JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT
FOURTH QUARTER MEETING
November 16, 2016

The Joint Committee on Public Employee Retirement (JCPER) held its 4th Quarter Meeting on Wednesday, November 16, 2016 at 2pm in Senate Committee Room 2. Representative Leara called the meeting to order. Joint Committee members in attendance were Representative Leara, Representative Bernskoetter, Representative Runions, Representative Walker, and Senator Walsh. Senator Schaaf participated via telephone. Representative Anders, Senator Chappelle-Nadal, Senator Kehoe, Representative Pierson, and Senator Wallingford were not in attendance. One vacancy currently exists on the JCPER. Because a quorum was not established, the Committee met for informational purposes only.

Representative Leara turned the meeting over to the Executive Director, Michael Ruff. The first discussion item was the presentation of the 2016 Watch List. The Watch List consists of plans that are below seventy percent funded on a market value basis. Twenty-two plans are on the current Watch List. Each plan on the Watch List was contacted and given an opportunity to provide a response. Twelve plans provided written responses and one plan responded by telephone. Written responses were included in the committee members' packets and the Executive Director summarized the telephone response for the committee members.

The Executive Director provided a status update on the City of Berkeley Police & Firemen's Retirement Fund. The Fund is no longer included on the Watch List because its funded ratio is above seventy percent on a market value basis. However, the City had provided the JCPER with an actuarial cost statement for the plan changes that were adopted at the April 2016 election. The Executive Director summarized the projected impact of the plan changes.

Next, the JCPER received a presentation from the County Employees' Retirement Fund. The JCPER had requested that representatives from the Fund speak to the JCPER regarding the sufficiency of existing revenue sources to meet the actuarially determined contribution, the sustainability of the defined contribution and deferred compensation account match, and the actuarial valuation date change. Ms. Sarah Maxwell, Executive Director, presented to the JCPER. Mr. Mike Zwiener, the Fund's outside actuary, assisted with the presentation. Ms. Maxwell provided the JCPER with copies of a written presentation. CERF's revenue streams are established in state statute, which require legislative action to modify. Ms. Maxwell explained that the Fund believes long-term that it needs to look at its funding sources. Ms. Maxwell also stated that the Fund's board of trustees has discussed the DC account match and whether to continue it. The Fund's board will hold its next meeting in December.

The Executive Director summarized the State Auditor's audit of the City of Bridgeton Employees' Retirement System. The State Auditor gave the system an overall rating of "Poor" and provided information regarding the areas of plan financial condition, plan governance, actuarial valuations, and communication.

Quarterly plan investment reporting was reviewed from the third quarter of 2016, ending September 30. The returns are broken down into 12 months, 36 months and 60 months. Of the plans that reported quarterly investment returns, many had higher returns than what had been reported from the second

JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT
Fourth QUARTER MEETING
November 16, 2016
(Continued)

and first quarters of 2016.

Senate Computer Information Systems has completed the development of the new JCPER website. Ms. Tabi Twehus, Computer Programmer, presented the new website to the JCPER. The new website is expected to go live by the end of the calendar year.

With no further business being presented, the committee adjourned.

Michael Ruff
Executive Director

JCPER

JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

4th QUARTER MEETING
November 16 , 2016
2:00 p.m.— Senate Committee Room 2

AGENDA

Roll Call

Presentation of 2016 Watch List

Presentation by County Employees' Retirement Fund

Status Update
City of Berkeley - Police & Fire

State Auditor's Audit of City of Bridgeton Employees Retirement Plan

Quarterly Reporting

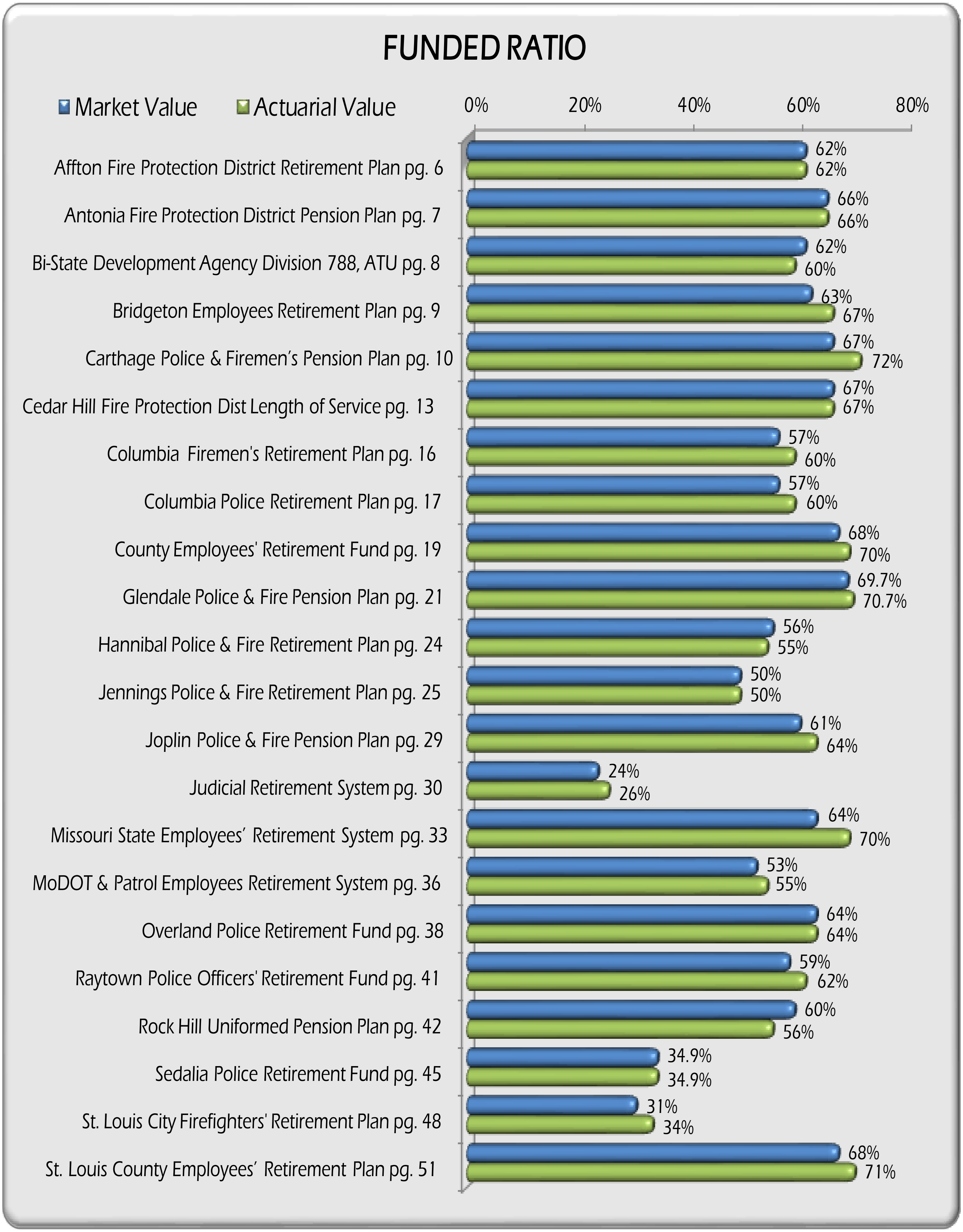
JCPER Website

Other Business

JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

WATCH LIST

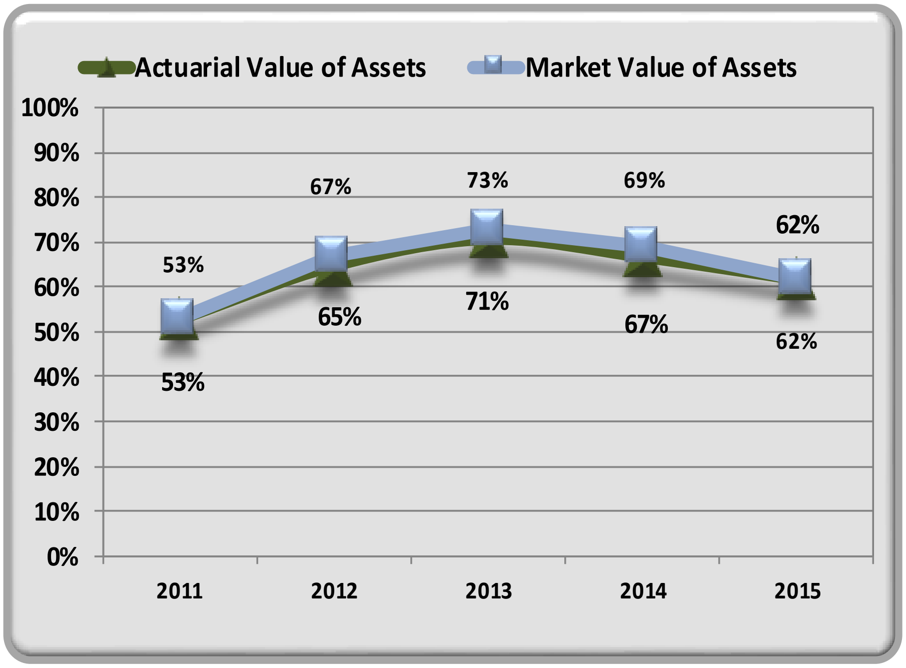
2016


FUNDED RATIO
Market Value
Actuarial Value
0%
20%
40%
60%
80%
Affton Fire Protection District Retirement Plan pg. 6
62%
62%
Antonia Fire Protection District Pension Plan pg. 7
66%
66%
Bi-State Development Agency Division 788, ATU pg. 8
62%
60%
Bridgeton Employees Retirement Plan pg. 9
63%
67%
Carthage Police & Firemen's Pension Plan pg. 10
67%
72%
Cedar Hill Fire Protection Dist Length of Service pg. 13
67%
67%
Columbia Firemen's Retirement Plan pg. 16
57%
60%
Columbia Police Retirement Plan pg. 17
57%
60%
County Employees' Retirement Fund pg. 19
68%
70%
Glendale Police & Fire Pension Plan pg. 21
69.7%
70.7%
Hannibal Police & Fire Retirement Plan pg. 24
56%
55%
Jennings Police & Fire Retirement Plan pg. 25
50%
50%
Joplin Police & Fire Pension Plan pg. 29
61%
64%
Judicial Retirement System pg. 30
24%
26%
Missouri State Employees' Retirement System pg. 33
64%
70%
MoDOT & Patrol Employees Retirement System pg. 36
53%
55%
Overland Police Retirement Fund pg. 38
64%
64%
Raytown Police Officers' Retirement Fund pg. 41
59%
62%
Rock Hill Uniformed Pension Plan pg. 42
60%
56%
Sedalia Police Retirement Fund pg. 45
34.9%
34.9%
St. Louis City Firefighters' Retirement Plan pg. 48
31%
34%
St. Louis County Employees' Retirement Plan pg. 51
68%
71%

Please Note: For purposes of the Watch List, the term “inactive” includes terminated vested, retired, surviving beneficiary, and disabled members.

AFFTON FIRE PROTECTION DISTRICT RETIREMENT PLAN

- Rate of return on investments equaled –0.2% (Market) vs. 6.5% assumed.
- Assets are valued at market value except for 2008 loss which was smoothed over 5 years.
- The actuarial cost method was changed from the Aggregate method to the Entry Age Normal Method with a 30 year amortization of the unfunded liability.
- The plan updated its mortality tables to reflect current life expectancies based on the most recent Society of Actuaries study. This change increased the target contribution.
- Plan provisions were modified effective 01/01/13. The benefit multiplier was changed from 2.1667% to 1.7333%. Accrued benefits are not modified; however, new and prospective service will be at new provision levels. Lump sum benefit payments were also ceased.
- Employee contributions were implemented in 2010 at 4% and then 7% thereafter.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2015	$315,183	$304,357	97%
2014	$248,521	$300,403	120%
2013	$264,490	$298,054	113%
2012	$393,592	$1,308,442	332%
2011	$364,433	$304,844	84%
2010	$345,598	$284,870	82%

As of 1/1/16

Market Value: $7,399,630
Actuarial Value: $7,399,630
AAL: $12,011,620

MEMBERSHIP:
Active: 39 **Inactive:** 26

Normal Retirement Formula:
52% (from 65%) of compensation
Reduced for less than 30 years
Supplemental Benefit:
$500 monthly to age 62 if employed on 01/01/09 and have at least 30 yrs service as of 12/31/09

Normal Retirement Benefits:
Age 60 with 5 years of service

Social Security Coverage: Yes

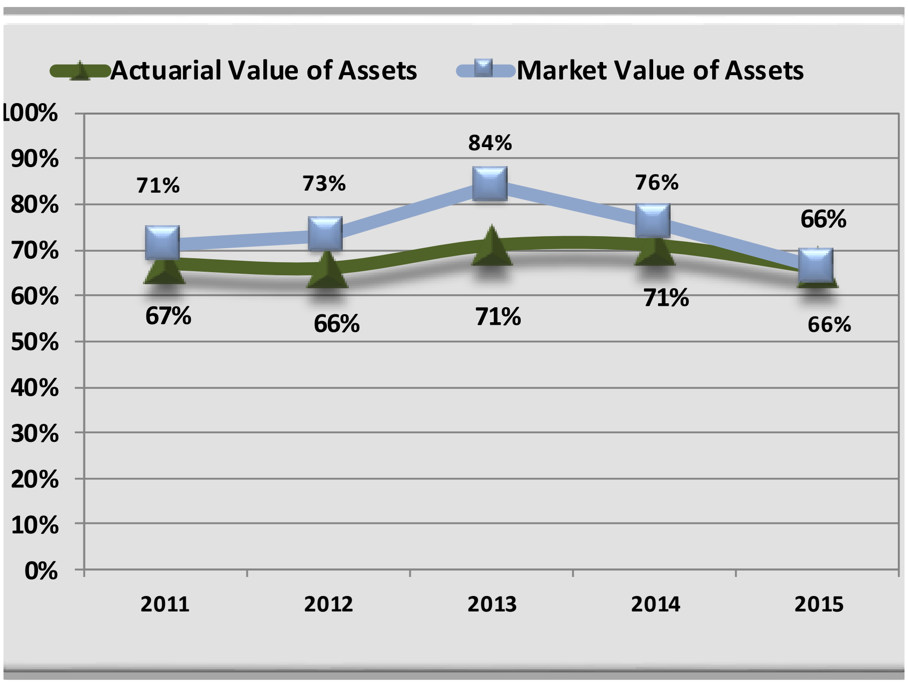
COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% **Salary:** 3.5%

ANTONIA FIRE PROTECTION DISTRICT PENSION PLAN

- Rate of return on investments equaled –0.51% vs. 6.0% assumed.
- Plan was frozen in February 2009. The FPD implemented a defined contribution plan for employees in 2010. The DC plan was terminated and proceeds distributed in 2013.
- Joined LAGERS in July 2012.
- Lump sum payment option eliminated.
- Closed 15 year amortization policy beginning in 2014.
- Actuarial valuation is performed on January 1. Financial statements completed as of October 31. FPD annual report completed as of November 30.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$104,304	n/a	n/a
2015	$85,237	$74,250	87%
2014	$68,700	$75,000	109%
2013	$58,625	$75,000	128%
2012	$66,317	$91,317	138%
2011	$58,078	$58,078	100%

As of 1/1/16

Market Value: **$1,904,873**
Actuarial Value: **$1,904,873**
AAL: **$2,883,647**

MEMBERSHIP:
Active: 15 **Inactive:** 6

Normal Retirement Formula:
2.25% of compensation for first 24 years of service plus 1% for the next 6 years of service
Formula frozen 01/01/09

Normal Retirement Benefits:
Age 55 or 30 years of service

Social Security Coverage: Yes

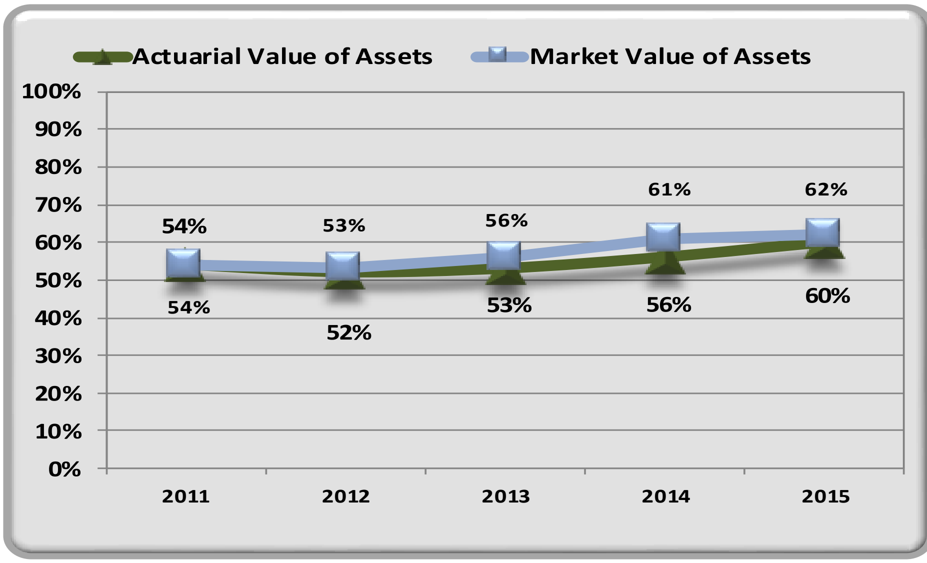
COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6% **Salary:** N/A

BI-STATE DEVELOPMENT AGENCY
DIVISION 788, A.T.U.

- Rate of return on investments equaled 6.1% (Market) and 10.0% (Actuarial) vs. 7.25% assumed.
- Investment gains/losses are smoothed over a 5 year period.
- Unfunded Actuarial Accrued Liability is amortized on a closed 30 year period effective April 1, 2003.
- The weekly recommended contribution for plan year 15/16 equals $152.44 per active participant.
- With the April 1, 2010 actuarial valuation, an additional 5 year weekly contribution of $8.87 was calculated for the plan to achieve a 60% funded ratio. The actuary has estimated this same amount would be required to achieve a 65% and 70% funded ratio over 5 years. This additional contribution continues to be made.
- Employees contribute approximately 30% of weekly contributions.
- The Employer continues to meet the full ADC.
- Effective April 1, 2015, this plan merged with the 788 Clerical Unit ATU plan pursuant to a resolution and vote of the membership and acceptance by the plans' pension committees. The Clerical Unit ATU plan had previously been on the JCPER Watch List.
- *This plan was included on the State Auditor's "watch list" in 2014.*



	EMPLOYER RECOMMENDED CONTRIBUTION	EMPLOYER ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
14/15	$8,716,712	$8,716,712	100%
13/14	$8,764,558	$8,764,558	100%
12/13	$7,830,531	$7,830,531	100%
11/12	$6,904,988	$6,904,988	100%
10/11	$5,393,748	$5,393,748	100%
09/10	$4,953,503	$4,953,503	100%

As of 4/1/15

Market Value: **$ 123,027,014**
Actuarial Value: **$ 117,889,375**
AAL: **$ 197,892,376**

MEMBERSHIP:
Active: 1,332 **Inactive:** 1,295

BENEFITS:
Normal Retirement Formula:
$40 times years of service for those retiring with less than 25 years of service
$55 times years of service for those retiring with 25 or more years of service

Normal Retirement Benefits:
25 years of service, age 65, or age 55 with 20 years of service

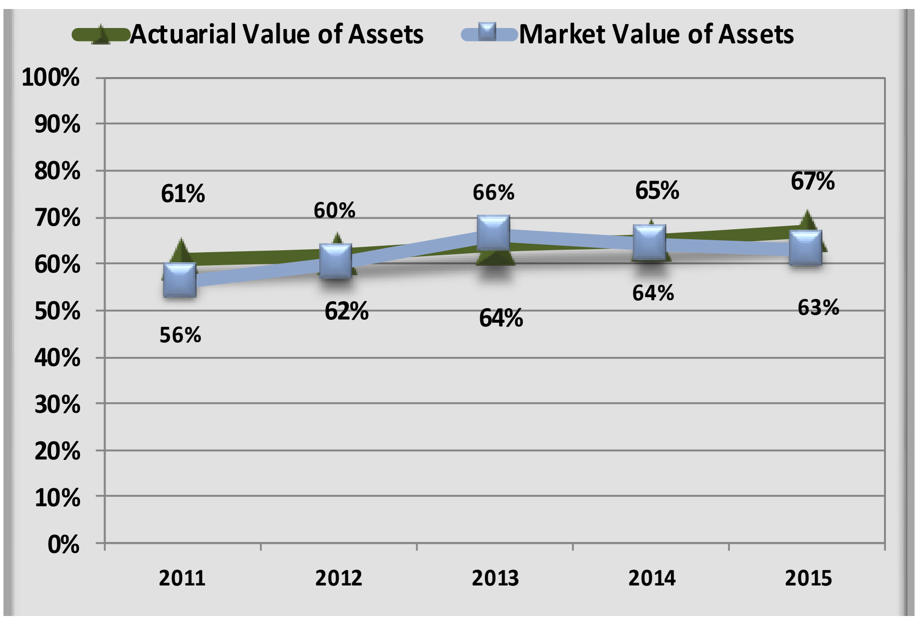
Social Security Coverage: Yes

COLA: Ad Hoc COLA

ACTUARIAL ASSUMPTIONS:
Interest: 7.25%

BRIDGETON EMPLOYEES RETIREMENT PLAN

- Rate of return on investments equaled –2.5% (Market) and 6.3% (Actuarial) vs. assumed 7.5%
- Investment gains/losses are smoothed over a 3 year period.
- Audited by the State Auditor in 2016 with an overall performance rating of Poor.
- Included on the State Auditor's "watch list" in 2014.
- Open 30 year period for amortization of unfunded liabilities.
- In April 2015, voters approved a hotel/motel tax increase to generate an additional $900,000 in revenue annually. According to the State Auditor, city officials are increasing the annual contribution by $200,000 each year until the full contribution is met.
- Employees do not make a payroll contribution to this plan.
- The Employer has not met the ARC since 2007.
- This plan was <u>frozen to new employees</u> as of January 1, 2012
- For employees hired after 1/1/12, the City uses a matching component to its 457 deferred compensation plan.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$1,680,519	N/A	N/A
2015	$1,750,340	$1,200,000	68%
2014	$1,740,187	$1,000,000	57%
2013	$1,767,398	$1,000,000	57%
2012	$1,745,095	$1,000,000	57%
2011	$1,529,511	$900,000	65%

<u>As of 01/01/16</u>

Market Value: **$26,070,396**
Actuarial Value: **$27,699,927**
AAL: **$41,623,235**

MEMBERSHIP:
Active: 106 **Inactive:** 147

BENEFITS:
Normal Retirement Formula:
2% of compensation times years of service

Normal Retirement Benefits:
Age 60 with 5 years of service

Social Security Coverage:
Yes

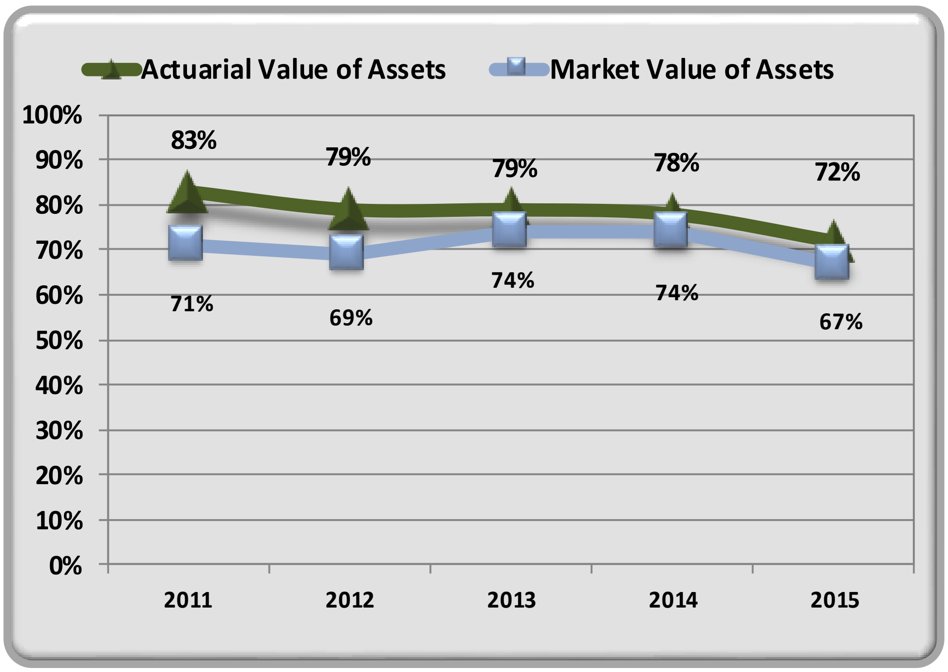
COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 7.5% **Salary:** 4%

*Market Value from actuarial valuation as of 1/1/16 including accrued contribution.

Carthage Police & Firemen's Pension Plan

- Rate of return on investments equaled 0% (market) and 2.29% (actuarial) vs. 7% assumed.
- Investment gains and losses are smoothed over a five year period.
- In 2016, lowered the normal retirement age from age 58 to age 55.
- Decreased the assumed rate of return from 8.0 to 7.0 in 2013. Decreased the salary inflation assumption from 4.0 to 3.5 in 2013.
- Unfunded liabilities are amortized over an open thirty year period.
- The plan's actuarial valuation is performed on January 1 for the plan year beginning July 1. The actual contribution numbers for years 2013 to 2015 are for the period July 1 to June 30. For years 2011 and 2012, the actual contribution numbers are for the period January 1 to December 31.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$449,784	N/A	N/A
2015	$370,191	$380,711	103%
2014	$361,180	$394,050	109%
2013	$346,065	$363,577	105%
2012	$328,432	$299,056	91%
2011	$317,672	$314,932	99%

As of 1/1/16 for the year beginning July 1, 2016

Market Value: **$6,337,520**
Actuarial Value: **$6,819,725**
AAL: **$9,448,399**

MEMBERSHIP:
Active: 48 **Inactive:** 53

BENEFITS:
Normal Retirement Formula:
2.5% of compensation for first 20 years of service plus 1% for the next 15 years

Normal Retirement Benefits:
Age 55 with 10 years of service

Social Security Coverage:
Yes

COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 7% **Salary:** 3.5%

From:	Maria Gutierrez-Fisher
To:	Michael Ruff
Subject:	FW: Carthage Police & Firemen"s Pension Plan
Date:	Tuesday, October 25, 2016 1:15:37 PM
Attachments:	image001.png SKM_C554e16102511370.pdf

Michael,

I will be having more discussion with the plan actuary, Dan Nichols, in the near future; however, the email below from Randy Conner may help explain some inconsistencies.
I will be in touch.

