

**PUBLIC SCHOOL RETIREMENT SYSTEM
OF THE CITY OF ST. LOUIS**

MINUTES OF THE BOARD OF TRUSTEES REGULAR MEETING

August 19, 2013

I. ROLL CALL AND ANNOUNCEMENT OF A QUORUM

The August meeting of the Board of Trustees of the Public School Retirement System of the City of St. Louis (PSRSSTL) was called to order at 4:35 p.m., Monday, August 19, 2013. The meeting was conducted in the 2nd floor boardroom of the PSRSSTL office building located at 3641 Olive Street, St. Louis, Missouri. Joseph Clark, Chairman of the Board of Trustees, was the presiding officer.

Roll Call was taken and Trustees Angela Banks, Christina Bennett, Joseph Clark, Charles Shelton, Rick Sullivan and Eural Thomas were present. The Board of Trustees had a quorum at the meeting. Trustee Thaha Menkara joined the meeting in progress. Trustees Sheila Goodwin, Mona Lawton and Yvette Levy were absent.

Executive Director, Andrew Clark, Accounting Specialist, Terry Mayes, Insurance Benefits Specialist, John Henderson, PSRSSTL Attorney, Jeff Hartnett, PSRSSTL Actuary, Steve Siepman, and PSRSSTL Health Insurance Consultant, Patrick Haraden, and several interested parties were also in attendance.

II. APPROVAL OF MINUTES FROM LAST MEETING

Christina Bennett made a motion, seconded by Rick Sullivan, to approve the minutes of the Board of Trustees Regular Meeting of June 17, 2013.

By voice vote, motion carried.

III. SEATING OF NEW BOARD MEMBERS

Rick Sullivan informed the Board of Trustees that the Special Administrative Board is getting closer on the appointment for the vacant Trustee position.

IV. READING OF COMMUNICATIONS TO THE BOARD OF TRUSTEES

None

V. PRESENTATIONS BY INTERESTED PARTIES

None

VI. CONSENT AGENDA

Christina Bennett made a motion, seconded by Angela Banks, to approve the Retirements and Benefits of June and July 2013.

By voice vote, motion carried.

Christina Bennett made a motion, seconded by Angela Banks, to approve the Refunds and Bills of June and July 2013.

By voice vote, motion carried.

VII. UNFINISHED BUSINESS

None

VIII. REPORT OF THE CHAIRPERSON

None

IX. REPORT OF THE EXECUTIVE DIRECTOR

The Executive Director reviewed 2013 travel activity for the Board of Trustees (see attached).

The Executive Director introduced the Health Insurance Consultant for a presentation on the retiree health insurance renewals and recommendations for 2014. The Health Insurance Consultant reviewed the agenda, the retirement system's insurance plans and current enrollment statistics for the medical and dental plans.

The Health Insurance Consultant presented the renewals for the three GHP Medicare Advantage Plans offered by the retirement system. The Health Insurance Consultant informed the Trustees that there are no premium rate increases for the plans and that the only design change is the narrowing of the prescription drug doughnut hole based on federal requirements.

The Health Insurance Consultant informed the Trustees that Met Life has offered the same dental plans as UHC with a 5.8% decrease in premiums that includes 8% rate cap increases for 2015 and 2016, and that Vision Benefits of America (VBA) has offered a 4% decrease in premiums with a two year rate guarantee. There will be no design changes for any of the plans.

The Health Insurance Consultant informed the Trustees that Coventry will be the new medical insurance carrier and Express Scripts will remain the pharmacy vendor for the two point-of-service (POS) plans offered through the St. Louis Public Schools (SLPS). The Health Insurance Consultant informed the Trustees that premium rates for the two plans are decreasing for all participants and that there will be no plan design changes.

The Health Insurance Consultant presented information on the effects of recent health care reform and future renewal considerations, and concluded the presentation by recommending the health insurance renewals for the two SLPS Coventry Medical plans, the three GHP Medicare Plans, the two Met Life Dental Plans and the VBA Vision Plan.

Charles Shelton, Chair of the Benefits Committee, made a motion, seconded by Christina Bennett, to adopt the insurance renewals for the two SLPS Coventry POS Medical Plans with Express Scripts Rx as presented by the Insurance Consultant.

A roll call vote was taken.

| | | | | | |
|---------------|-----|-------------------|-----|---------------|-----|
| Angela Banks | Yes | Christina Bennett | Yes | Joseph Clark | Yes |
| Thaha Menkara | Yes | Charles Shelton | Yes | Rick Sullivan | Yes |
| Eural Thomas | Yes | | | | |

With seven yes votes, motion carried.

Charles Shelton made a motion, seconded by Christina Bennett, to adopt the insurance renewals for the GHP Advantage HMO High, Low and Gold Medicare Options, the Met Life Dental High and Low PPO Options, and the VBA Vision Plan as presented by the Insurance Consultant.

A roll call vote was taken.

| | | | | | |
|---------------|-----|-------------------|-----|---------------|-----|
| Angela Banks | Yes | Christina Bennett | Yes | Joseph Clark | Yes |
| Thaha Menkara | Yes | Charles Shelton | Yes | Rick Sullivan | Yes |
| Eural Thomas | Yes | | | | |

With seven yes votes, motion carried.

X. REPORT OF THE INVESTMENT CONSULTANT

None

XI. REPORT OF THE ACTUARY

The Actuary presented the 2013 Actuarial Valuation Report, by reviewing a discussion document projected onto a screen for the audience. The Actuary explained the purposes of the report as the disclosure of the actuarial condition of the Fund and the determination of the required annual employer contributions for the Board of Education, the Retirement System, and the Charter Schools. The Actuary also presented updated information on the impacts to fund reporting from the recently adopted GASB rules.

There was discussion on the increase in employer contributions that included fund investment performance, demographics and the slight change to the actuarial assumptions due to updated mortality tables. The discussion continued with respect to the meaning of the various funding ratios in the report. The Actuary addressed all questions to the satisfaction of most of the Trustees.

Charles Shelton made a motion, seconded by Thaha Menkara, to adopt the 2013 Actuarial Valuation Report as presented by the Actuary.

A roll call vote was taken.

| | | | | | |
|-----------------|-----|---------------|---------|---------------|-----|
| Angela Banks | Yes | Joseph Clark | Yes | Thaha Menkara | Yes |
| Charles Shelton | Yes | Rick Sullivan | Abstain | Eural Thomas | Yes |

With five yes votes, and one abstention, motion failed.

XII. REPORTS OF COMMITTEES OF THE BOARD OF TRUSTEES

The Chairman asked for reports from the Committees.

Benefits Committee

None

Trustee Business Committee

None

Investment Committee

None

Legislative, Rules & Regulations Committee

None

Professional Contracts Committee

None

XIII. NEW BUSINESS

None

XIV. REPORT OF THE ATTORNEY

None

XV. ADJOURNMENT

Angela Banks made a motion, seconded by Rick Sullivan, to adjourn the meeting.

By voice vote, motion carried and the meeting adjourned at 5:45 p.m.

Attachments:

Retirements, Refunds & Bills Paid June and July 2013
Trustee Travel Report – Calendar Year 2013
Insurance Consultant Presentation and Premium Rates
2013 Actuarial Valuation Report and Results

To be Authorized and Approved
by the Board of Trustees

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|---|--------------------|------------|---------------------|---------------------|--------------------|
| Madeline Gottemoeller Teacher | May 1, 2013 | Early | 5.9445 | \$33,193.61 | \$204.40 |
| Gregory Lewis Printing Supervisor | May 1, 2013 | Normal | 25.1852 | \$61,001.57 | \$2,560.56 |
| Yvette Winslow Early Childhood Teacher Assistant | May 1, 2013 | Disability | 24.5446 | \$29,643.70 | \$1,212.66 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|---|--------------------|------------|---------------------|---------------------|--------------------|
| George Ackles Sr. Teacher | June 1, 2013 | Normal | 27.0667 | \$65,441.70 | \$2,314.49 |
| Ivanka Ajanovic Spec Ed Instr Care Aide | June 1, 2013 | Normal | 16.4112 | \$30,963.27 | \$846.91 |
| Micah Armstead ICA Special Education | June 1, 2013 | Normal | 30.0000 | \$38,688.64 | \$1,934.43 |
| Novella Atteberry Teacher | June 1, 2013 | Normal | 24.0778 | \$77,482.28 | \$2,524.78 |
| Mary Austin Teacher | June 1, 2013 | Normal | 22.0667 | \$73,115.15 | \$2,689.02 |
| Sara Austin Teacher Assistant | June 1, 2013 | Early | 17.8389 | \$28,957.27 | \$669.60 |
| Gale Bailey Librarian | June 1, 2013 | Normal | 30.0000 | \$70,320.60 | \$3,516.03 |
| Rochelle Bates Social Worker | June 1, 2013 | Normal | 30.0000 | \$74,989.35 | \$3,749.47 |
| Bernadette Beard Spec Ed Instr Care Aide | June 1, 2013 | Early | 10.6389 | \$28,477.44 | \$370.29 |
| Margaret Beard Teacher | June 1, 2013 | Normal | 30.0000 | \$65,420.64 | \$3,271.03 |
| David Billups Teacher | June 1, 2013 | Disability | 23.1889 | \$65,499.05 | \$1,822.62 |
| Valerie Bland Teacher | June 1, 2013 | Early | 20.0833 | \$71,189.18 | \$2,144.55 |
| James Blanke Teacher | June 1, 2013 | Normal | 30.0000 | \$85,873.71 | \$4,293.68 |
| Jerri Bolden Teacher | June 1, 2013 | Normal | 22.0722 | \$86,965.76 | \$3,199.21 |
| Dwight Bosman Teacher | June 1, 2013 | Normal | 30.0000 | \$77,948.51 | \$3,055.59 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|---|--------------------|------------|---------------------|---------------------|--------------------|
| Edna Boyd School Nurse | June 1, 2013 | Normal | 28.0667 | \$64,954.41 | \$3,038.43 |
| Cynthia Buehler Teacher | June 1, 2013 | Normal | 15.8004 | \$63,119.17 | \$1,349.69 |
| Donald Burgin Safety Officer | June 1, 2013 | Disability | 12.0166 | \$27,872.74 | \$580.68 |
| Emily Burns-Davidson Teacher | June 1, 2013 | Normal | 26.3722 | \$79,635.14 | \$3,500.26 |
| Cynthia Burroughs Teacher | June 1, 2013 | Normal | 21.6222 | \$65,420.64 | \$2,357.56 |
| Thomas Chuday Teacher | June 1, 2013 | Normal | 18.9944 | \$68,034.78 | \$2,153.80 |
| Christine Cole Teacher | June 1, 2013 | Normal | 13.5333 | \$60,053.63 | \$1,354.54 |
| Finnos Coleman Teacher | June 1, 2013 | Normal | 24.5055 | \$71,437.71 | \$2,917.69 |
| Leona Collins Teacher | June 1, 2013 | Normal | 11.0833 | \$77,729.64 | \$1,435.83 |
| Linda Compton Librarian | June 1, 2013 | Normal | 29.6389 | \$85,037.36 | \$4,200.69 |
| Rosalind Conner Social Worker | June 1, 2013 | Normal | 25.3389 | \$75,138.34 | \$3,173.21 |
| Cheryl Conway Teacher Aide II | June 1, 2013 | Early | 21.9444 | \$32,281.94 | \$969.07 |
| Genet Conyears Spec Ed Instr Care Aide | June 1, 2013 | Early | 6.1500 | \$29,018.95 | \$284.22 |
| Alicia Covington Teacher | June 1, 2013 | Normal | 26.0389 | \$64,786.23 | \$2,811.60 |
| Yvonne Crockett Teacher | June 1, 2013 | Normal | 29.9722 | \$65,441.70 | \$2,912.73 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|---|--------------------|--------|---------------------|---------------------|--------------------|
| Gloria Crutchfield Teacher Aide II | June 1, 2013 | Early | 15.7695 | \$27,804.58 | \$511.52 |
| Jeffrey Davis Teacher | June 1, 2013 | Early | 15.8056 | \$70,349.12 | \$1,445.97 |
| Susan Davis School Nurse | June 1, 2013 | Normal | 23.4945 | \$65,118.82 | \$2,549.89 |
| Martha Eckhoff Teacher | June 1, 2013 | Early | 19.9445 | \$65,088.32 | \$2,115.51 |
| James Economon Teacher | June 1, 2013 | Normal | 30.0000 | \$65,388.38 | \$3,269.42 |
| Tony Edwards Teacher | June 1, 2013 | Normal | 23.9556 | \$59,184.45 | \$2,095.98 |
| Paula Endsley Teacher | June 1, 2013 | Normal | 30.0000 | \$74,989.35 | \$3,749.47 |
| Brenda Evans Psychological Examiner | June 1, 2013 | Normal | 25.3388 | \$72,219.86 | \$3,049.94 |
| Ray Evans Teacher Aide II | June 1, 2013 | Normal | 23.0555 | \$34,033.05 | \$1,307.75 |
| Sammie Ewing Teacher | June 1, 2013 | Normal | 27.7695 | \$58,753.03 | \$2,719.24 |
| Synthia Farr Teacher | June 1, 2013 | Normal | 25.0778 | \$68,806.32 | \$2,875.85 |
| Michael Ferrer Coordinator Spec Area | June 1, 2013 | Early | 8.9304 | \$60,669.26 | \$877.91 |
| Judith Fisher School Nurse | June 1, 2013 | Early | 13.6389 | \$54,321.47 | \$1,207.37 |
| John Freeman Teacher | June 1, 2013 | Early | 13.1111 | \$53,780.27 | \$1,011.96 |
| Jo-Ann Ganschaw Secondary Counselor | June 1, 2013 | Normal | 19.0667 | \$74,274.65 | \$2,360.29 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|--|--------------------|--------|---------------------|---------------------|--------------------|
| Maudie Gaskin Teacher | June 1, 2013 | Normal | 23.8945 | \$68,991.79 | \$2,747.54 |
| Hazel Grider Teacher | June 1, 2013 | Normal | 29.3156 | \$73,602.44 | \$3,596.17 |
| Francene Guilfoy Teacher | June 1, 2013 | Normal | 16.1389 | \$72,569.50 | \$1,545.98 |
| Kathleen Hall Social Worker | June 1, 2013 | Early | 19.5500 | \$71,210.24 | \$1,800.87 |
| Paula Hammonds Librarian | June 1, 2013 | Normal | 28.0945 | \$89,676.58 | \$4,199.03 |
| Mary Hart Teacher | June 1, 2013 | Normal | 30.0000 | \$79,295.34 | \$3,964.77 |
| Arimenta Harvey Spec Ed Instr Care Aide | June 1, 2031 | Normal | 10.4055 | \$28,352.19 | \$491.70 |
| Gary Hayes Community Collaboration Spec | June 1, 2013 | Early | 23.0981 | \$76,459.25 | \$2,669.51 |
| Glenn Haymon Teacher | June 1, 2013 | Normal | 29.9667 | \$84,853.84 | \$4,237.98 |
| Buena Hickman Librarian | June 1, 2013 | Normal | 29.4000 | \$74,549.97 | \$3,652.95 |
| Kathleen Hill Teacher | June 1, 2013 | Normal | 24.8889 | \$64,954.41 | \$2,694.41 |
| Corlis Hinton Teacher | June 1, 2013 | Normal | 29.7500 | \$80,122.43 | \$3,559.58 |
| Husnija Hodzic Teacher Aide II | June 1, 2013 | Normal | 15.0788 | \$28,392.16 | \$713.48 |
| Tina Homeier Nurse | June 1, 2013 | Normal | 26.7031 | \$69,599.22 | \$3,097.53 |
| Gwendolyn Hopton-Myers Librarian | June 1, 2013 | Normal | 25.6001 | \$80,187.61 | \$3,421.35 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|------------------------------------|--------------------|--------|---------------------|---------------------|--------------------|
| Venita House Teacher Assistant | June 1, 2013 | Early | 8.5501 | \$33,388.41 | \$407.06 |
| Melvin Hudson Teacher | June 1, 2013 | Early | 12.6167 | \$53,014.67 | \$786.51 |
| Kathleen Hull Teacher | June 1, 2103 | Normal | 25.9250 | \$74,812.92 | \$3,232.54 |
| Jacalyn Hunt Counselor | June 1, 2013 | Normal | 27.2500 | \$85,852.65 | \$3,899.14 |
| JoAnn Hunt Teacher | June 1, 2013 | Normal | 30.0000 | \$86,339.94 | \$4,317.00 |
| Felise Hutton Special Education | June 1, 2013 | Normal | 29.9722 | \$70,398.96 | \$3,516.69 |
| Roberdia Irving Teacher | June 1, 2013 | Normal | 27.6389 | \$75,442.89 | \$3,475.27 |
| Deirdre Jackson Teacher | June 1, 2013 | Early | 14.9889 | \$93,235.43 | \$1,591.53 |
| Verne Jenkins Teacher Assistant | June 1, 2013 | Early | 15.0555 | \$27,781.24 | \$480.21 |
| Michelle Johnson Teacher | June 1, 2013 | Normal | 28.8722 | \$82,047.79 | \$3,948.17 |
| Wilma Jones Teacher | June 1, 2013 | Normal | 30.0000 | \$80,009.34 | \$4,000.47 |
| Waquita Jones-Haywood Teacher | June 1, 2013 | Normal | 28.8445 | \$73,094.09 | \$3,513.94 |
| Shirley Kayira Teacher | June 1, 2013 | Normal | 28.6389 | \$65,097.76 | \$3,107.21 |
| John Kelley Teacher | June 1, 2013 | Normal | 27.0667 | \$65,441.70 | \$2,314.49 |
| Diane Keys Teacher | June 1, 2013 | Normal | 28.8000 | \$63,900.05 | \$3,067.20 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|--|--------------------|--------|---------------------|---------------------|--------------------|
| Celine Koncki Teacher | June 1, 2013 | Normal | 22.5111 | \$80,143.49 | \$2,525.76 |
| Judith Kreitner Teacher | June 1, 2013 | Normal | 27.8611 | \$74,989.35 | \$3,482.14 |
| Angela Lattimore Social Worker | June 1, 2013 | Normal | 22.3778 | \$73,115.15 | \$2,726.93 |
| Marilouise Leonard Library Aide | June 1, 2013 | Normal | 7.1444 | \$27,273.45 | \$324.75 |
| Sonja Little Counselor | June 1, 2013 | Normal | 30.0000 | \$85,873.71 | \$4,293.68 |
| Rita Logan Social Worker | June 1, 2013 | Normal | 30.0000 | \$80,214.40 | \$4,010.72 |
| Gloria Lowery Teacher Assistant II | June 1, 2013 | Normal | 28.0500 | \$34,527.77 | \$1,614.17 |
| Madonna Mackey Nurse | June 1, 2013 | Normal | 26.9532 | \$61,458.93 | \$2,760.86 |
| Margo Mainer Academic Instructional Coach | June 1, 2013 | Normal | 16.1223 | \$67,354.05 | \$1,809.84 |
| Reubie Manning Teacher | June 1, 2013 | Normal | 19.1111 | \$74,229.76 | \$2,364.35 |
| Beverly McCainey Teacher | June 1, 2013 | Normal | 25.9945 | \$85,873.71 | \$3,720.41 |
| Patricia Meredith Guidance Counselor | June 1, 2013 | Normal | 21.9056 | \$85,873.71 | \$3,135.19 |
| Fannie Mitchell Spec Ed Instr Care Aide | June 1, 2013 | Normal | 10.9555 | \$28,456.10 | \$519.58 |
| Dorothy Monroe Teacher | June 1, 2013 | Early | 21.6278 | \$82,047.80 | \$2,661.74 |
| Rosemary Morgan Teacher | June 1, 2013 | Normal | 30.0000 | \$79,820.61 | \$3,991.03 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|---|--------------------|--------|---------------------|---------------------|--------------------|
| Billie Morrison Teacher | June 1, 2013 | Normal | 27.6945 | \$65,554.54 | \$3,025.83 |
| Janet Sue Morton Teacher | June 1, 2013 | Normal | 24.8278 | \$79,656.20 | \$3,296.15 |
| Shelia Mullins Teacher Aide II | June 1, 2013 | Normal | 20.9278 | \$34,474.51 | \$1,202.46 |
| Eunice Nave Teacher | June 1, 2013 | Early | 12.0833 | \$64,850.32 | \$899.66 |
| Deborah Nelson Guidance Counselor | June 1, 2013 | Normal | 25.4889 | \$67,834.39 | \$2,881.71 |
| Karin Niemeyer Teacher | June 1, 2013 | Normal | 12.0833 | \$68,375.48 | \$1,377.00 |
| Erma Owens Vocational Adjustment Counselor | June 1, 2013 | Normal | 9.0944 | \$71,636.58 | \$1,085.82 |
| Gail Owens Teacher | June 1, 2013 | Normal | 30.0000 | \$74,968.29 | \$3,748.42 |
| Carolyn Patterson Teacher | June 1, 2013 | Normal | 30.0000 | \$61,731.86 | \$3,086.59 |
| Emma Perkins Teacher | June 1, 2013 | Normal | 12.0833 | \$57,475.24 | \$1,031.31 |
| Deborah Pettis Teacher | June 1, 2013 | Normal | 30.0000 | \$64,933.35 | \$3,246.67 |
| Rosemary Phillips School Nurse | June 1, 2013 | Normal | 8.6945 | \$49,639.79 | \$719.32 |
| Harry Pickup Teacher | June 1, 2013 | Normal | 17.7777 | \$69,704.01 | \$2,065.30 |
| Gloria Price Safety Officer | June 1, 2013 | Normal | 7.1333 | \$27,854.38 | \$331.16 |
| Bettie Reed Teacher | June 1, 2013 | Normal | 30.0000 | \$64,933.35 | \$3,246.67 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|--|--------------------|--------|---------------------|---------------------|--------------------|
| Daniel Rhoten Teacher | June 1, 2013 | Normal | 29.9500 | \$64,074.09 | \$3,198.37 |
| Ruth Robertson Teacher | June 1, 2013 | Early | 15.0945 | \$59,323.04 | \$991.40 |
| Jacqueline Rogers Spec Ed Instr Care Aide | June 1, 2013 | Early | 12.0555 | \$28,629.57 | \$559.26 |
| Ronald Rogers Teacher | June 1, 2013 | Normal | 24.0722 | \$63,997.19 | \$2,567.59 |
| Barbara Rohring Teacher | June 1, 2013 | Normal | 8.0556 | \$52,957.65 | \$711.01 |
| Phyllis Scales Teacher | June 1, 2013 | Normal | 30.0000 | \$53,640.47 | \$2,682.02 |
| Gail Schneider Teacher | June 1, 2013 | Early | 13.9445 | \$58,295.82 | \$1,008.58 |
| William Sevier Counselor | June 1, 2013 | Early | 14.0889 | \$80,496.63 | \$1,869.18 |
| Barbara Siscel Teacher | June 1, 2013 | Normal | 23.6056 | \$64,954.41 | \$2,555.48 |
| Cynthia Smith Teacher | June 1, 2013 | Normal | 26.9000 | \$71,189.18 | \$3,191.65 |
| Jewell Smith Teacher | June 1, 2013 | Early | 24.0778 | \$73,012.35 | \$2,848.57 |
| Venus Smith Teacher | June 1, 2013 | Normal | 28.3778 | \$71,210.24 | \$3,367.99 |
| Pamela Smith-Albright Teacher | June 1, 2013 | Normal | 29.6161 | \$63,653.84 | \$3,141.97 |
| Gloria Spears-Clemons Teacher | June 1, 2013 | Normal | 12.0833 | \$86,361.00 | \$1,739.21 |
| Audry Sprivey Teacher | June 1, 2013 | Normal | 29.9722 | \$76,830.73 | \$3,837.98 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|-------------------------------------|--------------------|--------|---------------------|---------------------|--------------------|
| Jacqueline Swift Teacher | June 1, 2013 | Normal | 23.4667 | \$76,532.18 | \$2,993.26 |
| Lois Tatum Teacher | June 1, 2013 | Normal | 29.7043 | \$73,322.36 | \$3,629.98 |
| Stephanie Taylor Teacher | June 1, 2013 | Normal | 25.5722 | \$72,126.64 | \$3,074.06 |
| Dello Thedford Artistic Director | June 1, 2013 | Normal | 30.0000 | \$82,060.87 | \$4,103.05 |
| Joe Thedford Teacher | June 1, 2013 | Early | 19.1611 | \$69,315.99 | \$1,692.86 |
| Bonita Thomas Teacher | June 1, 2013 | Normal | 28.3333 | \$65,197.11 | \$3,078.75 |
| Sanette Thomas Counselor | June 1, 2013 | Normal | 22.0028 | \$65,007.39 | \$2,383.91 |
| Veronica Thurman Teacher | June 1, 2013 | Early | 20.0611 | \$65,420.64 | \$2,065.82 |
| Marshall Tolliver Teacher | June 1, 2013 | Normal | 30.0000 | \$74,862.54 | \$3,743.13 |
| Leonard Toms Teacher Aide | June 1, 2013 | Normal | 22.9333 | \$33,745.56 | \$1,289.83 |
| Verdine Tucker Teacher | June 1, 2013 | Normal | 22.4139 | \$68,749.72 | \$2,568.25 |
| Constance Turner Teacher | June 1, 2013 | Early | 21.9333 | \$65,575.60 | \$2,170.73 |
| Karen Unverfehrt Teacher | June 1, 2013 | Normal | 24.0000 | \$73,602.44 | \$2,944.10 |
| Inez Usoroh Teacher | June 1, 2013 | Normal | 28.5000 | \$61,613.18 | \$2,926.63 |
| Berva Washington Teacher | June 1, 2013 | Normal | 30.0000 | \$85,852.65 | \$4,292.63 |

