WORK SESSION MEETING
AGENDA
CITY OF CREVE COEUR
CITY COUNCIL
300 NORTH NEW BALLAS RD
DECEMBER 9, 2019
6:00 PM

CALL TO ORDER

ROLL CALL

DISCUSSION ITEMS

1. **Approval of November 25, 2019 City Council Work Session Meeting Minutes**

2. **City of Creve Coeur Actuarial Valuation as of July 1, 2019**
   Summary: The City's Actuary will present the July 1, 2019 Actuarial Report for discussion by the City Council and Employee Pension Board.

3. **Lump-Sum Buyout Pension Plan Summary Report**
   Summary: Staff will provide an update on the Voluntary Pension Buyout Program that was offered to participants who have separated from service with a vested accrued benefit and who have not yet begun to receive retirement benefits under the City of Creve Coeur Plan.

Pursuant to Section 610.022 RSMo., the City Council could, at any time during the meeting, vote to close the public meeting and move to closed session to discuss matters relating to litigation, legal actions and/or communications from the City Attorney as provided under Section 610.021(1) RSMo. and/or personnel matters under Section 610.021(13) RSMo. And/or employee matters under Section 610.021(3) RSMo. and/or real estate matters under Section 610.021(2) or other matters as permitted by Chapter 610.

Posted: __________________________ posted 12/5/2019
Deborah Ryan, MPCC
City Clerk

WORK SESSION MEETING
MINUTES
CITY OF CREVE COEUR
CITY COUNCIL
300 NORTH NEW BALLAS RD
NOVEMBER 25, 2019
6:00 PM

CALL TO ORDER

A regular meeting of the City Council of the City of Creve Coeur was called to order by Mayor Glantz at the City Council Chamber, 300 North New Ballas Rd, City of Creve Coeur Government Center, Creve Coeur, MO 63141 on Monday, November 25, 2019 at 6:00 PM.

Council Member, Ward 2 AJ Wang
Council Member, Ward 2 Ellen Lawrence
Council Member, Ward 3 Robert Hoffman
Council Member, Ward 3 Charlotte D'Alfonso
Council Member, Ward 4 Scott Saunders
Council Member, Ward 1 Alexis Travers
Council Member, Ward 1 Heather Silverman

Council Member, Ward 4 Susan Baseley **-- Absent**

ROLL CALL

Staff Present: Public Works Director Jim Heines, City Engineer Matt Wohlberg, City Administrator Mark Perkins, Asst City Administrator Sharon Stott, Chief Building Official Steve Unser, Community Development Director Jason Jaggi, Finance Director Lori Obermoeller, City Attorney Carl Lumley, Chief Eidman, City Planner Whitney Kelly, Parks Director Jason Valvero
Planning and Zoning Commission Members Present: Todd Streiler, Muriel Hall, Tim Carney, Jim Myers, Larry Potashnick, Gene Rovak
Parks and Historic Preservation Committee Members Present: Ralph Merola, Dave Russell

Special Guests: Paul Reitz, main presenter Reitz and Jens, Mike Wheeler, project manager Reitz and Jens, Janet Wilding, St. Louis Economic Development Partnership

DISCUSSION ITEMS

1. Approval of November 12, 2019 City Council Work Session Meeting Minutes

The vote on the motion being 7 ayes and 0 nays, motion carried.

MINUTES
CITY OF CREVE COEUR
CITY COUNCIL
300 NORTH NEW BALLAS RD
NOVEMBER 25, 2019
6:00 PM

RESULT:	**ACCEPTED [UNANIMOUS]**
MOVER:	Robert Hoffman, Council Member, Ward 3
SECONDER:	Alexis Travers, Council Member, Ward 1
AYES:	Wang, Lawrence, Hoffman, D'Alfonso, Saunders, Travers, Silverman
ABSENT:	Baseley