Thank you,

Maria

From: Conner, Randy [mailto:RConner@CBIZ.com]
Sent: Tuesday, October 25, 2016 11:55 AM
To: Maria Gutierrez-Fisher <m.gutierrez@carthagemo.gov>
Cc: Nichols, Dan <DNichols@CBIZ.com>
Subject: RE: Carthage Police & Firemen's Pension Plan

Maria,

I made a few changes to the JCPER summary exhibit (attached). It looks like that the changes to interest rate and salary scale were effective with the 1/1/2013 valuation. The recommended contribution which Dan calculates each year as part of the January 1 valuation is for the fiscal year beginning on the following July 1st. The contribution schedule seems to be mismatching recommended fiscal year contributions with calendar year contributions. Since the new GASB standards went into effect Dan has been showing actual fiscal year contributions (since the fiscal year beginning July 1, 2013) in his report. I've written those in. I couldn't find actual contributions for the fiscal years ending 6/30/2013 and 6/30/2012, but I've got a feeling that what's being shown in the schedule is inaccurate.

2015 was a bad year for investment returns. We've seen that across all of the plans we work with, and that's led to lower funding ratios. It appears that it is the city's policy to contribute at least the actuarially recommended contribution each year. That would suggest that funding ratios would increase in future years.

When Dan gets back Thursday, he might have something to add.
Regards,
Randy Conner, A.S.A., E.A.
Consulting Actuary

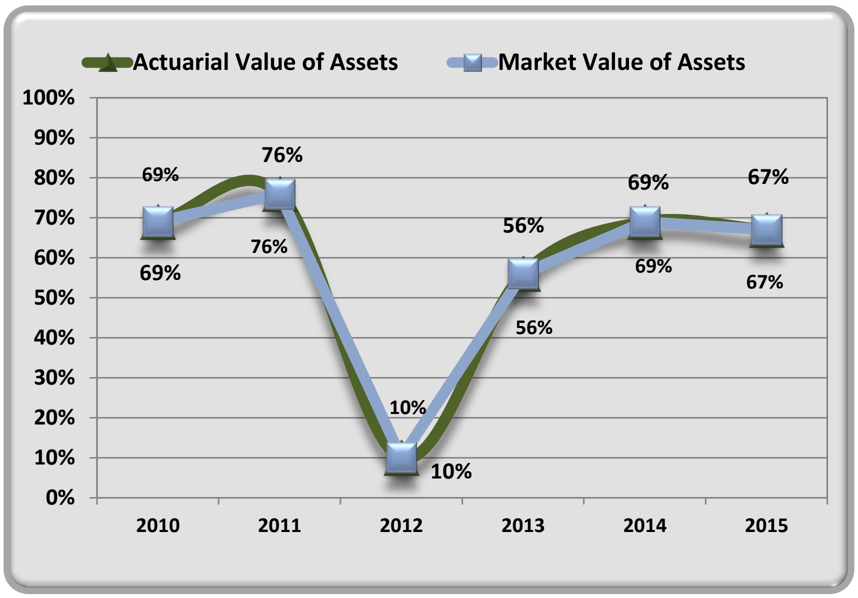
CBIZ Cottonwood

CBIZ Retirement Plan Services
6900 College Boulevard, Suite 300
Overland Park, KS 66211
p: 913-906-4233
f: 913-345-0172
NYSE Listed:CBZ
e: rconner@cbiz.com

To learn more about CBIZ Retirement Plan Services, visit our website: www.cbiz.com/retirement

CEDAR HILL FPD LENGTH OF SERVICE AWARDS PROGRAM

- This plan provides a pension benefit for volunteer members of the fire protection district.
- Benefit payments in 2012 exceeded $140,000 which greatly depleted plan assets.
- Active members do not make a monetary contribution to this plan.
- The plan does not smooth investment gains/losses.
- Plan closed to new members as of 12/01/14.
- The plan's 12/1/15 actuarial valuation contained newly supplied information, including a figure for actuarial accrued liability. Previously, the valuation only contained a figure for present value of accrued benefits. This impacts the funded ratio for 2015 because it had previously been calculated using present value of accrued benefits.
- The 12/1/15 actuarial valuation also included a schedule of sponsor contributions for the previous six years. This schedule's information, which is included below, differs from what had been previously reported to the JCPER.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$18,508	$24,196	130%
2015	$24,257	$19,564	81%
2014	$19,064	$27,462	144%
2013	$22,197	$27,430	124%
2012	$27,117	$27,310	101%
2011	$26,310	$23,013	87%

AS OF 12/01/15

Market Value: $ 113,594
Actuarial Value: $ 113,594
AAL: $ 170,528

MEMBERSHIP:
Active: 15 Inactive: 12

BENEFITS:
Normal Retirement Formula:
$15 per month times years of service
Maximum: $450 per month
Life annuity guaranteed for 10 years
Normal Retirement Benefits:
Age 65 with 5 years of service

COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 4.75%

From: Terry Soer
To: Michael Ruff
Subject: RE: Cedar Hill Fire Protection District LOSA
Date: Wednesday, October 26, 2016 2:12:22 PM

Hi Michael,

I have sent this information on to our CPA and also our Pension Attorney for some advice. I hope they will come back with some comments that I can forward on to you. Thanks.

Terry

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Wednesday, October 26, 2016 11:47 AM
To: Terry Soer (chfpd@cedarhillfire.com) <chfpd@cedarhillfire.com>
Subject: Cedar Hill Fire Protection District LOSA

Dear Chief Soer:
The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information based on the annual survey information for plan year 2015. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

I also would like to provide a quick explanation of two differences contained in this year's information sheet. First, the 2015 funded ratio in the chart (67%) is calculated using a different number from previous years. This year, the actuarial valuation included a number for actuarial accrued liability (AAL) for the first time. Previously, the actuarial valuation only contained a number for present value of accrued benefits, which was used to calculate the funded ratio in prior years. This year, because there was a number for AAL in the valuation, we used AAL to calculate the plan's funded ratio. This resulted in the funded ratio of 67%.

Second, this year's actuarial valuation contained a schedule of sponsor contributions for the past six plan years. Previous actuarial valuations did not contain a schedule. This information is different than what was previously reported to the JCPER. However, because this is the most recent information, I have included the schedule on the information page.

Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

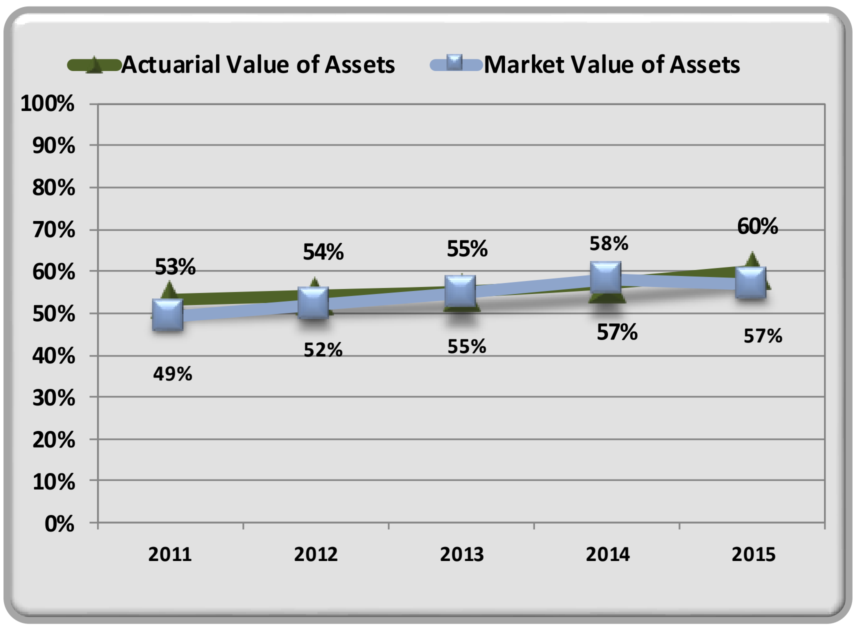
Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEMS

- The Fire and Police plans are commingled for investment purposes. Rate of return on investments equaled –1.5% (Market) & 7.0% (Actuarial) vs. 7.5% assumed. Investment gains/losses are smoothed over a 4 year period.
- The employer continues to meet or exceed the ARC.
- For fiscal year 2015, the City contributed an additional $5 million in excess of the recommended contribution, divided between the two plans.
- Unfunded liabilities are amortized over a closed 25 year period beginning in plan year 2014.
- A new tier of provisions were passed for employees hired on or after October 1, 2012. These provisions include, but are not limited to, modified age and service requirements for retirement eligibility, modified benefit multiplier with no retiree COLA, fire member contribution reduced to 4% of pay, and automatic survivor benefit replaced with a survivor option at retirement with member's reduced benefit. New tier provisions estimated to produce in excess of $40 million savings over 20 years.
- Fire employees contribute 16.32% of pay (4% for those hired on/after 10/01/12) and do not participate in Social Security.
- Police employees contribute between 7.45% & 8.35% of pay (4.5% for those hired on/after 10/01/12) & do participate in Social Security.
- The plan's actuary has recommended that an updated experience study be conducted prior to the next annual actuarial valuation.
- *These plans were included on the State Auditor's watch list in 2014.*

FIREMEN'S RETIREMENT FUND



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$4,548,880 (estimated)	N/A	N/A
14/15	$4,751,496	$7,751,496	163%
13/14	$4,674,412	$4,674,412	100%
12/13	$4,382,296	$4,382,296	100%
11/12	$3,995,869	$3,995,869	100%
10/11	$3,598,322	$3,598,322	100%

AS OF 9/30/15

Market Value: $ 69,028,862
Actuarial Value: $ 72,876,702
AAL: $ 120,598,202

MEMBERSHIP:
Active: 134 Inactive: 150

BENEFITS:
Normal Retirement Formula:
3.5% of compensation for the first 20 years + 2% for next 5 years. Max 80% of compensation; 2% of compensation < 20 years. New hires: 2.5% of compensation x yrs of service, no max.
Normal Retirement Benefits:
Age 65 or 20 years of service
Age 55 with 5 yrs of service or Rule of 80 (new hires)

COLA: Annual Max of 2%

ACTUARIAL ASSUMPTIONS:
Interest: 7.5%
Salary: 3.5%

COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEMS
(Continued)

POLICE RETIREMENT SYSTEM

As of 09/30/15

Market Value: $45,810,617
Actuarial Value: $48,364,215
AAL: $81,021,262

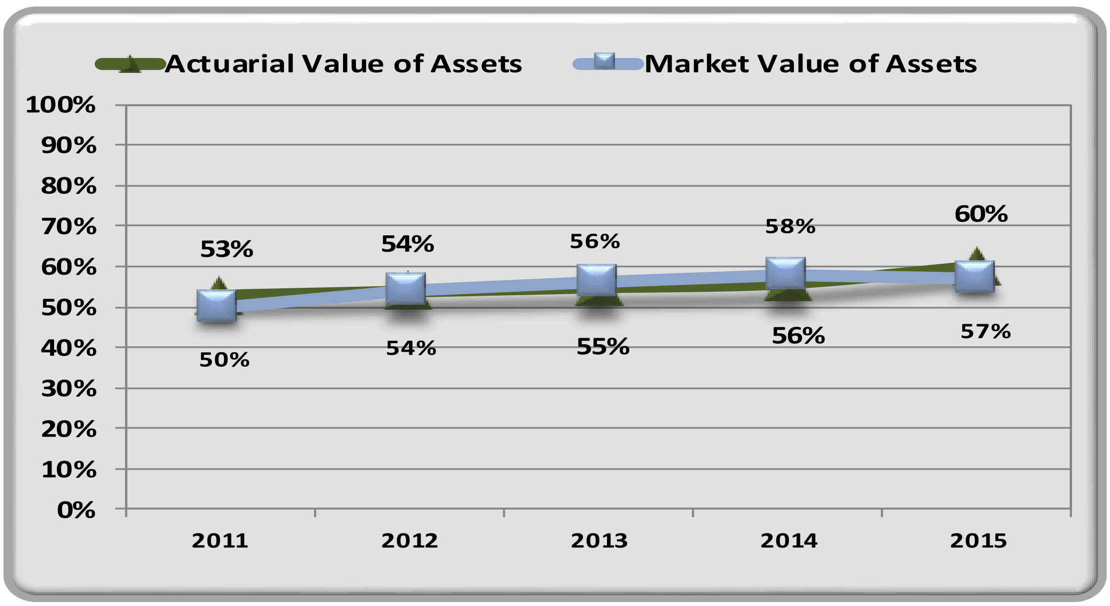
Membership:
Active: 155
Inactive: 171

Normal Retirement Formula:
3% of compensation for first 20 years + 2% for next 5 years Maximum: 70% of compensation
2.0% of compensation up to 25 years + 1.5% each year over 25 years Max—57.5% of compensation (new hires)

Normal Retirement Benefits:
20 years of service, or age 65
25 years of service or age 65 (new hires)

COLA:
Annual Amount Max: 0.6%

ACTUARIAL ASSUMPTIONS: Interest: 7.5% Salary: 3.5%



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$3,418,657 estimate	N/A	N/A
14/15	$3,486,784	$5,486,784	157%
13/14	$3,245,420	$3,245,420	100%
12/13	$3,243,455	$3,243,455	100%
11/12	$3,153,367	$3,153,367	100%
10/11	$3,033,164	$3,033,164	100%

From: Michele Nix
To: Michael Ruff
Cc: Janice Finley
Subject: JCPER Plan Information
Date: Monday, November 7, 2016 6:19:10 PM

MichaeI replaced John Battel as the the Finance Director and Plan Administrator for the City of Columbia when John retired in March, 2016.

I have reviewed you worksheet and it looks accurate however, I would like to add that the City made a $5 million dollar contribution towards the unfunded liability for the Police and Fire plan in FY2015. As such, the funded level rose to 60% as of 9-30-2015.

Please see the following links for information concerning the condition of the plan most recently included in the FY17 budget document.

Overview Page 10
Police Page 341
Fire Page 349

Thanks -m

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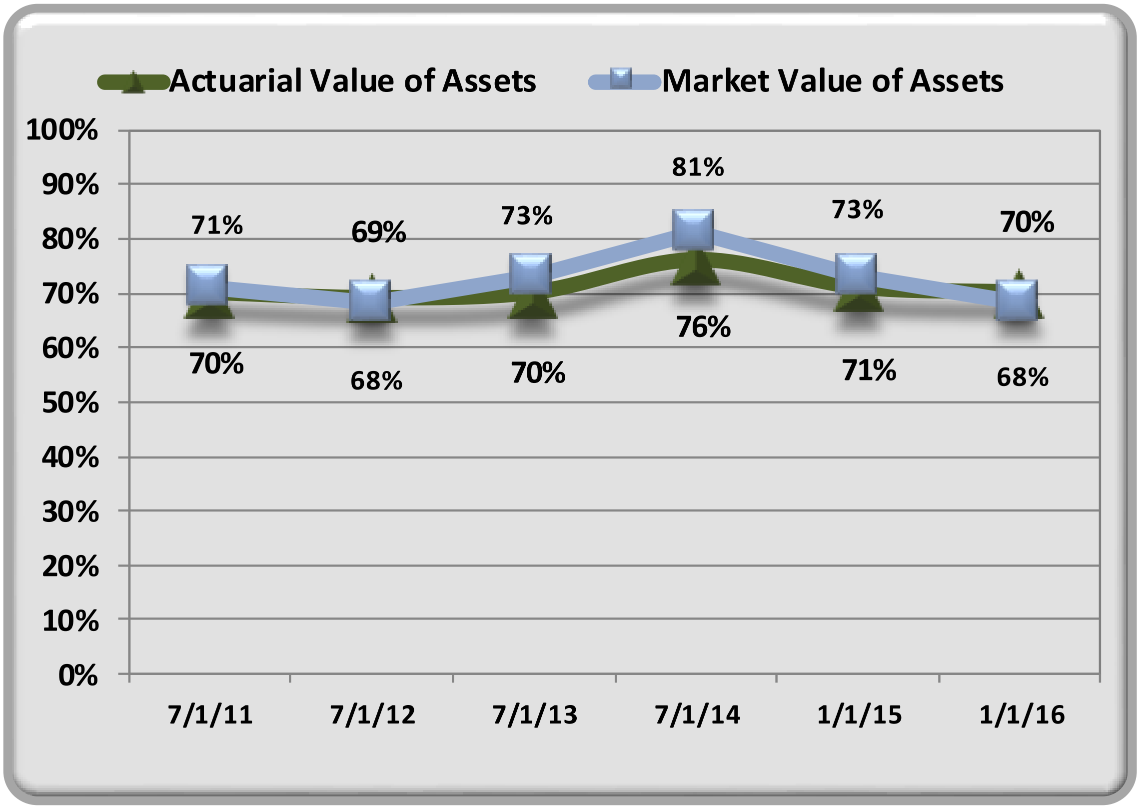
Michele Nix
Finance Director
573-874-7368

County Employees' Retirement Fund

- Rate of return on investments equaled 0.02% (market) and 6.45% (actuarial) vs. 7.5% assumed. Investment gains and losses are smoothed over a five year period.
- CERF was established in 1994 and is funded through county receipts of fee and penalty revenue and employee contributions. Employees hired on or after 2/25/02 contribute 6% of pay (non-LAGERS members) and 4% of pay (LAGERS members).
- The plan updated its mortality tables effective with the January 1, 2016 actuarial valuation.
- The plan's actuarial valuation date changed from July 1 to January 1 beginning on January 1, 2015. With the 1/1/15 valuation, the plan made several actuarial assumption changes, including but not limited to: assumed rate of return for investments was lowered from 8.0% to 7.5%, wage increase lowered from 3.0% plus merit to 2.5% plus merit, Social Security wage growth assumption lowered from 4.5% to 3.5%. The impact of some of these assumption changes increased the actuarial liability.
- The ADC has been met or exceeded each year since CERF's inception in 1994 except four times, most recently in 2015.
- The plan's board has discretion to make a matching contribution to members' DC accounts using penalty & fee revenue provided it is not needed to keep the system actuarially sound. The plan's actuary notes that "when the 401(a) matching contribution is netted out of the county contributions, the amount available for pension benefits has actually decreased over time. If this trend continues, the county contributions will represent a decreasing percent of payroll over time. This effect is mitigated over the short term as new employees enter CERF at the higher member contribution rate. If county contributions lag the county portion of the ADC for an extended period of time the funded position of CERF will deteriorate."

	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$25,608,251	N/A	N/A
2015	$22,051,507	$19,968,537	90.6%
2014	$17,483,325	$19,781,514	113%
2013	$18,594,085	$20,348,888	109%
2012	$18,706,575	$19,919,125	106%
2011	$17,486,046	$19,364,023	110%

- Recommended contribution numbers are found in the January 1, 2016 actuarial valuation, Summary of Historical Results.
- Actual Contribution numbers are derived from County Receipts figures from CERF's Annual Financial Reports, Statements of Changes in Fiduciary Net Position.



As of 12/31/15 & 1/1/16

Market Value: **$432,504,491**
Actuarial Value: **$448,784,038**
AAL: **$640,399,679**

MEMBERSHIP:
Active: 11,291 **Inactive:** 6634

BENEFITS:
Normal Retirement Formula:
$29 times years of service; Greater of flat dollar formula, TRR formula-Social Security offset or prior plan formula.

Normal Retirement Benefits:
Age 62 with 8 years of service

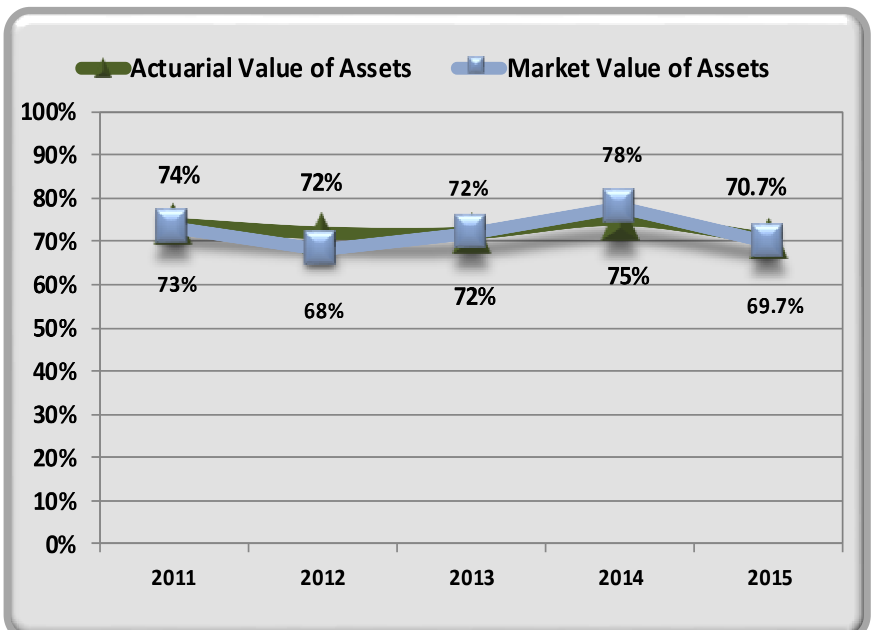
Social Security: Yes

COLA: Annual Max 1%, Total Max 50%, Percent of CPI: 100%

ACTUARIAL ASSUMPTIONS:
Interest: 7.5%
Salary: 2.5%

Glendale Police & Fire Pension Plan

- Rate of return on investments equaled 1.8% (market) and 6.9% (actuarial) vs. 7.5% assumed.
- Investment gains and losses are smoothed over a five year period.
- The plan changed its cost method from Aggregate to Entry Age Normal with a 20 year open amortization period for unfunded liabilities.
- The plan updated its mortality tables.
- The plan's actuary attributes this year's increase in the City's contribution to a poor asset return and assumption change for mortality.
- The plan is funded from two sources: a dedicated property tax levy and an employee contribution of 3.25%. The plan's financial statements note that "these are at this time fixed sources of revenue, which are not tied to actuarial experience of this plan, and are not tied to the actuarially recommended contribution."
- The tax levy has only produced sufficient revenue to meet the full annual required contribution one time (2007) since 2002.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$333,799	N/A	N/A
14/15	$294,386	$130,695	45%
13/14	$305,702	$127,993	42%
12/13	$311,625	$128,584	41%
11/12	$305,145	$132,462	43%
10/11	$347,737	$165,555	48%

As of 7/1/15

Market Value: **$5,271,715**
Actuarial Value: **$5,342,441**
AAL: **$7,555,918**

MEMBERSHIP:
Active: 26 **Inactive:** 19

BENEFITS:
Normal Retirement Formula:
50% of compensation for first 20 years of service plus 1% of compensation for each year over 20 years

Normal Retirement Benefits:
Age 55 with 15 years of service

Social Security Coverage:
Yes

COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 7.5%
Salary: 3.75%

From:	Andrew Witte
To:	Michael Ruff
Cc:	Daniel Lawrence
Subject:	RE: Glendale Police & Firemen"s Pension Plan
Date:	Wednesday, November 2, 2016 11:24:33 AM

OK, thanks for the context and I am glad you sent this to me and I think it is good for me to be the Plan contact here along with Dan.

Andrew Witte, FSA, EA
Aon Hewitt | Retirement and Investment
8182 Maryland Avenue | Suite 1500 | St. Louis, MO 63105
t +1.314.719.3836 | f +1.314.725.2262
Andrew.Witte@aonhewitt.com | aonhewitt.com

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Wednesday, November 02, 2016 10:31 AM
To: Andrew Witte
Subject: RE: Glendale Police & Firemen's Pension Plan

Good morning Andy,
Thank you for your response. The Joint Committee's Watch List has been around since probably the early 2000s although it was previously called "Concerned PERS." The goal of the watch list is to provide public awareness, provide an overview of the affected plans, and have an opportunity for comments and feedback.

The Joint Committee sends the watch list notification to the individuals listed as plan contacts. For Glendale Police & Fire, you and Mr. Lawrence are listed as the contacts. Only a few of the plans list the plan's actuary as the plan contact, which is probably why you haven't received a notification for them. For example, I know that you are one of the actuaries for Jennings Police & Fire but for the JCPER, Ms. Beverly Roche is listed as the plan contact.

Yes, I looked back at Glendale and it was on the Watch List for the November 20, 2013 Joint Committee hearing based on 2012 data.

Michael

From: Andrew Witte [mailto:andrew.witte@aonhewitt.com]
Sent: Wednesday, November 2, 2016 9:42 AM
To: Michael Ruff <mruff@senate.mo.gov>
Cc: Daniel Lawrence <dlawrence@glendalemo.org>
Subject: RE: Glendale Police & Firemen's Pension Plan

Hello:

Thanks for sending this to us.

Is this 70% "watch list" e-mail a new program? I think it is a good idea but don't recall getting anything like this before for any other clients, and I have had some below 70%

here and there in the past (including this plan a few years ago).

Just looking for context – at a glance I thought the document was very well put together and captured the situation accurately and succinctly.