APPLICATIONS FOR RETIREMENT

| NAME \ POSITION | RETIREMENT DATE | TYPE | CREDITED SERVICE | FINAL AVG SALARY | MONTHLY BENEFIT |
|--|--------------------|--------|---------------------|---------------------|--------------------|
| Phillip Washington Teacher | June 1, 2013 | Normal | 24.3056 | \$65,420.64 | \$2,650.15 |
| Rosalee Watson Teacher Assistant II | June 1, 2013 | Normal | 26.3611 | \$33,205.44 | \$1,458.89 |
| Beverly Whittington Teacher | June 1, 2013 | Normal | 29.9722 | \$87,196.41 | \$4,355.78 |
| Andrea Williams Teacher | June 1, 2013 | Early | 21.4056 | \$69,756.47 | \$2,308.88 |
| Cindy Williams Teacher | June 1, 2013 | Normal | 30.0000 | \$63,025.68 | \$3,151.28 |
| Constance Williams Nurse | June 1, 2013 | Normal | 29.4111 | \$58,657.22 | \$2,875.29 |
| Rosetta Williams-Scott Counselor | June 1, 2013 | Normal | 29.3667 | \$73,012.12 | \$3,573.54 |
| Anne Wirthlin Teacher | June 1, 2013 | Normal | 28.9278 | \$73,094.09 | \$2,935.56 |

Distributions - June 2013

| CHECK NUMBER | CHECK DATE | LAST NAME | FIRST NAME/MI | GROSS PAY | FEDERAL TAXES W/H | NET PAY | A(ctive) R(etired) | D(eath) S(eparation) | NOTES |
|-----------------|---------------|--------------|---------------|--------------|----------------------|-------------|-----------------------|-------------------------|--------------------------|
| 059542 | 11/21/06 | BOEDEKER | DONNA L. | (143.72) | | (143.72) | A | S | WP-VOID |
| 059547 | 11/21/06 | CLEMAN | JENNIFER | (79.50) | | (79.50) | A | S | EHL- VOID |
| 059808 | 01/25/07 | SANBORN | SARAH | (1,976.22) | | (1,976.22) | A | S | VOID |
| 060900 | 10/12/07 | MCCRARY | KIM | (15,152.51) | (3,030.50) | (12,122.01) | A | S | VOID |
| 061101 | 11/20/07 | THOMAS | TAMARA | (135.56) | | (135.56) | A | S | WP-Additional Funds VOID |
| 06180 | 09/03/08 | AMUNDSON | JACOB | (2,044.72) | | (2,044.72) | A | S | VOID |
| 062495 | 10/24/08 | HARRIS | VAN T | (2,609.13) | (521.82) | (2,087.31) | A | S | VOID |
| 063069 | 04/01/09 | MUG | CAROLINE | (83.15) | | (83.15) | A | S | CA-WP VOID |
| 063413 | 07/17/09 | MUMME | JOHANNA | (2,081.64) | | (2,081.64) | A | S | VOID |
| 063690 | 09/18/09 | MCNULTY | ANNA | (6,696.06) | | (6,696.06) | A | S | VOID |
| 064038 | 12/11/09 | JONES-FOWLER | DEBBIE | (113.47) | | (113.47) | A | S | VOID |
| 064039 | 12/11/09 | KAMINSKI | MARY | (1,061.92) | (212.38) | (849.54) | A | S | LFL - VOID |
| 065189 | 10/22/10 | LEWIS | DORTHEA | (106.89) | | (106.89) | A | S | CA VOID |
| 065463 | 01/19/11 | LOVE | PAMELA | (1,201.51) | (240.30) | (961.21) | A | S | EHL- VOID |
| 065741 | 04/29/11 | LYNCH | AMY | (13,540.77) | | (13,540.77) | A | S | VOID |
| 065746 | 04/29/11 | JOHNSON | COURTNEY | (948.14) | (189.63) | (758.51) | A | S | CA-WP VOID |
| 066502 | 12/09/11 | BLEIER | ELIZABETH J | (12,425.86) | | (12,425.86) | A | S | VOID |
| 067197 | 08/15/12 | LOMAX | HERBERT | (5,655.84) | (1,131.17) | (4,524.67) | A | S | VOID |
| 067313 | 08/31/12 | MCCRORY JR | MICHAEL E | (12,681.73) | | (12,681.73) | A | S | VOID |
| 067320 | 08/31/12 | WILLIAMS | KELLY | (4,511.01) | | (4,511.01) | A | S | VOID |
| 067707 | 12/06/12 | AVITT | TIMOTHY | (4,102.01) | | (4,102.01) | A | S | CCC VOID |
| 068198 | 06/11/13 | SUNDY | MERYL | 800.48 | | 800.48 | A | S | SLLIS |
| 068199 | 06/11/13 | WILLIAMS | OLUFUNMILAYO | 3,886.95 | 777.39 | 3,109.56 | A | S | LFL |
| 068200 | 06/11/13 | BAUMANN | THIEMA | 28,144.74 | | 28,144.74 | A | S | |
| 068201 | 06/11/13 | CUNNINGHAM | MICHELLE | 15,081.71 | 3,016.34 | 12,065.37 | A | S | |
| 068202 | 06/11/13 | HARRIS | DAVID | 46.87 | | 46.87 | A | S | |
| 068203 | 06/11/13 | JOHNSON | EVELYNN | 1,779.50 | 355.90 | 1,423.60 | A | S | |
| 068204 | 06/11/13 | KIGHTLINGER | TERRI L | 3,752.19 | 750.44 | 3,001.75 | A | S | |
| 068205 | 06/11/13 | OWENS | KELLY R | 21,002.22 | 4,200.44 | 16,801.78 | A | S | |
| 068206 | 06/11/13 | ODONNELL | DANIELLE N | 24,550.66 | | 24,550.66 | A | S | |
| 068207 | 06/11/13 | WASHINGTON | CARLETTA | 7,218.30 | 1,443.66 | 5,774.64 | A | S | |
| 068208 | 06/11/13 | WOLFF | DORIS L | 2,507.33 | | 2,507.33 | A | S | |
| 068209 | 06/11/13 | CRANGLE | ALICE | 8,623.32 | 1,724.66 | 6,898.66 | A | D | DEC: JOHN CRANGLE |
| 068210 | 06/11/13 | MASON | DEBORAH | 449.34 | | 449.34 | A | S | SEF |
| 068212 | 06/19/13 | LINDWOOD | DESHONDA | 3,098.04 | 619.61 | 2,478.43 | A | S | LFL |
| 068213 | 06/19/13 | TAYLOR | MARILYN J | 805.83 | 161.17 | 644.66 | A | S | CA |
| 068214 | 06/19/13 | THOMPSON | PEARL | 13,528.37 | 2,705.67 | 10,822.70 | A | S | STL |

Distributions - June 2013

| CHECK NUMBER | CHECK DATE | LAST NAME | FIRST NAME/MI | GROSS PAY | FEDERAL TAXES W/H | NET PAY | A(ctive) R(etired) | D(eath) S(eparation) | NOTES |
|-----------------|---------------|-----------|---------------|--------------------|----------------------|--------------------|-----------------------|-------------------------|-------|
| 068215 | 06/19/13 | CUMMINGS | TIMOTHY | 4,847.02 | | 4,847.02 | A | S | |
| 068216 | 06/19/13 | NORDHAUS | KIRSTIN A | 580.53 | 116.11 | 464.42 | A | S | |
| 068217 | 06/19/13 | REED | TAKIYAH | 4,867.61 | 973.52 | 3,894.09 | A | S | |
| 068218 | 06/19/13 | REMES | DANIEL | 2,034.69 | 406.94 | 1,627.75 | A | S | |
| TOTAL | | | | \$60,254.34 | \$11,926.05 | \$48,328.29 | | | |

Distributions - July 2013

| CHECK NUMBER | CHECK DATE | LAST NAME | FIRST NAME/MI | GROSS (B+C) | Federal Taxes W/H | NET PAY | A(ctive) R(etired) | D(eath) S(eparation) | NOTES |
|-----------------|---------------|-------------|---------------|----------------|----------------------|------------|-----------------------|-------------------------|--------------------|
| 068239 | 07/05/13 | HARRIS | CHRISTOPHER | 6,257.12 | 1,251.42 | 5,005.70 | A | S | IAESM |
| 068240 | 07/05/13 | KELLY | ANNA M | 3,767.30 | | 3,767.30 | A | S | CA |
| 068241 | 07/05/13 | PETERSON | STEPHANIE | 2,592.02 | | 2,592.02 | A | S | SEF |
| 068242 | 07/05/13 | SHERROD | LINDA C | 14,900.06 | | 14,900.06 | A | S | BLCA, CA |
| 068243 | 07/05/13 | ANDERSON | CAROL | 70,224.30 | 13,289.92 | 56,934.38 | A | S | |
| 068244 | 07/05/13 | BLAYLOCK | DE-ANDREA | 9,015.80 | 1,803.16 | 7,212.64 | A | S | |
| 068245 | 07/05/13 | HANK-PIPES | EDNA J | 13,072.04 | 2,614.41 | 10,457.63 | A | S | |
| 068246 | 07/05/13 | HENDERSON | BETTY J | 10,103.51 | 2,020.70 | 8,082.81 | A | S | |
| 068247 | 07/05/13 | LAYNE | RICHARD A | 7,995.56 | 1,599.11 | 6,396.45 | A | S | |
| 068248 | 07/05/13 | LINDER | JULIE | 11,450.70 | | 11,450.70 | A | S | |
| 068249 | 07/05/13 | MARTIN | DORETTA | 4,627.59 | 925.52 | 3,702.07 | A | S | |
| 068250 | 07/05/13 | PIAZZALUNGA | VALERIE | 4,778.70 | | 4,778.70 | A | S | |
| 068251 | 07/05/13 | RUMFELT | LEROY L | 962.95 | 192.59 | 770.36 | A | S | |
| 068252 | 07/05/13 | YOUDE | BLAKE | 25,572.78 | | 25,572.78 | A | S | |
| 068279 | 07/11/13 | EISWIRTH | ASHLEY | 4,293.66 | 858.73 | 3,434.93 | A | S | ICP, SLPS |
| 068280 | 07/11/13 | HALL | ABBY | 5,626.09 | 1,125.22 | 4,500.87 | A | S | SLPS, ICP |
| 068291 | 07/11/13 | PETERSON | STEPHANIE | 3.00 | | 3.00 | A | S | SEF BAL OF CONTRIB |
| 068282 | 07/11/13 | SHARP | TERON | 6,418.80 | 1,283.76 | 5,135.04 | A | S | IAAS, ICP, SLPS |
| 068283 | 07/11/13 | CLARK | JOSHUA L | 10,370.42 | 2,074.08 | 8,296.34 | A | S | |
| 068284 | 07/11/13 | HILL | ALBERT | 2,552.03 | 510.41 | 2,041.62 | A | S | |
| 068285 | 07/11/13 | HARRIS | ALICE F | 6,902.86 | 1,380.57 | 5,522.29 | A | S | |
| 068286 | 07/11/13 | SIEGEL | SARAH | 7,182.88 | | 7,182.88 | A | S | |
| 068287 | 07/11/13 | TAYLOR | TONY | 1,167.96 | 233.59 | 934.37 | A | S | |
| 068288 | 07/11/13 | TURNER | DALE | 13,155.32 | 2,631.06 | 10,524.26 | A | S | |
| 068289 | 07/11/13 | WANNER | DAVID | 4,002.43 | | 4,002.43 | A | S | |
| 068290 | 07/11/13 | WREEN | VICTORIA | 5,389.53 | 1,077.91 | 4,311.62 | A | S | |
| 068316 | 07/23/13 | BELISLE | TARA | 7,967.99 | | 7,967.99 | A | S | SLPS, IACE |
| 068317 | 07/23/13 | BLASSINGAME | CHRISTINA L | 11,490.30 | 2,298.06 | 9,192.24 | A | S | IACM, CA |
| 068318 | 07/23/13 | CARTER | CHANTRELL | 470.21 | | 470.21 | A | S | IAAS, STL |
| 068319 | 07/23/13 | FULLER | ALLISON | 5,748.46 | | 5,748.46 | A | S | KIPP, CA |
| 068320 | 07/23/13 | STORCH | JONATHAN D | 1,760.16 | 352.03 | 1,408.13 | A | S | CA |
| 068321 | 07/23/13 | VANDE VREDE | MAGGIE | 7,356.97 | | 7,356.97 | A | S | LFL |
| 068322 | 07/23/13 | BARBIER | DONNA S | 18,427.32 | 3,685.46 | 14,741.86 | A | S | |
| 068323 | 07/23/13 | BURNS | MICHAEL | 8,549.88 | 1,709.98 | 6,839.90 | A | S | |
| 068324 | 07/23/13 | HALL | LEON | 8,254.79 | | 8,254.79 | A | S | |
| 068325 | 07/23/13 | HAYES-BIRT | ANITA | 8,323.00 | 1,664.60 | 6,658.40 | A | S | |
| 068326 | 07/23/13 | JUNKANS | ANDREA M | 21,584.03 | | 21,584.03 | A | S | |

Distributions - July 2013

| CHECK NUMBER | CHECK DATE | LAST NAME | FIRST NAME/MI | GROSS (B+C) | Federal Taxes W/H | NET PAY | A(ctive) R(etired) | D(eath) S(eparation) | NOTES |
|-----------------|---------------|-----------|---------------|---------------------|----------------------|---------------------|-----------------------|-------------------------|-------|
| 068327 | 07/23/13 | KENNELLY | JULIA R | 9,529.45 | | 9,529.45 | A | S | |
| 068328 | 07/23/13 | LIU | ELLEN | 2,046.75 | | 2,046.75 | A | S | |
| 068329 | 07/23/13 | MCMULLEN | WILFRED | 2,724.37 | 544.87 | 2,179.50 | A | S | |
| 068330 | 07/23/13 | OLDS | SARA | 4,625.01 | | 4,625.01 | A | S | |
| 068331 | 07/23/13 | RHEM | KASHMIR D | 7,245.37 | 1,449.07 | 5,796.30 | A | S | |
| 068332 | 07/23/13 | SCHONMAN | ERICA | 3,956.89 | | 3,956.89 | A | S | |
| 068333 | 07/23/13 | WOODS | EVELYN M | 35,158.82 | 7,031.76 | 28,127.06 | A | S | |
| TOTAL | | | | \$417,605.18 | \$53,607.99 | \$363,997.19 | | | |

Public School Retirement System of the City of St. Louis
Checks Written During the Month of June, 2013

| <u>Payee</u> | <u>Ck. Number</u> | <u>Description</u> | <u>Amount</u> |
|---|-------------------|--|--------------------|
| Date Paid June 5, 2013 | | | |
| Ameren UE | 68174 | Electric Service | 2,467.91 |
| Longfellow Benefits | 68175 | Group Insurance Consulting Services | 3,320.25 |
| Blade Technologies, Inc. | 68176 | Professional Services | 1,467.50 |
| Digital Intersection | 68177 | Monthly Data Center Housing - May | 150.00 |
| PMI Computer Supplies | 68178 | Office Supplies | 196.40 |
| BuildingStars STL Operations, Inc. | 68179 | Janitorial Supplies | 1,326.00 |
| Purchase Power | 68180 | Postage | 500.00 |
| AT&T | 68181 | Monthly Service Charge #090 040-1833 370 1 | 145.00 |
| Minuteman Press | 68182 | Booklet Envelopes | 220.37 |
| Evault Inc. | 68183 | Disaster Recovery Site | 1,110.46 |
| Access Courier, Inc. | 68184 | Courier Service | 18.91 |
| UPS | 68185 | UPS Shipping | 39.90 |
| UnitedHealthcare Insurance Company | 68186 | Michigan 1% Assessment, Mar. & April 2013 | 17.70 |
| Government Finance Officers Association | 68187 | 2012 Annual Report (CAFR) Cert. of Achievement | 1,160.00 |
| The Berwyn Group | 68188 | Death Check Verification Services | 395.00 |
| Andrew Clark | 68189 | Retirement Certificates | 130.84 |
| Charles L. Shelton, Jr. | 68190 | Reimbursement-NEPC Annual Client Conference | 183.97 |
| IESI - Missouri | 68191 | Trash Pick-Up | 227.00 |
| Delta Pest Stl. Inc. | 68192 | Pest Control | 50.00 |
| CBRE - 608844 | 68193 | Engineer Services | 650.00 |
| Board of Education St. Louis Benefits Trust | 68194 | Office Employees Insurance - Dental | 224.67 |
| Board of Education St. Louis Benefits Trust | 68195 | Office Employees Insurance - Vision | 15.37 |
| Board of Education St. Louis Benefits Trust | 68196 | Office Employees Insurance - Life | 110.95 |
| Date Paid June 14, 2013 | | | |
| Office Payroll | ACH | Office Payroll | 10,828.84 |
| AXA Equitable | ACH | 457 Contributions | 1,485.00 |
| Eural R. Thomas | 68211 | Advance - NASP Conference | 2,325.00 |
| Date Paid June 20, 2013 | | | |
| Absopure Water Company | 68219 | Water Cooler Service | 81.80 |
| Buck Consultants, LLC | 68220 | Actuarial Consulting Services - May & June | 4,466.00 |
| Windstream Communications | 68221 | Telephone, Data | 363.98 |
| AT&T | 68222 | Monthly Service Charge #314 652-1704 033 4 | 248.28 |
| AT&T Long Distance | 68223 | Long Distance Service | 4.91 |
| AT&T Teleconference Services | 68224 | TeleConference Services | 6.22 |
| Minuteman Press | 68225 | Envelopes | 379.25 |
| MSD | 68226 | Sewer Service | 50.07 |
| Parking Management Services, LLC | 68227 | July Parking - 4 Employees | 240.00 |
| Parking Management Services, LLC | 68228 | Parking Ticket Validations - May | 36.00 |
| Eazy Business Mailers, Inc. | 68229 | Postage | 220.00 |
| Cintas Corporation | 68230 | Infoport | 377.45 |
| Hartnett Gladney Hetterman, L.L.C. | 68231 | Legal Fees | 211.50 |
| Gregory F.X. Daley, Collector of Revenue | 68232 | Water - City | 115.66 |
| CBRE - 608844 | 68233 | Building Management Fee, June 2013 | 1,057.21 |
| St. Louis Mat & Linen Company | 68234 | Floor Mats | 16.00 |
| Delta Pest Stl. Inc. | 68235 | Pest Control | 50.00 |
| CBRE - 608844 | 68236 | Engineer Services | 338.00 |
| SiteStuff, Inc. | 68237 | Supplies | 10.38 |
| Charles L. Shelton, Jr. | 68238 | Advance - MAPERS, Osage Beach, MO | 825.00 |
| Date Paid June 28, 2013 | | | |
| Office Payroll | ACH | Office Payroll | 10,844.44 |
| AXA Equitable | ACH | 457 Contributions | 1,485.00 |
| | | TOTAL | \$50,194.19 |

Public School Retirement System of the City of St. Louis
Checks Written During the Month of July, 2013

| <u>Payee</u> | <u>Ck. Number</u> | <u>Description</u> | <u>Amount</u> |
|---|-------------------|--|----------------------------|
| Date Paid July 8, 2013 | | | |
| Ameren UE | 68253 | Electric Service | 2,501.96 |
| Longfellow Benefits | 68254 | Group Insurance Consulting Services | 3,320.25 |
| Blade Technologies, Inc. | 68255 | Professional Services | 1,467.50 |
| Digital Intersection | 68256 | Monthly Data Center Housing - June | 150.00 |
| PMI Computer Supplies | 68257 | Office Supplies | 319.22 |
| BuildingStars STL Operations, Inc. | 68258 | Janitorial Supplies | 1,326.00 |
| Purchase Power | 68259 | Postage | 1,552.06 |
| AT&T | 68260 | Monthly Service Charge #090 040-1833 370 1 | 130.00 |
| Minuteman Press | 68261 | Annual Report, Summary & Envelopes | 9,843.47 |
| Evault Inc. | 68262 | Disaster Recovery Site | 1,126.10 |
| Access Courier, Inc. | 68263 | Courier Service | 86.53 |
| Parking Management Services, LLC | 68264 | Parking Ticket Validations - June | 265.50 |
| Eazy Business Mailers, Inc. | 68265 | Postage | 200.00 |
| Hartnett Gladney Hetterman, L.L.C. | 68266 | Legal Fees | 211.50 |
| Anders | 68267 | CAFR Requirements, Election-Retired Nonteacher | 1,800.00 |
| BarnesCare | 68268 | Y. Winslow, D. Burgin, M. Yates, Y. Crews | 400.00 |
| CGI Security, Inc. | 68269 | Security Guard 06/17/2013 | 144.00 |
| Gregory F.X. Daly, Collector of Revenue | 68270 | City Earnings Tax - Second Quarter 2013 | 1,030.24 |
| American Express | 68271 | Network Solutions Software - Costco Card | 15.99 |
| IESI - Missouri | 68272 | Trash Pick-Up | 195.57 |
| CBRE - 608844 | 68273 | Engineer Services | 780.00 |
| Systematic Financial Management, LP | 68274 | 2nd Quarter 2013 Management Fee | 61,670.40 |
| Board of Education St. Louis Benefits Trust | 68275 | Office Employees Insurance - Dental | 224.67 |
| Board of Education St. Louis Benefits Trust | 68276 | Office Employees Insurance - Vision | 15.37 |
| Board of Education St. Louis Benefits Trust | 68277 | Office Employees Insurance - Life | 79.75 |
| Christina C. Bennett | 68278 | Reimbursement - NASP Conference, New York | 1,576.95 |
| Date Paid July 12, 2013 | | | |
| Office Payroll | ACH | Office Payroll | 10,844.44 |
| AXA Equitable | ACH | 457 Contributions | 1,485.00 |
| Date Paid July 23, 2013 | | | |
| Absopure Water Company | 68292 | Water Cooler Service | 111.80 |
| Buck Consultants, LLC | 68293 | Actuarial Consulting Services - June & July | 47,166.00 |
| Windstream Communications | 68294 | Telephone, Data | 370.85 |
| AT&T | 68295 | Monthly Service Charge #314 652-1704 033 4 | 259.83 |
| AT&T Long Distance | 68296 | Long Distance Service | 2.36 |
| MSD | 68297 | Sewer Service | 50.07 |
| Parking Management Services, LLC | 68298 | Parking Ticket Validations - May | 36.00 |
| Eazy Business Mailers, Inc. | 68299 | Postage - Election Mailing, Annual Report | 8,468.01 |
| Cintas Corporation | 68300 | Infoport | 377.45 |
| Shred-It | 68301 | Document Shredding | 185.00 |
| Purchase Power | 68302 | Postage | 1,588.91 |
| Andrew Clark | 68303 | Retirement Certificates | 73.50 |
| Angela Banks | 68304 | Reimbursement - NASP Conference, New York | 1,456.82 |
| Sheila P. Goodwin | 68305 | Reimbursement - NASP Conference, New York | 2,461.99 |
| Mondrian Investment Partners Limited | 68306 | 2nd Quarter 2013 Management Fee | 47,437.99 |
| New Amsterdam Partners, LLC | 68307 | 2nd Quarter 2013 Management Fee | 24,508.39 |
| ERNEST Partners, LLC | 68308 | 2nd Quarter 2013 Management Fee | 12,927.85 |
| Holland Capital Management LLC | 63809 | 2nd Quarter 2013 Management Fee | 47,548.41 |
| Loomis, Sayles & Company, L.P. | 68310 | 2nd Quarter 2013 Management Fee | 56,505.15 |
| Causeway Capital Management LLC | 68311 | 2nd Quarter 2013 Management Fee | 73,390.22 |
| TCW Asset Management Company | 68312 | 2nd Quarter 2013 Management Fee | 46,878.46 |
| CBRE - 608844 | 68313 | Building Management Fee, July 2013 | 1,057.21 |
| St. Louis Mat & Linen Company | 68314 | Floor Mats | 16.00 |
| CBRE - 608844 | 68315 | Engineer Services | 546.00 |
| Date Paid July 26, 2013 | | | |
| Office Payroll | ACH | Office Payroll | 10,844.44 |
| AXA Equitable | ACH | 457 Contributions | 1,485.00 |
| TOTAL | | | <u>\$488,516.18</u> |

Public School Retirement System of the City of St. Louis
Travel Activity and Expenses - Calendar Year 2013

| NAME | SPONSOR | DATES | | LOCATION | ADVANCES | REIMBURSEMENTS | | TOTAL | EXP | VOUCHER | NOTES |
|--------------------|---------|------------|------------|-----------------|------------|----------------|------|-------------|-----|---------|-----------------------------------|
| | | FROM | TO | | TO | TO | FROM | COST | RPT | STATUS | PENDING = PENDING BOARD APPROVALS |
| Banks, Angela | NASP | 06/24/2013 | 06/26/2013 | New York, NY | | \$1,456.82 | | \$1,456.82 | Y | Pending | |
| Bennett, Christina | NASP | 06/24/2013 | 06/26/2013 | New York, NY | | \$1,576.95 | | \$1,576.95 | Y | Pending | |
| Clark, Joe | NEPC | 05/13/2013 | 05/15/2013 | Boston, MA | \$1,480.00 | | | \$1,480.00 | | | |
| | NASP | 06/24/2013 | 06/26/2013 | New York, NY | \$1,945.00 | | | \$1,945.00 | | | |
| | NEPC | 05/13/2013 | 05/15/2013 | Boston, MA | | \$1,205.91 | | \$1,205.91 | Y | Pending | |
| Goodwin, Sheila | NASP | 06/24/2013 | 06/26/2013 | New York, NY | | \$2,461.99 | | \$2,461.99 | Y | Pending | |
| | MAPERS | 07/10/2013 | 07/12/2013 | Osage Beach, MO | | \$760.92 | | \$760.92 | Y | | |
| Lawton, Mona | NASP | 06/24/2013 | 06/26/2013 | New York, NY | | | | | | | |
| Levy, Yvette | MAPERS | 07/10/2013 | 07/12/2013 | Osage Beach, MO | | | | | | | |
| Menkara, Thaha | MAPERS | 07/10/2013 | 07/12/2013 | Osage Beach, MO | | | | | | | |
| | NEPC | 05/13/2013 | 05/15/2013 | Boston, MA | \$1,468.64 | \$183.97 | | \$1,652.61 | Y | Pending | |
| Shelton, Charles | NASP | 06/24/2013 | 06/26/2013 | New York, NY | \$2,577.00 | \$3.41 | | \$2,580.41 | Y | Pending | |
| | MAPERS | 07/10/2013 | 07/12/2013 | Osage Beach, MO | \$825.00 | \$63.86 | | \$888.86 | Y | Pending | |
| Sullivan, Rick | | | | | | | | | | | |
| Thomas, Eural | NASP | 06/24/2013 | 06/26/2013 | New York, NY | \$2,325.00 | | | \$2,325.00 | | | |
| Clark, Andrew | NEPC | 05/13/2013 | 05/15/2013 | Boston, MA | \$829.76 | \$326.32 | | \$1,156.08 | Y | Pending | |
| Total Cost | | | | | | | | \$19,490.55 | | | |

MAPERS - Missouri Association of Public Employee Retirement Systems
 NASP - National Association of Securities Professionals
 NCTR - National Council on Teacher Retirement
 NEPC - New England Pension Consultants

Public School Retirement System of the City of St. Louis (PSRSSTL)

2014 Insurance Benefits Renewals

August 19, 2013

Presented by:

Patrick J. Haraden, Principal – Longfellow Benefits

Agenda

- ⇒ Current Plans Overview
- ⇒ 2014 Renewal Summary
- ⇒ Health Care Reform Considerations
- ⇒ Other Renewal Considerations
- ⇒ Questions and Answers
- ⇒ Recommendations/Motions

Executive Summary – 2014 Renewals

- ⇒ There was no change in rates for the 3 GHP medical plans. The only plan design change was the required annual change to the prescription drug coverage gap or “doughnut hole.” [coverage gap is narrowing]
- ⇒ The UHC Dental initial increase was 14.2%, negotiated down to 5%. Met Life proposed a 5.8% decrease and 8% rate caps for 2015 and 2016, no plan design changes.
- ⇒ The VBA vision rates decreased 4% and are guaranteed for 2 years. There were no plan design changes.
- ⇒ SLPS changed medical vendors from UHC to Coventry and POS premium rates decreased for all subscribers. There were no plan design changes.

Current Enrollments – July 2013

⇒ UHC Base Medical Plan

| | |
|--------------------|------------|
| – With Medicare | 896 |
| – Without Medicare | <u>177</u> |
| – Total | 1,073 |

⇒ UHC Buy Up Medical Plan

| | |
|--------------------|------------|
| – With Medicare | 403 |
| – Without Medicare | <u>224</u> |
| – Total | 627 |

Current Enrollments – July 2013

⇒ GHP Medical Plans

| | |
|---------------|------------|
| – Hi Option | 366 |
| – Low Option | 421 |
| – Gold Option | <u>119</u> |
| – Total | 906 |

⇒ UHC Dental Plans

| | |
|---------------|------------|
| – High Option | 2,181 |
| – Low Option | <u>706</u> |
| – Total | 2,887 |

Health Care Reform – 2014 Impact

- ⇒ Phase out of Donut hole continues (coverage gap in certain prescription drug plans) gradually each year until 2020 when it is eliminated completely
- ⇒ Reduction of certain Medicare provider payments
- ⇒ Additional fees and administrative/reporting requirements
 - Some do not apply to the retirement system
- ⇒ Assessments on insurers to pay for healthcare reform will be included in premium rates [approx. 2.5% for 2014]
- ⇒ Marketplaces [exchanges] will be operational for non-Medicare retirees
 - Marketplaces should be more expensive than the current offerings

Other Renewal Considerations

- ⇒ As the cost of Medicare plans increases and subsidy remains constant (i.e., \$80 per month); plans will become increasingly unaffordable for retirees
 - Increasing subsidy impacts future liability calculations
- ⇒ Some retirees choose individual Medicare plans (non-group) and forfeit their monthly subsidy
 - PSRSSTL staff can not assist these retirees with plan selection
 - Currently approximately 1,800 retirees
- ⇒ PSRSSTL Rules and Regulations
 - Retirees who drop group medical plan offered by PSRSSTL or do not enroll initially, can only re-enroll when they experience a qualifying event e.g., Medicare Part A eligibility or involuntary loss of coverage under another employer sponsored, creditable plan

Other Renewal Considerations

- ⇒ Individual Medicare Plan “exchanges” examples
 - Extend Health
 - Select Quote Senior
- ⇒ Provide alternatives to group plans
 - Provides assistance to Medicare eligible retirees in evaluating individual Medicare plans – matches plan to medical/pharmacy utilization
 - Operates as an individual health insurance exchange for multiple insurance companies depending on where the retiree lives
 - Exchange may be a more attractive option as the group Medicare plan premiums continue to increase
- ⇒ Exchanges created under health care reform may assist non-Medicare eligible retirees

Other Renewal Considerations

⇒ Subsidy considerations for exchange model

- Would a subsidy be offered for the exchange plans?
- What would the amount?
- Premium and out of pocket costs
- Administration costs of the plans

⇒ Preliminary exchange research results

- Majority of retirees have access to 3 or more plans
- Total cost savings for most categories of retirees (catastrophic, episodic, healthy) in all plans except Gold Advantage Option plan
- Similar approaches to retiree communications and plan selection assistance
- Exchange requires much longer implementation/education time

Questions and Answers



Motions for Approval

- ⇒ To adopt the insurance renewals for the two SLPS Coventry POS Plans with Express Scripts Rx as presented by the Insurance Consultant.
- ⇒ To adopt the insurance renewals for the GHP Advantage HMO High, Low and Gold Medicare Options, the Met Life Dental High and Low PPO Options, and the VBA Vision Plan renewal as presented by the Insurance Consultant.

Member Monthly Premiums

Plan Year 2013 v. 2014

MEDICAL

| | <i>UnitedHealthcare - 2013 Base</i> | | <i>UnitedHealthcare - 2013 Buy Up</i> | | <i>Group Health Plan (GHP) Medicare Advantage HMO Plan</i> | | <i>Group Health Plan (GHP) Medicare Advantage HMO Plan</i> | | <i>Group Health Plan (GHP) Medicare Advantage HMO Plan</i> | |
|---|--|--|--|--|--|--------------------------------------|--|--------------------------------------|--|--------------------------------------|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| <i>Retiree Only:</i> Retiree With Medicare Retiree Without Medicare | \$300.35 \$542.24 | \$281.68 \$497.69 | \$329.70 \$599.37 | \$307.89 \$548.71 | \$68.00 N/A | \$68.00 N/A | \$215.00 N/A | \$215.00 N/A | \$0.00 N/A | \$0.00 N/A |
| <i>Retiree and Spouse:</i> Retiree and Spouse With Medicare Retiree and Spouse Without Medicare Retiree With Medicare/Spouse Without Medicare Spouse With Medicare/Retiree Without Medicare | \$711.18 \$1,070.58 \$804.34 \$804.34 | \$667.21 \$988.15 \$750.40 \$750.40 | \$764.51 \$1,156.95 \$866.92 \$866.92 | \$714.83 \$1,065.28 \$806.28 \$806.28 | \$216.00 N/A N/A N/A | \$216.00 N/A N/A N/A | \$510.00 N/A N/A N/A | \$510.00 N/A N/A N/A | \$80.00 N/A N/A N/A | \$80.00 N/A N/A N/A |
| <i>Retiree and Spouse With Children:</i> Retiree and Spouse With Medicare Retiree and Spouse Without Medicare Retiree With Medicare/Spouse Without Medicare Spouse With Medicare/Retiree Without Medicare Retiree, Spouse and Child With Medicare | \$1,073.30 \$1,249.71 \$981.31 \$981.31 \$1,073.30 | \$997.16 \$1,154.70 \$915.02 \$915.02 \$997.16 | \$1,158.49 \$1,349.36 \$1,056.98 \$1,056.98 \$1,158.49 | \$1,073.24 \$1,243.69 \$982.59 \$982.59 \$1,073.24 | N/A N/A N/A N/A \$364.00 | N/A N/A N/A N/A \$364.00 | N/A N/A N/A N/A \$805.00 | N/A N/A N/A N/A \$805.00 | N/A N/A N/A N/A \$160.00 | N/A N/A N/A N/A \$160.00 |
| <i>Retiree and Children:</i> Retiree With Medicare Retiree Without Medicare Retiree and Child With Medicare | \$666.66 \$848.74 \$666.66 | \$619.54 \$782.14 \$619.54 | \$720.47 \$918.49 \$720.47 | \$667.59 \$844.42 \$667.59 | N/A N/A \$216.00 | N/A N/A \$216.00 | N/A N/A \$510.00 | N/A N/A \$510.00 | N/A N/A \$80.00 | N/A N/A \$80.00 |
| No Coverage for Non-Medicare members | | | | | | | | | | |

DENTAL

| | <i>United Health Care - 2013 /MetLife - 2014</i> | | | |
|---|---|-------------------------------|--|-------------------------------|
| | <i>PPO Low Option Plan (choose any dentist)</i> | | <i>PPO High Option Plan (choose any dentist)</i> | |
| | 2013 | 2014 | 2013 | 2014 |
| <i>Retiree Only</i> <i>Retiree and One Dependent</i> <i>Retiree and Family</i> | \$11.36 \$33.74 \$66.28 | \$10.34 \$31.40 \$64.02 | \$20.83 \$51.11 \$91.61 | \$19.25 \$47.74 \$85.85 |

VISION

| <i>Vision Benefits of America</i> | | | |
|---|--|----------------------------|----------------------------|
| | | In or Out of Network Plan | |
| | | 2013 | 2014 |
| <i>Retiree Only</i> <i>Retiree and One Dependent</i> <i>Retiree and Family</i> | | \$0.00 \$2.26 \$4.97 | \$0.00 \$2.04 \$4.65 |

Over, for Survivor Monthly Premiums...