- Andy

Andrew Witte, FSA, EA
Aon Hewitt | Retirement and Investment
8182 Maryland Avenue | Suite 1500 | St. Louis, MO 63105
t +1.314.719.3836 | f +1.314.725.2262
Andrew.Witte@aonhewitt.com | aonhewitt.com

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Monday, October 24, 2016 3:48 PM
To: dlawrence@glendalemo.org; Andrew Witte
Subject: Glendale Police & Firemen's Pension Plan

Dear Mr. Lawrence and Mr. Witte:

The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information based on the annual survey information for plan year 2015. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

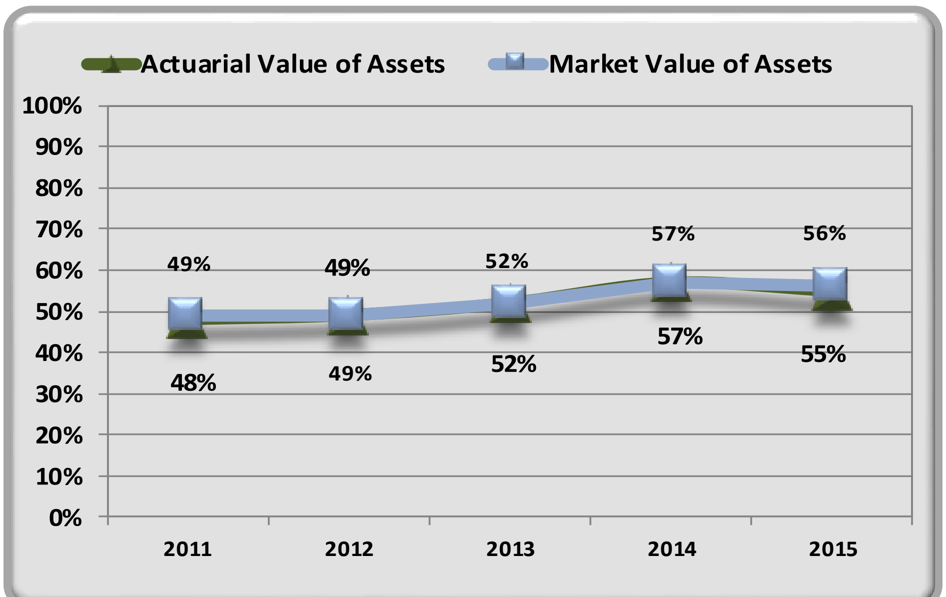
Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

HANNIBAL POLICE & FIRE RETIREMENT PLAN

- Rate of return on investments equaled 1.4% (Market) vs. 7.5% assumed.
- The plan does not smooth investment gains/losses.
- Open 20 year period for amortization of unfunded liabilities.
- Plan members do not participate in Social Security.
- Actuary notes "*The city has contributed more than recommended contribution in the last four years. This year's asset loss decreased the funded status. The new policy, implemented in 2012, increasing employee contributions while not decreasing the city's contribution rate will also help the Plan in its recovery. However, any pattern of less than adequate funding could decrease the funded status of the Plan to a point from which it would be very difficult to recover.* "
- The City made multiple plan modifications effective 7/1/11 including: Increasing mandatory employee contributions from 9.5% of pay to 12%, 11.4% annual minimum City contribution (plus tax revenue) will be modified to provide that the City's contribution will not be reduced unless the plan is determined to be at least 80% funded.
- Effective July 1, 2016, the employee contribution rate will increase by one-half percent annually until it reaches 15% on July 1, 2021.
- Decreased the salary assumption from 4.0 to 3.5 based on the results of an experience study from May 2015.
- The City has exceeded the actuary's recommended contribution since 2012.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$1,066,446	N/A	N/A
14/15	$984,663	$1,237,446	126%
13/14	$994,809	$1,214,217	122%
12/13	$1,010,251	$1,212,249	120%
11/12	$921,124	$1,152,165	125%
10/11	$1,179,620	$1,051,162	89%

As of 6/30/15

Market Value:
$15,326,681

Actuarial Value:
$15,285,088

AAL:
$27,598,708

MEMBERSHIP:
Active: 75 **Inactive:** 67

BENEFITS:
Normal Retirement Formula:
65% of compensation for first 25 years of service, plus 1% for each of the next 5 years of service in excess of 25
Maximum: 70% of compensation

Normal Retirement Benefits:
Age 55 or 25 years of service

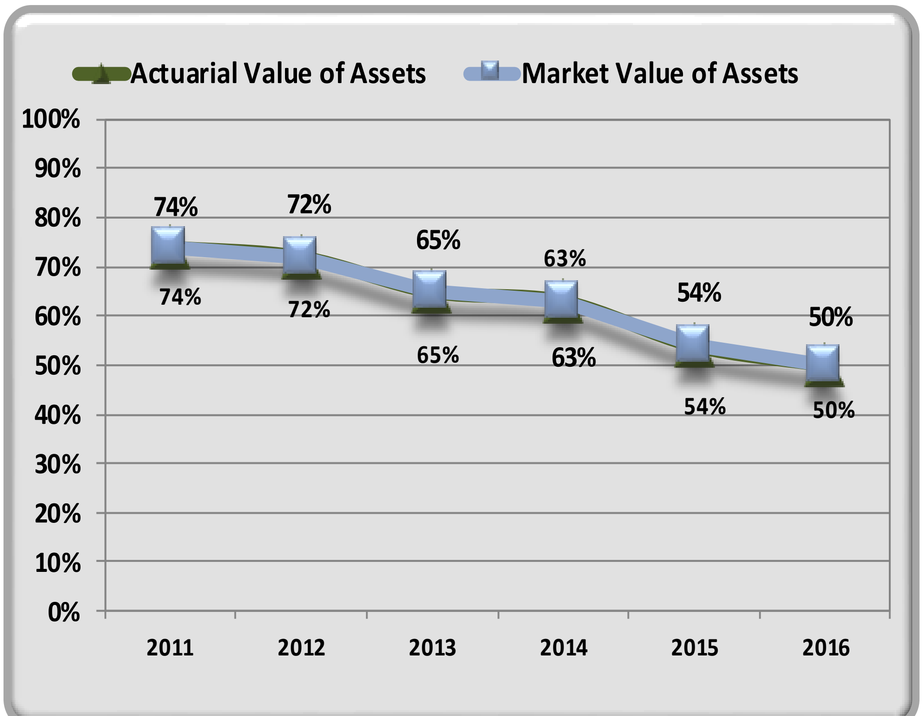
Social Security Coverage: No

COLA: Ad Hoc COLA
No COLA if Funded Ratio below 50%

ACTUARIAL ASSUMPTIONS:
Interest: 7.5% **Salary:** 3.5%

JENNINGS POLICE & FIRE RETIREMENT FUND

- Rate of return on investments equaled –1.01% (Market) vs. 6% assumed.
- Investment gains/losses are not smoothed.
- Closed 15 year period for amortization of unfunded liabilities. As of 4/1/16, 12 years remain.
- Plan was closed in 1987 with new hires joining LAGERS. No active members remain in the plan; all members are now retired.
- Third time being included on JCPER watch list. Funded ratio has been decreasing since 1996 (94.29% in 1996 —> 50% in 2016)
- Plan officials testified in favor of legislation in 2016 to permit certain political subdivisions to enter into an agreement with LAGERS for transferring the duties and responsibilities of operating a prior pension plan to LAGERS.
- The Police Department was disbanded in 2011 with the St. Louis County Police Department being contracted for public safety purposes. Voters approved the dissolving of the Fire Department in August 2014 with the city cooperating with Riverview FPD for fire services.
- The City has met the ARC two years (2010 & 2011) since 1999. The contribution is tied to a tax levy. At the April 2016 election, voters approved a property tax increase of 12.5 cents, from 24.5 cents to 37 cents. The fund is projected to be solvent through its remaining lifetime.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$462,216	$189,890	41%
14/15	$345,068	$194,976	57%
13/14	$315,629	$195,337	62%
12/13	$244,685	$203,049	83%
11/12	$209,394	$203,184	97%
10/11	$201,076	$210,405	105%

As of 04/01/16

Market Value: $4,184,172
Actuarial Value: $4,184,172
AAL: $8,291,582

MEMBERSHIP:
Active: 0 **Inactive:** 39

BENEFITS:
Normal Retirement Formula:
2.25% of compensation times years of service
Maximum: 50% of compensation

Normal Retirement Benefits:
Age 55 with 20 years of service
Age 65 with 15 years of service

Social Security Coverage: Yes

COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 6% **Salary:** N/A

Plan Closed in 1987 with New Hires joining LAGERS.

From:	Matt Rustige
To:	Michael Ruff
Cc:	Beverly Roche - City of Jennings (BAROCH@CITYOFJENNINGS.ORG); Andrew Witte
Subject:	City of Jennings Police and Firemen"s Retirement Fund - 2016 Actuarial Valuation and Projected Fund Solvency
Date:	Wednesday, October 26, 2016 9:36:10 AM
Attachments:	Actuarial Report for 2016 City of Jennings P&F.pdf City of Jennings Police and Fire Retirement Fund - Solvency Projection - 6% Return Scenario (2016).pdf City of Jennings Police and Fire Retirement Fund - Solvency Projection - 6% Return Scenario and 2 additional deaths (2016).pdf

Mr. Ruff,

As requested by Ms. Beverly Roche, we are forwarding a copy of the 2016 actuarial valuation report for the City of Jennings Police and Firemen’s Retirement Fund. Also included as separate displays are copies of the fund’s solvency projection, including one scenario based on data as of 4/1/2016 and a second scenario reflecting two additional retiree deaths after 4/1/2016. As a result of the increased tax rates and resulting higher budgeted revenues beginning in 2016, the fund is now projected to be solvent through its remaining lifetime.

If you have questions or would like to discuss any of these results, please let me know.

Sincerely,
Matt Rustige

Matt Rustige, EA, MAAA
Aon Hewitt | Retirement and Investment
8182 Maryland Ave. | 15th Floor | St. Louis, MO 63105
t 314-854-0704 | f 314-725-2262 | m 314.368.4936
matt.rustige@aonhewitt.com | aonhewitt.com | retirementandinvestmentblog.aon.com

From:	Matt Rustige
To:	Michael Ruff
Cc:	BAROCHE@CITYOFJENNINGS.ORG
Subject:	RE: Jennings Police & Fire Plan
Date:	Monday, November 7, 2016 6:48:36 AM

Mr. Ruff,

We do not have anything to add, but thank you for forwarding and providing the opportunity to comment.

Please note that Beverly Roche's email was incorrect in my original message and has now been corrected within as BAROCHE@CITYOFJENNINGS.ORG (to include the missing "e" in her last name). I have spoken with her and forwarded her copies of our prior correspondence. I apologize for any confusion.

Thank you,
Matt Rustige

Matt Rustige, EA, MAAA
Aon Hewitt | Retirement and Investment
8182 Maryland Ave. | 15th Floor | St. Louis, MO 63105
t 314-854-0704 | f 314-725-2262 | m 314.368.4936
matt.rustige@aonhewitt.com | aonhewitt.com | retirementandinvestmentblog.aon.com

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Thursday, October 27, 2016 2:37 PM
To: Beverly Roche - City of Jennings (BAROCH@CITYOFJENNINGS.ORG); Matt Rustige
Subject: Jennings Police & Fire Plan

Dear Ms. Roche and Mr. Rustige:
Thank you for providing the JCPER with the 4/1/16 actuarial valuation and the two solvency projections for Jennings Police & Fire.

Each year, the Joint Committee on Public Employee Retirement (JCPER) staff compiles a watch list report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. Based on the 4/1/16 actuarial valuation, Jennings Police & Fire has a funded ratio, on a market value basis, of approximately 50%. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the JCPER at its fourth quarter meeting on Wednesday, November 16, 2016. As you might recall, at the April 2016 meeting, the JCPER discussed the successful property tax increase from the April election using the information you had provided. At the November meeting, I plan to mention the projected positive impact of the tax increase as well as the passage of the LAGERS legislation that would permit the City to transfer the duties and responsibilities of administering the plan to LAGERS.

Please feel free to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

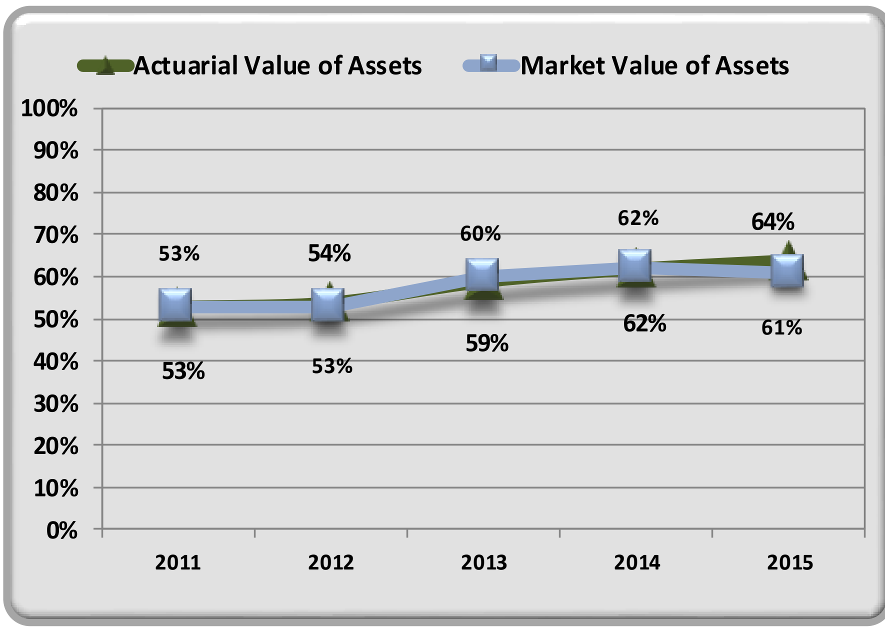
Thank you for your time and consideration.

Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

JOPLIN POLICE & FIRE PENSION PLAN

- Rate of return on investments equaled –0.2% (Market) & 5.7% (Actuarial) vs. 7% assumed.
- Investment gains/losses are smoothed over a 5 year period.
- Closed 30 year period as of 11/01/06 for amortization of unfunded liabilities.
- Modified plan assumptions in 2011 included, but not limited to, mortality, inflation rate and retirement rates resulted in approximately $5 million increase in plan liabilities. These modifications were based on the most recent experience study.
- A new tier was implemented for those hired after 1/31/09 with provisions including normal retirement service of 25 years (from 20) and maximum benefit of 60% of compensation (from 65%).
- Employees contribute 18.08% of pay, which is refunded at retirement. Those hired under new benefit tier contribute 10% of pay without refund.
- The City only contributed 97.8% of the actuarially determined contribution in 2015 but had exceeded the ADC for the previous 4 years.
- *This plan was included on the State Auditor's "watch list" in 2014.*



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$2,708,565	N/A	N/A
14/15	$2,721,986	$2,662,322	97.8%
13/14	$2,737,752	$2,919,862	107%
12/13	$2,580,017	$3,718,194	144%
11/12	$2,214,118	$2,473,301	112%
10/11	$2,214,118	$2,653,556	120%

As of 10/31/15

Market Value: $36,069,265
Actuarial Value: $37,912,204
AAL: $59,513,531

MEMBERSHIP:
Active: 196 **Inactive:** 152

BENEFITS:
Normal Retirement Formula:
Hired after 1/31/09: 2.2% of compensation for first 25 years of service, plus 1% for each of the next 5 years of service
Maximum: 60% of compensation

Normal Retirement Benefits:
Age 60 or 25 years of service

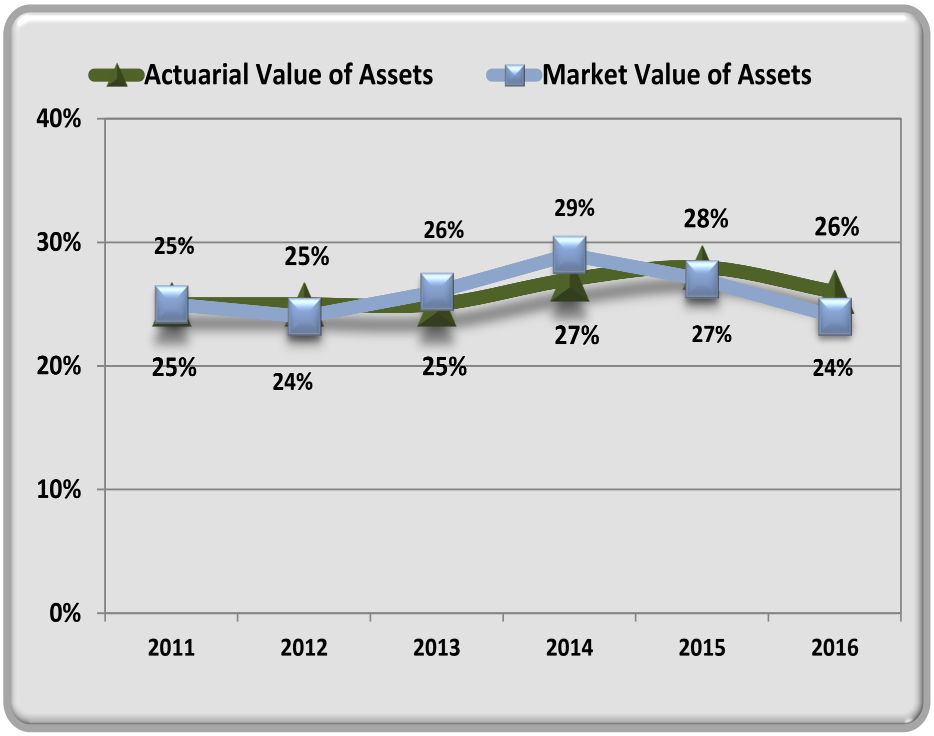
Social Security Coverage: No

COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 7% **Salary:** 2.5%

JUDICIAL RETIREMENT PLAN

- Rate of return on investments equaled 0.02% (Market) and 5.89% (Actuarial) vs. 7.65% assumed.
- In plan year 2016, the plan used a 28 year amortization period (of a closed 30) for unfunded liabilities.
- In June 2016, actuarial assumptions were changed based on the recent experience study. Assumed rate of return was lowered from 8.0 to 7.65, the asset smoothing period was changed from 3 years to 5 years, and mortality tables were updated. The assumed rate of return will be decreased by 0.15 for four years. The plan's actuary states that "the assumption changes increased the actuarial accrued liability and had an upward effect on the contribution rate."
- New tier provisions were passed in 2010 requiring increased age and service requirements, as well as employee contributions of 4% for judges serving for the first time on or after 01/01/11.
- Previously, the Board of Trustees voted to certify an annual contribution rate minimum of 58.45% of payroll until the plan's funded ratio is at least 80%.
- Prior to 1998, the plan was funded on a pay-as-you-go basis.
- The employer continues to meet the ARC.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$33,642,497	$33,642,497	100%
14/15	$32,696,686	$32,696,686	100%
13/14	$29,264,877	$29,264,877	100%
12/13	$28,330,648	$28,330,648	100%
11/12	$26,324,526	$26,324,526	100%
10/11	$27,702,682	$27,702,682	100%

As of 6/30/16

Market Value: **$132,056,350**
Actuarial Value: **$143,468,860**
AAL: **$547,621,617**

MEMBERSHIP:
Active: 408 **Inactive:** 567

BENEFITS:
Normal Retirement Formula:
50% of compensation;
Less than service requirement:
Pro-rated benefit based on service

Normal Retirement Benefits:
Age 62 with 12 years of service;
Age 60 with 15 years of service;
Age 55 with 20 years of service

Serving for first time on or after 01/01/11:
Age 67 with 12 years of service, or
Age 62 with 20 years of service

Social Security Coverage: Yes

COLA: Annual Amount Max: 5%
Percent of CPI: 80%

Actuarial Assumptions:
Interest: 7.65% **Salary:** 3%

From: Ronda Stegmann
To: Michael Ruff
Cc: John Watson; Mark Murphy; Jake McMahon
Subject: RE: Judicial Retirement System
Date: Thursday, November 3, 2016 4:29:28 PM

Michael - Thank you for the opportunity to respond to the inclusion of the Judicial Retirement Plan on the annual reporting of the Joint Committee on Public Employee Retirement (JCPER). As you are aware, the Judicial Retirement Plan was operated on a pay-as-you-go basis prior to 1998 when the law was changed to require that the plan be funded on an actuarial basis. The progression of the funded status of the plan beginning in 1998 was 0% and has grown to the 2016 funded ratio of 26.2%.

We hope this information is helpful to the JCPER as it conducts its proceedings. If you have any questions or we can provide additional information, please do not hesitate to contact our office.

Sincerely,

Ronda

Ronda Stegmann
Legislative & Policy Coordinator
MOSERS
573-632-6113
www.mosers.org

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Monday, October 24, 2016 3:59 PM
To: Ronda Stegmann
Subject: Judicial Retirement System

Dear Ronda:

The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information based on the annual survey information for plan year 2015. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the Judicial Retirement System that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

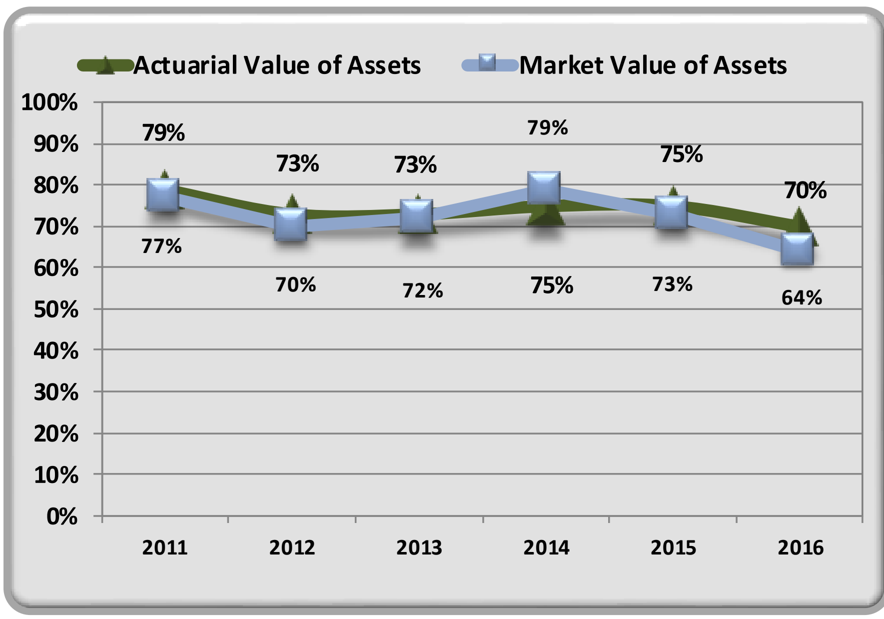
Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

Missouri State Employees' Retirement System

- For year ending June 30, 2016, rate of return on investments equaled 0.02% (market) and 5.76% (actuarial) vs. 7.65% assumed.
- In June 2016, actuarial assumptions were changed based on the recent experience study. Assumed rate of return was lowered from 8.0 to 7.65, the asset smoothing period was changed from 3 years to 5 years, and mortality tables were updated. The assumed rate of return will be decreased by 0.15 for each of the next four years.
- The computed employer contribution rate as a percent of payroll increased to 19.45% for FY18 from 16.34% in FY17. The plan had an experience loss due to investment losses, higher than expected salary increases, active retirement experience, and service purchases.
- New tier provisions were passed in 2010 requiring increased age and service requirements, as well as employee contributions of 4% for employees hired for the first time on or after 01/01/11. As new employees are hired under the 2011 tier and replace MSEP and MSEP 2000 members, the employer normal cost is expected to decrease by 3.3% of payroll relative to the June 30, 2016 valuation.
- The employer continues to meet the recommended contribution.
- Previously on the Watch List in 2009 and 2010 due to the market downturn.



June 30,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	% CONTRIBUTED
2017	$396,500,000 estimated	N/A	N/A
2016	$329,957,369	$329,957,369	100%
2015	$329,752,832	$329,752,832	100%
2014	$326,370,336	$326,370,336	100%
2013	$274,655,284	$274,655,284	100%
2012	$263,373,924	$263,373,924	100%
2011	$263,418,048	$263,418,048	100%

As of 6/30/16

Market Value: $8,109,161,214
Actuarial Value: $8,878,057,191
AAL: $12,751,162,753

MEMBERSHIP:
Active: 49,464 **Inactive:** 65,400

BENEFITS:
Normal Retirement Formula:
MSEP 2000: 1.7% of compensation times years of service, plus .8% to age 62 (under Rule of 80)

Normal Retirement Eligibility:
Age 62 with 5 years of service or Rule of 80

Hired for the first time on or after 1/1/11: Age 67 with 10 years of service or Rule of 90

Social Security Coverage: Yes

COLA: Annual Max 5%
Percent of CPI: 80%

ACTUARIAL ASSUMPTIONS:
Interest: 7.65%
Salary: 3.0%

From:	Ronda Stegmann
To:	Michael Ruff
Cc:	John Watson; Mark Murphy; Jake McMahon
Subject:	RE: MOSERS 2016 Watch List
Date:	Thursday, November 3, 2016 4:26:38 PM

Michael - Thank you for the opportunity to respond to the inclusion of the Missouri State Employees' Retirement System (MOSERS) on this annual reporting of the Joint Committee on Public Employee Retirement (JCPER). We would like to offer the following factors contributing to the MOSERS' inclusion on this year's JCPER report.

In June 2016, the MOSERS Board of Trustees voted to:

-reduce the plan's investment rate of return assumption from 8.0% to 7.65%, and

-strengthen mortality tables associated with potential increased membership longevity.

These adopted plan modifications were a result of recommendations contained in the plan's experience study conducted for the five-year period ending June 30, 2015. These modifications more closely align the fund with future capital market expectations as well as potential longer lifespans of members. Such changes significantly contributed to the decrease in plan's funded ratio and the increase in employer contribution requirements for FY18.

Important to note since June 30, 2016:

-Calendar Year to Date (CYTD) total fund return as of September 30, 2016 equaled 11.99%, and

-Total fund growth for the CYTD equaled $908,223,000.

We hope this information is helpful to the JCPER as it conducts its proceedings. If you have any questions or we can provide additional information, please do not hesitate to contact our office.