Public School Retirement System of the City of St. Louis
Medical, Dental and Vision Insurance Plans

Survivor Monthly Premiums

Plan Year 2013 v. 2014

MEDICAL

| | <i>UnitedHealthcare - 2013 Base</i> | | <i>UnitedHealthcare - 2013 Buy Up</i> | | <i>Group Health Plan (GHP) Medicare Advantage HMO Plan</i> | | <i>Group Health Plan (GHP) Medicare Advantage HMO Plan</i> | | <i>Group Health Plan (GHP) Medicare Advantage HMO Plan</i> | |
|---|---|----------|---|----------|--|----------|--|----------|--|----------|
| | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 | 2013 | 2014 |
| <i>Surviving Spouse or Child Only:</i> | | | | | | | | | | |
| Survivor With Medicare | \$380.35 | \$361.68 | \$409.70 | \$387.89 | \$148.00 | \$148.00 | \$295.00 | \$295.00 | \$80.00 | \$80.00 |
| Survivor Without Medicare | \$622.24 | \$577.69 | \$679.37 | \$628.71 | N/A | N/A | N/A | N/A | N/A | N/A |
| <i>Surviving Spouse and Children:</i> | | | | | | | | | | |
| Survivor With Medicare | \$746.66 | \$699.54 | \$800.47 | \$747.59 | N/A | N/A | N/A | N/A | N/A | N/A |
| Survivor Without Medicare | \$928.74 | \$862.14 | \$998.49 | \$924.42 | N/A | N/A | N/A | N/A | N/A | N/A |
| Survivor and Child With Medicare | \$746.66 | \$699.54 | \$800.47 | \$747.59 | \$296.00 | \$296.00 | \$590.00 | \$590.00 | \$160.00 | \$160.00 |
| No Coverage for Non-Medicare members | | | | | | | | | | |

DENTAL

| | <i>United Health Care - 2013 /MetLife - 2014</i> | | | |
|-----------------------------------|---|---------|--|---------|
| | <i>PPO Low Option Plan (choose any dentist)</i> | | <i>PPO High Option Plan (choose any dentist)</i> | |
| | 2013 | 2014 | 2013 | 2014 |
| <i>Survivor Only</i> | \$17.31 | \$16.29 | \$26.78 | \$25.20 |
| <i>Survivor and One Dependent</i> | \$39.69 | \$37.35 | \$57.06 | \$53.69 |
| <i>Survivor and Family</i> | \$72.23 | \$67.97 | \$97.56 | \$91.80 |

| <i>Vision Benefits of America</i> | | | |
|---------------------------------------|--------|--------|--|
| In or Out of Network Plan | | | |
| | 2013 | 2014 | |
| <i>Survivor Only</i> | \$2.72 | \$2.61 | |
| <i>Survivor and One Dependent</i> | \$5.41 | \$5.19 | |
| <i>Survivor and Family</i> | \$8.12 | \$7.80 | |

Over, for Member Monthly Premiums...

A photograph of a person wearing a blue long-sleeved shirt, holding a stack of several thick books. The person's hand is visible, wearing a thin bracelet and a ring. The background is blurred, suggesting an indoor setting like a library or study.

Public School Retirement System of the City of St. Louis, Missouri

2013 Valuation Results

August 19, 2013

Data – Population as of 1/1/2013

| | 2013 | 2012 | Change |
|----------------------------|--------|--------|--------|
| Retirees and Beneficiaries | 4,516 | 4,540 | -24 |
| Inactives | 1,643 | 1,958 | -315 |
| Actives | | | |
| School District | 3,829 | 3,620 | 209 |
| Charter Schools | 950 | 1,156 | -206 |
| Retirement System | 7 | 8 | -1 |
| Total Actives | 4,786 | 4,784 | 2 |
| Total | 10,945 | 11,282 | -337 |

Data – Member Census Information

| | As of January 1 | |
|--------------------------------------|-----------------|----------|
| | 2013 | 2012 |
| Active Members | | |
| Number | 4,786 | 4,784 |
| Average Age | 44.69 | 44.61 |
| Average Service | 8.92 | 8.90 |
| Average Annual Base Pay | \$47,199 | \$49,062 |
| Vested Terminated Members | | |
| Number | 380 | 438 |
| Average Account Balance | \$29,459 | \$27,287 |
| Non-vested Terminated Members | | |
| Number | 1,263 | 1,520 |
| Average Account Balance | \$ 3,139 | \$ 3,267 |
| Benefit Recipients | | |
| Number | 4,516 | 4,540 |
| Average Age | 73.10 | 72.82 |
| Average Monthly Benefit | \$ 1,838 | \$ 1,813 |

Valuation Results – Summary

| | January 1, 2013 | January 1, 2012 |
|---|------------------|------------------|
| System Assets | | |
| Expense and contingency reserve | \$ 29,181,897 | \$ 29,564,563 |
| Market value, excluding expense & contingency reserve | 867,360,276 | 838,521,455 |
| Actuarial value | 914,494,335 | 925,389,359 |
| System liabilities | | |
| Unfunded actuarial accrued liability | \$ 170,630,323 | \$ 164,929,347 |
| Projected benefit obligation | \$ 1,160,322,263 | \$ 1,155,851,532 |
| Funding Ratio (PBO) | | |
| Actuarial value funding ratio | 78.8% | 80.1% |
| Market value funding ratio | 74.8% | 72.5% |
| Employer Cost (% of active payroll) | 16.50% | 15.07% |

Valuation Results – Annual Required Contribution

| | 2013 Valuation | 2012 Valuation | Increase / (Decrease) |
|---|-------------------|-------------------|--------------------------|
| Normal cost contribution | 20,814,732 | 19,702,945 | 1,111,787 |
| Unfunded Actuarial accrued liability contribution | 16,452,546 | 15,664,653 | 787,893 |
| Annual required contribution (ARC) | 37,267,278 | 35,367,598 | 1,899,680 |
| Covered compensation | 225,893,514 | 234,760,091 | (8,866,577) |
| ARC as % of covered compensation | 16.50% | 15.07% | 1.43% |

Valuation Results – Reconciliation of ARC

| | <u>ARC as a % of payroll</u> |
|------------------------|----------------------------------|
| 2012 valuation cost | 15.07% |
| Demographic experience | 0.27% |
| Asset experience | 1.09% |
| Assumption changes | <u>0.07%</u> |
| 2013 valuation cost | 16.50% |

Increases positive
(Decreases negative)

Valuation Results – ARC By Employer Group

| | Board of Education | Retirement System | Charter Schools | Total |
|--|-----------------------|----------------------|--------------------|-------------|
| Normal cost contribution | 17,624,667 | 47,804 | 3,142,261 | 20,814,732 |
| Actuarial accrued liability contribution | 13,931,029 | 37,786 | 2,483,731 | 16,452,546 |
| Annual required contribution (ARC) | 31,555,696 | 85,590 | 5,625,992 | 37,267,278 |
| Covered compensation | 191,273,081 | 518,799 | 34,101,634 | 225,893,514 |
| ARC as % of covered compensation | 16.50% | 16.50% | 16.50% | 16.50% |

Gain/Loss – Liability

| | <i><u>Dollar amounts in millions</u></i> |
|---|--|
| A. 2012 Projected Benefit Obligation | \$1,155.9 |
| B. Expected 2013 Projected Benefit Obligation | \$1,158.2 |
| C. Actual 2013 Projected Benefit Obligation | <u>\$1,160.3</u> |
| Gain / (Loss): B – C | (\$2.1) |
| Gain / (Loss) as a Percent of Expected | (0.2%) |

Gain/Loss – Assets

| | Actuarial Value of Assets (\$ in millions) | Market Value of Assets (\$ in millions) |
|-------------------------|---|--|
| A. 2012 Assets | \$925.4 | \$868.1 |
| B. Expected 2013 Assets | \$931.9 | \$870.0 |
| C. Actual 2013 Assets | \$914.5 | \$896.5 |
| D. Gain/(Loss): C – B | (\$17.4) | \$26.5 |
| E. Expected Return | 8.0% | 8.0% |
| F. Actual Return | 6.5% | 11.7% |
| G. Gain/(Loss): F – E | (1.5%) | 3.7% |

Actual return calculation assumes mid-year cash flows

GASB Highlights

GASB Board approved final statements amending pension accounting and financial reporting requirements on June 25, 2012

- GASB Statement No. 25: Financial Reporting for Pension Plans amended by GASB Statement No. 67
- GASB Statement No. 27: Accounting for Pensions by Employers amended by GASB Statement No. 68

Highlights of GASB Changes:

- Separates Funding Policy from Accounting Expense
- Balance sheet of employer will reflect the funded status of plan
 - On Market Value basis
 - Entry Age Normal Cost Method must be used
 - Discount rate may be different than funding discount rate
- Additional financial statement notes and supplementary information

Effective Date for Employer Financials

Effective Date of the new standards:

- **Pension plans** are required to meet the new standards for financial reporting under GASB No. 67 for fiscal years beginning after June 15, 2013
 - Fiscal year ended December 31, 2014 for PSRS
 - All required disclosure / supplemental information required other than Pension Expense
- **Employers** are required to meet the new accounting standards under GASB No. 68 for fiscal years beginning after June 15, 2014.
 - Fiscal Year ended December 31, 2015 for PSRS
 - Inclusion of NPL on employer balance sheet rather than NPO
 - Inclusion of Pension Expense in employer income statement
 - All required disclosure / supplemental information required

- 
- Any Final Questions on the Valuation?
 - Request Board Approval of Report Results

PUBLIC SCHOOL RETIREMENT SYSTEM OF THE CITY OF ST. LOUIS, MISSOURI

Actuarial Valuation Report

Plan Year *January 1, 2013 – December 31, 2013*

July 2013

July 2013

Mr. Andrew Clark
Executive Director
PSRS of the City of St. Louis
3641 Olive Street, Suite 300
St. Louis, MO 63108-3601

Dear Members of The Public School Retirement System of the City of St. Louis Board:

Actuarial Certification

The annual actuarial valuation required for the Public School Retirement System of the City of St. Louis has been prepared as of January 1, 2013 by Buck Consultants. The purposes of the report are to:

- (1) determine the required annual contributions from the board of education, the retirement system, and the charter schools;
- (2) present the valuation results of the System as of January 1, 2013;
- (3) develop information used for reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

This report is submitted in accordance with Section 169.450-16 Revised Statutes of Missouri (R.S. Mo.). The required contribution to the System from the board of education, the retirement system, and the charter schools is computed in accordance with Section 169.490 R.S. Mo. The amount of the required contribution is stated in Section 1.3 of this report.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data and financial information provided to us by the System, to determine a sound value for the System liability. The employee data has not been audited, but it has been reviewed and found to be consistent, both internally and with prior years' data.

This actuarial valuation is based on the same actuarial assumptions and methods as those used in the prior actuarial valuation, except for those noted in Section 4.8 under Changes from the Prior Valuation. A summary of all assumptions and methods is presented in Section 4.8 of this report. All assumptions used in this valuation are as adopted by the Board. The assumptions fairly represent past and anticipated future experience of the System. The assumptions used are individually reasonable and reasonable in the aggregate.

Future contribution requirements may differ from those determined in the valuation because of:

- (1) differences between actual experience and anticipated experience based on the assumptions;
- (2) changes in actuarial assumptions or methods;
- (3) changes in statutory provisions;
- (4) differences between actuarially required contributions and actual contributions.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein, and are available to answer questions regarding this report.

We believe that the assumptions and methods used for funding purposes and for the disclosures presented in this report satisfy the parameter requirements set forth in the Government Accounting Standards Board (GASB) Statement No. 25. We believe that this report conforms with the requirements of the Missouri statutes, and where applicable, other federal and accounting laws, regulations and rules, as well as generally accepted actuarial principles and practices.

Sincerely,

Stephen B. Siepman, FSA, EA, MAAA
Principal, Consulting Actuary

Troy Jaros, FSA, EA, MAAA
Consultant, Retirement Actuary

Contents

| | |
|--|-----------|
| Report Highlights..... | 1 |
| Summary and Comparison of Principal Valuation Results..... | 3 |
| Analysis of the Valuation | 4 |
| Section 1: <i>Valuation Results</i> | 5 |
| 1.1 Determination of the Unfunded Frozen Actuarial Accrued Liability | 6 |
| 1.2 Determination of Normal Cost Contribution..... | 7 |
| 1.3 Required Annual Contribution | 8 |
| 1.4 Actuarial Balance Sheet as of January 1, 2013 | 9 |
| 1.5 Projected Benefit Obligation Funding Ratios..... | 10 |
| 1.6 Projected Benefit Obligation Funded Status | 11 |
| 1.7 Prioritized Solvency Test | 12 |
| Section 2: <i>Valuation of System's Assets</i>..... | 13 |
| 2.1 Development of the Actuarial Value of Assets | 14 |
| 2.2 The Expense and Contingency Reserve | 15 |
| 2.3 Investment Performance | 16 |
| Section 3: <i>Information Required by GASB No. 25</i>..... | 17 |
| 3.1 Schedule of Employer Contributions | 18 |
| 3.2 Schedule of Funding Progress | 19 |
| 3.3 Actuarial Assumptions, Methods and Additional Information | 20 |
| Section 4: <i>Basis of the Valuation</i>..... | 21 |
| 4.1 Summary of Plan Provisions | 22 |
| 4.2 Legislative History of the Retirement System..... | 25 |
| 4.3 Changes in System Participation..... | 31 |
| 4.4 Member Census Information | 32 |
| 4.5 Distributions of Active Members | 33 |
| 4.6 Distributions of Inactive Members | 35 |
| 4.7 Schedule of Retirees and Beneficiaries Added/Removed From Rolls | 36 |
| 4.8 Summary of Methods and Assumptions..... | 37 |
| 4.9 Definition of Actuarial Terms | 48 |

Report Highlights

This report has been prepared by Buck Consultants to:

- Present the results of a valuation of the Public School Retirement System of the City of St. Louis as of January 1, 2013;
- Determine the required contribution rate for 2014;
- Provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

This report is divided into four sections. Section 1 contains the results of the valuation. It includes the experience of the System during the 2012 plan year, the actuarially required costs, and funded levels.

Section 2 contains asset information. It includes market value of assets, the calculation of actuarial value of assets, the contingency reserve, and asset returns.

Section 3 provides reporting and disclosure information for financial statements, governmental agencies and other interested parties.

Section 4 describes the basis of the valuation. It summarizes the System provisions, provides information relating to the System members, and describes the funding methods and actuarial assumptions used in determining liabilities and costs. Also included is historical information about the System.

Experience Gains and losses

Under the actuarial funding method used to determine the contribution, actuarial gains (or losses) result in a decrease (or increase) in the normal cost rate. Actuarial gains (or losses) result from differences between the actual experience of the System and the expected experience based upon the actuarial assumptions. Annual gains (or losses) should be expected because short-term deviations from expected long-term average experience are common.

For 2013, actuarial losses due to plan experience were \$18.0 million. Roughly \$17.4 million of the loss is attributable to the System's actuarial rate of return on assets which was 6.5%, 1.5 percentage points less than the assumed rate of return of 8.0%. By comparison, the rate of return on the market value of assets was 11.7%. The difference in these returns is because the actuarial value of assets has not yet fully recognized the asset losses that occurred during recent years. At January 1, 2013, the actuarial value of assets at \$914 million remains above market value of assets (excluding the expense and contingency reserve) by approximately \$47 million. About \$0.6 million of the loss is attributable to demographic changes.

Assumption Changes

For the 2013 valuation, the mortality assumption was changed. A detailed description of the changes appears in section 4.8. In total, the assumption changes increased actuarial liability by almost \$1.6 million.

Normal cost rate

The normal cost is determined annually and equals the product of the normal cost rate times covered payroll. For 2013, the annual normal cost due December 31, 2013 is \$20,814,732, as compared to \$19,702,945 for 2012, an increase primarily due to the aforementioned actuarial loss and change of assumptions. The annual normal cost rate increased from 8.07% to 8.86% due to the experience losses and the changes in the actuarial assumptions. Covered payroll decreased from \$234.8 million to \$225.9 million.

Accrued liability amortization

The actuarial accrued liability contribution is determined as the amount necessary to amortize the remaining Unfunded Frozen Actuarial Accrued Liability (UFAAL) over a period of 30 years from January 1, 2006, when the Board of Trustees acted to redetermine the UFAAL. This portion of the contribution only changes to reflect changes in benefits, changes in actuarial assumptions and methods, and variations in the remaining UFAAL due to deviations between actual and expected contributions. Employer contributions for 2012 were \$3.6 million more than the annual required contribution, which reduced the UFAAL more than expected. However, the changes in actuarial assumptions from the previous valuation increased the UFAAL by \$1.6 million. As a result, the amortization payment is increased from \$15,664,653 to \$16,452,546. The amortization payment component of the contribution rate increased from 6.7% to 7.3% of covered payroll.

Required contribution and timing

In 2001, the Board of Education agreed to institute a one-year lag for future years. Therefore, this actuarial valuation is used to determine the actual contribution rate for 2014. The dollar amount of the actual contribution increased to \$37,267,278 for 2014 from \$35,367,598 for 2013. As a percentage of covered payroll, the contribution rate for 2014 increased to 16.50% from 15.07% for 2013.

Summary and Comparison of Principal Valuation Results

Annual Required Contribution

| | Board of Education | Retirement System | Charter Schools | Total |
|--|-----------------------|----------------------|--------------------|----------------------|
| 2013 | | | | |
| Normal cost contribution | \$ 17,624,667 | \$ 47,804 | \$ 3,142,261 | \$ 20,814,732 |
| Actuarial accrued liability contribution | <u>13,931,029</u> | <u>37,786</u> | <u>2,483,731</u> | <u>\$ 16,452,546</u> |
| Annual required contribution (ARC) | 31,555,696 | 85,590 | 5,625,992 | \$ 37,267,278 |
| Covered payroll | 191,273,081 | 518,799 | 34,101,634 | \$ 225,893,514 |
| ARC as % of covered payroll | 16.50% | 16.50% | 16.50% | 16.50% |
| 2012 | | | | |
| Normal cost contribution | \$ 15,577,622 | \$ 50,896 | \$ 4,07,427 | \$ 19,702,945 |
| Actuarial accrued liability contribution | <u>12,384,850</u> | <u>40,465</u> | <u>3,239,338</u> | <u>\$ 15,664,653</u> |
| Annual required contribution | 27,962,472 | 91,361 | 7,313,765 | \$ 35,367,598 |
| Covered payroll | 185,606,968 | 606,427 | 48,546,696 | \$ 234,760,091 |
| ARC as % of covered payroll | 15.07% | 15.07% | 15.07% | 15.07% |

| | January 1, 2013 | January 1, 2012 |
|---|-----------------|-----------------|
| System Assets | | |
| Expense and contingency reserve | \$ 29,181,897 | \$ 29,564,563 |
| Market value, excluding expense & contingency reserve | 867,360,276 | 838,521,455 |
| Actuarial value | 914,494,335 | 925,389,359 |
| System liabilities | | |
| Unfunded actuarial accrued liability | \$ 170,630,323 | \$ 164,929,347 |
| Projected benefit obligation | \$1,160,322,263 | \$1,155,851,532 |
| PBO Funding Ratio | | |
| Actuarial value funding ratio | 78.8% | 80.1% |
| Market value funding ratio | 74.8% | 72.5% |

Analysis of the Valuation

(1) Investment Experience

Our actuarial calculations were based upon the assumption that the System's assets earn 8.00%. The approximate market value rate of return during 2012 was 11.7%. The approximate actuarial value rate of return was 6.5%.

(2) Demographic Experience

The number of active members increased from 4,784 to 4,786 for the period. The average age of active members increased by 0.03 years, the average service increased by 0.02 years, and the average annual salary decreased \$1,861. There were small changes in the inactive statistics as well. The membership statistics are found in Sections 4.3 through 4.6 of this report. In addition, a new exhibit in Section 4.7 shows the Schedule of Retirees and Beneficiaries Added/Removed from Rolls.

(3) Salary Increases

The average annual salary decreased 3.8% between January 1, 2012 and January 1, 2013. Total annual covered payroll decreased 3.8% between January 1, 2012 and January 1, 2013.

(4) Changes in Methods from the Prior Valuation

There have been no changes in methods since the prior valuation.

(5) Changes in Assumptions from the Prior Valuation

Assumptions that were changed were the mortality tables. Details of these assumption changes can be found in Section 4.7. The net effect of changes was to increase the actuarially required employer contribution by 0.07% of covered payroll.

(6) Changes in Benefit Provisions from the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.

(7) Other Changes

There have been no other changes since the prior valuation.

(8) Summary

The overall effect of experience during the period, along with the changes in assumptions, resulted in a decrease in the funding ratio from 80.1% to 78.8%. The total contribution rate increased from 15.07% to 16.50% of covered payroll.

Section 1

Valuation Results

This section sets forth the results of the actuarial valuation.

| | |
|-------------|---|
| Section 1.1 | Develops the actuarial accrued liability contribution |
| Section 1.2 | Develops the normal cost contribution |
| Section 1.3 | Develops the required annual contribution |
| Section 1.4 | Actuarial balance sheet as of January 1, 2013 |
| Section 1.5 | Projected benefit obligation funding ratios |
| Section 1.6 | Projected benefit obligation funded status |
| Section 1.7 | Prioritized solvency test |

Section 1 (continued)

1.1 Determination of the Unfunded Frozen Actuarial Accrued Liability

| | |
|--|----------------|
| 1. Unfunded frozen actuarial accrued liability as of January 1, 2012 | \$ 164,929,347 |
| 2. Normal cost due January 1, 2012 | 18,945,139 |
| 3. Interest on (1) and (2) at 8.0% to December 31, 2012 | 14,709,959 |
| 4. Employer contributions for 2012 | 29,551,964 |
| 5. Interest on (4) at 8.0% to December 31, 2012 | 0 |
| 6. Supplement for changes in actuarial assumptions or benefits | 1,597,842 |
| 7. Unfunded frozen actuarial accrued liability as of January 1, 2013, (1) + (2) + (3) – (4) – (5) + (6) | 170,630,323 |
| 8. Actuarial accrued liability contribution for 2013 | 16,452,546 |

Section 1 (continued)

1.2 Determination of Normal Cost Contribution

| | | |
|--|----------------|------------------|
| 1. Actuarial present value of future benefits | | |
| a. Active participants | | |
| i. Retirement benefits | \$ 404,623,218 | |
| ii. Vested withdrawal benefits | 39,723,393 | |
| iii. Refund of contributions | 3,777,550 | |
| iv. Survivor benefits | 5,560,756 | |
| v. Disability benefits | 10,398,190 | |
| Total | | \$ 464,083,107 |
| b. Retired participants and beneficiaries | | 828,656,539 |
| c. Inactive participants | | |
| i. Vested participants | 16,791,553 | |
| ii. Nonvested participants | 3,964,473 | |
| Total | | 20,756,026 |
| d. Total actuarial present value of future benefits | | \$ 1,313,495,672 |
| 2. Unfunded frozen actuarial accrued liability as of January 1, 2013 | | 170,630,323 |
| 3. Actuarial value of assets as of December 31, 2012 | | 914,494,335 |
| 4. Actuarial present value of future participant contributions | | 82,391,181 |
| 5. Actuarial present value of future employer normal costs, (1)(d) – (2) – (3) – (4), not less than \$0 | | 145,979,833 |
| 6. Actuarial present value of future covered payroll of current participants | | 1,647,823,622 |
| 7. Employer normal cost rate, (5) / (6) | | 8.86% |
| 8. Total covered payroll | | 225,893,514 |
| 9. Normal cost for 2013, (7) x (8) | | 20,014,165 |
| 10. Normal cost contribution due by December 31, 2013, (9) x [1 + (0.08 x 0.5)] | | 20,814,732 |

Section 1 (continued)**1.3 Required Annual Contribution**

| | Board of Education | Retirement System | Charter Schools | Total |
|--|-----------------------|----------------------|--------------------|----------------------|
| Normal cost contribution | \$ 17,624,667 | \$ 47,804 | \$ 3,142,261 | \$ 20,814,732 |
| Actuarial accrued liability contribution | <u>13,931,029</u> | <u>37,786</u> | <u>2,483,731</u> | <u>\$ 16,452,546</u> |
| Annual required contribution (ARC) | 31,555,696 | 85,590 | 5,625,992 | \$ 37,267,278 |
| Covered payroll | 191,273,081 | 518,799 | 34,101,634 | \$ 225,893,514 |
| ARC as % of covered payroll | 16.50% | 16.50% | 16.50% | 16.50% |

Section 1 (continued)**1.4 Actuarial Balance Sheet as of January 1, 2013****Actuarial assets**

| | |
|---|------------------|
| Actuarial value of present assets | \$ 914,494,335 |
| Actuarial present value of future participant contributions | 82,391,181 |
| Actuarial present value of future employer contributions for: | |
| Normal costs | 145,979,833 |
| Unfunded actuarial accrued liability | 170,630,323 |
| Total present and future assets | \$ 1,313,495,672 |

Actuarial liabilities

| | |
|--|------------------|
| Actuarial present value of benefits now payable | \$ 828,656,539 |
| Actuarial present value of benefits payable in the future: | |
| Active participants | \$ 464,083,107 |
| Terminated vested participants | 16,791,553 |
| Terminated non-vested participants | 3,964,473 |
| Total payable in the future | 484,839,133 |
| Total liabilities for benefits | \$ 1,313,495,672 |
| Surplus / (deficit) | 0 |

Section 1 (continued)

1.5 Projected Benefit Obligation Funding Ratios

The funding objective of the System is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percentage of covered payroll.

Funding ratios provide a measure of how much progress has been made towards achieving this objective. For this purpose, the System's liabilities are determined using the projected benefit obligation cost method. Under this method, liabilities are determined for each participant using only service already performed, but anticipating the impact of future salary growth on the benefits attributable to current active participants.

Section 1.6 provides a comparison of this liability measure to the value of assets to produce a snapshot measure of the System's funding ratio.

Another way to check the funding progress of the System is through a prioritized solvency test. Section 1.7 illustrates the history of the System's funding progress under this test.

In a prioritized solvency test, the plan's present assets (cash and investments) are sequentially allocated and compared three priorities of liabilities as follows:

- Liability 1: Active participant contributions, accumulated with interest;
- Liability 2: The liabilities for future benefits to current inactive participants and beneficiaries; and
- Liability 3: The liabilities for future benefits to current active participants for prior service.

Ideally, progress in funding of these liability groups will normally be exhibited with Liability 1 attaining 100% coverage first, then Liability 2, and finally Liability 3. Note that 100% funding of Liability 3 does not mean that the System has completed its funding of benefits since additional benefits typically are expected to be earned in the future.

Section 1 (continued)

1.6 Projected Benefit Obligation Funded Status

As of January 1, 2013 the projected benefit obligation was:

| | |
|---|------------------|
| 1. Retired members and beneficiaries currently receiving benefits and terminated members not yet receiving benefits | \$ 849,412,565 |
| a. Current active participants | |
| i. Accumulated member contributions, including interest | 120,355,959 |
| ii. Employer-financed benefits | 190,553,739 |
| Total projected benefit obligation | \$ 1,160,322,263 |

As of January 1, 2013 the projected benefit obligation was funded as follows:

| | |
|---|----------------|
| 2. Net assets available for benefits at actuarial value | \$ 914,494,335 |
| 3. Unfunded projected benefit obligation | 245,827,928 |
| 4. Actuarial value funding ratio, (2) / (1) | 78.8% |
| 5. Net assets available for benefits at market value | \$ 867,360,276 |
| 6. Unfunded projected benefit obligation | 292,961,987 |
| 7. Market value funding ratio, (5) / (1) | 74.8% |

Section 1 (continued)

1.7 Prioritized Solvency Test

| Valuation date January 1 | Active participants' accumulated contributions | Retirees, beneficiaries and inactive participants | Active participants (employer-financed) | Valuation assets | Percent covered by valuation assets | | |
|-----------------------------|--|---|---|------------------|-------------------------------------|------|------|
| | (1) | (2) | (3) | | (1) | (2) | (3) |
| 1997 | 118,041,749 | 272,393,748 | 251,827,653 | 598,638,356 | 100% | 100% | 83% |
| 1998 | 122,227,173 | 296,455,647 | 252,445,749 | 644,429,672 | 100% | 100% | 89% |
| 1999 | 130,705,014 | 276,290,128 | 303,953,494 | 694,250,672 | 100% | 100% | 95% |
| 2000 | 129,398,364 | 353,852,977 | 288,213,016 | 770,090,498 | 100% | 100% | 100% |
| 2001 | 127,086,325 | 414,052,293 | 269,590,438 | 828,097,298 | 100% | 100% | 100% |
| 2002 | 116,506,785 | 476,104,516 | 372,221,726 | 861,128,076 | 100% | 100% | 72% |
| 2003 | 115,570,837 | 492,633,382 | 361,818,972 | 873,260,102 | 100% | 100% | 73% |
| 2004 | 106,021,476 | 528,287,121 | 364,459,284 | 901,996,455 | 100% | 100% | 73% |
| 2005 | 89,710,662 | 518,880,414 | 368,306,240 | 935,328,638 | 100% | 100% | 89% |
| 2006 | 90,001,111 | 661,353,685 | 319,920,373 | 983,828,243 | 100% | 100% | 73% |
| 2007 | 96,223,413 | 712,467,372 | 305,409,824 | 1,003,428,983 | 100% | 100% | 64% |
| 2008 | 98,112,123 | 781,006,957 | 249,244,208 | 1,014,923,381 | 100% | 100% | 54% |
| 2009 | 104,576,264 | 801,995,237 | 187,035,147 | 963,851,408 | 100% | 100% | 31% |
| 2010 | 110,054,510 | 805,831,292 | 195,185,151 | 950,709,944 | 100% | 100% | 18% |
| 2011 | 103,178,297 | 842,643,351 | 169,510,764 | 944,356,735 | 100% | 100% | 0% |
| 2012 | 116,268,566 | 850,498,527 | 189,084,439 | 925,389,359 | 100% | 95% | 0% |
| 2013 | 120,355,959 | 849,412,565 | 190,553,739 | 914,494,335 | 100% | 93% | 0% |

Section 2

Valuation of the System's Assets

This section of the report shows the development of the actuarial value of the assets of the System and provides information regarding the expense and contingency reserve, investment results and the various assets of the System.

The amount of assets used in the actuarial valuation is known as the "actuarial value of assets." The method is discussed in the summary of methods and assumptions, section 4.8. The development of the actuarial value of assets is shown in section 2.1. An important element in the development of the actuarial value of assets is the expense and contingency reserve. The amount of the reserve is determined pursuant to a policy adopted by the Board of Trustees. The history of the reserve is presented in section 2.2.

As shown in section 2.3, the fund had a rate of return of 6.54% on an actuarial value basis, which is 1.46% below the assumed rate of return of 8.00%. Normally, in accordance with Rule X, amounts would have been transferred from the investment contingency portion of the reserve, because the preliminary actuarial rate of return would have been less than the assumed rate of return by more than 1%. However, the contingency reserve was exhausted at January 1, 2009, so no additional amounts are available.

The rate of return on an actuarial value basis is intended to be a more stable rate of return and fluctuate less than rates of return on a market value basis. Thus, the rate of return on an actuarial basis is not always a fair measure of the annual investment performance of the fund. Another indicator of actual performance during the year is the rate of return on a market value basis of 11.72%, also presented in section 2.3.

Section 2 (continued)

2.1 Development of the Actuarial Value of Assets

| | |
|--|----------------|
| 1. Actuarial value of assets as of January 1, 2012 | \$ 925,389,359 |
| 2. Participant contributions | 12,147,663 |
| 3. Employer contributions | 29,551,964 |
| 4. Benefit payments and expenses | 110,892,492 |
| 5. Investment increment at 8.0%, $8\% \times \{(1) + .5 \times [(2) - (4)]\}$ | 70,081,356 |
| 6. Expected actuarial value on January 1, 2013, (1) + (2) + (3) – (4) + (5) | 926,277,850 |
| 7. Market value of assets on January 1, 2013 | 896,542,173 |
| 8. Expense and contingency reserve on January 1, 2013, prior to adjustment | 29,181,897 |
| 9. Adjustment to the investment contingency reserve | 0 |
| 10. Excess of market value over expected actuarial value, (7) – (6) – (8) – (9) | (58,917,574) |
| 11. Market value adjustment, $20\% \times (10)$ | (11,783,515) |
| 12. Actuarial value of assets as of January 1, 2013, (6) + (11) | 914,494,335 |

Section 2 (continued)

2.2 The Expense and Contingency Reserve

Effective January 1, 1996, the Board of Trustees revised Rule X, which governs the determination of the amount of the expense and contingency reserve. The expense portion of the reserve is the sum of:

1. The estimated annual operating expenses for the ensuing year;
2. An amount equal to the liability for non-insurance supplements;
3. An amount equal to the liability for insurance supplements for those participants participating in the program on January 1; and
4. The estimated amount of insurance supplements to be paid for participants expected to retire and participate in the program during the ensuing year.

The investment contingency portion of the reserve is intended to help cover significant shortfalls in the actuarial rate of return. When a shortfall of more than 1% occurs, a portion of the reserve is released equal to one half of the amount of the shortfall up to 2% plus any remaining shortfall. When the rate of return exceeds the assumed rate of return by more than 1%, the reserve is increased subject to a maximum reserve of 5% of the market value of the Retirement Fund. The addition equals one half of the amount of the excess up to 2% plus any remaining excess.

Since the actuarial return on assets was less than 7% during 2012, a portion of the reserve would normally be released. However, since the entire contingency reserve was released in 2009, nothing further is available to be released.

Below is a history of the expense and contingency reserve:

| January 1 | Expense reserve | Investment contingency reserve | Total expense and contingency reserve |
|-----------|-----------------|--------------------------------|---------------------------------------|
| 1996 | \$33,702,346 | \$ 0 | \$33,702,346 |
| 1997 | 25,403,190 | 5,220,821 | 30,624,011 |
| 1998 | 30,891,555 | 24,100,041 | 54,991,596 |
| 1999 | 22,142,759 | 45,972,067 | 68,114,826 |
| 2000 | 27,992,032 | 50,003,862 | 77,995,894 |
| 2001 | 29,837,776 | 50,003,743 | 79,841,519 |
| 2002 | 23,527,529 | 50,003,743 | 73,531,272 |
| 2003 | 24,952,255 | 37,759,976 | 62,712,231 |
| 2004 | 26,028,780 | 37,759,976 | 63,788,756 |
| 2005 | 27,170,188 | 45,115,876 | 72,286,064 |
| 2006 | 32,534,770 | 45,115,876 | 77,650,646 |
| 2007 | 29,864,946 | 50,732,410 | 80,597,356 |
| 2008 | 31,987,370 | 57,234,574 | 89,221,944 |
| 2009 | 30,555,388 | 0 | 30,555,388 |
| 2010 | 29,903,107 | 0 | 29,903,107 |
| 2011 | 29,480,465 | 0 | 29,480,465 |
| 2012 | 29,564,563 | 0 | 29,564,563 |
| 2013 | 29,181,897 | 0 | 29,181,897 |

Section 2 (continued)

2.3 Investment Performance

There are several different methods of approximating the rates of return on investments of the trust fund. Following is a brief comparison of the actuarial assumed rate of return as compared with rates of return on market and actuarial value bases:

a. Market Value Basis

The rate of return on a market value basis is the ratio of the appreciation (or depreciation) of assets less contributions plus disbursements to the market value at the beginning of the year plus the average of the receipts and disbursements made during the year. This may be approximated as follows:

| | | |
|------|---|----------------|
| i. | A = Market value of assets as of January 1, 2012 | \$ 868,086,018 |
| ii. | B = Market value of assets as of January 1, 2013 | 896,542,173 |
| iii. | C = Contributions during the period | 41,699,627 |
| iv. | D = Disbursements during the period | 110,892,492 |
| v. | Rate of return: $\frac{B - A + D - C}{A + \frac{1}{2} (C - D)}$ | 11.72% |
| vi. | Actuarial assumed rate of return for 2012 | 8.00% |
| vii. | Difference between actual and assumed rates of return, (v) – (vi) | 3.72% |

b. Actuarial Value Basis

The rate of return on an actuarial value basis is approximated using the same method:

| | | |
|------|---|----------------|
| i. | A = Actuarial value of assets as of January 1, 2012 | \$ 925,389,359 |
| ii. | B = Actuarial value of assets as of January 1, 2013 | 914,494,335 |
| iii. | C = Contributions during the period | 41,699,627 |
| iv. | D = Disbursements during the period | 110,892,492 |
| v. | Rate of return: $\frac{B - A + D - C}{A + \frac{1}{2} (C - D)}$ | 6.54% |
| vi. | Actuarial assumed rate of return for 2012 | 8.00% |
| vii. | Difference between actual and assumed rates of return, (v) – (vi) | -1.46% |

Section 3

Information Required by GASB No. 25

This section contains supplementary information on retirement benefits that is required to be disclosed in financial statements to comply with Statements No. 25 of the Governmental Accounting Standards Board (GASB No. 25).

Section 3.1 Shows the schedule of employer contributions.

Section 3.2 Shows the schedule of funding progress.

Section 3.3 Shows the actuarial assumptions, methods and additional information.

Section 3 (continued)

3.1 Schedule of Employer Contributions

The following information is required to satisfy the reporting requirements of the Governmental Accounting Standards Board Statement No. 25 on Financial Reporting for Deferred Benefit Plans.