Sincerely,

Ronda

Ronda Stegmann
Legislative & Policy Coordinator
MOSERS
573-632-6113
www.mosers.org

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Monday, October 24, 2016 4:27 PM
To: Ronda Stegmann
Subject: MOSERS 2016 Watch List

Dear Ronda:

The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. The information sheet is based largely on the June 30, 2016 actuarial valuation. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

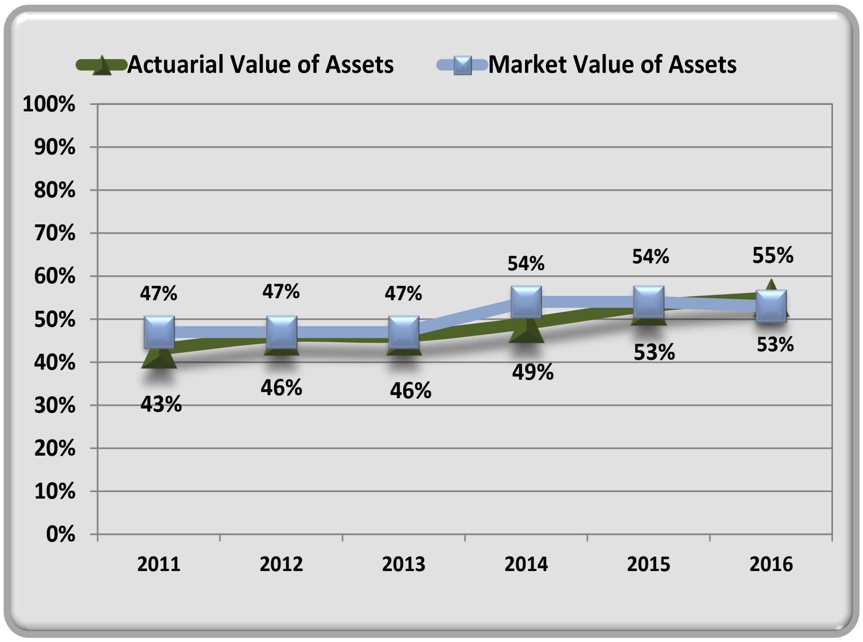
Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

MoDOT & Highway PATROL EMPLOYEES' RETIREMENT SYSTEM

- Rate of return on investments equaled 1.08% (Market) and 8.13% (Actuarial) vs. 7.75% assumed.
- Investment gains/losses are smoothed over a 3 year period.
- Assumed investment return reduced from 8.25% to 7.75% effective with the 6/30/13 valuation.
- New tier provisions were passed in 2010 requiring increased age and service requirements, increased vesting period and employee contributions for employees hired for the first time on or after 01/01/11. As of 06/30/16, 1,914 members were covered under the 2011 tier.
- Employees hired for the first time on or after 1/1/11 contribute 4% of pay.
- As of 7/1/16, closed 9-year amortization period for unfunded retiree liabilities and closed 24-year amortization period for the remaining unfunded liabilities.
- In September 2016, the Board voted to certify the FY2018 contribution at the same level as the previous year. In September 2014, the Board established a "rate stabilization reserve fund" from experience gains to attempt to maintain the employer contribution rate at or close to its current level.
- The Employer continues to meet the ARC.
- The next experience study will likely be performed after the Plan Year 2017 actuarial valuation.
- *This plan was included on the State Auditor's "watch list" in 2014.*



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
16/17	$211,120,922 (projected)	N/A	N/A
15/16	$199,609,396	$199,609,396	100%
14/15	$200,485,540	$200,638,571	100%
13/14	$183,358,841	$183,358,841	100%
12/13	$170,836,117	$170,836,117	100%
11/12	$164,884,467	$164,884,467	100%

As of 6/30/16

Market Value: **$1,992,073,946**
Actuarial Value: **$2,086,654,348**
AAL: **$3,761,733,004**

MEMBERSHIP:
Active: 7,441 **Inactive:** 11,018

BENEFITS:
Normal Retirement Formula:
MSEP 2000: 1.7% of compensation times years of service, plus .8% to Age 62 (under Rule of 80)

Normal Retirement Benefits:
Age 62 with 5 years service, or Rule of 80 (Age 48)
Uniformed Patrol: Mandatory retirement at Age 60
Hired for first time on or after 01/01/11:
Age 67 w 10 years service, or Rule of 90 (Age 55)
Uniformed Patrol: Age 55 with 10 years service

Social Security Coverage: Yes

COLA: Annual Amount Max: 5%
Percent of CPI: 80%

ACTUARIAL ASSUMPTIONS:
Interest: 7.75% **Salary:** 3.50%

From: Scott Simon
To: Michael Ruff
Subject: RE: MPERS 2016 JCPER Watch List
Date: Thursday, October 27, 2016 7:50:12 AM

Michael, The summary looks good. Thanks for sharing.

ss

Scott L. Simon | **Executive Director** | **MoDOT & Patrol Employees' Retirement System**
Office Location: 1913 William St., Jefferson City, MO 65109 **Mailing Address:** PO Box 1930, Jefferson City, MO 65102-1930
Telephone Number: (573) 298-6020 **Toll Free:** 1-800-270-1271 **Fax:** (573) 522-6111 **Website:** www.mpers.org

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Monday, October 24, 2016 4:13 PM
To: Scott Simon <Scott.Simon@mpers.org>
Subject: MPERS 2016 JCPER Watch List

Dear Scott:
The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. The information is primarily based on the June 30, 2016 actuarial valuation and the information you provided to me from MPERS' recent GASB report as well as information previously provided to the JCPER. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

Last year, you had commented on the term "inactive" regarding membership. Due to space constraints the term "inactive" will continue to be used but the first page of the report will include an explanation of "inactive" including retirees, terminated vested, disabled, and surviving beneficiaries.

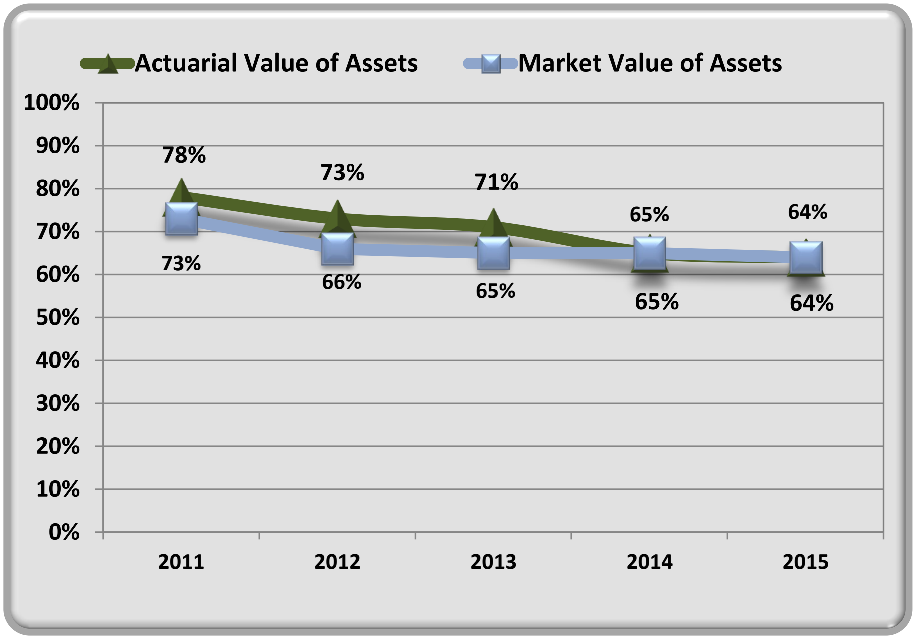
Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

OVERLAND POLICE RETIREMENT FUND

- Rate of return on investments equaled 7.1% (Market) and 6.7% (Actuarial) vs. 7% assumed.
- The plan smooths investment gains and losses over a five year period.
- The City made multiple changes to actuarial assumptions in 2014 based on the results of a five-year experience study, including lowering the assumed rate of return from 7.5 to 7.0 and updating mortality tables.
- The Aggregate Cost Method is utilized by the plan which does not yield an actuarial accrued liability.
- Employer contribution is supported by a tax levy of $0.12 per $100 of assessed valuation. The actuary notes *"The rate [property tax] is currently 12 cents which is less than one-quarter of the recommended rate. Although the Plan has no immediate solvency issues, this contribution shortfall issue should be addressed as soon as possible. Potential approaches might include: i) securing a higher rate from the County, ii) developing an additional source of funding and/or iii) adjusting the benefit provisions to a level consistent with what the current tax rate will support."*
- The City has not met the ARC since 2008.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$1,085,072	N/A	N/A
2015	$1,072,917	$251,812	23%
2014	$863,157	$240,878	28%
2013	$801,961	$268,988	34%
2012	$693,886	$271,164	39%
2011	$672,820	$283,848	42%

As of 04/01/15

Market Value: **$13,330,701**
Actuarial Value: **$13,343,394**
AAL: **$20,830,124**

MEMBERSHIP:
Active: 45 **Inactive:** 38

BENEFITS:
Normal Retirement Formula:
2.5% of compensation for first 20 years of service, plus 1.5% for each of the next 10 years of service

Normal Retirement Benefits:
20 years of service, or
Age 62 w/ 18 years of service, or
SSA full retirement age w/ 5 years of service

Social Security Coverage:
Yes

COLA: Annual Max: 3%
Percent of CPI: 60%

ACTUARIAL ASSUMPTIONS:
Interest: 7% **Salary:** 3.5%

From: Melissa Burton
To: Jason McConachie; Michael Ruff
Subject: Re: Overland Police Retirement Plan
Date: Friday, November 4, 2016 12:41:45 PM
Attachments: 161104 Overland Police JCPER Response.pdf

Mr. Ruff,

The response from the Board of Trustees for the Police Retirement Plan is attached for your review.

Respectfully,

>>> Michael Ruff <mruff@senate.mo.gov> 10/24/2016 4:30 PM >>>
Dear Ms. Burton and Mr. McConachie:

The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information based on the annual survey information for plan year 2015. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

City of Overland
Police Department

Members of the Joint Committee,

I am writing this letter on behalf of the members of the Overland Police Retirement Pension Fund. As of the last actuarial report, our retirement fund is approximately 64% funded. This has been of great concern for the pension board, as we have seen the fund trend downwards over the past several years. The City of Overland Police Pension Plan is funded in three ways:

1. A tax levy of .12 cents per $100 of assessed valuation of real estate and personal property.

2. Employee contributions of 5%.

3. Income/Gains in the bond and equities market.

In regards to the current tax rate, the actuarial recommendation given the fund's current and long term obligations is above 50 cents per $100 of assessed valuation. The current tax rate of 12 cents has not been raised since 1987 and is far lower than other area municipalities with like pension plans. It is the pension board's intent to bring a ballot initiative to the voters to raise the tax to appropriate funding levels in the spring of 2017. Along with the above ballot initiative, we intend to raise employee contributions of 5% to 7.5%.

In terms of employee benefits, currently the plan refunds all contributions to the employee upon retirement. Upon the successful passing of a tax levy increase, it is the pension board's recommendation that all future contributions remain in the pension fund, except in those instances where no other retirement benefit is payable (i.e. early employee resignation/termination). The pension board feels this is a material benefit change, but will be a positive for the long term viability of the pension.

It is of the upmost importance of the pension board to remedy this situation in a manner that is both equitable for the police officers and the citizens of Overland whom we serve. Any recommendations or comments from your committee would be much appreciated. Thank you.

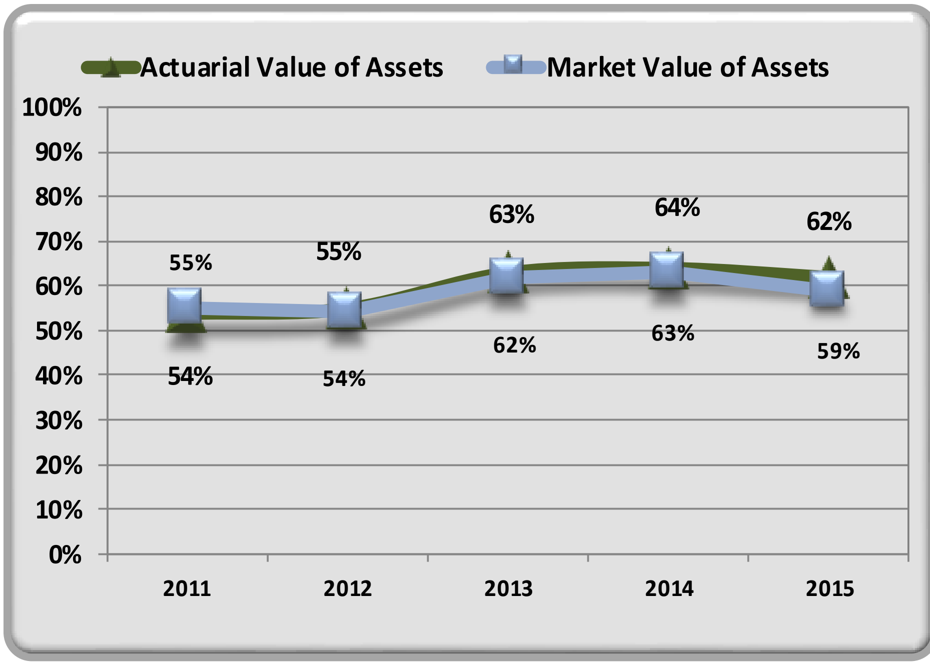
Respectfully,

Lt. Ken Robinson #488
Trustee, Overland Police Pension
2410 Goodale Ave.
Overland, Mo 63114
314-428-1212 (B)
314-799-5511 (C)

2410 Goodale Avenue Overland, MO 63114
314-428-1221 ● Fax 314-428-8625

RAYTOWN POLICE OFFICERS' RETIREMENT FUND

- Rate of return on investments equaled –1.5% (market) and 5.7% (actuarial) vs. 7.5% assumed.
- The plan implemented five year smoothing of investment gains and losses "to realize less volatility in asset values and consequently less volatility in contribution amounts." The plan updated to a more recent set of mortality tables.
- The plan utilizes a closed 30 year period for amortization of unfunded actuarial accrued liabilities that began 1/1/14.
- An employee contribution of 3% of pay was ceased in 2000 when the Plan was 101% funded.
- The actuary notes *"The Plan has been making progress toward a safe funding level. The City policy to contribute the recommended contribution will allow the funded status to slowly improve."*
- The City has met or exceeded the ARC since 2011.
- **The Plan was frozen as of December 31, 2013 with members moving to LAGERS.**



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$562,862	N/A	N/A
2015	$513,291	$513,291	100%
2014	$508,285	$531,116	104%
2013	$660,842	$660,842	100%
2012	$678,787	$686,270	101%
2011	$616,618	$637,728	105%

As of 1/1/16 and 10/31/15

Market Value: $10,218,583
Actuarial Value: $10,680,109
AAL: $17,236,595

MEMBERSHIP:
Active: 45 **Inactive:** 42

BENEFITS:
Normal Retirement Formula:
2.5% of compensation for first 20 years of service, plus 1% for each of the next 10 years of service—Benefits are frozen as of 12/31/13.

Normal Retirement Benefits:
Age 55 with 20 years of service

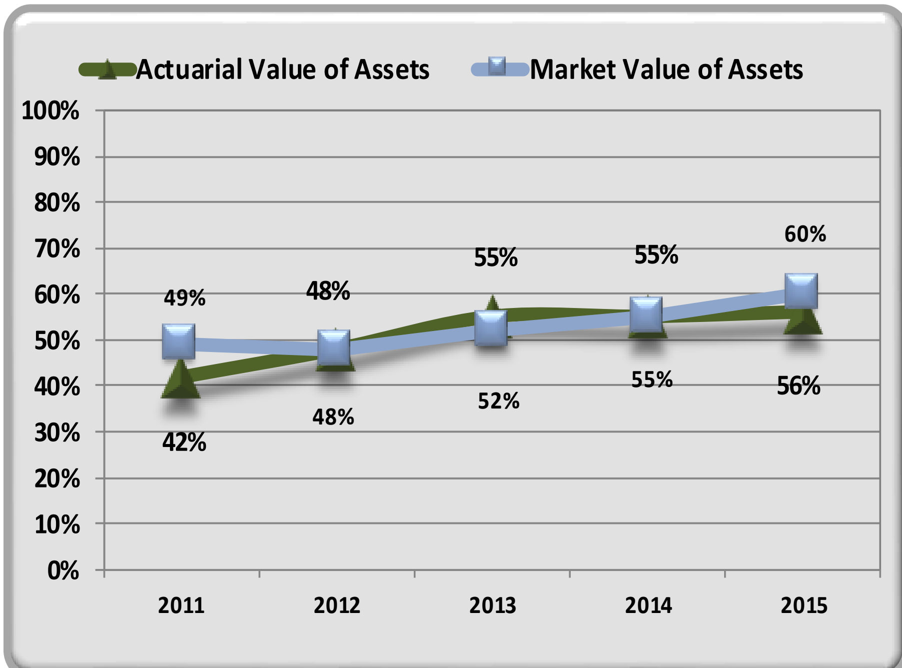
Social Security Coverage:
Yes

COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 7.5% **Salary:** 4%

ROCK HILL UNIFORMED PENSION PLAN

- Rate of return on investments equaled 9.27% (market) compared to 6.4% assumed.
- This plan was closed to new employees effective May 2003. Benefit accruals were frozen as of May 1, 2011.
- All active participants as well as new hires are members of LAGERS as of 09/2007.
- The employer has not met the ARC since 2007.
- Beginning with the May 1, 2016 actuarial valuation, the plan increased the investment rate of return from 6.0 to 6.4 to match expected long term rate of return.
- Employees do not make a payroll contribution to this plan.
- Plan does not smooth investment gains/losses.



As of 3/31/15 & 5/1/16

Market Value: $2,086,252
Actuarial Value : $1,951,255
AAL: $3,463,654

MEMBERSHIP:
Active: 7 **Inactive:** 21

BENEFITS:
Normal Retirement Formula:
40% or 50% of compensation, reduced by 1/20 for each year less than 20, plus temporary benefit. Percentage based on age and years of service as of 4/30/03.

Normal Retirement Benefits:
Age 60 with 5 years of service

Social Security Coverage: Yes

COLA: No COLA

ACTUARIAL ASSUMPTIONS:
Interest: 6.4% **Salary:** 0%

Closed Plan effective October 2003

Year Ending March 31,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2017	$212,536	N/A	N/A
2016	$199,227	$150,000	75%
2015	$199,227	$150,000	75%
2014	$251,551	$125,000	50%
2013	$251,551	$210,325	84%
2012	$293,522	$216,269	74%

From: Sandra Stephens
To: Michael Ruff; jyackley@rockhillmo.net
Subject: RE: Rock Hill Uniformed Pension Plan
Date: Monday, October 24, 2016 4:57:22 PM
Attachments: RH FY2016 CAFR - Final.pdf

Mr. Ruff,
There was a contribution for $150,000 made during 15/16. Please refer to page 18 of the attached CAFR.
Thank you
Sandy

Sandra Stephens, CPFO
Assistant Director of Finance, City of Kirkwood
Treasurer, City of Rock Hill
139 S Kirkwood Road
Kirkwood, MO 63122
314 822-5834
stephesf@kirkwoodmo.org

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Monday, October 24, 2016 4:43 PM
To: jyackley@rockhillmo.net; Sandra Stephens
Subject: Rock Hill Uniformed Pension Plan

Dear Ms. Yackley and Ms. Stephens:

The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information based on the annual survey information for plan year 2015. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

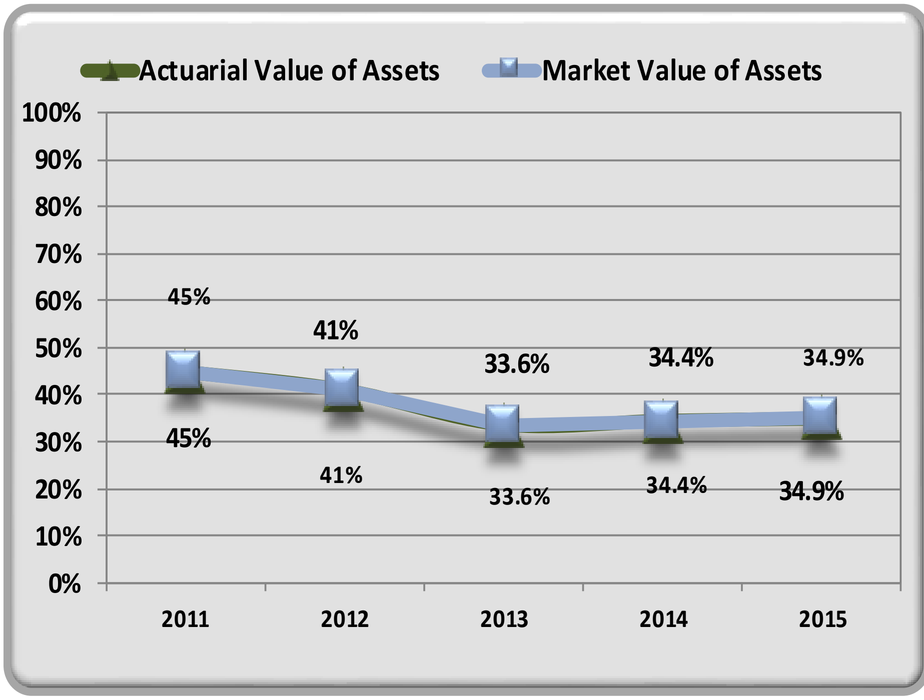
Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A

Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

SEDALIA POLICE RETIREMENT FUND

- Rate of return on investments equaled 1.98% (Market) vs. 6% assumed (investment assumption was reduced from 7.5% to 6.0% effective with the 8/01/13 actuarial valuation).
- The reduced investment return assumption increased the accrued liability by $1.3 million.
- Plan does not smooth investment gains/losses.
- Unfunded Actuarial Accrued Liabilities are amortized over a 25 year period as of 2014.
- The actuary notes three investment assumption scenarios and a time estimate of when the plan will have liabilities that it will not be able to fund using available assets. These estimates include 25 years, 15 years, and 10 years.
- Plan was frozen as of April 1, 2010, with no additional benefit accruals.
- Existing and new employees moved to LAGERS.
- Effective 4/1/10, employee payroll contributions are not required.
- Employer contribution is tied to a $0.0894 per $100 assessed valuation tax levy.
- The employer contribution tied to tax levy proceeds is not meeting the ARC.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2016	$452,528	N/A	N/A
2015	$456,345	$448,165	98%
2014	$459,978	$384,258	84%
2013	$387,414	$235,179	61%
2012	$364,705	$231,860	64%
2011	$429,331 (estimate)	$222,527	52%

As of 7/31/15

Market Value: $3,299,533
Actuarial Value: $3,299,533
AAL: $9,431,446

MEMBERSHIP:
Active: 32 **Inactive:** 42

BENEFITS:
Normal Retirement Formula:
2% of compensation times years of service
Maximum: 30 years

Normal Retirement Benefits:
Age 52 with 15 years of service

Social Security Coverage: Yes

COLA:
Annual Amount Maximum: 2%

ACTUARIAL ASSUMPTIONS:

Interest: 6.0%

Plan Frozen April 2010
Current & New Employees moved to LAGERS

From: Arlene Silvey
To: Michael Ruff
Subject: RE: Sedalia Police Retirement Fund
Date: Friday, October 28, 2016 3:14:10 PM

Mr. Ruff:

Just for some information, in 2016, in addition to the tax money that is collected, the City of Sedalia approved an additional budget request of $230,000.00 that was contributed to the Police Retirement Fund.

Arlene Silvey

Arlene Silvey, MPCC City Clerk
City of Sedalia, MO
200 S. Osage
Sedalia, MO 65301

asilvey@cityofsedalia.com

From: Michael Ruff [mailto:mruff@senate.mo.gov]
Sent: Monday, October 24, 2016 4:59 PM
To: Arlene Silvey
Subject: Sedalia Police Retirement Fund

Dear Ms. Silvey:

The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information based on the annual survey information for plan year 2015. This report is designed to increase awareness of trends in plan funding and contribution levels.

I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.

Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.

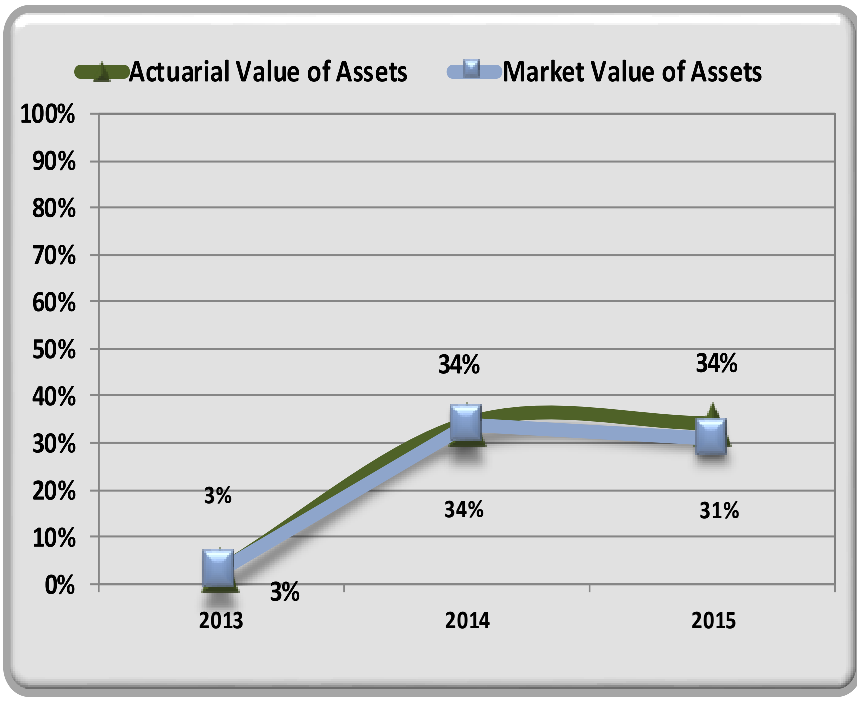
Sincerely,

Michael Ruff
Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A

Jefferson City, MO 65101
573-751-1280
mruff@senate.mo.gov

ST. LOUIS CITY FIREFIGHTERS' RETIREMENT PLAN

- Rate of return on investments equaled –4.02% (Market) and 4.83% (Actuarial) vs. 7.625% assumed.
- Investment gains/losses are smoothed over a 5 year period.
- Effective February 1, 2013, benefit accruals under the Firemen's Retirement System of St. Louis were frozen. This plan (The Firefighters' Retirement Plan of the City of St. Louis) was established to provide benefits for service rendered after that date.
- Plan adopted a 30 year closed amortization period effective in 2013 for unfunded liabilities.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$9,148,007	N/A	N/A
14/15	$7,435,635	$7,435,635	100%
13/14	$8,942,435	$8,942,435	100%

As of 10/01/15

Market Value: $29,775,598
Actuarial Value: $31,940,730
AAL: $94,712,110

MEMBERSHIP:
Active: 607 **Inactive:** 39

BENEFITS:
Normal Retirement Formula: (new members since 02/01/13)
2% of compensation for the first 25 yrs of service plus 2.5% (5% for grandfathered participants) in excess of 25 years of service
Maximum: 75% of compensation

Normal Retirement Eligibility:
Age 55 with 20 years of service

Social Security Coverage: No

COLA: Annual Amount Minimum: 1.5%
Annual Amount Maximum: 5%
"CAP"-Total Max: 25%

ACTUARIAL ASSUMPTIONS:
Interest: 7.625% **Salary:** 3%

Deferred Retirement Option Plan (DROP)-only available to members on 02/01/13

From: Fairless, Janice
To: Michael Ruff
Cc: leeserr@stlouis-mo.gov
Subject: Re: Firefighters" Retirement Plan of the City of St. Louis
Date: Friday, October 28, 2016 2:44:50 PM

Michael,

The City has paid 100% of the $9,148,007.