The following table develops the percentage of the employer's annual required contribution that was actually made.

| Fiscal Year Ending December 31 | Annual Required Contribution (ARC) | Actual Contribution | Percentage of ARC Contributed |
|-----------------------------------|---------------------------------------|---------------------|----------------------------------|
| 1993 | \$ 14,098,562 | \$ N/A | 98.4% |
| 1994 | \$ 15,441,488 | \$ N/A | 99.2% |
| 1995 | \$ 15,087,519 | \$ N/A | 99.6% |
| 1996 | \$ 16,619,187 | \$ N/A | 100.1% |
| 1997 | \$ 16,876,759 | \$ N/A | 100.2% |
| 1998 | \$ 15,328,067 | \$ N/A | 111.1% |
| 1999 | \$ 13,906,270 | \$ N/A | 124.5% |
| 2000 | \$ 15,543,984 | \$ N/A | 112.3% |
| 2001 | \$ 18,168,580 | \$ N/A | 100.2% |
| 2002 | \$ 19,076,442 | \$ N/A | 100.6% |
| 2003 | \$ 19,517,288 | \$ N/A | 101.2% |
| 2004 | \$ 19,210,506 | \$ N/A | 132.0% |
| 2005 | \$ 19,364,705 | \$ N/A | 121.4% |
| 2006 | \$ 14,414,133 | \$ N/A | 114.9% |
| 2007 | \$ 17,311,658 | \$ 22,445,608 | 129.7% |
| 2008 | \$ 21,021,316 | \$ 27,853,996 | 132.5% |
| 2009 | \$ 21,406,949 | \$ 28,598,502 | 133.6% |
| 2010 | \$ 19,407,722 | \$ 26,075,146 | 134.4% |
| 2011 | \$ 24,264,182 | \$ 28,720,193 | 118.4% |
| 2012 | \$ 25,928,658 | \$ 29,551,964 | 114.0% |
| 2013 | \$ 35,367,598 | \$ * | * |
| 2014 | \$ 37,267,278 | \$ * | * |

*To be determined at the end of the year.

Section 3 (continued)

3.2 Schedule of Funding Progress

The following information is required to satisfy the reporting requirements of the Governmental Accounting Standards Board Statement No. 25 on Financial Reporting for Deferred Benefit Plans.

The exhibit below calculated the unfunded accrued liability as a percentage of payroll.

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liabilities (AAL) (b) | Unfunded AAL (UAAL) (b - a) | Funded Ratio (a / b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b - a) / c) |
|-----------------------------|-------------------------------------|---|-----------------------------------|-------------------------|------------------------|---|
| 1/1/1993 | \$ 458,279,727 | \$ 530,766,832 | \$ 72,487,105 | 86.3% | \$ 194,555,489 | 37.3% |
| 1/1/1994 | \$ 487,385,302 | \$ 557,941,103 | \$ 70,555,801 | 87.4% | \$ 202,384,485 | 34.9% |
| 1/1/1995 | \$ 519,088,399 | \$ 588,157,615 | \$ 69,069,216 | 88.3% | \$ 207,113,839 | 33.3% |
| 1/1/1996 | \$ 562,177,274 | \$ 664,807,425 | \$ 102,630,151 | 84.6% | \$ 206,935,682 | 49.6% |
| 1/1/1997 | \$ 598,638,356 | \$ 716,727,527 | \$ 118,089,171 | 83.5% | \$ 210,228,288 | 56.2% |
| 1/1/1998 | \$ 644,429,672 | \$ 759,687,878 | \$ 115,258,206 | 84.8% | \$ 210,843,186 | 54.7% |
| 1/1/1999 | \$ 694,250,672 | \$ 846,891,006 | \$ 152,640,334 | 82.0% | \$ 215,602,351 | 70.8% |
| 1/1/2000 | \$ 770,090,498 | \$ 937,669,100 | \$ 167,578,602 | 82.1% | \$ 216,699,483 | 77.3% |
| 1/1/2001 | \$ 828,097,298 | \$ 1,022,042,819 | \$ 193,945,521 | 81.0% | \$ 235,087,151 | 82.5% |
| 1/1/2002 | \$ 861,128,076 | \$ 1,069,789,813 | \$ 208,661,737 | 80.5% | \$ 243,880,038 | 85.6% |
| 1/1/2003 | \$ 873,260,102 | \$ 1,063,209,205 | \$ 189,949,103 | 82.1% | \$ 283,935,810 | 66.9% |
| 1/1/2004 | \$ 901,996,455 | \$ 1,074,259,628 | \$ 172,263,173 | 84.0% | \$ 255,317,974 | 67.5% |
| 1/1/2005 | \$ 935,328,638 | \$ 1,084,409,302 | \$ 149,080,664 | 86.3% | \$ 240,185,055 | 62.1% |
| 1/1/2006 | \$ 983,828,243 | \$ 1,122,583,775 | \$ 138,755,532 | 87.6% | \$ 227,035,801 | 61.1% |
| 1/1/2007 | \$ 1,003,428,983 | \$ 1,150,263,339 | \$ 146,834,356 | 87.2% | \$ 222,387,289 | 66.0% |
| 1/1/2008 | \$ 1,014,923,381 | \$ 1,158,921,113 | \$ 143,997,732 | 87.6% | \$ 225,190,968 | 63.9% |
| 1/1/2009 | \$ 963,851,408 | \$ 1,099,891,716 | \$ 136,040,308 | 87.6% | \$ 234,582,326 | 58.0% |
| 1/1/2010 | \$ 950,709,944 | \$ 1,076,002,070 | \$ 125,292,126 | 88.4% | \$ 241,958,133 | 51.8% |
| 1/1/2011 | \$ 944,356,735 | \$ 1,066,270,852 | \$ 121,914,117 | 88.6% | \$ 218,308,239 | 55.8% |
| 1/1/2012 | \$ 925,389,359 | \$ 1,090,318,706 | \$ 164,929,347 | 84.9% | \$ 234,760,091 | 70.3% |
| 1/1/2013 | \$ 914,494,335 | \$ 1,085,124,658 | \$ 170,630,323 | 84.3% | \$ 225,893,514 | 75.5% |

Section 3 (continued)**3.3 Actuarial Assumptions, Methods and Additional Information**

| | |
|---------------------------------------|-----------------------------|
| Valuation Date | January 1, 2013 |
| Actuarial Cost Method | Frozen Entry Age |
| Amortization Method | Level Dollar, Closed Period |
| Equivalent Single Amortization Period | 23 years |
| Asset Valuation Method | Assumed Yield Method |
| Actuarial Assumptions: | |
| Investment rate of return* | 8.00% |
| Participant account crediting rate | 5.00% |
| Projected salary increases | 4.50% |
| *Includes inflation at | 3.50% |
| Cost-of-living adjustment | 0.00% |

Section 4

Basis of the Valuation

In this section, the basis of the valuation is presented and described. This information – the provisions of the System and the census of members – is the foundation of the valuation, since these are the present facts upon which benefit payments will depend.

A summary of the System's provisions is provided in Section 4.1, the legislative history of the System is provided in Section 4.2, and member census information is shown in Section 4.3 to Section 4.7.

The valuation is based upon the premise that the System will continue in existence, so that future events must also be considered. These future events are assumed to occur in accordance with the actuarial assumptions and concern such events as the earnings of the fund; the number of members who will retire, die or terminate their services; their ages at such termination and their expected benefits.

The actuarial assumptions and the actuarial cost method, or funding method, which have been adopted to guide the sponsor in funding the System in a reasonable and acceptable manner, are described in Section 4.8.

A guide to actuarial terminology used in this report is included as Section 4.9.

Section 4 (continued)

4.1 Summary of Plan Provisions

Participants

All persons regularly employed by the board of education, charter schools, and employees of the board of trustees are in the System.

Retirement age

Normal

Age 65 or any age if age plus the years of credited service equals or exceeds 85 (Rule of 85)

Early

Age 60 with 5 years of service

Service retirement allowance

- a. 2% (1-1/4% if terminated prior to July 1, 1999) times years of credited service, subject to a maximum of 60%
- b. Times average final compensation (AFC)
- c. Subject to a maximum of 60% of AFC.
 - i. AFC is the highest average compensation for any three consecutive years of the last 10 years of service.
 - ii. Compensation is the regular wages plus what your employer pays towards your health and welfare benefits.
 - iii. Minimum monthly benefit is \$10.00 for each year of credited service, up to 15 years, retirement age 65 and over.
 - iv. Unused sick leave is added to a participant's credited service and age.

Early retirement benefit

Service retirement allowance reduced five-ninths of one percent for each month of commencement prior to age 65 or the age at which the Rule of 85 would have been satisfied had the employee continued working until that age, if earlier.

Disability benefit

Service retirement allowance using actual service, or 25% of AFC if larger, provided that in no case will the benefit exceed that payable if service had continued to age 65.

- a. Disability must be incurred while an employee as determined by the medical board and approved by the board of trustees.
- b. The participant must have a minimum of five years of credited service and not be eligible for normal retirement.

Continued disability is subject to routine verification.

Withdrawal benefit

Accumulated contributions of participant with interest credited to the participant's account.

Section 4 (continued)

4.1 Summary of Plan Provisions

Vested benefit

Full vesting on termination of employment after at least five years of service is provided if contributions are left with the System. The full accrued benefit is payable at age 65 or a reduced early retirement benefit prior to age 65.

Retirement options

In lieu of the benefit paid only over the lifetime of the participant, a reduced benefit payable for life of participant with:

- Option 1 Same retirement allowance continued after death to the beneficiary.
- Option 2 One-half of the retirement allowance continued after death to the beneficiary.
- Option 3 Same retirement allowance continued after death to the beneficiary. If the beneficiary predeceases the participant, the retirement allowance is adjusted back to the unreduced allowance.
- Option 4 One-half of retirement allowance continued after death to the beneficiary. If the beneficiary predeceases the participant, the retirement allowance is adjusted back to the unreduced allowance.
- Option 5 Increased retirement allowance is provided up to age 62, such that benefit provided prior to age 62 is approximately equal to the sum of the reduced retirement allowance paid after age 62 and Social Security.
- Option 6 Options 1 and 5 combined.
- Option 7 Options 2 and 5 combined.

Survivor benefits

If an active participant dies after completing 18 months of service, leaving a surviving spouse or other dependent beneficiaries, survivor benefits are payable. The widow or dependent beneficiary may elect to receive either a refund of accumulated contributions, or:

- a. A survivor who is the widow at least age 62 and married to a participant for at least one year receives \$60 a month.
- b. A widow with dependent, unmarried children under age 22 receives \$60 a month plus \$60 per dependent child, not to exceed \$180 per month. The benefit ceases when youngest child is age 22 and resumes again under (a) at age 62.
- c. If no benefits are payable under (a) or (b), minor children may receive a benefit of \$60 per child or \$180 divided among them if more than three children.
- d. If no benefits are payable under (a), (b) or (c), a dependent parent or parents may receive or share \$60 per month upon attaining age 62.

If an active participant dies after completing 5 years of service, the widow or dependent beneficiary may elect to receive either a refund of accumulated contributions or:

- a. If the survivor is the widow, a survivor benefit calculated as if the participant had been age 60 at death and elected Option 1, plus \$60 per dependent child not to exceed \$180 per month.
- b. If there is no widow, a survivor benefit calculated as if the participant had been age 60 at death and elected Option 1.

Section 4 (continued)

4.1 Summary of Plan Provisions

Return of contributions upon death

If after the death of a participant, no further monthly are payable to a beneficiary under an optional form of payment, or under the survivor benefit provisions, the participant's beneficiary shall be paid the excess, if any, of the participant's accumulated contributions over all payments made to or on behalf of the deceased participant.

DROP

Effective July 1, 2001, active participants may elect to enter the deferred retirement option plan (DROP) for up to four years. Upon entering the DROP, the participant's retirement benefit is frozen and credited to the participant's DROP account. At the end of the DROP, or upon earlier termination of employment, the DROP account is paid in a lump sum or installments, at the participant's option. During the DROP, the participant continues as an active participant, but does not pay contributions. To enter the DROP the participant must be age 65 or meet the Rule of 85. The DROP program is no longer available, ending June 30, 2008.

Contributions by participants

Participants contribute 5% of compensation. Accumulated contributions are credited at the rate of interest established by the board of trustees. The current crediting rate is 5%.

Contributions by employers

As needed to keep the System actuarially sound.

Expenses

Administrative expenses paid out of investment income.

Section 4 (continued)

4.2 Legislative History of the Retirement System

On and after January 1, 1944, all persons employed by the board of education on a full-time permanent basis are participants of the System as a condition of employment. In 1961, provisions regarding benefits and employee contribution levels were revised for all future employees of the board of education. Participants of the System at that time were granted the right to remain under the "old plan" and have their membership governed by the provisions of the law in effect prior to 1961. These old plan participants have both benefits and contributions based on a \$3,000 maximum annual compensation. Old plan participants have been given the option to transfer into the revised plan at various times since 1961.

Effective October 13, 1969, legislation permitted the reinstatement of credited service lost during the years 1944 to 1947 inclusive when the married women teachers rule was in effect.

Effective August 31, 1972, legislation resulted in the following changes:

- Purchase of past service credit by paying contributions for service claimed plus interest.
- Service as extended substitute teacher.
- Service of re-employed participants lost on prior terminations.
- Service out-state Missouri and outside the state of Missouri.
- Service lost by those who elected to stay out of the retirement plan either temporarily or to date.
- Old plan participants who wished to become new plan participants could do so by paying the differential in participant contributions under the new and old plans, plus interest.
- Dependent beneficiary on death of participant before retirement but after age 60 or age 55 with 30 years service may receive option 1 benefit as if participant had retired under such option.
- A participant with five or more years of service and prior to age 65 may be retired with a disability benefit if the medical board certifies that such participant is mentally or physically totally incapacitated for further performance of duty.
- Minimum retirement benefit at age 65 or after 10 years service is \$50.00 per month.

On February 10, 1975, the Missouri Supreme Court handed down a decision supporting HB 613 (Section 169.585 of state statutes), which granted increased benefits to retired teachers. The increases apply to those teachers who retired after June 30, 1957, and prior to January 1, 1971. Technically, those retirees are retained as "advisors and supervisor" and receive a "salary" of \$5 per month for each year of service, with a maximum of \$75. This salary plus the regular retirement benefit cannot exceed \$150 per month. To the extent that assets are depleted because of this law, future district contributions will increase. Because these benefits are paid as "salaries," coming out of investment income along with other expenses of operation, there will be less money available for crediting of interest to the various funds at the end of the year.

Section 4 (continued)

4.2 Legislative History of the Retirement System

Effective August 13, 1978 legislation resulted in the following changes:

- The service retirement allowance and projected service retirement allowance was changed to 1-1/4% of average final compensation per year of credited service. The participant's allowance plus his Social Security primary insurance amount could not exceed 80% of his average final compensation. Participants born before 1917 receive the larger of the allowances calculated under the new formula and the formula in effect immediately before it.
- Credited service no longer limited to a maximum of 35 years.
- Two new joint and survivor optional forms of payment were added which provide for the participant's pension to be adjusted back to his unreduced pension in the event his spouse predeceases him.
- Contributions from participants shall be 3% of compensation.
- End of period for purchasing prior service or outside service extended from December 31, 1973 to December 31, 1980. Deleted requirement of electing to purchase out-state or outside the state of Missouri service within one year of completing five years of credited service.
- Gives board of trustees the power to establish regulations, methods and factors that may be needed to calculate primary Social Security benefits.
- Dependent beneficiary on death of participant before retirement with five or more years of credited service may receive option 1 benefit as if the participant had retired under that option as of the date of his death.
- Allow retired educational secretaries to serve as part-time or temporary substitute educational secretary up to a maximum of 360 hours per school year without a reduction in the retired employee's retirement allowance or requiring the retired employees to contribute to the retirement system.

Effective September 28, 1979, legislation resulted in the following changes:

- Accumulated and unused days of sick leave shall be included in computing a participant's age and credited service at retirement.
- Participants who have attained age 62 and who have 30 or more years of credited service may retire and receive a service retirement allowance without reduction for early retirement. The early retirement reduction for participants who retire with 30 or more years of credited service but who have not attained age 62 on their retirement date shall be determined on the basis of the number of months by which their age at retirement is less than age 62.
- Benefits to survivors of a participant who dies while an employee and after having at least 18 months of credited service are as follows:
 - (a) Surviving spouse age 62 or over: \$60 per month.
 - (b) Surviving spouse with unmarried dependent children under age 22: \$60 per month, plus \$30 per month for each eligible child, with a maximum of \$150 per month.
 - (c) Unmarried dependent children under age 22: \$60 per month for each eligible child, with a maximum of \$120 per month. This benefit is payable if the benefit in (b) is not payable.
 - (d) Dependent parent(s): \$60 per month, provided no benefits are payable under (a), (b) or (c) above.

Section 4 (continued)

4.2 Legislative History of the Retirement System

Effective September 28, 1981, legislation resulted in the following changes:

- The provision limiting service retirement and projected service retirement allowances to 80% of average final compensation less Social Security was removed for future retirees.
- The minimum monthly benefit payable to participants retiring on or after age 65 with 10 or more years of service was increased to \$75.
- Old plan participants were extended the option to transfer into the current System by paying the difference in participant contributions plus interest. Such election to be made on or before December 31, 1984. Retired participants who retired prior to January 1, 1955, may be consultants at a "salary" equal to \$4 for each year of retirement prior to January 1, 1982. Total "salaries" as a "school consultant" and "special school advisor and supervisor" are limited to \$250 per month.
- The retirement system may contribute as part of its administrative expenses toward health, life and similar insurance for retirees.
- The actuarial cost method was changed from the "entry age cost method" to the "frozen entry age cost method." The period for amortizing "supplements" to the unfunded actuarial accrued liability was set at 50 years from the time the "supplement" is created.
- Several changes were made dealing with the administration and operation of the System.
- Investment powers were broadened.

Effective September 28, 1984, legislation resulted in the following changes:

- Dependent beneficiary on death of employed, active participant before retirement with five or more years of service may receive option 1 benefit as if the participant had attained age 55 (if less than 55 at his death) and had retired under option 1 as of the date of his death.
- In addition to the option 1 death benefit, a surviving spouse may receive \$30 per month for each unmarried dependent child, provided that the total benefit does not exceed the greater of \$150 or the option 1 benefit.
- Surviving spouse benefits do not cease on remarriage.
- Dependent children's benefits do not require that the child remain a full-time student.
- Participants retired on disability may elect to receive an actuarial equivalent benefit under options 1 through 4.
- Retired participants who retired on or after January 1, 1976, may be employed as school consultants and receive a salary and insurance benefits provided other retirants.

Section 4 (continued)

4.2 Legislative History of the Retirement System

Effective August 13, 1986, legislation resulted in the following changes:

- A participant with 30 years of credited service who is between the ages of 55 and 62, upon certification by the board of education, is eligible for a supplemental early retirement benefit payable to age 62. This provision remains in effect until December 31, 1991.
- Benefits to a surviving spouse for dependent children are increased from \$30 to \$60 per month, with a maximum of \$240 per month, including the \$60 for the surviving spouse.
- Supplemental pay to retired participants employed as "school consultants" is increased by \$2 per month for each year between the participant's date of retirement and December 31, 1986

Effective June 19, 1987, legislation resulted in the following changes:

- Reinstated the option for "old plan" participants to elect "new plan" membership by paying the difference in contributions accumulated with interest.
- Increased the minimum benefit for participants retiring on or after age 65 to \$10 per month for each year of credited service, up to a maximum of 15 years.
- Several changes were made dealing with the accounting, administration, and operation of the System.

Effective August 13, 1988, legislation resulted in the following changes:

- Made provisions for children's benefits uniform, providing \$60 per month per child, up to a maximum of \$180 per month, under both subsections 169.460(13) and (15) survivor benefits.
- Supplemental pay to retired participants of \$2 per month for each year of retirement up to December 31, 1988.

Effective June 14, 1989, legislation resulted in the following changes:

- The maximum on compensation was removed.
- Average final compensation is based on the highest three consecutive years, rather than the highest five consecutive years.
- Participants may retire with unreduced benefits at any age, if their age plus credited service equals or exceeds 85 (the "Rule of 85").