Janice

On Mon, Oct 24, 2016 at 4:52 PM, Michael Ruff <mruff@senate.mo.gov> wrote:

> Dear Mrs. Fairless and Mr. Leeser:
>
> The Joint Committee on Public Employee Retirement (JCPER) staff compiles a report for the committee's review that includes any defined benefit retirement plan that has a funded ratio on a market value basis of less than 70%. The JCPER staff is in the process of preparing this information based on the annual survey information for plan year 2015. This report is designed to increase awareness of trends in plan funding and contribution levels. This report is not intended to include all information relating to the plan, therefore, contribution information and early retirement provisions are not listed.
>
> I am attaching an information sheet relating to the plan that will be presented to the committee at its fourth quarter meeting on Wednesday, November 16, 2016. We welcome you to review this information and respond with any additional information or thoughts you deem appropriate. If you would like to respond, please provide any information or comments by Friday, November 4, 2016.
>
> Thank you for your consideration and ongoing cooperation with the JCPER. Please do not hesitate to contact the office if you have any questions or would like additional information.
>
> Sincerely,
>
> Michael Ruff
>
> Executive Director
>
> Joint Committee on Public Employee Retirement

> State Capitol, Room 219-A
>
> Jefferson City, MO 65101
>
> 573-751-1280
>
> mruff@senate.mo.gov

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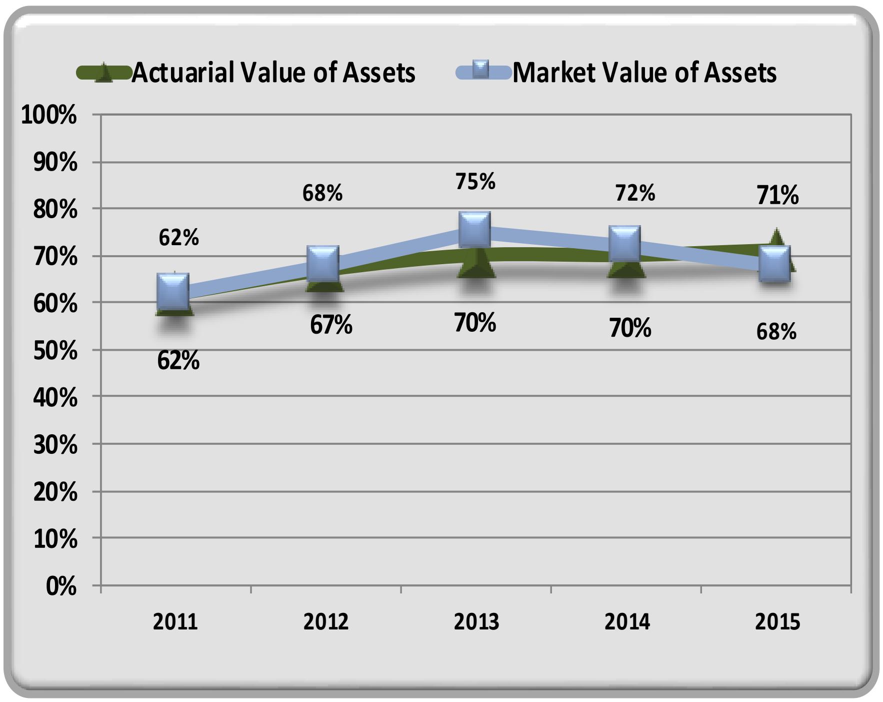
Janice Fairless
Plan Supervisor
Firefighters' Retirement Plan
e-mail: fairlessj@stlouis-mo.gov
phone: 314-622-3216
fax: 314-622-3228

St. Louis County Employees' Retirement Plan

- Rate of return on investments equaled 1.8% (market) and 9.5% (actuarial) vs. 8.0% assumed rate of return used for plan year 2015.
- Investment gains and losses are smoothed over a four year period.
- Effective 1/1/16, the plan lowered the assumed rate of return from 8.0% to 7.75%, decreased the salary increase assumption from 4.5% to 4.25%, and shortened the amortization period for unfunded liabilities from 30 years to 25 years.
- The plan maintains both uniformed and non-uniformed components.
- Employees do not make a payroll contribution to the plan. Employees participate in Social Security.
- The employer continues to meet the ARC.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUT-ED
2016	$39,938,958	N/A	N/A
2015	$37,894,303	$37,894,303	100%
2014	$36,202,086	$36,202,086	100%
2013	$36,628,538	$36,628,538	100%
2012	$38,959,667	$38,959,667	100%
2011	$30,949,913	$30,949,913	100%

As of 12/31/15

Market Value: $594,907,837
Actuarial Value: $617,382,097
AAL: $873,847,697

MEMBERSHIP:
Active: 3893 **Inactive:** 4221

BENEFITS:
Normal Retirement Formula:
General Employees: 1.5% of compensation times years of service, plus $15 per month times years of service.
Uniformed: 1.6% of compensation times years of service, plus $30 per month times years of service to age 65, plus $5 per month times years of service.

Normal Retirement Benefits:
General Employees: Age 65 with 3 years of service
Uniformed: Age 60 with 10 years of service, age 65 with 3 years of service, or Rule of 80

Social Security Coverage: Yes

COLA: Ad hoc cola

ACTUARIAL ASSUMPTIONS:
Interest: 7.75%
Salary: 4.25%

Partial Lump Sum Option

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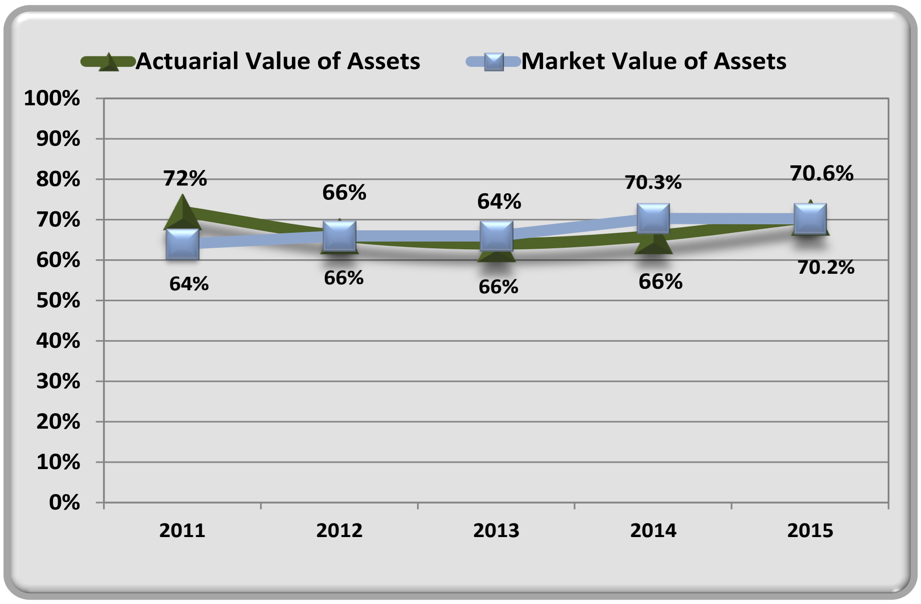
STATUS UPDATE ON:

BERKELEY POLICE & FIRE PENSION FUND

- Rate of return on investments equaled 2.1% (Market) & 9.6% (Actuarial) vs. 7.5% assumed.
- The plan experienced an actuarial gain for the year ending June 30, 2015, based largely on the return of actuarial value of assets, salary increases lower than expected, and 9 non-vested terminations during the year.
- Voters adopted plan changes at the April 2016 election, including decreasing the multiplier from 2.5 to 2.0 for service earned on/after 1/1/17, eliminating the COLA after 7/1/15 and only refunding 2/3s of a member's contribution upon retirement. These changes are not reflected in the most recent actuarial valuation. The actuary notes that had they been included it "would have resulted in a reduction in the recommended employer contribution of approximately $370,000."
- An actuarial cost statement indicates a decrease in the normal cost rate from 44.7% to 28% between the pre– and post-plan changes. The actuary notes the "changes are projected to improve the ability of the plan to meet its obligations."
- The plan is funded by a dedicated tax levy that has been insufficient to meet the recommended contribution. At the April 2016 election, the tax levy was increased from $0.11 to $0.33 per $100 of assessed valuation.
- Employees contribute 6% of pay to this plan. *Employee contributions are refunded at retirement.*
- The employer has not met the ARC since 2003.
- On JCPER Watch List from 2010-2014.



	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
15/16	$1,060,472	N/A	N/A
14/15	$1,247,121	$198,187	15.8%
13/14	$1,337,551	$204,885	15%
12/13	$1,279,952	$186,654	15%
11/12	$1,245,038	$225,619	18%
10/11	$976,809	$246,418	25%

As of 6/30/15

Market Value: **$12,580,089**
Actuarial Value: **$12,646,660**
AAL: **$17,912,482**

MEMBERSHIP:
Active: 49 **Inactive:** 53

BENEFITS:
Normal Retirement Formula:
50% of compensation for first 20 years of service plus 1% for next 5 years of service
Maximum: 55% of compensation

Normal Retirement Benefits:
Age 55 with 10 years of service

Social Security Coverage: Yes

COLA:
Percent of CPI: 50%
Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:
Interest: 7.5% **Salary:** 4%

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October 19, 2016

Board of Trustees of the Police and Firemen's
Retirement Fund of the City of Berkeley, Missouri
C/O Ms. Keidra King
Director of Finance
City of Berkeley
8425 Airport Road
Berkeley, MO 63134

RE: Police and Firemen's Retirement Fund of the City of Berkeley, Missouri– Section 105.665 Cost Statement

Dear Trustees:

The purpose of this letter is to provide the Police and Firemen's Retirement Fund of the City of Berkeley, Missouri with a cost statement that is required under the Missouri Revised Statute Section 105.665 in connection with the changes adopted by the citizens of the City of Berkeley in April 2016.

A summary of the changes that are subject to this statement are as follows:

1. The authorized tax rate was increased from 11 cents per $100 of assessed valuation to 33 cents per $100 of assessed valuation.
2. All Cost of Living Adjustments (COLAs) after July 1, 2015 were eliminated
3. Upon retirement or termination of employment, only two-thirds of the member's post 12/31/2016 contributions will be refunded (in addition to 100% of all pre-12/31/2016 contributions).
4. Members who retire prior to age 55 or attaining 20 years of service will earn a lower benefit rate (2.0% vs. 2.5%) for service worked after December 31, 2016.

This cost statement is based upon the July 1, 2015 valuation results projected forward to July 1, 2016 using the actuarial methods and assumptions employed in the 2015 report as required by 105.665.2. For the purpose of this cost statement, we have assumed that the benefit provision changes were effective as of April 2016.

Our cost statement, numbered to correspond with Section 105.665, follows below:

1. The level normal cost of plan benefits currently in effect was projected to be $1,116,237 on July 1, 2016, or 51.0% of projected active payroll.
2. Under the aggregate funding method utilized there is no Amortization of Unfunded Actuarial Accrued Liability.

3. The total employer contribution rate from items one and two above was projected to be $1,116,237 or 51.0% of active payroll.

4. Contributions to the Fund were 11 cents per $100 of assessed valuation. Those contributions were not sufficient to cover the actuarially determined contribution.
5. The plan's actuarial value of assets was projected to be $12,614,006 on July 1, 2016. The actuarial accrued liability was projected to be $18,384,311 and the funded ratio 68.6%. The market value of assets was projected to be $12,602,026.
6. The estimated actuarially determined employer post-change contribution amount on July 1, 2016 is projected to be $724,684 or 33.1% of active payroll.
7. A ten-year projection of annual plan costs and funded ratios for both: i) the current plan and ii) the amended plan is presented in Exhibit II. The funded ratio under the proposed plan is projected to be higher than the current plan.
8. The changes increase employer contributions from 11 cents per $100 of assessed valuation to 33 cents per $100 of assessed valuation.
9. The proposed changes are projected to improve the ability of the plan to meet its obligations.
10. The actuarial assumptions are contained in the attached pages from the July 1, 2015 Actuarial Valuation Report.
11. We certify that all assumptions used in this cost study are the same as those used in the most recent actuarial valuation, and that such assumptions produce results which in the aggregate, are reasonable.
12. The actuarial funding method used in preparing the valuation is described in the attached pages from the July 1, 2015 Actuarial Valuation Report.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City of Berkeley, Missouri. This information includes, but is not limited to, Plan documents and provisions, employee data, and financial information. Since the results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American

Milliman

Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Actuarial computations included in this report are for the exclusive purposes cited in this report. Determinations for purposes other than those specifically referenced in this report may be significantly different. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security on a settlement basis.

These cost estimates are subject to the uncertainties of a regular actuarial valuation; the costs are inexact because they are based on assumptions that are themselves necessarily inexact, even though we consider them reasonable. Thus, the emerging costs may vary from those presented in this letter to the extent actual experience differs from that projected by the actuarial assumptions.

We have not explored any legal issues with respect to the plan changes. We are not attorneys and cannot give legal advice on such issues.

This report has been prepared for the internal use of and is only to be relied upon by the City of Berkeley; it is not for the use or benefit of any third party for any purpose. No portion of this report may be disclosed to any other party (other than Missouri State legislative and regulatory personnel) without Milliman's prior written consent. In the event such consent is given, the report must be provided in its entirety, unless prior written consent is obtained from Milliman. We recommend that any such party have its own actuary or other qualified professional review this report to ensure that the party understands the assumptions and uncertainties inherent in our estimates.

We are available to address any questions that you may have.

Sincerely,

Michael J. Zwiener, FSA
Consulting Actuary

Michael A. Sudduth, FSA
Consulting Actuary

CC: James Singer

Enclosures: Exhibit I
Exhibit II
Assumptions and Methods

Police and Firemen's Retirement Fund of the City of Berkeley, Missouri

Exhibit I

Projected Actuarial Valuation Results as of July 1, 2016

	Current Plan	Proposed Plan
1. Present Value of Future Benefits		
a. Active Participants	$11,344,452	$9,496,994
b. Inactive Participants	11,000,255	9,640,290
c. Total	22,344,707	19,137,284
2. Actuarial Value of Assets	12,614,006	12,614,006
3. Present Value Future Employee Contributions	1,115,364	1,115,364
4. Present Value of Future Normal Costs (1d) - (2) - (3), not less than zero	8,615,337	5,407,914
5. Present Value of Future Earnings	19,270,097	19,270,097
6. Normal Cost Rate: (4) / (5)	44.7083%	28.0638%
7. Eligible Payroll:		
a. Under Assumed Retirement Age	2,188,318	2,188,318
8. Normal Cost (EOY): (8) x 1.075	1,116,237	724,684

Police and Firemen's Retirement Fund of the City of Berkeley, Missouri
July 1, 2015 Valuation Projections

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Baseline (Current Plan Provisions)											
Employee Contributions	$131,299	$132,099	$136,916	$139,849	$144,874	$149,896	$144,277	$149,269	$148,788	$149,518	$149,567
Employer Contributions (Actuarially Determined)	$1,116,237	$1,160,564	$1,292,027	$1,471,615	$1,670,291	$1,861,206	$1,903,748	$2,062,245	$2,250,673	$2,398,894	$2,579,718
Employer Contributions % of Payroll	51.0%	52.7%	56.6%	63.1%	69.2%	74.5%	79.2%	82.9%	90.8%	96.3%	103.5%
Employer Contributions (Statutory)	$203,803	$203,803	$203,803	$203,803	$203,803	$203,803	$203,803	$203,803	$203,803	$203,803	$203,803
Employer Contributions % of Expected Payroll	9.3%	9.3%	8.9%	8.7%	8.4%	8.2%	8.5%	8.2%	8.2%	8.2%	8.2%
Accrued Liability	$18,384,311	$18,972,144	$19,458,224	$20,209,514	$21,027,774	$21,827,235	$22,656,973	$23,227,412	$23,893,444	$24,608,143	$25,270,098
Actuarial Value of Assets	$12,614,006	$12,627,441	$12,438,881	$12,266,295	$12,230,263	$12,098,917	$11,912,596	$11,415,457	$10,911,513	$10,379,175	$9,705,654
Unfunded Accrued Liability (Entry Age Basis)	$5,770,305	$6,344,703	$7,019,343	$7,943,219	$8,797,511	$9,728,318	$10,744,376	$11,811,955	$12,981,930	$14,228,968	$15,564,444
Funded Percentage	68.6%	66.6%	63.9%	60.7%	58.2%	55.4%	52.6%	49.1%	45.7%	42.2%	38.4%
Market Value of Assets	$12,602,026	$12,524,414	$12,296,160	$12,266,295	$12,230,263	$12,098,917	$11,912,596	$11,415,457	$10,911,513	$10,379,175	$9,705,654
Assumed Asset Return	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
Proposed Plan											
Employee Contributions	$131,299	$132,099	$136,916	$139,849	$144,874	$149,896	$144,277	$149,269	$148,788	$149,518	$149,567
Employer Contributions (Actuarially Determined)	$724,684	$720,106	$739,264	$783,737	$818,912	$842,790	$802,268	$808,283	$812,946	$805,157	$801,582
Employer Contributions % of Payroll	33.1%	32.7%	32.4%	33.6%	33.9%	33.7%	33.4%	32.5%	32.8%	32.3%	32.2%
Employer Contributions (Statutory)	$407,606	$611,408	$611,408	$611,408	$611,408	$611,408	$611,408	$611,408	$611,408	$611,408	$611,408
Employer Contributions % of Expected Payroll	18.6%	27.8%	26.8%	26.2%	25.3%	24.5%	25.4%	24.6%	24.7%	24.5%	24.5%
Accrued Liability	$15,891,577	$16,218,912	$16,443,089	$16,918,622	$17,455,512	$17,965,916	$18,503,477	$18,816,260	$19,195,417	$19,625,748	$20,017,423
Actuarial Value of Assets	$12,614,006	$12,854,691	$13,144,561	$13,497,118	$14,042,956	$14,554,177	$15,082,720	$15,405,203	$15,781,256	$16,217,253	$16,619,246
Unfunded Accrued Liability (Entry Age Basis)	$3,277,571	$3,364,221	$3,298,528	$3,421,505	$3,412,556	$3,411,739	$3,420,757	$3,411,057	$3,414,161	$3,408,495	$3,398,177
Funded Percentage	79.4%	79.3%	79.9%	79.8%	80.4%	81.0%	81.5%	81.9%	82.2%	82.6%	83.0%
Market Value of Assets	$12,602,026	$12,735,859	$12,946,354	$13,497,118	$14,042,956	$14,554,177	$15,082,720	$15,405,203	$15,781,256	$16,217,253	$16,619,246
Assumed Asset Return	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%
Differince in Actuarial Accrued Liability	($2,492,733)	($2,753,232)	($3,015,135)	($3,290,891)	($3,572,263)	($3,861,319)	($4,153,495)	($4,411,152)	($4,698,026)	($4,982,394)	($5,252,675)
Differince in Actuarial Value of Assets	$0	$227,250	$705,681	$1,230,823	$1,812,693	$2,455,261	$3,170,124	$3,989,746	$4,869,742	$5,838,078	$6,913,592

This work product was prepared solely for the City of Berkeley for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

Police and Firemen's Retirement Fund
of the City of Berkeley, Missouri

July 1, 2015 Actuarial Valuation

Actuarial Methods

Following are brief descriptions of the actuarial cost and asset valuation methods used in the valuation:

Actuarial Cost Method

Aggregate Cost Method:

The normal cost rate as a percentage of covered payroll is equal to (a) divided by (b) where

(a) is the actuarial present value of future benefits (including refund of employee contributions) on the valuation date, minus the sum of actuarial value of assets and present value of future employee contributions on the valuation date.
(b) is the present value of future salaries on the valuation date.

The normal annual cost is the product of the normal cost rate times covered payroll on the valuation date.

Actuarial gains or (losses) will decrease (increase) the normal cost rate and be spread as a constant percent of payroll for the overall group.

Asset Valuation Method

Valuation assets were determined using the five-year expected return method without phase-in.

Under this method, a gain or loss for a year is determined by calculating the difference between the expected market value of assets and the actual market value of assets at the valuation date. The expected market value of assets is equal to the market value of assets at the prior valuation date, plus contributions, minus disbursements, all adjusted with interest at the valuation rate to the current valuation date. Ultimately, the actuarial value of assets is equal to the market value less:

(a) 4/5 of the prior year's gain/(loss)
(b) 3/5 of the second preceding year's gain/(loss)
(c) 2/5 of the third preceding year's gain/(loss)
(d) 1/5 of the fourth preceding year's gain/(loss)

The method became effective with the July 1, 2012 valuation.

Police and Firemen's Retirement Fund
of the City of Berkeley, Missouri

July 1, 2015 Actuarial Valuation

Actuarial Assumptions

Following are the primary actuarial assumptions used in performing the valuation:

Interest Rate — 7.5% per annum

Annual Pay Increases — 4% per year; 2.5% for inflation and 1.5% for merit

Mortality

Actives: RP-2000 Employees Mortality Table, male and female rates, with generational projection based on Scale AA

Healthy Inactives: RP-2000 Healthy Annuitant Mortality Table, male and female rates, with generational projection based on Scale AA

Disabled Inactives: RP-2000 Disabled Mortality Table, male and female rates

100% of active participant deaths are assumed to be duty related.

Turnover — Separation from service for reason other than disability, death, or age/service retirement. Rates at selected ages:

	Percentage Terminating in the Next Year	
Age	Male	Female
25	8.046%	8.025%
30	5.711%	5.684%
35	3.811%	3.773%
40	1.824%	1.767%
45	0.643%	0.526%
50	0.941%	0.715%
55	0%	0%

Rate of Disability

Probability of becoming disabled during the next year. Rates at selected ages:

Age	Percentage Becoming Disabled in the Next Year
20	0.20%
25	0.25%
30	0.25%
35	0.25%
40	0.25%
45	0.33%
50	0.40%
55	0.50%
60	0%

100% of disabilities are assumed to be duty related.

Retirement

Age 55 with 10 years of service

Cost of Living Adjustment

Retirees are assumed to receive an annual 1.5% Cost of Living Adjustment.

Expenses

$60,000 flat addition to the normal cost

Dependent Information

For retired and deferred vested members, actual marital status and spouse birth date are used. For active members, 100% are assumed to be married, and males are assumed to be three years older than their spouses. Active members are assumed to have no minor dependents.

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Nicole Galloway, CPA
Missouri State Auditor

CITIZENS SUMMARY

Findings in the audit of the City of Bridgeton Employees Retirement Plan

Background and Summary

The City of Bridgeton Employees Retirement Plan, a defined benefit retirement plan, was established by the City of Bridgeton, Missouri in 1971. The city's Code of Ordinances designate the City Council as the plan's trustee, and the city's Finance Commission assists with oversight of the plan. The plan guarantees monthly payments to eligible members, beginning upon retirement, based on a fixed percentage of members' average annual earnings multiplied by years of credited service. The plan is non-contributory and is funded by annual contributions from the city and plan investment earnings. The plan was closed to new employees hired on or after January 1, 2012.

As of plan year 2015, actuarial studies indicated the plan was only 67 percent funded and had unfunded liabilities of nearly $14 million. Similar to many retirement plans nationwide, the plan's financial condition was significantly impacted by the 2007 to 2009 recession. We identified various internal factors that also negatively impacted the plan's financial condition. Inadequate plan governance and oversight allowed for decisions that were unfavorable to the plan, including insufficient contributions and investment return assumptions higher than actual returns.

Financial Condition

The plan's financial condition is poor primarily because the city has not met annual contribution requirements and investment returns have been historically less than assumed returns. Annual contributions received from the city during the 7-year period from 2009 to 2015, averaged only 60 percent of actuarially determined contribution (ADC) amounts, an average contribution shortfall of $628,000 per year. The failure to provide ADC amounts for a number of years has a compounding effect on the plan's poor financial condition and increases the risk the plan may not be able to pay all future benefit payments owed to members. The city also has not developed formal funding or investment policies. In addition, the city's recent actions to address the plan's poor financial condition were made without timely analysis of the impact and sufficiency of the changes.

Plan Governance

Because the plan is governed by the City Council, the governance structure does not allow representation of varied and balanced interests and provides for an inherent conflict of interest. The City Council, as plan trustee, does not sufficiently monitor and oversee the plan. In addition, the Finance Commission is responsible for oversight of the plan, but did not hold meetings during 2012, 2013, or 2014. The city has not established a plan board member education program and City Council members have not received training concerning their fiduciary responsibilities and duties, as required by state law.