Effective May 31, 1990, legislation resulted in the following change:

- Supplemental pay of \$2 per month for each year of retirement up to December 31, 1990.

Effective August 28, 1993, legislation resulted in the following change:

- Supplemental pay of \$3 per month for each year of retirement up to December 31, 1993.

Section 4 (continued)

4.2 Legislative History of the Retirement System

Effective August 28, 1996, legislation resulted in the following changes:

- Provision was added for the purchase of service for certain periods of layoff.
- The investment trustee position was eliminated and the position of school administrator trustee was added.
- Cost-of-living increases for participants who retired prior to August 28, 1996, with at least 15 years of credited service. The cost-of-living increases are up to 3% in one year, with a cumulative maximum of 10%.
- The board of education is authorized to increase retirement benefits and the participant contribution rate, subject to several conditions.

Effective August 28, 1997, legislation resulted in the following change:

- Cost-of-living increases extended to participants who retired prior to August 28, 1997, with at least 15 years of credited service. The cost-of-living increases are up to 3% in one year, with a cumulative maximum of 10%.

In accordance with the statutory authority granted the board of education in 1996, the board of education made the following changes:

- Participant contributions were increased to 4.5%, effective July 1, 1998; to 5.0%, effective July 1, 1999; and, if necessary to 5.5%, effective July 1, 2000.
- The service retirement allowance was changed to 2.00% of average final compensation per year of credited service, subject to a maximum of 60% of average final compensation, effective for participants who retired after June 29, 1999.
- A “catch-up” cost-of-living adjustment (COLA) is provided for participants who retired prior to June 30, 1999, and survivors of participants who retired or died prior to June 30, 1999. The amount of the “catch-up” COLA is equal to 65% of the amount by which the participant’s original benefit would have increased due to increases in the CPI, in excess of any supplements or COLA increases being received by the participant. The “catch-up” COLA is effective July 1, 2000.
- The board of education agreed to contribute 8.03% of covered payroll for 1998, 1999, and 2000, in order to fund the benefit increase and the “catch-up” COLA.

In accordance with the statutory authority granted the board of education in 1996, the board of education made the following changes:

- Effective January 1, 2001, all participants who retired prior to January 1, 2000, received a 3% cost-of-living increase.
- Effective July 1, 2001, a DROP was made available until June 30, 2005, at which time the program will be evaluated to determine whether or not it should be extended. Eligible participants may elect to enter the DROP for up to four years.
- In conjunction with the DROP, employers will contribute at 8.00% of covered payroll for 2001. The contribution rate for subsequent years will be based on the rate determined by the actuarial valuation for the January 1 of the year preceding the year the contribution is due.

Section 4 (continued)

4.2 Legislative History of the Retirement System

Effective August 28, 2002, legislation resulted in the following changes:

- Purchase of service rules were updated.
- The System may accept qualified transfers of funds for the purchase of service.
- Clarified provisions relating to charter school participation in the System.
- Option 5, the level income option is added.
- Replaced the specific actuarial cost method in the statutes with a provision that the method adopted by the board of trustees may be any method in accordance with generally accepted actuarial standards. The amortization period for the UAAL may not exceed 30 years.

Note: There have been no changes to the System's plan provisions since 2002.

Section 4 (continued)

4.3 Changes in System Participation

Basis of the Valuation

| | Active | Retirees | Beneficiaries | Disabled | Total In Pay Status | Deferred Vested | Nonvested w/ Balance | Total Terminated Records | Total |
|---|--------|----------|---------------|----------|------------------------------|--------------------|----------------------------|--------------------------------|--------|
| Total as of January 1, 2012 | 4,784 | 3,966 | 299 | 275 | 4,540 | 438 | 1,520 | 1,958 | 11,282 |
| New Entrants | 718 | | 16 | | 16 | | 26 | 26 | 760 |
| Rehires/Transfers | 90 | (3) | | | (3) | (14) | (56) | (70) | 17 |
| Retirements | (105) | 130 | | | 130 | (23) | (2) | (25) | 0 |
| Disablements | (12) | | | 14 | 14 | (2) | | (2) | 0 |
| Beneficiaries | | | | | | | | | 0 |
| Deaths | (1) | (141) | (20) | (24) | (185) | | (1) | (1) | (187) |
| Deferred Vested | (42) | | | | | 42 | | 42 | 0 |
| Nonvested Terminations - Account Balance | (234) | | | | | | 234 | 234 | 0 |
| Refunds Paid in 2012 | (408) | | | | | (60) | (450) | (510) | (918) |
| Data Adjustments * | (4) | 3 | | 1 | 4 | (1) | (8) | (9) | (9) |
| Total as of January 1, 2013 | 4,786 | 3,955 | 295 | 266 | 4,516 | 380 | 1,263 | 1,643 | 10,945 |

Note on Data:

PSRS cleaned the data this year and found a large number of members that have actually taken a refund and were taken off of the data. We believe that some of these refunds may have been paid prior to 2012.

There were also a handful of nonvested Inactive members that were found to be vested.

* Note on Data Adjustments:

1 Retired record we identified to be Disabled Retired record this year.

Section 4 (continued)**4.4 Member Census Information**

| As of January 1 | 2012 | 2013 |
|--------------------------------------|-------------|-------------|
| Active Members | | |
| Number | 4,784 | 4,786 |
| Average Age | 44.61 | 44.69 |
| Average Service | 8.90 | 8.92 |
| Average Annual Base Pay | \$ 49,060 | \$ 47,199 |
| Vested Terminated Members | | |
| Number | 438 | 380 |
| Average Account Balance | \$ 27,287 | \$ 29,459 |
| Non-vested Terminated Members | | |
| Number | 1,520 | 1,263 |
| Average Account Balance | \$ 3,267 | \$ 3,139 |
| Benefit Recipients | | |
| Number | 4,540 | 4,516 |
| Average Age | 72.82 | 73.10 |
| Average Monthly Benefit | \$ 1,813 | \$ 1,838 |

Section 4 (continued)

4.5 Distributions of Active Members

Years of Service By Age
Charter Schools

| Age | Years of Service | | | | | | | | | Total |
|----------|------------------|-------|---------|---------|---------|---------|---------|---------|-----|-------|
| | 0 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40+ | |
| Under 25 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70 |
| 25 - 29 | 248 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 258 |
| 30 - 34 | 126 | 37 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 166 |
| 35 - 39 | 79 | 31 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 123 |
| 40 - 44 | 81 | 14 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 99 |
| 45 - 49 | 45 | 10 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 58 |
| 50 - 54 | 80 | 12 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 96 |
| 55 - 59 | 30 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| 60 - 64 | 19 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 65 - 69 | 5 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 70 & Up | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total | 785 | 135 | 26 | 2 | 1 | 0 | 0 | 0 | 0 | 950 |

Years of Service By Age
School District

| Age | Years of Service | | | | | | | | | Total |
|----------|------------------|-------|---------|---------|---------|---------|---------|---------|-----|-------|
| | 0 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40+ | |
| Under 25 | 156 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 156 |
| 25 - 29 | 276 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 312 |
| 30 - 34 | 234 | 129 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 385 |
| 35 - 39 | 148 | 111 | 117 | 16 | 0 | 0 | 0 | 0 | 0 | 392 |
| 40 - 44 | 163 | 101 | 112 | 60 | 5 | 0 | 0 | 0 | 0 | 441 |
| 45 - 49 | 116 | 78 | 102 | 49 | 28 | 6 | 0 | 0 | 0 | 379 |
| 50 - 54 | 129 | 76 | 98 | 82 | 77 | 68 | 11 | 0 | 0 | 541 |
| 55 - 59 | 128 | 79 | 121 | 87 | 68 | 116 | 51 | 14 | 0 | 664 |
| 60 - 64 | 64 | 55 | 84 | 64 | 74 | 65 | 15 | 29 | 3 | 453 |
| 65 - 69 | 13 | 12 | 28 | 15 | 9 | 6 | 3 | 0 | 2 | 88 |
| 70 & Up | 4 | 4 | 5 | 2 | 1 | 1 | 0 | 0 | 1 | 18 |
| Total | 1,431 | 681 | 689 | 375 | 262 | 262 | 80 | 43 | 6 | 3,829 |

Section 4 (continued)

4.5 Distributions of Active Members

Years of Service By Age
Total

| Age | Years of Service | | | | | | | | | Total |
|----------|------------------|-------|---------|---------|---------|---------|---------|---------|-----|-------|
| | 0 - 4 | 5 - 9 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40+ | |
| Under 25 | 226 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 226 |
| 25 - 29 | 524 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 571 |
| 30 - 34 | 360 | 166 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 551 |
| 35 - 39 | 227 | 142 | 130 | 16 | 0 | 0 | 0 | 0 | 0 | 515 |
| 40 - 44 | 244 | 115 | 116 | 60 | 5 | 0 | 0 | 0 | 0 | 540 |
| 45 - 49 | 162 | 89 | 102 | 51 | 29 | 6 | 0 | 0 | 0 | 439 |
| 50 - 54 | 209 | 90 | 102 | 82 | 77 | 68 | 11 | 0 | 0 | 639 |
| 55 - 59 | 158 | 97 | 121 | 87 | 68 | 116 | 51 | 14 | 0 | 712 |
| 60 - 64 | 83 | 57 | 85 | 64 | 74 | 65 | 15 | 30 | 3 | 476 |
| 65 - 69 | 18 | 14 | 29 | 15 | 9 | 6 | 3 | 0 | 2 | 96 |
| 70 & Up | 6 | 5 | 5 | 2 | 1 | 1 | 0 | 0 | 1 | 21 |
| Total | 2,217 | 822 | 715 | 377 | 263 | 262 | 80 | 44 | 6 | 4,786 |

Section 4 (continued)

4.6 Distributions of Inactive Members

Deferred Vested and Nonvested

| Account Balance | Vested | Non-vested | Total |
|-----------------|--------|------------|-------|
| 0-1,000 | 0 | 389 | 389 |
| 1,000-5,000 | 7 | 601 | 608 |
| 5,000-10,000 | 21 | 207 | 228 |
| 10,000-25,000 | 176 | 66 | 242 |
| 25,000-50,000 | 126 | 0 | 126 |
| 50,000-75,000 | 38 | 0 | 38 |
| 75,000-100,000 | 8 | 0 | 8 |
| 100,000+ | 4 | 0 | 4 |
| Total | 380 | 1,263 | 1,643 |

Retirees, Beneficiaries and Disabled

| Option | Service benefit | Disability benefit | Survivor benefit | All |
|--------|-----------------|--------------------|------------------|-------|
| 0 | 3,335 | 216 | 295 | 3,846 |
| 1 | 150 | 14 | 0 | 164 |
| 2 | 85 | 5 | 0 | 90 |
| 3 | 179 | 13 | 0 | 192 |
| 4 | 177 | 8 | 0 | 185 |
| 5 | 18 | 4 | 0 | 22 |
| 6 | 10 | 6 | 0 | 16 |
| 7 | 1 | 0 | 0 | 1 |
| Total | 3,955 | 266 | 295 | 4,516 |

Annual benefit

| Option | Service benefit | Disability benefit | Survivor benefit | All |
|--------|-----------------|--------------------|------------------|--------------|
| 0 | \$79,443,989 | \$2,741,985 | \$3,130,339 | \$85,316,313 |
| 1 | 2,699,981 | 188,364 | 0 | 2,888,345 |
| 2 | 1,967,724 | 124,270 | 0 | 2,091,994 |
| 3 | 3,664,770 | 168,756 | 0 | 3,833,526 |
| 4 | 4,574,499 | 155,353 | 0 | 4,729,852 |
| 5 | 434,729 | 42,869 | 0 | 477,598 |
| 6 | 210,093 | 50,744 | 0 | 260,837 |
| 7 | 30,849 | 0 | 0 | 30,849 |
| Total | \$93,026,634 | \$3,472,341 | \$3,130,339 | \$99,629,314 |

Section 4 (continued)

4.7 Schedule of Retirees and Beneficiaries Added/Removed From Rolls

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
(Last Six Years)

| Plan Year | <u>Added to Payroll</u> | | <u>Removed from Payroll</u> | | <u>Payroll Year-End</u> | | % Increase in Annual Allowances | Average Annual Allowance |
|--------------|-------------------------|--------------------------|-----------------------------|--------------------------|-------------------------|--------------------------|---------------------------------------|--------------------------------|
| | <u>No.</u> | <u>Annual Allowances</u> | <u>No.</u> | <u>Annual Allowances</u> | <u>No.</u> | <u>Annual Allowances</u> | | |
| 2008 | N/A | | N/A | | N/A | | N/A | N/A |
| 2009 | N/A | | N/A | | N/A | | N/A | N/A |
| 2010 | N/A | | N/A | | 4,370 | | N/A | N/A |
| 2011 | 373 | | 156 | | 4,587 | \$ 98,927,501 | N/A | \$ 21,567 |
| 2012 | 135 | \$ 2,606,505 | 182 | \$ 2,793,752 | 4,540 | \$ 98,768,933 | -0.16% | \$ 21,755 |
| 2013 | 164 | \$ 3,544,756 | 188 | \$ 2,699,920 | 4,516 | \$ 99,629,314 | 0.87% | \$ 22,061 |

Section 4 (continued)**4.8 Summary of Methods and Assumptions****Interest**

8.0% per annum.

Participant account interest crediting rate

5.0% per annum.

Expenses

The rate of interest assumed is net of expenses.

Mortality

Mortality tables mandated by the Pension Protection Act as specified in IRS Regulation 1.430(h)(3)-1, applied on a static basis, projected 7 years from the valuation date for annuitants and 15 years for non-annuitants. Rates are shown for pre-commencement in Table 1 and post-commencement in Table 2.

Disability Mortality

The RP-2000 Disability Mortality Table is used for disabled participants. Rates are shown in Table 6.

Withdrawal

Withdrawals are assumed to occur at rates based on actual experience of the retirement system. During the first five years of membership, withdrawals are assumed to occur at the following rates:

| Year of Membership | Non-charter school employees | Charter school employees |
|--------------------|------------------------------|--------------------------|
| 1 st | 25.0% | 30.0% |
| 2 nd | 20.0% | 25.0% |
| 3 rd | 15.0% | 20.0% |
| 4 th | 12.5% | 15.0% |
| 5 th | 10.0% | 10.0% |

The rates used after the first five years of membership are shown in Table 3.

Salary scale

Salaries are assumed to increase at the rate of 4.5% per year.

Disability

Disabilities are assumed to occur at rates based on the actual experience of the retirement system. The rates used are shown in Table 5.

Section 4 (continued)**4.8 Summary of Methods and Assumptions****Retirement**

Retirements occur at rates based on the actual experience of the retirement system. The age-related rates used are shown in Table 4. Unless the age-related rate is greater, for those eligible to retire under the Rule of 85, it is assumed that 25% will retire when first eligible for unreduced benefits with at least 30 years of credited service.

Family Structure

The probability of a participant being married and the probable number of children are based on a table constructed by the Social Security Administration, modified to reflect the experience of the retirement system. The rates used are shown in Table 6. For married participants, husbands are assumed to be 3 years older than their wives.

Usage of Cash-out Option

Participants terminating in vested status are given the option of taking a refund of their accumulated participant contributions instead of a deferred retirement benefit. Active members who terminate in the future with a vested benefit are assumed to take a deferred vested annuity, unless a refund of contributions and interest is greater than the actuarial present value of their vested deferred benefit.

Future Benefit Increases or Additional Benefits

When funding is adequate, the Board may authorize cost of living adjustments (COLAs), as noted in the summary of plan provisions. In the past, the Board has also sometimes granted an additional monthly payment to retirees (13th check.) This valuation assumes that no future COLAs and no future 13th checks will be awarded.

Actuarial Method – Frozen Entry Age

The actuarial cost method used by the System is the "frozen entry age actuarial cost method." Under this method, on the initial actuarial valuation date for which the cost method is used, the annual cost accruals (individual normal costs for each participant) are determined as a level percentage of pay for each year from entry age until retirement or termination. The UFAAL was originally determined as of January 1, 1981. Entry age is determined at the date each participant would have entered the System. The sum of these individual normal costs for all active participants whose attained ages are under the assumed retirement age is the normal cost for the initial plan year. The excess of all normal costs falling due prior to the initial actuarial valuation date, accumulated with interest, over the plan assets establishes the initial Unfunded Frozen Actuarial Accrued Liability (UFAAL).

The UFAAL is only frozen in that it is not adjusted due to experience gains and losses. Instead, gains and losses are reflected through changes in the normal cost accrual rate. The UFAAL does change, increasing due to interest and additional normal costs, and decreasing due to contributions. Any changes to plan provisions or actuarial assumptions results in a change to the UFAAL. The amount of the change is determined by computing the impact in the actuarial accrued liability as of the valuation date coincident with or next following the change.

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Normal costs are calculated as the level percentage of pay required to fund the excess of the actuarial present value of future benefits over the sum of the actuarial value of current assets and the remaining UFAAL.

Effective January 1, 2006, UFAAL was reestablished to better reflect an appropriate relationship between the normal cost and the actuarial accrued liability.

The funding requirement for each plan year is the sum of the "normal cost contribution" (equal to the normal cost for that year), plus the "actuarial accrued liability contribution." The "actuarial accrued liability contribution" is the payment required to amortize the UFAAL over 30 years, from January 1, 2006, the date that it was reestablished.

Valuation of Assets

The actuarial value of assets is determined using the assumed yield method of valuing assets. Under the assumed yield asset valuation method, the prior year's actuarial value is increased at the assumed rate of return with appropriate adjustments for contributions and disbursements to produce an expected actuarial value of assets at the end of the year. The expected actuarial value is compared to the market value of assets less the expense and contingency reserve, and 20% of the difference is added to the expected actuarial value. The actuarial value of assets was "fresh-started" as of January 1, 2006 and set equal to the market value of assets as of that date.

Changes from the Prior Valuation

The mortality table for non-disabled members was updated to the IRS Static Mortality Table mandated for use by private pension plans for the 2013 plan year. This uses a separate table for pre-commencement and post-commencement.