Actuarial Valuations

The city's continued use of a 30-year open amortization method for calculating the annual ADC provides for inequities because costs of current covered employees are shifted to future generations. The city has never obtained an independent actuarial audit or alternative review to ensure the reliability of amounts reported in plan actuarial reports and the reasonableness of the actuarial methods and assumptions used by the plan actuary.

Communication to Key Stakeholders

City officials have not prepared or distributed reports of financial information, including information showing the impact of insufficient contributions on plan financial condition, to key stakeholders such as employees, retirees, and citizens. City officials primarily used a less relevant and misleading funding statistic, rather than the plan's funded ratio, to communicate the plan's financial condition. For example, city officials cited an 83 percent "funded percentage" in 2014 and 2015, when the plan funded ratio was only 64 percent.

In the areas audited, the overall performance of this entity was **Poor**.*

*****The rating(s) cover only audited areas and do not reflect an opinion on the overall operation of the entity. Within that context, the rating scale indicates the following:

Excellent: The audit results indicate this entity is very well managed. The report contains no findings. In addition, if applicable, prior recommendations have been implemented.

Good: The audit results indicate this entity is well managed. The report contains few findings, and the entity has indicated most or all recommendations have already been, or will be, implemented. In addition, if applicable, many of the prior recommendations have been implemented.

Fair: The audit results indicate this entity needs to improve operations in several areas. The report contains several findings, or one or more findings that require management's immediate attention, and/or the entity has indicated several recommendations will not be implemented. In addition, if applicable, several prior recommendations have not been implemented.

Poor: The audit results indicate this entity needs to significantly improve operations. The report contains numerous findings that require management's immediate attention, and/or the entity has indicated most recommendations will not be implemented. In addition, if applicable, most prior recommendations have not been implemented.

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Office of Missouri State Auditor

Nicole Galloway, CPA

City of Bridgeton Employees Retirement Plan Funding and Governance

Report No. 2016-107

October 2016

auditor.mo.gov

Nicole Galloway, CPA
Missouri State Auditor

CITIZENS SUMMARY

Findings in the audit of the City of Bridgeton Employees Retirement Plan

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City of Bridgeton Employees Retirement Plan
Funding and Governance
Table of Contents

NICOLE GALLOWAY, CPA
Missouri State Auditor

Members of the City Council
Bridgeton, Missouri

Due to concerns regarding plan financial condition, we have audited the City of Bridgeton Employees Retirement Plan's funding and governance as authorized under Chapter 29, RSMo. The objectives of our audit were to:

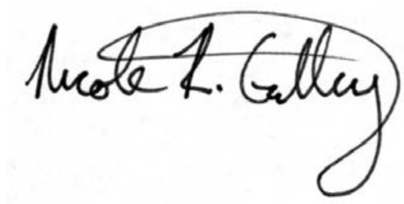
1. Analyze key data indicating the plan's financial condition.
2. Evaluate the impact of key factors influencing the plan's financial condition.
3. Evaluate the internal controls, management practices, and decisions impacting the plan's financial condition.
4. Evaluate compliance with certain legal provisions.

We conducted our audit in accordance with the standards applicable to performance audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform our audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides such a basis.

For the areas audited, we identified (1) data indicating a poor overall financial condition, (2) various key factors contributing to the plan's financial condition, (3) the need to improve plan oversight and management practices, and (4) noncompliance with legal provisions.

As of plan year 2015, actuarial studies indicated the plan was 67 percent funded and had unfunded liabilities of nearly $14 million. Similar to many retirement plans nationwide, the plan's financial condition was significantly impacted by the 2007 to 2009 recession. We identified various internal factors that also negatively impacted the plan's financial condition. Inadequate plan governance and oversight allowed for decisions that were unfavorable to the plan, including insufficient contributions and investment return assumptions higher than actual returns. Also, the city has not followed best practices related to management of retirement plans, complied with training requirements in state law, or adequately communicated with key stakeholders regarding the plan's financial condition.

The accompanying Management Advisory Report presents our findings arising from our audit of the Bridgeton Employees Retirement Plan's funding and governance.



Nicole R. Galloway, CPA
State Auditor

The following auditors participated in the preparation of this report:

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City of Bridgeton Employees Retirement Plan
Funding and Governance
Introduction

Background

The City of Bridgeton Employees Retirement Plan (plan), a defined benefit (DB) retirement plan, was established by the City of Bridgeton, Missouri in 1971. The plan was created by local ordinance and is codified by Chapter 140 of the city's Code of Ordinances.

The city's Code of Ordinances designate the City Council as the plan's trustee unless the City Council designates an individual or committee of individuals as fiduciaries. No such alternate designation has been made. As the plan's trustee, the City Council has the power and duty to take all actions and make all decisions necessary to carry out the plan, except that selection of administrative and professional service providers is subject to approval of the mayor.

The city's Finance Commission assists with oversight of the plan. The Finance Commission consists of five city residents, appointed by the mayor and approved by the City Council. One councilmember serves as an ex-officio member of the commission. General responsibilities of the commission include monitoring the plan's investment performance and financial condition based on the annual actuarial valuation. The city's Code of Ordinances grant the commission no legal authority to make decisions on behalf of the plan, therefore the commission functions solely in an advisory capacity.

Key city personnel involved in plan matters include the city administrator and city finance officer. The city administrator is appointed by the mayor and acts as chief finance officer, assists the mayor with preparation and administration of the annual city budget, and assists with plan administration. The finance officer reports to the city administrator. Both employees provide plan information and documentation to the Finance Commission and participate in commission meetings.

The plan guarantees monthly payments to eligible members, beginning upon retirement, based on a fixed percentage of members' average annual earnings multiplied by years of credited service. The plan is non-contributory, meaning members are not required to make contributions to the plan. The plan is funded by annual contributions from the city and plan investment earnings. The City Council made 2 significant changes to plan benefits in the last 15 years. The benefit multiplier was increased from 1.75 to 2.0 percent in 2001 and the plan was closed to new employees in 2013. For new employees not eligible for the plan, the city matches employees' contributions to the city's defined contribution plan up to a selected percentage (5 percent for 2015) of each employee's annual salary.

The plan is part of the city's financial reporting entity and is included in the city's audited Comprehensive Annual Financial Report (CAFR).[1] The city contracts with an actuary to perform annual actuarial valuations for the plan. Actuarial valuations determine plan liabilities, assets, and contributions. An annual actuarial valuation is used to calculate the contributions needed to fully fund the plan. Starting in 2014, the plan receives an additional actuarial valuation report that is used to present the plan's financial information in accordance with newly implemented governmental accounting standards.

In September 2014, the State Auditor's Office issued Report No. 2014-092, *Survey of Public Employee Retirement Systems in Missouri*. Our survey report analyzed financial data of all 89 public employee DB retirement plans in Missouri as of plan years 2011 and 2012. During this survey, we identified the Bridgeton Employees Retirement Plan as one of several plans having indicators of a poor financial condition. Our survey reported the plan's funded ratio had declined from 100 percent in plan year 2002 to 61 percent in plan year 2011, and the city's actual annual contributions to the plan as a percentage of actuarially determined contributions had declined from 92 percent in plan year 2006 to 57 percent in plan year 2012. In March 2016, we obtained and analyzed Missouri public employee retirement plan data from a database maintained by the Joint Committee on Public Employee Retirement (JCPER), noting continued concerns regarding the plan's financial condition.

The JCPER prepares an annual "watch list" of retirement plans whose market value of assets is less than 70 percent of the plans' actuarially accrued liabilities. The Bridgeton Employees Retirement Plan has been listed on the watch list since 2009.

Defined Benefit Plans

DB plans typically promise retirement benefits to eligible members in the form of monthly payments. The monthly payments begin upon members' retirement and continue throughout their remaining lives, normally with some options for survivor benefits. The authorizing government and/or the sponsoring government and the plan's governing board design various aspects of the DB plan's benefit structure and policies. The governing board manages the plan's assets/investments and retirement benefit payments. Because benefit payments are guaranteed, the sponsoring government is responsible for funding these payments and assumes nearly all of the financial risk associated with operating the plan.

[1] Recent CAFR reports are available through the city's website at http://www.bridgetonmo.com/departments/administration/finance

Retirement benefits are funded by plan assets accumulated from contributions by sponsoring governments, employees, or other sources; and investment earnings. These assets are held in trust for future benefit payments to retirees. To be considered fully funded, current plan assets should equal the estimated current (present) value of future benefit payments (accrued liabilities) earned by employees as of the actuarial valuation date.

Contributions necessary to fund retirement benefits of DB plans are often determined using an actuarial funding approach. With this approach, an actuarial analysis estimates and compares the present value of future benefit payments (actuarially accrued liabilities, or AAL) to plan assets. The actuary calculates the actuarially determined contributions (ADC) necessary to meet plan funding goals. The ADC includes an amount for normal costs and an amortization payment for the unfunded actuarially accrued liability (UAAL). The ADC must be paid to achieve funding goals.

Scope and Methodology

To analyze and evaluate the plan's financial condition, and due to the long-term nature of retirement plan funding, we reviewed plan data that was readily available for the 10 years ended December 31, 2015. We obtained and analyzed key plan data indicating the plan's financial condition. Plan data was primarily obtained from the city's annual financial statements and the plan's annual actuarial reports. We also compared plan data to aggregate data of all Missouri DB plans obtained from the JCPER. This aggregate data was compiled by the JCPER in a database from information submitted by the DB plans. The most recent data in the JCPER database was as of plan year 2014.

Our methodology included conducting interviews with current and former city officials regarding various management practices and actions related to plan financial condition and reporting, and the plan's contracted actuary. We obtained an understanding of the funding and governance approaches and applicable controls that are significant within the context of the audit objectives and assessed whether such controls have been properly designed and placed in operation. We also obtained an understanding of legal provisions that are significant within the context of the audit objectives, and we assessed the risk that illegal acts, including fraud, and violation of contract or other legal provisions could occur. Based on that risk assessment, we designed and performed procedures to provide reasonable assurance of detecting instances of noncompliance significant to those provisions. Records reviewed included the city's audited financial statements, actuarial reports, contracts with vendors, and meeting minutes of the City Council and the Finance Commission.

Our evaluation considered best practices related to management of public employee DB retirement plans, as identified in our survey report. The best practice sources include various guides and advisories issued by the Government Finance Officers Association (GFOA) and recommendations issued by the Pension Funding Task Force in its report, *PENSION FUNDING: A Guide for Elected Officials*. The Pension Funding Task Force was established by several national organizations representing local and state governments and its publication is intended to offer guidance on funding standards and practices.

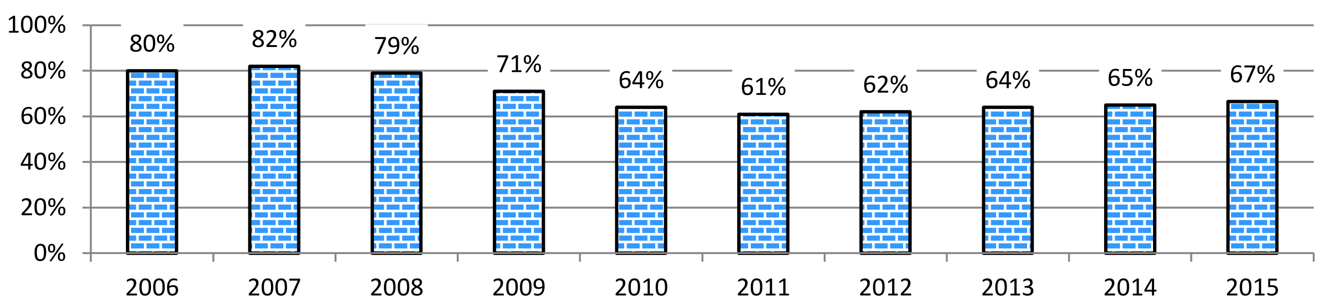
Since 1997, the city annually engaged RubinBrown, LLP, Certified Public Accountants (CPAs), to audit the city's financial statements, including the Pension Trust Fund. The audit of the city's year ended December 31, 2015 financial statements had not been completed at the time of our audit. Therefore, we reviewed the audit report and substantiating workpapers of the CPA firm for the year ended December 31, 2014, to minimize duplication of effort and obtain an understanding of the nature, timing, and extent of audit procedures relating to the audited financial statement amounts and disclosures pertaining to the Pension Trust Fund.

Plan Financial Condition

The plan's financial condition is poor. As of plan year 2015, the plan was 67 percent funded and had unfunded liabilities (UAAL) of nearly $14 million.

Funded Ratio

The plan's funded ratio, one of the most often cited indicators of financial condition, has declined from 80 percent in plan year 2006 to 67 percent in plan year 2015. The following chart shows the plan's funded ratios at year-end over the last 10 years.



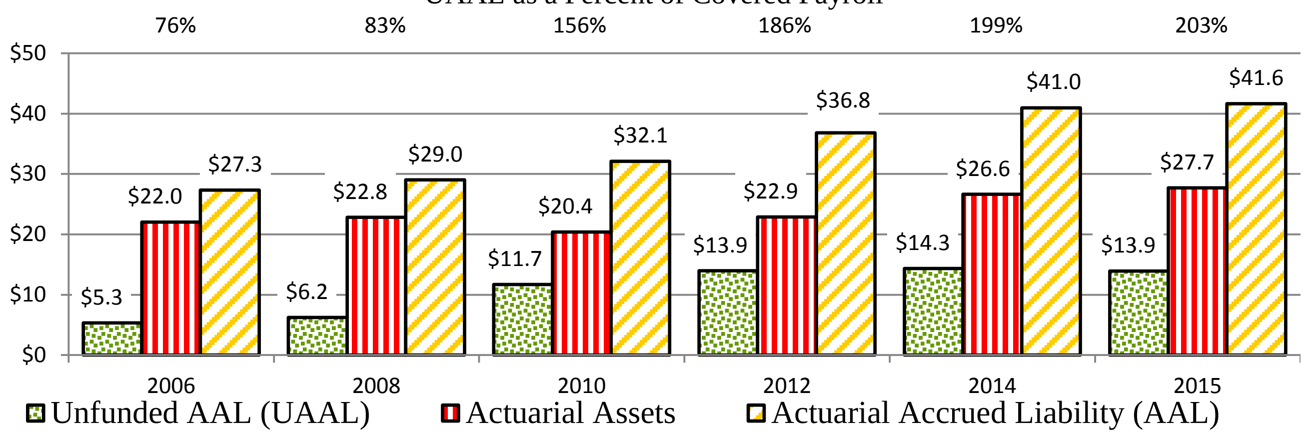
While slight improvements to the plan's funded ratio have occurred in recent years due to higher than average investment returns in plan years 2012 and 2013, the plan's funded ratio indicates the plan has been significantly underfunded for several years. The funded ratio is determined by dividing the actuarial value of assets by actuarially accrued liabilities (AAL) and represents the percentage of the present value of future benefit payments (accrued liabilities) earned that are covered by plan assets as of the valuation date. When a plan has not accumulated enough assets to cover expected benefit payments in future years based on service to date, the plan has UAAL. A plan is considered fully funded if the plan's assets meet or exceed the plan's liabilities.

For comparison, the aggregate funded ratio for all Missouri public employee DB retirement plans for plan year 2014 was 80 percent according to plan data in the JCPER's database. While there are widely varying viewpoints regarding what minimum funded ratio percentage indicates a plan is adequately funded, it is common for a public employee DB retirement plan with a funded ratio of less than 80 percent to be considered insufficiently funded. A DB plan's goal should be to achieve at least 100 percent funding so plan assets are sufficient to cover all future benefit payments.

Unfunded Liabilities

The following chart shows the plan's AAL and UAAL at year-end over the last 10 years. The chart shows trends of a widening gap between actuarial assets and AAL, and an increasing UAAL. The chart also shows the growing UAAL as a percentage of annual covered payroll. This percentage increased from 76 percent in plan year 2006 to 203 percent in plan year 2015. Unless the UAAL significantly declines, the percentage will continue to increase because covered payroll is expected to decrease due to the plan closing to new employees.

UAAL as a Percent of Covered Payroll



Note: Amounts are presented in millions of dollars

The Governmental Accounting Standards Board (GASB) standards for accounting and reporting requirements for DB Plans were amended in 2012 and implemented by plans and sponsoring governments in 2014 and 2015. The new accounting standards significantly changed the pension data available in plan and sponsoring government financial statements. The plan's total pension liability (TPL) and fiduciary net position (FNP), calculated using newly required asset and liability measurements, showed a TPL of $45.6 million for plan year 2014 and $48.2 million for plan year 2015. The plan's FNP was $26.3 million for plan year 2014 and $24.9 million for plan year 2015. The plan's resulting FNP/TPL was only 58 percent for plan year 2014 and 52 percent for plan year 2015.

1. Financial Condition

The City of Bridgeton Employees Retirement Plan's financial condition is poor primarily because the city has not met contribution requirements since plan year 2008 and investment returns have been historically less than assumed returns. The lack of adequate board governance, policies, and oversight, as noted at MAR finding number 2, allowed for decisions that worsened the plan's financial condition.

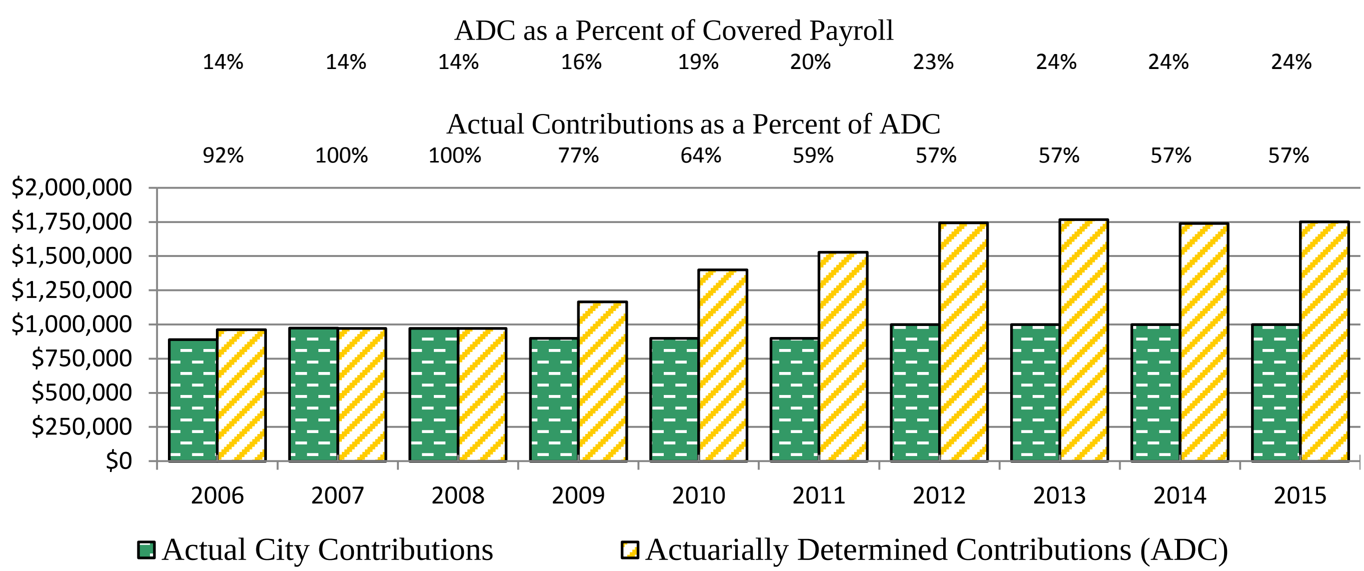
1.1 Funding

Actuarially determined annual contributions have not been received from the city since 2008, and the city has not developed a funding policy. In addition, the city's recent actions to address the plan's poor financial condition were made without timely analysis of the impact and sufficiency of the changes.

Contributions

The city's decisions to contribute significantly less than ADC amounts has been a primary factor in the plan's poor financial condition.

Actual contributions as a percentage of ADC, or percentage of ADC paid, indicates the extent the city is making the contribution payments as determined by the actuary. This factor measures the city's commitment to achieving the plan's overall funding goals. The ADC is determined based on various actuarial assumptions and practices. The following chart shows the ADC amounts and amounts actually contributed by the city over the last 10 years.



Despite annual actuarial reports indicating the plan is in poor financial condition, the city contributed significantly less than ADC amounts in each of the last 7 years (2009 through 2015). The ADC significantly increased over the last 7 years; however, the city's contributions remained at levels contributed prior to 2009. Actual contributions as a percentage of ADC averaged only 60 percent during the 7-year period, and the contribution shortfall averaged $628,000 per year during the period. For 2016, the city budgeted contributions to the plan totaling $1.2 million, or 71 percent of the approximately $1.7 million ADC amount. While the city generally makes contributions to the plan based on budgeted amounts, the budgeted amounts recommended by the mayor and approved by the City Council did not increase to cover increasing ADC amounts. The city's continued underfunding of pension obligations was cited by Moody's Investor Services as a factor in its November 2015 downgrading of the city's issuer rating.

Our review of City Council and Finance Commission meeting minutes and budget messages during the last 10 years noted no documented discussions concerning the City Council's decision to budget and pay less than the ADC amounts. City officials stated city resources were insufficient to provide the needed funding to the plan, and decreases to city programs, staffing, services, and employee benefits would have been necessary to fully contribute ADC amounts. City officials indicated the city has experienced revenue shortfalls during this period due to a number of reasons including (1) the recent economic recession, (2) a decline in population due to the airport expansion, (3) costs associated with natural disasters, and (4) increasing employee health insurance premiums. The city's audited financial statements show the city's general fund expenditures exceeded revenues during the last 10 years, and the general fund unreserved balance decreased from $3.8 million at January 1, 2006, to $1.1 million at December 31, 2015.

The failure to provide ADC amounts for a number of years has a compounding effect on the plan's poor financial condition and increases the risk the plan may not be able to pay all future benefit payments owed to members. The GFOA[2] recommends "under no circumstance should state and local government plan sponsors engage in pension contribution holidays or make insufficient contributions. When employers skip an actuarially determined contribution or make smaller payment, they defer that cost to the future and jeopardize the long-term funding of the plan. When governing bodies arbitrarily reduce contributions to a plan, the resulting systemic underfunding ensures future financial shortfalls and places the burden for that shortfall on future taxpayers. These types of funding decisions compound future funding problems and are, in many instances, a leading cause of funding shortfalls."

[2] "Responsible Management and Design Practices for Defined Benefit Pension Plans," Government Finance Officers Association, October 2010, <http://www.gfoa.org/responsible-management-and-design-practices-defined-benefit-pension-plans>, accessed on June 7, 2016, p. 1.

Funding policy

The city has not developed a formal funding policy. As a result, there are no policies or guidelines for city officials to utilize when making decisions impacting the plan's financial condition.

The city's ordinance regarding plan contributions does not require making actuarially determined contributions. Section 140.380 of the city's Code of Ordinances states "the City intends to contribute, but does not guarantee to do so, funds hereunder in amounts actually necessary for the funding of the plan."

A plan's funding policy plays an integral role in the plan's financial condition. The GFOA[3] recommends "every state and local government that offers defined benefit pensions formally adopt a funding policy that provides reasonable assurance that the costs of those benefits will be funded in an equitable and sustainable manner." In addition, the Pension Funding Task Force[4] states that a clear pension funding policy is important because it "lays out a plan to fund pensions; provides guidance in making annual budget decisions; demonstrates prudent financial management practices; reassures bond rating agencies; and shows employees and the public how pensions will be funded." The Task Force recommends the policy address the core elements of pension funding (actuarial cost method, asset smoothing method, and amortization policy) consistent with the general objectives of basing funding on actuarially determined contributions, building funding discipline, maintaining intergenerational equity, making employer costs a consistent percentage of payroll, and requiring clear reporting.

Recent actions

The city did not obtain written projection analyses to determine the sufficiency of recent changes to plan provisions and contribution amounts. The city took actions in 2013 and 2015 to try to improve the plan's financial condition. While these decisions show the city acknowledged and tried to address the plan's deteriorating financial condition, the actions were made without determining the impact of the changes and the extent the changes will improve the plan's financial condition.

- In January 2013, the City Council voted to close the plan to new employees hired or rehired on or after January 1, 2012. This decision was made in response to a concern raised by the actuary in February 2012 that plan funding was nearing the criteria of contribution

[3] "Funding Defined Benefit Pension," Government Finance Officers Association, June 2012, < http://www.gfoa.org/funding-defined-benefit-pensions>, accessed on June 7, 2016, p. 1.
[4] "PENSION FUNDING: A Guide for Elected Officials," 2013, <http://www.nasact.org/files/News_and_Publications/White_Papers_Reports/2013_03_25_Pension_Funding_Guide.pdf>, accessed on June 7, 2016, p. 4.

deficiency under state law. Section 105.683, RSMo, states if a plan's funded ratio is below 60 percent and has been descending for 5 consecutive years, and the sponsoring government has not paid 100 percent of the ADC for 5 years, the sponsoring government can be considered delinquent in making contribution payments. The law provides certain plans in this situation can intercept state payments due to the sponsoring government in the amount of 25 percent of the contribution deficiency.

- In early 2015 city officials decided to begin making incremental annual increases in contributions and seek voter approval for a general hotel/motel tax increase to help fund the increases. In April 2015, voters approved the tax increase, which city officials project will increase the city's general revenues by $900,000 per year. City officials decided to increase annual contribution amounts by $200,000 each year until the full ADC amount is reached, and to make the full ADC each year thereafter. Accordingly, the city budgeted $1.2 million for contributions for 2016, an increase from $1.0 million paid in each of the previous 4 years.

In the cover letter to the 2016 funding actuarial valuation report, the actuary warned "to date, the plan asset values have been relatively stable year over year, but the magnitude of the benefit payments is considerably greater than the contributions being made, and you can anticipate that the asset values will begin to decline." In the 2016 actuarial valuation prepared under newly implemented accounting standards for financial statement purposes, even with the city's planned contribution increases and eventual full contributions, and current actuarial assumptions, the actuary was required to use a blended assumed investment rate of return (discount rate) of 6.15 percent because the plan's FNP will not be sufficient to make all projected future benefit payments of current plan members.

Analyzing the impact of changes to plan benefits and contributions would assist City Council members in determining whether proposed changes are adequate to provide anticipated outcomes, and whether additional changes are necessary.

Conclusions

To attain good plan financial condition, it is imperative the City Council reinstate contributions to the plan of at least ADC amounts. The City Council should work with the plan's actuary to develop a funding plan that will increase plan assets to a level sufficient to pay all projected benefit payments. In developing such a plan, the City Council should first evaluate and revise as necessary, various actuarial assumptions and methods as recommended in this report. The City Council should develop a formal funding policy to guide funding decisions and communicate its funding intentions to plan members and the public. Also, the city should obtain an actuarial analysis that evaluates the projected impact of recent decisions on the plan's financial condition.

1.2 Investments

Actual investment returns have historically been less than assumed returns, and the city has not established an investment policy or analyzed the sufficiency of plan investment return assumptions.

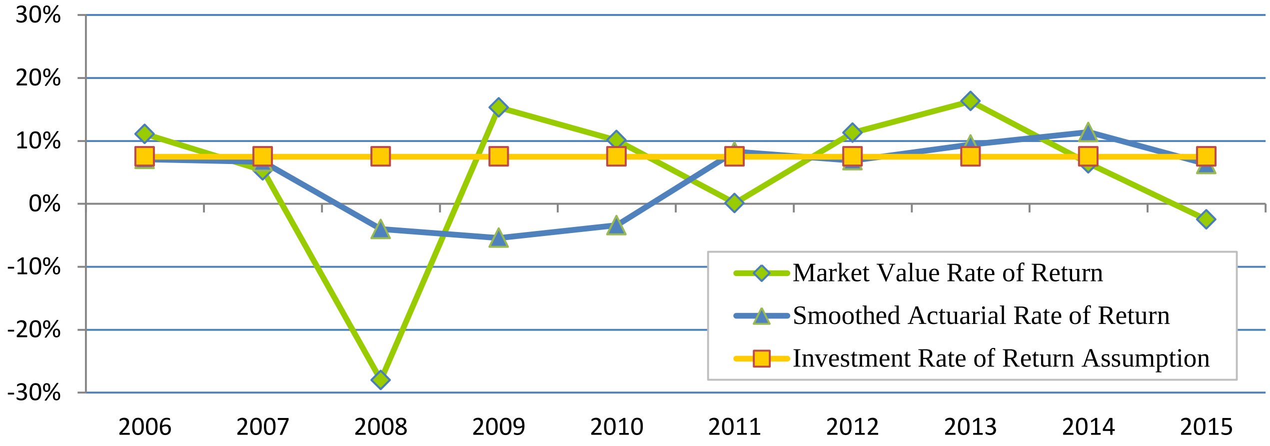
The plan's investments are managed by a contracted investment firm. The city changed plan investment firms in April 2015, and had contracted with the previous investment firm for 29 years.

Assumed rate of return

The plan's actual rate of return has historically been lower than the assumed investment rate of return, and a formal analysis has not been performed to determine the reasonableness of the assumed investment rate of return.

The assumed investment rate of return is the long-term rate of return expected on plan assets, and is often cited as the actuarial economic assumption having the most impact on plan financial condition. Changes to the assumed rate of return can significantly influence the determination of the ADC amounts and funded ratio. When setting the assumed rate of return, a plan should consider current and past economic conditions, long-term economic outlook predictions, expected inflation, past investment performance, investment policies, and asset allocation. The same or similar rate is typically assumed each year due to the long-term nature of the rate. The assumed rate of return is typically used as the discount rate when calculating the present value of plan liabilities through a method called discounting.

A comparison of the plan's market value, smoothed, and assumed investment rates of return over the last 10 years is shown in the following chart. For determining actuarial asset valuations, the plan's actuary smooths the market value gains and losses over a 3-year time period. As shown in the chart, the plan's assumed rate of return was 7.50 percent, while the market and smoothed rates of return were significantly less than 7.50 percent in several years during the 10-year period.



The plan's long-term time-weighted smoothed investment returns[5] have been significantly less than the plan's current assumed rate of return of 7.50 percent. The chart below shows the plan's time-weighted smoothed returns over the previous 30, 20, and 10-year time periods ended December 31, 2015. These calculations are based on smoothed annual investment returns reported in the plan's 2016 funding actuarial report.

Time Period	Time-Weighted Return
30 years	6.42%
20 years	5.14%
10 years	4.16%

City officials indicated the plan's assumed rate is comparable to other public employee DB retirement plans but a formal analysis to determine the reasonableness of the rate has not been performed. Our survey report showed the average assumed investment return for Missouri's 89 public employee DB plans was 7.17 percent as of plan year 2012. Recent information from the JCPER's database indicates this amount decreased to 7.07 percent as of plan year 2014. This average had declined from 7.58 percent in plan year 2003, a likely indicator plans were anticipating slower economic growth in future years. While the plan's assumed rate of return is in line with that of other plans statewide, there is significant debate among pension and public finance professionals regarding whether these rates are too high. This debate is discussed in the Risk-Free Discount Rate Debate section of the survey report.

[5] The plan changed asset valuations methods from a market value method to a 3-year smoothed method beginning with the January 1, 1996 valuation.

Retirement plans should achieve at least the assumed investment rate of return over the long term to properly fund benefit payments. If the rate is not reevaluated regularly, plans cannot ensure the reasonableness of the rate and the resulting ADC and funded ratio. If rate is not set realistically, over time the funded ratio and contributions could become inconsistent with plan liabilities. A rate set too high could jeopardize the financial condition of the plan. The GFOA[6] states "Unrealistically high investment return assumptions are likely to result in a chronically declining funded ratio and higher contributions in the future. Caution should be exercised to ensure the investment return assumption reflects the reasonably expected returns of the plan's asset allocation over a reasonable period of time."

The GFOA[7] recommends retirement plans periodically engage an actuary to perform additional services to assist management in determining the reasonableness of actuarial assumptions. Such services include an experience study, performed no less frequently than every 5 years, that determines whether actuarial assumptions are in line with a plan's demographic and economic experience. Experience studies can include a review of a plan's assumed rate of return and would assist plan management in determining if changes to the rate or the plan's investment strategy are necessary. Given the significant role of a plan's assumed rate of return, the City Council should consider obtaining an experience study or performing similar procedures.

Investment policy

The city has not developed a formal investment policy outlining the key aspects of the plan investment program, such as investment strategies and goals and monitoring of investment performance.

City officials indicated the current asset allocation (60 percent equities and 40 percent fixed income) was developed through discussions of the Finance Commission and former investment firm personnel, but the allocation and other investment strategies and goals have not been formalized in an investment policy. Additionally, the City Council does not directly monitor plan investment performance or approve investment decisions. The current investment firm requested the city develop a formal investment policy in August 2015; however, city officials had not developed a policy as of May 2016.

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[6] "Responsible Management and Design Practices for Defined Benefit Pension Plans," Government Finance Officers Association, October 2010, <http://www.gfoa.org/responsible-management-and-design-practices-defined-benefit-pension-plans>, accessed on June 7, 2016, p. 2.

[7] "Enhancing Reliability of Actuarial Valuations for Pension Plans," Government Finance Officers Association, September 2014, <http://www.gfoa.org/enhancing-reliability-actuarial-valuations-pension-plans>, accessed on June 7, 2016, p. 1.

A sufficiently designed investment policy is essential due to the significance of investment income to plan assets. The GFOA[8] recommends "state and local entities establish a formal investment policy that is approved by the governing board or trustee(s) of the pension plan." The GFOA recommends such a policy should address a variety of issues such as asset allocation, investment guidelines, roles and responsibilities of key decision makers, investment goals, and procedures for reporting and monitoring investment performance. The absence of a formal investment policy prevents the governing board from clearly communicating the investment goals, priorities, and responsibilities to plan officials and personnel, the contracted investment manager, and other interested parties. Also, when there is no policy and the assumed rate of return is too high, there is increased risk of poor investment decisions in an attempt to meet rate of return assumptions.

Recommendations

The City Council, as the plan's trustee:

1.1 Consult with the plan's actuary to develop a plan to increase plan assets to a level sufficient to pay all projected benefit payments and ensure annual contribution amounts are no less than the actuarially determined amounts. The City Council should develop a formal funding policy and obtain projection analyses when making changes impacting the plan's financial condition.

1.2 Obtain an experience study or similar procedures to evaluate the sufficiency of the plan's assumed investment rate of return and make changes to the rate and/or investment strategy if necessary. In addition, the City Council should develop a formal investment policy.

Auditee's Response

1.1 The city has regularly consulted with the plan actuary over the past 30 years evaluating asset values, returns, and contributions. The city contributions from 1987-2008 mirrored or exceeded the ADC. After the recession of 2008 the ADC spiked to levels unseen before. The city continued to make significant contributions of $1,000,000 per year for several years during a rough period of revenue declines. A consequence of making the full ADC of $1,700,000 during those years would have resulted in staff layoffs and program and service cuts to the residents. The city was optimistic that the economy would rebound and budgeted to keep up the desired levels of service. The city has always made the budgeted City Council approved contributions. Yet the 30 percent asset loss in 2008 was very difficult to catch up in a short period of time. The city

[8] "Pension Investment Policies," Government Finance Officers Association, February 2003, <http://www.gfoa.org/pension-investment-policies>, accessed on June 7, 2016, p. 1.

developed a plan in 2015 to increase contributions incrementally from $1,000,000 to $1,600,000 over three years to reach the full ADC and implemented a soft freeze for new hires. Voters approved a hotel tax increase, which helped to fund a portion of the increased contributions. Subsequently the funded ratio has increased in each of the last four years and contributions as a percent of the ADC increased to 69 percent in 2016 and will increase to approximately 83 percent in 2017. Therefore, the recent city actions did impact the plan favorably and valuations continue to trend upward. In the future, if further plan changes are considered, the city will obtain a formal projection analysis as recommended.

1.2 The plan's assumed actuarial rate of return is discussed regularly with the actuary as part of the annual review process. The rate of return of 7.5 percent is comparable to that of many other public plans and the actuary and commission has felt it to be reasonable. The Missouri Joint Committee on Public Employee Retirement in their 2015 Annual Report cited the Missouri State Employees Retirement Plan having an 8 percent rate assumption. Over the past ten years, the market value rate of return of the plan has achieved or exceeded the rate assumption seven times. The 30 percent investment loss in 2008 also affected subsequent years due to the three year smoothed valuations. In the future the city will consider such a procedure as well as developing formal investment and funding policies. The Finance Commission did formally approve the asset allocation guidelines at the quarterly meeting on August 11, 2016. Investments are monitored monthly by staff and reviewed quarterly with presentations by the asset managers to the Commission. The "Prudent Person Rule" is strictly adhered to. The plan returns for the six months ending June 30, 2016 is at 7.15 percent.

Auditor's Comments

1.1 While city officials have established a plan to increase contribution amounts incrementally each year beginning in 2016, this plan will not provide for full ADC payments for at least 3 more years. In addition, this plan assumes the ADC will remain the same each year, which is not guaranteed. Under the current plan, any increases in ADC will further delay full funding of the ADC. The continued failure to provide ADC amounts compounds the plan's funding problems and shifts the costs to future taxpayers.

1.2 Because the plan's actual rate of return has historically been lower than the assumed investment rate of return, a review of the assumed rate of return is necessary. This review should be based on actual plan experience, rather than a comparison to other retirement plans. As noted in our survey report, many Missouri public employee defined benefit retirement plans have reduced their assumed investment rates of return in recent years because they anticipate economic growth will be slower in future years. It is unrealistic to compare the plan's assumed rate of return to that of the Missouri State Employees' Retirement System (MOSERS) as MOSERS' assets are more than 300 times those of the Bridgeton Employees Retirement Plan. In June 2016, the MOSERS Board of Trustees voted to reduce its assumed rate of return from 8 percent to 7.65 percent, effective July 1, 2017.

2. Plan Governance

The plan's governance structure does not allow representation of varied and balanced interests. The City Council, which serves as the plan's trustee, does not provide adequate oversight and monitoring of the plan and City Council members have not received pension training as required.

Section 140.220 of the city's Code of Ordinances provides that the City Council manage and control the plan. While the Code of Ordinances allows the City Council to designate an individual or committee of individuals to serve as the plan's trustee, no such designation has been made. The city has delegated oversight of the plan to the Finance Commission, but only in an advisory capacity.

Governing Board

The plan is not governed by a board, independent from the city, and consisting of members representing varied and balanced interests.

Because the plan is governed by the City Council, the governance structure does not allow for a variety of interest groups to be represented. This governance structure provides for an inherent conflict of interest because the City Council is responsible for budgeting and planning decisions regarding both the city and the plan. The exclusion of viewpoints from all key stakeholders in plan decisions may have contributed to the plan's poor financial condition. During the 10 years ended December 31, 2015, City Council and Finance Commission membership did not include current employees or retirees.

The GFOA[9] states "board governance is a crucial component of a properly managed DB plan. It is the manner and process by which Trustees exercise authority and control over all plan activities. DB plan sponsors should pay particular attention to the composition of the Board of Trustees and make efforts to ensure that varied interests are represented and balanced among those of employers, employees, retirees, taxpayers and unions, if

[9] "Design Elements of Defined Benefit Retirement Plans," Government Finance Officers Association, February 2008, <http://www.gfoa.org/design-elements-defined-benefit-retirement-plans>, accessed on June 7, 2016, p. 3.

applicable." Providing for varied and balanced representation of a plan's governing board help ensure decisions are unbiased and the interests of all parties are considered.

Oversight

The City Council, as the plan's trustee, does not sufficiently monitor and oversee the plan.

The City Council does not always review and approve documents relating to the plan's financial condition such as actuarial reports and investment performance reports, and does not approve some key decisions impacting the plan's financial condition, including decisions to maintain or change actuarial assumptions and investment practices. City officials indicated copies of Finance Commission meeting minutes and actuarial reports are distributed to councilmembers when the Finance Commission meets; however, the Finance Commission did not meet for a 3-year period.

Our review of City Council meeting minutes from 2006 through 2015 noted the plan was rarely discussed during semi-monthly City Council meetings. Meeting minutes during 2014 and 2015, only included two discussions regarding the plan. Both occurred in October 2014 after the plan was mentioned in our survey report.

In addition, the Finance Commission did not hold meetings during 2012, 2013, or 2014. City officials indicated the Finance Commission was often not able to establish a quorum until the appointment of new commission members in 2015. Our review of meeting minutes from Finance Commission meetings during the period 2006 through 2011 and 2015 noted the Finance Commission reviewed plan actuarial reports and investment performance reports, but the minutes included no documented discussions regarding the plan's poor financial condition. In the absence of the Finance Commission, these reports were reviewed by the city administrator and the finance officer.

As the plan's trustee and fiduciary, the City Council is expected to administer the plan in a prudent manner. The GFOA[10] indicates the general standard for this "duty of prudence" is that "a trustee should act in a way that a reasonable or prudent person acts in a similar situation or in the conduct of his or her own affairs." Without reviewing and approving documents and decisions relating to the plan's financial condition, the City Council is unable to fulfill its fiduciary responsibilities.

[10] "Governance of Public Employee Postretirement Benefits Systems," Government Finance Officers Association, March 2010, <http://www.gfoa.org/governance-public-employee-postretirement-benefits-systems>, accessed on June 21, 2016, p 1.

Training

The city has not established a plan board member education program and City Council members, who serve as the plan's trustee, have not received training concerning their fiduciary responsibilities and duties, as required by state law. The Finance Officer and the former City Administrator received pension training in 2015 but the City Council members have not received training.

Effective January 2008, Section 105.666.1, RSMo, requires pension boards to establish a board member education program. The statute requires new board members to complete an orientation training program within 90 days of becoming new board members and all other board members to attend 6 hours of continuing education programs each year. Without adequate training, City Council members may lack adequate knowledge regarding the key aspects of public employee DB retirement plans and their role as plan fiduciaries. This could prevent the City Council from making decisions that ensure the plan is responsibly managed and financially solvent to satisfy all pension obligations.

Recommendation

The City Council, as the plan's trustee, maintain effective oversight of the plan by delegating fiduciary responsibilities to a pension board that consists of a varied and balanced representation of key stakeholders. Additionally, the City Council should develop and implement a training program for pension board members as required by state law.

Auditee's Response

The City Council and Mayor have delegated oversight responsibilities to an advisory board, the Finance Commission. The selection of members involves the balancing of representation of stakeholders (employers, taxpayers, unions, etc.). There is a residency requirement which limits the availability of retirees while the meetings are attended by staff and open to the public. The City Council is elected by the voters, thus there is little control over the composition of the Council. A councilmember is appointed as an ex-officio member of the Commission where actuarial reports are distributed and reviewed. The financial condition of the plan is discussed at the meetings, which were regularly held from 1988-2012. Member vacancies during 2012-2014 resulted in missed meetings. The Commission has met regularly since 2015. All plan amendments, key decisions, and annual contributions are approved by City Council.

The Missouri legislature passed HB 1882 in 2014, requiring 6 hours of continuing education annually for pension board members. Bridgeton's City Administrator and Finance Officer did complete this training in 2015. The training seminars have had limited offerings in various cities, requiring time commitments and enrollment fees. These offerings have and will be made available to councilmembers as recommended and they will be encouraged to attend to fulfill this requirement.

3. Actuarial Valuations

The method used to amortize the UAAL when calculating the annual ADC amounts is contrary to recommended best practices and the city has not obtained an actuarial audit.

The city has engaged the same actuary to prepare annual actuarial valuations for 10 years. The annual actuarial valuations are reviewed by the Finance Commission, city administrator, and finance officer, and report the plan's liabilities, assets, contributions, and other key information that indicate plan financial condition.

3.1 Amortization Method

The city's continued use of a 30-year open amortization method for calculating the annual ADC provides for inequities because costs of current covered employees are shifted to future generations.

Amortization methods are used to determine the contributions needed to fund the UAAL. Retirement plans typically spread the contribution payments across several years, called the amortization period. An open amortization period allocates UAAL over an identified number of years on a rolling year basis. A closed amortization period sets a future date the UAAL will become fully funded and reduces the amortization period by 1 year each year after the closed period policy is adopted. The city utilizes a 30-year open amortization period, which spreads the UAAL over the next 30 years. In theory, this method could eventually approach full funding of the liability; however, it will require significantly longer than the 30 years to arrive at a nearly fully funded position because there is no definite date in the future to achieve the goal.

Since the plan was closed to new employees beginning in January 2012, the use of a 30-year open amortization period will spread a portion of the UAAL into periods after the covered employees are no longer employed. The plan's actuary warned of this concern in the cover letter to the 2016 funding actuarial valuation report. City officials indicated they have always used this amortization method and have not analyzed the potential results of using other methods.

The GFOA[11] recommends "the ADC should be calculated in a manner that fully funds the long-term costs of promised benefits, while balancing the goals of 1) keeping contributions relatively stable and 2) equitably allocating the costs over the employees' period of active service." The Pension Funding Task Force states the principle of intergenerational equity in relation to pension funding ensures "the cost of employee benefits is paid

[11] "Funding Defined Benefit Pensions," Government Finance Officers Association, June 2012, <http://www.gfoa.org/funding-defined-benefit-pensions>, accessed on June 7, 2016, p. 1.

by the generation of taxpayers who receives services."[12] In addition, the GFOA[13] recommends amortization of the UAAL should use closed periods and should "never exceed 25 years, but ideally fall in the 15-20 year range." Implementation of amortization period best practices is only effective when full ADC payments are made.

3.2 Actuarial Audit

The city has never obtained an independent actuarial audit or alternative review to ensure the reliability of amounts reported in plan actuarial reports and the reasonableness of the actuarial methods and assumptions used by the plan actuary. City officials indicated they are satisfied by the services provided by their current actuary and obtaining an actuarial audit would result in additional costs to the plan.

The GFOA[14] indicates "a comprehensive audit of the plan's actuarial valuations performed by an independent actuary at least once every five to eight years can be used to evaluate the appropriateness of the actuarial methods, assumptions, and their application." Without periodically obtaining an actuarial audit or similar procedures, the city has less assurance regarding the reliability of the plan actuarial reports.

Recommendations

The City Council, as the plan's trustee:

3.1 Work with the actuary to evaluate implementing a closed amortization period recommended by best practices.

3.2 Consider periodically obtaining actuarial audits or alternative reviews.

Auditee's Response

3.1 The city will work with the actuary to evaluate implementing a closed amortization period as recommended.

3.2 The city will consider periodically obtaining actuarial audits or alternative reviews as recommended. The city did engage the actuary to perform a retirement incentive study in 2016 to continue to seek ways to improve the plan condition. Subsequently, 7 of the 106 active members have retired to date in 2016.

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[12] "PENSION FUNDING: A Guide for Elected Officials," 2013, <http://www.nasact.org/files/News_and_Publications/White_Papers_Reports/2013_03_25_Pension_Funding_Guide.pdf>, accessed on June 7, 2016, p. 6.

[13] "Core Elements of a Funding Policy," Government Finance Officers Association, March 2013, <http://www.gfoa.org/core-elements-funding-policy> , accessed on June 7, 2016, pp. 1-2.

[14] "The Role of the Actuarial Valuation Report in Plan Funding," Government Finance Officers Association, February 2013, <http://www.gfoa.org/role-actuarial-valuation-report-plan-funding>, accessed on June 7, 2016, p. 3.

4. Communication to Key Stakeholders

The city has not adequately communicated plan financial information to key stakeholders. City officials have not distributed reports to stakeholders and used a less relevant funding statistic rather than the plan's funded ratio in communications regarding the plan's financial condition.

Reports to stakeholders

City officials have not prepared or distributed reports of financial information, including information showing the impact of insufficient contributions on plan financial condition, to key stakeholders such as employees, retirees, and citizens. While the city's annual financial statements contain plan financial information and are made available on the city's website, plan financial information is not provided directly to key stakeholders.

Misleading use of funding statistics

Our review of documentation of discussions of the plan's financial condition in City Council and Finance Commission meeting minutes as well as documentation submitted to the JCPER in response to the plan's inclusion on the annual watch list, noted city officials primarily used a less relevant funding statistic, rather than the plan's funded ratio, to communicate the plan's financial condition.

During an October 2014 City Council meeting, city officials discussed a newspaper article regarding our survey report. The meeting minutes indicate the article "created some unnecessary concerns" and "was based on old and incorrect information and the financial plan is solid." The minutes also state the plan is now at 83 percent funding and growing, and will be self-sufficient eventually. However, the plan funded ratio at that time was only 64 percent. The 83 percent was similarly cited in the August 2015 Finance Commission meeting minutes that quoted the City Administrator as saying "we are in very good standing with this pension fund." Furthermore, the city referenced the 83 percent in its "watch list" response to the JCPER.

The 83 percent figure was the "funded percentage," separately calculated by the actuary and included in the 2014 funding actuarial report based on projected liability calculations using current wages and did not take into account future wage increases. The funded percentage is not the funded ratio calculated assuming wage increases and commonly used to monitor the financial condition of public employee DB plans. The use of the funded percentage statistic has never been required by governmental accounting standards and is not monitored by the JCPER. This statistic is unrealistic because future wage increases for current employees are likely. Furthermore, the use of this statistic can be misleading and provide a false sense of security to stakeholders. City officials indicated they understood the difference between the calculated funded percentage and the actuarially determined funded ratio, but were unable to explain why the higher, less relevant statistic was cited in meeting minutes and reported to the JCPER rather than the plan's funded ratio.

Conclusion

The GFOA[15] recommends the plan's financial information included in the city's annual financial report be summarized and distributed to all plan participants. The GFOA best practice guide further recommends when contributions are below the actuarially determined rates, "the board of trustees should prepare a report that analyzes what effect the underfunding has on the system and distribute the report to all stakeholders." Without receiving adequate and accurate summarized financial information, key stakeholders may not be fully aware of the plan's financial condition and the fiscal impact of the city's contributions of less than actuarially determined amounts.

Recommendation

The City Council, as the plan's trustee, prepare and distribute reports summarizing plan financial information, including the impact of insufficient contributions on plan financial condition, to key stakeholders. In addition, the City Council should cite the plan's funded ratio, rather than the funded percentage statistic, in communications regarding plan financial condition.

Auditee's Response

The city has made available the plan information in the Comprehensive Annual Financial Report, posted on the city's website. Actuarial and budget documents are also made available and employees do receive annual benefit information. The city has made strides in correcting a downturn in funding and has seen the funded ratio increase in each of the last four years. The city will seek to develop a meaningful report to summarize the plan to stakeholders. The long-term nature of a pension plan allows for gradual improvement over time. This trend upward is what the plan is currently experiencing.

The funded percentage is a statistic used in the actuarial report and does not take into account future wage increases. Wage increases have been negligible due to low inflation and the plan being frozen to new hires in 2012. The funded ratio will be cited in the future, rather than the funded percentage as recommended.

Again, the recession of 2008 and the loss of population and revenue from the airport expansion had a major negative impact on the plan. The city is committed to reach full funding levels and believes that trend is moving in the right direction.

[15] "Sustainable Funding Practices of Defined Benefit Pension Plans," Government Finance Officers Association, October 2009, <http://www.gfoa.org/sustainable-funding-practices-defined-benefit-pension-plans>, accessed on June 7, 2016, p. 2.

City of Bridgeton Employees Retirement Plan
Funding and Governance
Organization and Statistical Information

The City of Bridgeton Employees Retirement Plan (plan) was established by the City of Bridgeton, Missouri in 1971. The plan was created by local ordinance and is codified by Chapter 140 of the city's Code of Ordinances.

The plan is a single-employer, defined benefit retirement plan for employees of the City of Bridgeton hired before January 1, 2012. The plan provides retirement and death benefits to its members and survivors. Members are not required to make contributions to the plan.

Members are vested in the plan after 5 years of service. Any member who has attained the age of 60 and who has 5 or more years of creditable service may retire with full benefits. The retirement benefit is calculated at 2 percent of average annual earnings multiplied by the number of years of credited service. Average annual earnings are based on the highest consecutive 5 years of the member's last 10 years of service. A member may elect to retire at age 50 (age 45 for police employees) with reduced benefits if the member has 5 or more years of creditable service.

As of December 31, 2015, there were 106 active members, 120 retired members and beneficiaries, and 27 terminated-vested members. The plan was frozen to new employees as of January 1, 2012.