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Table 1
Mortality Rates for Pre-Commencement
Annual Rates Per 1,000 Members

| Age | Rate | | Age | Rate | |
|-----|-------|--------|-----|---------|---------|
| | Male | Female | | Male | Female |
| 20 | 0.202 | 0.122 | 60 | 3.105 | 3.416 |
| 21 | 0.215 | 0.119 | 61 | 3.525 | 3.724 |
| 22 | 0.226 | 0.120 | 62 | 3.876 | 4.046 |
| 23 | 0.244 | 0.125 | 63 | 4.361 | 4.379 |
| 24 | 0.261 | 0.132 | 64 | 4.736 | 4.718 |
| 25 | 0.284 | 0.139 | 65 | 5.103 | 5.059 |
| 26 | 0.319 | 0.153 | 66 | 5.615 | 5.394 |
| 27 | 0.332 | 0.159 | 67 | 5.960 | 5.721 |
| 28 | 0.342 | 0.168 | 68 | 6.111 | 6.036 |
| 29 | 0.358 | 0.177 | 69 | 6.408 | 6.335 |
| 30 | 0.386 | 0.199 | 70 | 6.499 | 6.616 |
| 31 | 0.434 | 0.245 | 71 | 7.338 | 7.221 |
| 32 | 0.488 | 0.280 | 72 | 9.016 | 8.430 |
| 33 | 0.548 | 0.306 | 73 | 11.533 | 10.244 |
| 34 | 0.610 | 0.328 | 74 | 14.889 | 12.662 |
| 35 | 0.672 | 0.348 | 75 | 19.084 | 15.685 |
| 36 | 0.731 | 0.367 | 76 | 24.118 | 19.312 |
| 37 | 0.786 | 0.384 | 77 | 29.991 | 23.544 |
| 38 | 0.815 | 0.403 | 78 | 36.703 | 28.380 |
| 39 | 0.839 | 0.424 | 79 | 44.254 | 33.821 |
| 40 | 0.862 | 0.462 | 80 | 52.647 | 39.866 |
| 41 | 0.887 | 0.507 | 81 | 60.125 | 44.124 |
| 42 | 0.917 | 0.558 | 82 | 68.542 | 48.916 |
| 43 | 0.953 | 0.614 | 83 | 76.403 | 54.313 |
| 44 | 0.996 | 0.674 | 84 | 86.701 | 60.405 |
| 45 | 1.045 | 0.716 | 85 | 96.240 | 68.664 |
| 46 | 1.089 | 0.757 | 86 | 106.702 | 78.137 |
| 47 | 1.136 | 0.797 | 87 | 120.616 | 88.916 |
| 48 | 1.184 | 0.862 | 88 | 136.225 | 99.037 |
| 49 | 1.234 | 0.932 | 89 | 150.545 | 112.205 |
| 50 | 1.286 | 1.037 | 90 | 169.280 | 124.002 |
| 51 | 1.337 | 1.155 | 91 | 184.380 | 136.171 |
| 52 | 1.390 | 1.325 | 92 | 203.973 | 148.426 |
| 53 | 1.489 | 1.523 | 93 | 220.035 | 163.744 |
| 54 | 1.597 | 1.752 | 94 | 236.072 | 175.624 |
| 55 | 1.770 | 2.017 | 95 | 256.992 | 186.875 |
| 56 | 1.988 | 2.329 | 96 | 272.762 | 197.318 |
| 57 | 2.245 | 2.616 | 97 | 288.083 | 210.976 |
| 58 | 2.544 | 2.860 | 98 | 309.050 | 219.510 |
| 59 | 2.810 | 3.128 | 99 | 323.665 | 226.803 |

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Table 2
Mortality Rates for Post-Commencement
Annual Rates Per 1,000 Members

| Age | Rate | | Age | Rate | |
|-----|-------|--------|-----|---------|---------|
| | Male | Female | | Male | Female |
| 20 | 0.202 | 0.122 | 60 | 5.936 | 5.609 |
| 21 | 0.215 | 0.119 | 61 | 6.653 | 6.259 |
| 22 | 0.226 | 0.120 | 62 | 7.329 | 6.956 |
| 23 | 0.244 | 0.125 | 63 | 8.260 | 7.697 |
| 24 | 0.261 | 0.132 | 64 | 9.140 | 8.499 |
| 25 | 0.284 | 0.139 | 65 | 10.122 | 9.375 |
| 26 | 0.319 | 0.153 | 66 | 11.444 | 10.324 |
| 27 | 0.332 | 0.159 | 67 | 12.670 | 11.344 |
| 28 | 0.342 | 0.168 | 68 | 13.728 | 12.457 |
| 29 | 0.358 | 0.177 | 69 | 15.165 | 13.708 |
| 30 | 0.386 | 0.199 | 70 | 16.413 | 15.145 |
| 31 | 0.434 | 0.245 | 71 | 18.161 | 16.472 |
| 32 | 0.488 | 0.280 | 72 | 20.164 | 18.322 |
| 33 | 0.548 | 0.306 | 73 | 22.460 | 19.959 |
| 34 | 0.610 | 0.328 | 74 | 25.057 | 22.121 |
| 35 | 0.672 | 0.348 | 75 | 28.538 | 23.935 |
| 36 | 0.731 | 0.367 | 76 | 31.808 | 26.371 |
| 37 | 0.786 | 0.384 | 77 | 36.105 | 29.635 |
| 38 | 0.815 | 0.403 | 78 | 40.942 | 32.667 |
| 39 | 0.839 | 0.424 | 79 | 46.431 | 36.066 |
| 40 | 0.862 | 0.462 | 80 | 52.647 | 39.866 |
| 41 | 0.914 | 0.507 | 81 | 60.125 | 44.124 |
| 42 | 1.018 | 0.558 | 82 | 68.542 | 48.916 |
| 43 | 1.174 | 0.614 | 83 | 76.403 | 54.313 |
| 44 | 1.382 | 0.674 | 84 | 86.701 | 60.405 |
| 45 | 1.642 | 0.721 | 85 | 96.240 | 68.664 |
| 46 | 1.954 | 0.815 | 86 | 106.702 | 78.137 |
| 47 | 2.317 | 0.956 | 87 | 120.616 | 88.916 |
| 48 | 2.732 | 1.145 | 88 | 136.225 | 99.037 |
| 49 | 3.199 | 1.381 | 89 | 150.545 | 112.205 |
| 50 | 3.718 | 1.664 | 90 | 169.280 | 124.002 |
| 51 | 3.767 | 1.781 | 91 | 184.380 | 136.171 |
| 52 | 3.768 | 1.997 | 92 | 203.973 | 148.426 |
| 53 | 3.820 | 2.274 | 93 | 220.035 | 163.744 |
| 54 | 3.870 | 2.609 | 94 | 236.072 | 175.624 |
| 55 | 4.023 | 3.007 | 95 | 256.992 | 186.875 |
| 56 | 4.259 | 3.480 | 96 | 272.762 | 197.318 |
| 57 | 4.573 | 3.967 | 97 | 288.083 | 210.976 |
| 58 | 4.994 | 4.452 | 98 | 309.050 | 219.510 |
| 59 | 5.421 | 5.003 | 99 | 323.665 | 226.803 |

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Table 3
Withdrawal Rates
Annual Rates Per 1,000 Members

| Age | Rate | Age | Rate |
|-----|-------|-----|------|
| 20 | 185.0 | 45 | 40.0 |
| 21 | 179.0 | 46 | 37.0 |
| 22 | 173.0 | 47 | 34.0 |
| 23 | 167.0 | 48 | 31.0 |
| 24 | 161.0 | 49 | 28.0 |
| 25 | 155.0 | 50 | 25.0 |
| 26 | 146.0 | 51 | 24.0 |
| 27 | 137.0 | 52 | 23.0 |
| 28 | 128.0 | 53 | 22.0 |
| 29 | 119.0 | 54 | 21.0 |
| 30 | 110.0 | 55 | 20.0 |
| 31 | 106.0 | 56 | 19.0 |
| 32 | 102.0 | 57 | 18.0 |
| 33 | 98.0 | 58 | 17.0 |
| 34 | 94.0 | 59 | 16.0 |
| 35 | 90.0 | 60 | 15.0 |
| 36 | 87.0 | 61 | 0.0 |
| 37 | 84.0 | 62 | 0.0 |
| 38 | 81.0 | 63 | 0.0 |
| 39 | 78.0 | 64 | 0.0 |
| 40 | 75.0 | | |
| 41 | 68.0 | | |
| 42 | 61.0 | | |
| 43 | 54.0 | | |
| 44 | 47.0 | | |

Section 4 (continued)**4.8 Summary of Methods and Assumptions**

Table 4
Retirement Rates
Annual Rates Per 1,000 Members

| Age | Rule of 85 Rate | Not Rule of 85 Rate |
|------------|----------------------------|--------------------------------|
| < 60 | 200.0 | N/A |
| 60 | 200.0 | 100.0 |
| 61 | 200.0 | 150.0 |
| 62 | 250.0 | 200.0 |
| 63 | 250.0 | 175.0 |
| 64 | 250.0 | 200.0 |
| 65 | 350.0 | 350.0 |
| 66 | 200.0 | 200.0 |
| 67 | 200.0 | 200.0 |
| 68 | 200.0 | 200.0 |
| 69 | 200.0 | 200.0 |
| 70 - 71 | 300.0 | 300.0 |
| 72 | 1,000.0 | 1000.0 |

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Table 5
Disability Rates
Annual Rates Per 1,000 Members

| Rate | | | Rate | | |
|------|-------|---------|------|-------|---------|
| Age | Males | Females | Age | Males | Females |
| 20 | 0.00 | 0.00 | 45 | 1.50 | 1.00 |
| 21 | 0.00 | 0.00 | 46 | 1.60 | 1.10 |
| 22 | 0.00 | 0.00 | 47 | 1.70 | 1.20 |
| 23 | 0.00 | 0.00 | 48 | 1.80 | 1.30 |
| 24 | 0.00 | 0.00 | 49 | 1.90 | 1.40 |
| 25 | 0.00 | 0.00 | 50 | 2.00 | 1.50 |
| 26 | 0.00 | 0.00 | 51 | 2.50 | 1.70 |
| 27 | 0.00 | 0.00 | 52 | 3.00 | 1.90 |
| 28 | 0.00 | 0.00 | 53 | 3.50 | 2.10 |
| 29 | 0.00 | 0.00 | 54 | 4.00 | 2.30 |
| 30 | 0.40 | 0.40 | 55 | 4.50 | 2.50 |
| 31 | 0.40 | 0.40 | 56 | 4.70 | 2.60 |
| 32 | 0.40 | 0.40 | 57 | 4.90 | 2.75 |
| 33 | 0.40 | 0.40 | 58 | 5.10 | 2.85 |
| 34 | 0.40 | 0.40 | 59 | 5.30 | 3.00 |
| 35 | 0.40 | 0.40 | 60 | 5.50 | 3.25 |
| 36 | 0.45 | 0.45 | 61 | 6.00 | 3.50 |
| 37 | 0.50 | 0.50 | 62 | 6.50 | 3.50 |
| 38 | 0.60 | 0.60 | 63 | 7.00 | 3.50 |
| 39 | 0.70 | 0.70 | 64 | 7.50 | 3.50 |
| 40 | 0.80 | 0.75 | 65 | 0.00 | 0.00 |
| 41 | 0.95 | 0.80 | | | |
| 42 | 1.10 | 0.85 | | | |
| 43 | 1.25 | 0.90 | | | |
| 44 | 1.40 | 0.95 | | | |

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Table 6
Post-Disability Mortality Rates
Annual Rates Per 1,000 Members

| Age | Rate | | Age | Rate | |
|-----|--------|--------|-----|---------|---------|
| | Male | Female | | Male | Female |
| 20 | 0.000 | 0.000 | 60 | 42.042 | 21.839 |
| 21 | 22.571 | 7.450 | 61 | 43.474 | 22.936 |
| 22 | 22.571 | 7.450 | 62 | 44.981 | 24.080 |
| 23 | 22.571 | 7.450 | 63 | 46.584 | 25.293 |
| 24 | 22.571 | 7.450 | 64 | 48.307 | 26.600 |
| 25 | 22.571 | 7.450 | 65 | 50.174 | 28.026 |
| 26 | 22.571 | 7.450 | 66 | 52.213 | 29.594 |
| 27 | 22.571 | 7.450 | 67 | 54.450 | 31.325 |
| 28 | 22.571 | 7.450 | 68 | 56.909 | 33.234 |
| 29 | 22.571 | 7.450 | 69 | 59.613 | 35.335 |
| 30 | 22.571 | 7.450 | 70 | 62.583 | 37.635 |
| 31 | 22.571 | 7.450 | 71 | 65.841 | 40.140 |
| 32 | 22.571 | 7.450 | 72 | 69.405 | 42.851 |
| 33 | 22.571 | 7.450 | 73 | 73.292 | 45.769 |
| 34 | 22.571 | 7.450 | 74 | 77.512 | 48.895 |
| 35 | 22.571 | 7.450 | 75 | 82.067 | 52.230 |
| 36 | 22.571 | 7.450 | 76 | 86.951 | 55.777 |
| 37 | 22.571 | 7.450 | 77 | 92.149 | 59.545 |
| 38 | 22.571 | 7.450 | 78 | 97.640 | 63.545 |
| 39 | 22.571 | 7.450 | 79 | 103.392 | 67.793 |
| 40 | 22.571 | 7.450 | 80 | 109.372 | 72.312 |
| 41 | 22.571 | 7.450 | 81 | 115.544 | 77.135 |
| 42 | 22.571 | 7.450 | 82 | 121.877 | 82.298 |
| 43 | 22.571 | 7.450 | 83 | 128.343 | 87.838 |
| 44 | 22.571 | 7.450 | 84 | 134.923 | 93.794 |
| 45 | 22.571 | 7.450 | 85 | 141.603 | 100.203 |
| 46 | 23.847 | 8.184 | 86 | 148.374 | 107.099 |
| 47 | 25.124 | 8.959 | 87 | 155.235 | 114.512 |
| 48 | 26.404 | 9.775 | 88 | 162.186 | 122.464 |
| 49 | 27.687 | 10.634 | 89 | 169.233 | 130.972 |
| 50 | 28.975 | 11.535 | 90 | 183.408 | 140.049 |
| 51 | 30.268 | 12.477 | 91 | 199.769 | 149.698 |
| 52 | 31.563 | 13.456 | 92 | 216.605 | 159.924 |
| 53 | 32.859 | 14.465 | 93 | 233.662 | 170.433 |
| 54 | 34.152 | 15.497 | 94 | 250.693 | 182.799 |
| 55 | 35.442 | 16.544 | 95 | 267.491 | 194.509 |
| 56 | 36.732 | 17.598 | 96 | 283.905 | 205.379 |
| 57 | 38.026 | 18.654 | 97 | 299.852 | 215.240 |
| 58 | 39.334 | 19.710 | 98 | 315.296 | 223.941 |
| 59 | 40.668 | 20.768 | 99 | 330.207 | 231.387 |

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Table 7
Family Structure

| Male | Age | | Age of youngest child | Average number of children | Probability of being married | Probability of children if married |
|------|--------|--|-----------------------|----------------------------|------------------------------|------------------------------------|
| | Female | | | | | |
| 20 | 17 | | 2 | .90 | .30 | .50 |
| 21 | 18 | | 2 | .90 | .35 | .50 |
| 22 | 19 | | 2 | .98 | .40 | .50 |
| 23 | 20 | | 2 | .98 | .46 | .53 |
| 24 | 21 | | 3 | 1.05 | .53 | .56 |
| 25 | 22 | | 3 | 1.13 | .60 | .59 |
| 26 | 23 | | 4 | 1.20 | .67 | .62 |
| 27 | 24 | | 4 | 1.28 | .74 | .65 |
| 28 | 25 | | 4 | 1.35 | .76 | .67 |
| 29 | 26 | | 5 | 1.43 | .78 | .69 |
| 30 | 27 | | 5 | 1.50 | .80 | .71 |
| 31 | 28 | | 6 | 1.58 | .82 | .73 |
| 32 | 29 | | 6 | 1.65 | .84 | .75 |
| 33 | 30 | | 7 | 1.80 | .85 | .76 |
| 34 | 31 | | 7 | 1.95 | .86 | .77 |
| 35 | 32 | | 8 | 2.10 | .87 | .78 |
| 36 | 33 | | 8 | 2.10 | .87 | .79 |
| 37 | 34 | | 9 | 2.10 | .87 | .80 |
| 38 | 35 | | 9 | 2.30 | .87 | .79 |
| 39 | 36 | | 10 | 1.95 | .87 | .78 |
| 40 | 37 | | 10 | 1.88 | .87 | .77 |
| 41 | 38 | | 11 | 1.80 | .87 | .76 |
| 42 | 39 | | 11 | 1.73 | .87 | .75 |
| 43 | 40 | | 11 | 1.73 | .87 | .72 |
| 44 | 41 | | 12 | 1.65 | .87 | .69 |
| 45 | 42 | | 12 | 1.65 | .86 | .66 |
| 46 | 43 | | 12 | 1.58 | .86 | .63 |
| 47 | 44 | | 12 | 1.58 | .86 | .60 |
| 48 | 45 | | 12 | 1.50 | .85 | .56 |
| 49 | 46 | | 12 | 1.43 | .85 | .52 |
| 50 | 47 | | 13 | 1.43 | .85 | .48 |
| 51 | 48 | | 13 | 1.35 | .85 | .44 |
| 52 | 49 | | 13 | 1.35 | .85 | .40 |
| 53 | 50 | | 13 | 1.35 | .85 | .37 |
| 54 | 51 | | 13 | 1.35 | .84 | .34 |

Section 4 (continued)

4.8 Summary of Methods and Assumptions

Table 7
Family Structure
(continued)

| Male | Age | | Age of youngest child | Average number of children | Probability of being married | Probability of children if married |
|------|--------|--|-----------------------|----------------------------|------------------------------|------------------------------------|
| | Female | | | | | |
| 55 | 52 | | 13 | 1.28 | .84 | .31 |
| 56 | 53 | | 13 | 1.28 | .83 | .28 |
| 57 | 54 | | 13 | 1.28 | .83 | .25 |
| 58 | 55 | | 13 | 1.28 | .83 | .23 |
| 59 | 56 | | 13 | 1.20 | .82 | .21 |
| 60 | 57 | | 13 | 1.20 | .81 | .19 |
| 61 | 58 | | 13 | 1.20 | .80 | .17 |
| 62 | 59 | | 13 | 1.20 | .79 | .15 |
| 63 | 60 | | 13 | 1.20 | .78 | .13 |
| 64 | 61 | | 13 | 1.20 | .77 | .11 |
| 65 | 62 | | 13 | 1.13 | .76 | .09 |
| 66 | 63 | | 13 | 1.13 | .75 | .07 |
| 67 | 64 | | 13 | 1.13 | .74 | .05 |
| 68 | 65 | | 13 | 1.13 | .73 | .04 |
| 69 | 66 | | 13 | 1.05 | .72 | .03 |
| 70 | 67 | | 13 | 1.05 | .71 | .02 |
| 71 | 68 | | 13 | 1.05 | .70 | .01 |

Section 4 (continued)

4.9 Definition of Actuarial Terms

Accrued benefit

The benefit earned by a participant as of the date at which the determination is made payable in the form of an annual benefit commencing at normal retirement age. The accrued benefit is payable for the member's lifetime only, however if the total monthly payments at the member's death are less than contributions accumulated with interest, the remaining employee contribution balance will be paid to the member's beneficiary.

Accumulated plan benefits

The accrued benefits and any other benefits, whether vested or not, that have been earned by the participants covered by the plan as of the date at which the determination is made. These other benefits include any death, early retirement or disability benefits provided under the plan.

Actuarial accrued liability

Equal to the actuarial present value of future benefits less the present value of future annual normal costs

Actuarial cost method

The method for allocating the actuarial present value of a pension plan's benefits and expenses to various time periods. An actuarial cost method is also referred to as a funding method.

Actuarial gain/(loss)

The difference between the plan's actual experience and that expected based upon a set of actuarial assumptions. A gain occurs when the experience of the plan is more favorable (in terms of cost) than the assumptions projected; a loss occurs when experience is less favorable. May also be referred to as experience gains/(losses).

Actuarial present value

See present value.

Actuarial valuation

The determination, as of a valuation date, of the annual normal cost, actuarial accrued liability, actuarial value of assets and related actuarial present values for a pension plan.

Actuarial value of assets

The value of cash, investments and other property belonging to a pension plan determined by the actuary for the purpose of an actuarial valuation. Actuarial asset methods are generally designed

Amortization

The spreading of a present value or a cost over a period of years. A plan's unfunded actuarial accrued liability is amortized over a period of years.

Section 4 (continued)

4.9 Definition of Actuarial Terms

Fiscal year

The year on which the plan sponsor maintains its financial records.

Funded

Provided by plan assets. A liability is fully funded when assets exceed or equal the liability.

Normal cost

That portion of the actuarial present value of pension plan benefits and expenses which is allocated to a valuation year by the actuarial cost method.

Normal retirement age

An age defined in the plan for purposes of establishing when a terminated participant is entitled to an accrued benefit.

Normal retirement benefit

The benefit payable when it commences at the normal retirement age.

Participant

A person covered by a pension plan in accordance with its terms including active participants, retired participants and beneficiaries, vested terminations and vested transfers.

Plan year

The year on which the plan maintains its financial records.

Present value

The value of an amount or series of amounts payable at various times, determined as of a given date by the application based on a particular set of actuarial assumptions. It is a single sum which reflects the time value of money and the probabilities of payment.

Rate of return

The actual or expected investment income as a percentage of a plan's average assets.

System

Public School Retirement System of the City of St. Louis, Missouri.

Unfunded actuarial accrued liability

The excess of the actuarial accrued liability over the actuarial value of assets.

Vested benefit

A benefit that is not forfeited if the participant terminates employment.