City Council and Key Plan Personnel

The plan is under the control and management of the City Council. Two City Council members are elected from each of the city's four wards and serve 2-year terms. The members of the City Council as of December 31, 2015, were:

Ferd Fetsch, Council President and Ward 3 Councilmember
Bob Saettele, Ward 1 Councilmember
Scott Zimmer, Ward 1 Councilmember
Linda Eaker, Ward 2 Councilmember
Jerry Grimmer, Ward 2 Councilmember
Randy Hein, Ward 3 Councilmember
Barbara Abram, Ward 4 Councilmember
Joni Norris, Ward 4 Councilmember

Terry Briggs was elected Mayor in April 2015, and serves a 4-year term. He replaced Conrad Bowers who served 28 years as Mayor. The city administrator and city finance officer oversee plan matters. Kevin Bookout has served as City Administrator since November 2015. He replaced Police Chief Donald Hood who served as City Administrator from September 2012 to November 2015. Dennis Rainey has served as Finance Officer since November 1988.

Plan Consultants

The City contracts with Aetna, Inc., for pension administration services; US Bancorp, for investment management services; Buck Consultants, for actuarial services; and RubinBrown, LLP, for auditing services.

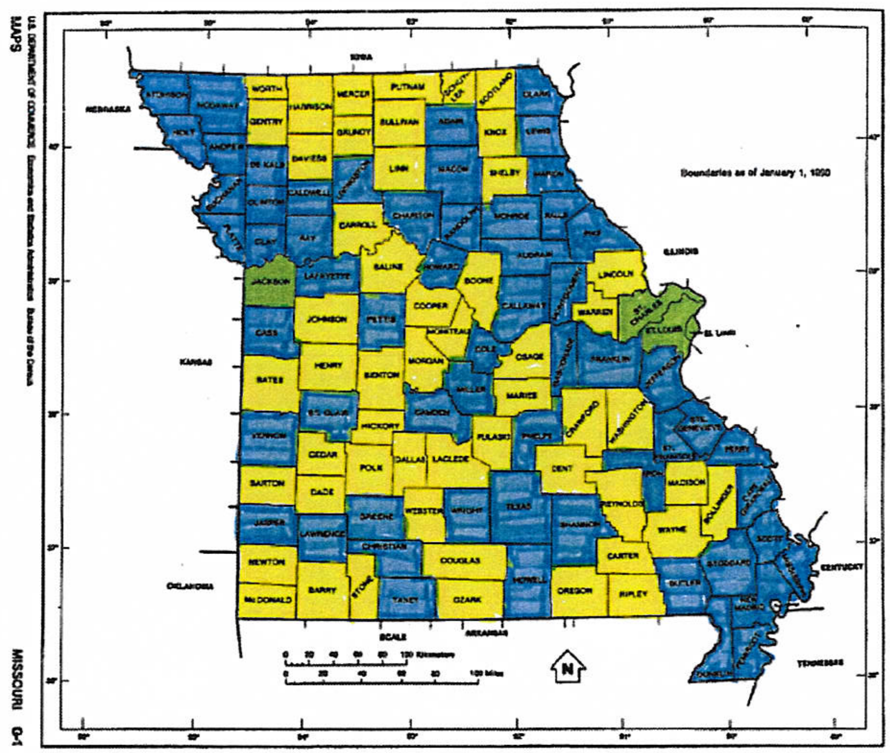
Additional information regarding the plan's provisions and benefits, investments, financial activities, consultants, and actuarial valuations can be obtained by contacting the city directly at (314) 739-7500.

CERF History

- Created in 1994 to provide retirement benefits for eligible county employees in 111 Missouri counties (excluding Jackson County, St. Charles County, City of St. Louis, and St. Louis County).
  - At that time, about half the counties in the state could not afford LAGERS so these people had no retirement

- Initial data suggested about 7,500 employees would be in the system

LAGERS vs. Non-LAGERS Counties



KEY

CERF Eligible Counties
LAGERS Counties
non-LAGERS Counties

Counties Not Participating in CERF

59 LAGERS
52 Non-LAGERS

CERF Funding Sources

- County Receipts
  - Assessor Late Fees
  - Collector Delinquent Fees
  - Collector Merchant Fees
  - County Interest
  - Recorder Document Fees
  - Contributions Paid by Counties on Behalf of Employees
- Employee Contributions (Non-LAGERS)
  - Employees hired prior to February 25, 2002 - 2%
- Employee Contributions (LAGERS)
  - Employees hired prior to February 25, 2002 - 0%

Addition of Employee Contributions

- By 2002 it was clear that having a "free" system was an invitation for abuse so the Board sought statutory approval of additional employee contributions, effective 1/1/2003

- Employee Contributions (Non-LAGERS)
  - Employees hired prior to February 25, 2002 - 2%
  - Employees hired on or after February 25, 2002 – 6%

- Employee Contributions (LAGERS)
  - Employees hired prior to February 25, 2002 - 0%
  - Employees hired on or after February 25, 2002 – 4%

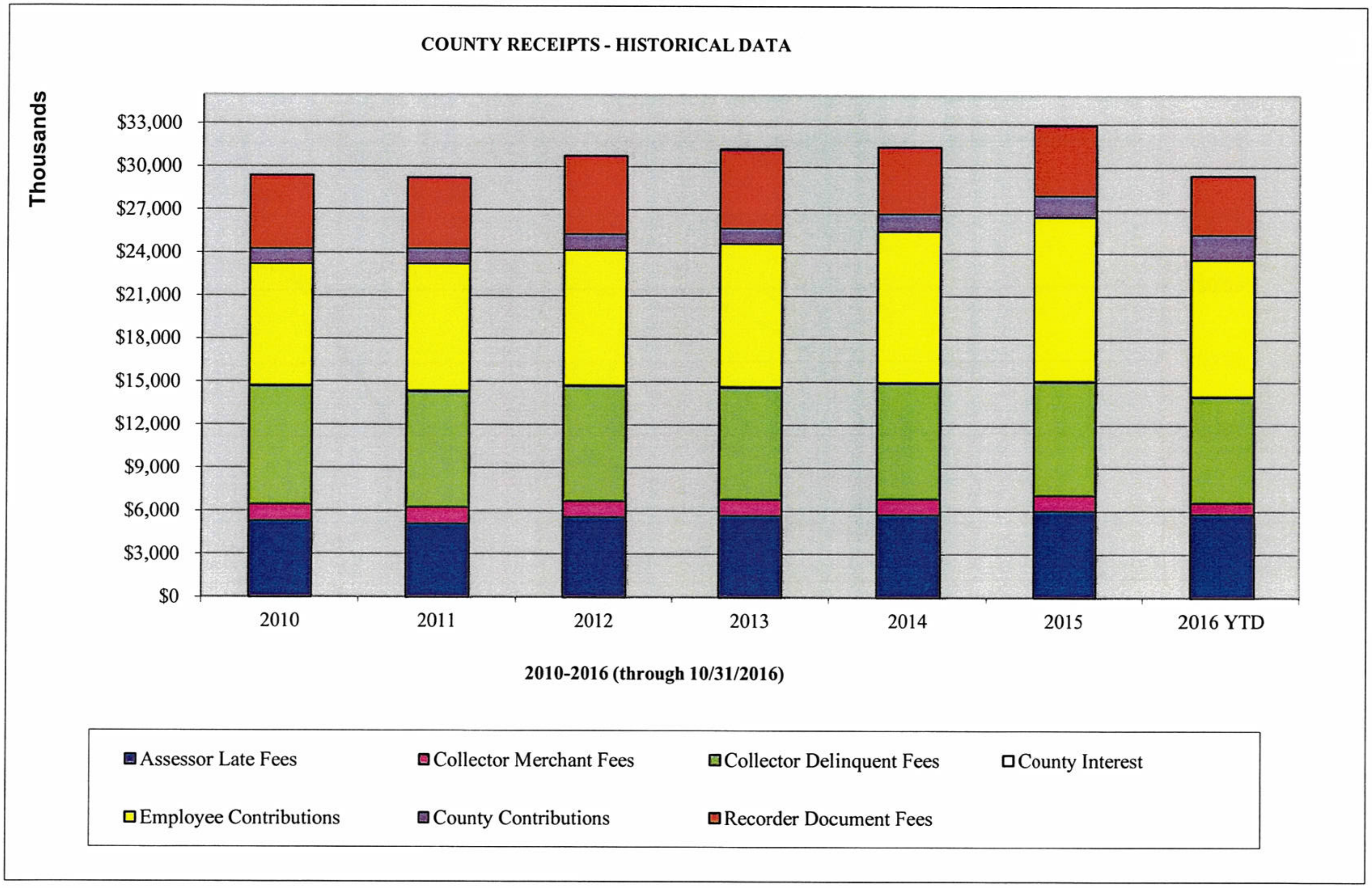
CERF Statistics

- As of 10/31/2016
  - Actives – 11,443
  - Terminated Vested – 2,608
  - Retirees in Pay Status (Avg. Monthly Benefit $505.76)
    - Members – 4,109
    - Beneficiaries – 598
- As of 12/31/2015
  - Average Annual Salary of CERF Member - $34,700

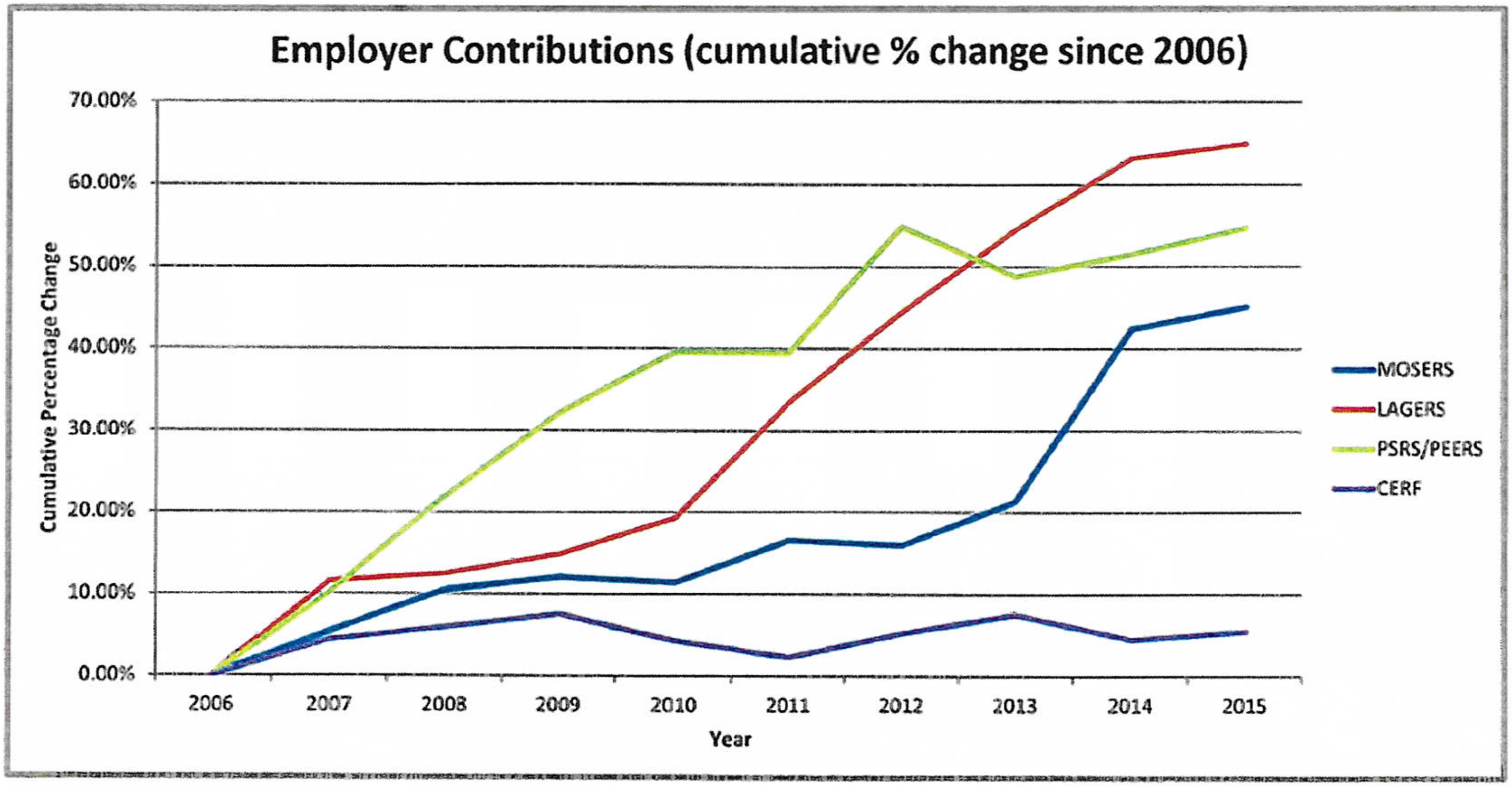
Key CERF Difference

- Traditional retirement plans tie contributions to liabilities.
  - CERF, in contrast, has a flat, statutorily defined revenue stream with liabilities that increase over time due to natural growth in member pool.
  - Other state retirement systems have seen contributions go up by 40-50% over the same time period that CERF has had relatively flat contribution growth.

Fee Receipts



Contribution Comparison



Employer Contributions (cumulative percentage change since 2006)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
MOSERS	0.00%	5.45%	10.56%	12.10%	11.46%	16.62%	16.05%	21.37%	42.46%	45.19%
LAGERS	0.00%	11.59%	12.51%	14.85%	19.30%	33.49%	44.48%	54.48%	63.13%	64.91%
PSRS/PEERS	0.00%	10.20%	21.96%	32.17%	39.58%	39.53%	54.86%	48.80%	51.52%	54.80%
CERF	0.00%	4.42%	5.97%	7.53%	4.31%	2.33%	5.26%	7.53%	4.53%	5.52%

CERF Contribution History

- In 2015, the contribution from fees, penalties & investment income was less than the required contribution for the first time.

	Annual Required ER Contribution	Actual ER Contribution
2015	22,051,507	19,968,537
2014	18,623,038	19,781,514
2013	19,441,738	20,348,888
2012	18,663,294	19,919,125
2011	17,641,319	19,364,023
2010	19,353,216	19,739,918

A More Conservative Approach

- Recognizing that the stock market has never regained pre-2008 rates of return and the industry trend toward lowering assumptions, the CERF Board voted to lower the assumed rate of return from 8% to 7.5% which impacted the funded ratio.
  - The Board also adopted a more conservative mortality assumption further impacting the numbers.

The DC Plan Match

- In 2000, the Legislature approved a defined contribution plan to work in conjunction with CERF's defined benefit plan.
  - Employees are encouraged to take responsibility for their own retirement security and CERF rewards those employees who do so with a match.
    - The match is 50 cents for every dollar contributed up to 6% of pay.
    - In 2015, the match amounted to $2.8 million or about .75% of payroll.

Benefits of the Match

- Encourages personal responsibility
- Anecdotally, members report this money is often what allows them to buy post-retirement health insurance or prescription drugs

CERF DC Plan

- Two components—a 401(a) plan for CERF contributions and a 457 plan for employee contributions.

Assets	457	401(a)
Assets = $113.2M	$78.8M	$34.3M
Contributions	$7.8M	$4M
Distributions	$5.2M	$2.7M

Participants	457	401(a)
Eligible Employees	11,171	11,171
Participants	5,408	7,494

Balance	457	401(a)
Average Balance	$14,391	$4,434
Average Annual Contr.	$1,618	$504

Change in Reporting Date

- Other state retirement systems use a 7/1-6/30 fiscal year.
  - In an effort to be more in line with other systems & have data ready for Joint Committee reporting in a more timely fashion, the board voted to change to a 7/1 date on 7/1/2007.
  - In practice, this proved difficult because counties are on calendar year reporting.
    - In effect, CERF was forced to perform 2 sets of reporting—one for 7/1 and one for 12/31
    - When a new actuary came on board, the Board agreed it made more sense to return to a calendar year for reporting and verified with Joint Committee staff that we may sometimes not get our report turned in until shortly after the 6/30 cut-off.

Moving Forward

- A revenue increase of $11 million would be necessary to put CERF on track for a full funding level over 20 years.
- The Board is open to exploring any type of revenue enhancement.
- The Board recognizes that long-term discussion about the continued DC match is in order. They would prefer to make the match in 2017 and advise employees that it may decrease or disappear in the future if revenues aren't addressed.

Joint Committee on Public Employee Retirement
Quarterly Reports
2016 Third Quarter

Plan Name	Beg. Mkt Value	End Mkt Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.	ROR for Inv	Price Inf. Assump..	Sal/Wage Assump.
Antonia FPD Pension Plan	$2,043,112	$2,061,905	1.29% (Net)	n/a% (Net)	n/a% (Net)	n/a%	n/a%	n/a%
Berkeley Police & Fire Pension Fund	$11,686,263	$12,075,736	N/A% (Gross)	N/A% (Gross)	N/A% (Gross)	7.5%	2.5%	1.5%
Black Jack FPD Retirement Plan	$11,369,912	$11,737,470	1% (Gross)	1% (Gross)	1% (Gross)	7%	2.75%	4.50%
Bothwell Regional Health Center Retirement Plan	$40,993,367	$42,091,040	9.2% (Net)	4.2% (Net)	8.5% (Net)	7.75%	3%	3.2%
Bridgeton Employees Retirement Plan	$25,432,932	$26,039,190	6.51% (Net)	3.04% (Net)	7.66% (Net)	7.50%	3.00%	4.00%
Carthage Policemen's & Firemen's Pension Plan	$6,451,895	$6,544,994	8.73% (Net)	5.83% (Net)	7.85% (Net)	7.0%	2.2%	3.5%
Cedar Hill Fire Protection District Length of Service Awards Program	$138,904	$139,714	N/A% (Gross)	N/A% (Gross)	N/A% (Gross)	4.75%	N/A%	N/A%
Columbia Police and Firemens' Retirement Plan	$118,895,011	$121,695,036	6.30% (Net)	4.32% (Net)	7.07% (Net)	7.5%	3%	3.50%
Community FPD Retirement Plan	$22,576,383	$24,298,611	18.90% (Net)	4.16% (Net)	10.03% (Net)	7.00%	NONE %	4.00%
County Employees Retirement Fund	$429,294,000	$445,498,000	6.97% (Gross)	5.36% (Gross)	9.87% (Gross)	7.5%	2.5%	2.5%
Creve Coeur FPD Retirement Plan	$10,010,701	$10,182,399	n/a% (Gross)	n/a% (Gross)	n/a% (Gross)	7%	3%	4%
Eureka FPD Retirement Plan	$10,074,111	$10,432,983	1% (Gross)	1% (Gross)	1% (Gross)	7%	2.75%	4.50%
Fenton FPD Retirement Plan	$26,982,843	$27,851,933	10.42% (Net)	5.54% (Net)	9.00% (Net)	7.5%	2.5%	2%
Florissant Valley FPD Retirement Plan	$24,575,125	$25,161,257	n/a% (Net)	n/a% (Net)	n/a% (Net)	6.25%	2.50%	see comments%
Glendale Pension Plan	$4,982,916	$5,021,685	10.06% (Gross)	N/A% (Gross)	N/A% (Gross)	7.50%	2.50%	3.75%
Hannibal Police & Fire Retirement Plan	$15,429,690	$15,467,315	6.6% (Gross)	6.4% (Gross)	8.9% (Gross)	7.0%	2.5%	3.5%
Hazelwood Retirement Plan	$34,102,311	$36,532,764	9.86% (Net)	7.88% (Net)	15.78% (Net)	7.5%	3%	4.5%
Jackson County Employees Pension Plan	$242,069,008	$248,665,827	10.13% (Gross)	6.13% (Gross)	10.53% (Gross)	7%	2.5%	4%
Jefferson City Firemen's Retirement System	$15,786,613	$15,827,259	7.19% (Net)	4.15% (Net)	6.07% (Net)	5.50%	2.50%	n/a%
Joplin Police & Fire Pension Plan	$35,557,480	$36,296,485	9.34% (Net)	4.34% (Net)	7.17% (Net)	7%	2.5%	2.5%
Kansas City Public School Retirement System	$613,837,924	$619,247,000	9.05% (Net)	4.62% (Net)	8.37% (Net)	8.0%	3.0%	5.0%

Please be aware information provided in this report may contain unaudited data.

Plan Name	Beg. Mkt Value	End Mkt Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.	ROR for Inv	Price Inf. Assump..	Sal/Wage Assump.
KC Area Transportation Authority Salaried Employees Pension Plan	$15,631,985	$16,241,641	8.24% (Gross)	5.90% (Gross)	9.18% (Gross)	7.5%	3.00%	4.0%
LAGERS Staff Retirement Plan	$9,635,742	$10,030,539	14.58% (Net)	7.39% (Net)	10.69% (Net)	7.25%	2.5%	3.25%
Little River Drainage Dist Retirement Plan	$1,340,146	$1,380,911	6.18% (Net)	2.87% (Net)	3.67% (Net)	5%	0%	3.5%
Local Government Employees Retirement System	$6,273,160,892	$6,471,501,563	9.38% (Net)	6.08% (Net)	10.28% (Net)	7.25%	2.5%	3.25%
Metro West FPD Retirement Plan	$41,956,782	$43,342,844	9.21% (Net)	4.81% (Net)	7.32% (Net)	N/A%	N/A%	N/A%
Missouri State Employees Retirement System	$8,227,875,711	$8,271,805,743	8.2701% (Net)	4.4771% (Net)	7.5189% (Net)	5.5%	2.5%	3.0%
MoDOT & Highway Patrol Employees' Retirement System	$1,984,989,056	$2,030,160,446	6.27% (Net)	7.81% (Net)	9.87% (Net)	7.75%	3%	3.5%
North Kansas City Hospital Retirement Plan	$245,651,313	$251,311,667	7.53% (Net)	6.78% (Net)	10.20% (Net)	7.0%	2.3%	2.5%
Olivette Salaried Employees' Retirement Plan	$19,109,804	$19,421,823	10.6% (Net)	7.0% (Net)	10.4% (Net)	7.25%	2.75%	4.00%
Overland Non-uniform Pension Fund	$9,629,000	$9,871,000	10.17% (Net)	5.58% (Net)	8.97% (Net)	7%	2.5%	3.5%
Overland Police Retirement Fund	$12,061,000	$12,042,000	10.93% (Net)	5.99% (Net)	9.24% (Net)	7%	2.5%	3.5%
Prosecuting Attorneys' Retirement System	$37,414,953	$38,840,559	8.07% (Net)	4.47% (Net)	7.27% (Net)	7.1%	2%	0%
Public Education Employees' Retirement System	$3,983,897,399	$4,070,148,537	8.7% (Net)	7.0% (Net)	9.7% (Net)	7.75%	2.25%	2.75%
Public School Retirement System	$34,081,714,882	$34,665,342,873	8.8% (Net)	7.0% (Net)	9.8% (Net)	7.75%	2.25%	2.75%
Richmond Heights Police & Fire Retirement Plan	$47,477,712	$48,989,298	9.45% (Net)	5.835% (Net)	10.05% (Net)	7.0%	3.0%	5.0%
Richmond Heights Police & Fire Retirement Plan	$45,422,678	$46,348,962	-1.02% (Net)	8.19% (Net)	7.76% (Net)	7.0%	3.0%	5.0%
Rock Hill Police & Firemen's Pension Plan	$1,901,027	$1,887,804	2.15% (Net)	2.15% (Net)	2.15% (Net)	6.40%	3.0%	6.5%
Sedalia Firemen's Retirement Fund	$6,998,333	$7,030,443	6.3% (Gross)	6.4% (Gross)	8.9% (Gross)	7%	2%	3%
Sedalia Police Retirement Fund	$3,203,995	$3,153,714	8.55% (Gross)	4.20% (Gross)	N/A% (Gross)	6%	None%	None%
Sheriff's Retirement System	$39,672,280	$40,857,431	9% (Gross)	7.3% (Gross)	11.828% (Gross)	6.5%	3.5%	see comment%
St. Joseph Policemen's Pension Fund	$34,973,766	$35,472,588	0% (Gross)	0% (Gross)	0% (Gross)			
St. Louis County Employees Retirement Plan	$593,813,559	$614,841,826	9.28% (Gross)	6.40% (Gross)	10.37% (Gross)	7.75%	2.5%	4.5%
St. Louis County Library Dist Empl Pension Plan	$42,478,237	$43,331,102	8.22% (Net)	4.52% (Net)	7.65% (Net)	7.0%	2.5%	3.5%
Valley Park FPD Retirement Plan	$5,273,861	$5,470,284	9.91% (Net)	6.55% (Net)	8.46% (Net)	7.%	2%	4%

Plan Name	Beg. Mkt Value	End Mkt Value	ROR 12 mos.	ROR 36 mos.	ROR 60 mos.	ROR for Inv	Price Inf. Assump..	Sal/Wage Assump.
	$57,467,574,614	$58,501,694,201						

Please be aware information provided in this report may contain unaudited data.

St. Louis Public School Retirement System

Date:	11/16/2016
Calendar Year:	2016
Quarter:	Third
Beginning Market Value:	$ 827,557,101
Ending Market Value:	$ 832,336,173
Time-weighted Rate of Return (rolling 12 months):	8.4% (Net)
Time-weighted Rate of Return (rolling 36 months):	5.1% (Net)
Time-weighted Rate of Return (rolling 60 months):	8.7% (Net)
Assumed Rate of Return for Investments:	7.5%
Price Inflation Assumption:	3.5%
Salary/wage Inflation Assumption:	3.5% / 5.0%
Submitted By:	Andrew Clark
Contact Number:	314-534-7444 ext. 3015
Comments:	The assumed rate of return for investments and the salary / wage inflation assumption were changed at a board meeting on 10/17/16. The salary / wage inflation assumption of 3.5% is for members with 5 or more years of service. The salary / wage inflation assumption of 5.0% is for members with less than 5 years of service. PSRSSTL's rate of return is based on a mix of gross and net of fees as each manager is different in reporting rates of return. However, market values for the system are all net of fees. 2016 Q3 rate of return = 3.7%