2. 39 North Greenway Plan

Mark Perkins introduced Paul Reitz, of Reitz and Jens; Mike Wheeler, project manager Reitz and Jens and Janet Wilding, St. Louis Economic Development Partnership. Paul Reitz reviewed the Greenway Plan, goals, timeline and next steps. Discussed strategies to partner with several agencies to form a group as a united front to get funding to complete the project. (Exhibit A)

Adjourned at 6:38 pm

RESULT:	**ITEM DISCUSSED**

City Council
300 North New Ballas Rd
Creve Coeur, MO 63141

SCHEDULED

Meeting: 12/09/19 06:00 PM
Department: City Council
Category: Report
Prepared By: Lori Obermoeller
Department Head: Lori Obermoeller

STAFF REPORT

City of Creve Coeur Actuarial Valuation as of July 1, 2019

The City's Actuary will present the July 1, 2019 Actuarial Report for discussion by the City Council and Employee Pension Board.

RETIREMENT PLAN FOR EMPLOYEES OF THE CITY OF CREVE COEUR

Actuarial Valuation Report
July 1, 2019

Prepared by

Michael J. Zwiener, FSA
Consulting Actuary

William Winningham, EA, MAAA
Consulting Actuary

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October 1, 2019

Table of Contents

Introduction and Purpose

In this report, we present the results of the July 1, 2019 actuarial valuation for the Retirement Plan for Employees of the City of Creve Coeur.

Purposes of the Valuation

The actuarial valuation of the Plan is intended to accomplish several purposes:

(a) In general, the determination of current levels of employer contributions which, together with prior funding, will accumulate monies sufficient to meet benefit payments when due under the terms of the Plan;

(b) review plan experience for the year ended on the valuation date to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application; and

(c) assessment of the relative funded position of the plan on an ongoing basis, i.e., through a comparison of plan assets and projected plan liabilities.

Actuarial Certification

As requested, we have performed an actuarial valuation of the Retirement Plan for Employees of the City of Creve Coeur as of July 1, 2019 for the Plan Year ending June 30, 2020. Our findings are set forth in this actuary's report. This report reflects the benefit provisions in effect on July 1, 2019.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the the Plan's Administrative Staff. This information includes, but is not limited to, statutory plan provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Plan. Further, in our opinion, each actuarial assumption used is reasonably related to the experience of the Plan and to reasonable expectations which, in combination, represent our best estimate of anticipated experience under the Plan.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The City has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in this report.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the Fund. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Fund's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Actuarial Certification

Milliman’s work is prepared solely for the internal business use of the City of Creve Coeur and its employees (for their use in administering the Plan). To the extent that Milliman’s work is not subject to disclosure under applicable public records laws, Milliman’s work may not be provided to third parties without Milliman’s prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman’s consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

(a) The System may provide a copy of Milliman’s work, in its entirety, to the System’s professional advisors who are subject to a duty of confidentiality and who agree to not use Milliman’s work for any purpose other than to benefit the System.

(b) The System may provide a copy of Milliman’s work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the City. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We respectfully submit the following report, and we look forward to discussing it with you.

Michael J. Zwiener, FSA
Consulting Actuary

William Winningham, EA, MAAA
Consulting Actuary

Discussion of Valuation Results

Actuarially Determined Contribution

The results of this valuation are used to actuarially determine contribution amounts to the Fund for the July 1, 2019 - June 30, 2020 fiscal year. A comparison of actuarially determined contribution amounts for the current and immediately preceding valuation are summarized below:

	Actuarial Valuation as of	
	July 1, 2018	**July 1, 2019**
Actuarially Determined Employer Contribution*	$1,262,474	$1,252,981
Actuarially Determined Employer Contribution**	$1,347,691	$1,337,557
Actual Employer Contribution	$1,307,755	N/A

* Assuming payment as of first day of plan year
**Assuming payment as of last day of plan year

Plan Assets

The market value of plan assets increased from $25,729,821 at July 1, 2018 to $26,718,920 at June 30, 2019. A balance sheet and statement of income and disbursements are presented on pages 7 and 8. Investment income (net of expense) was $1,412,380 for a return of 5.5%. During the prior year, investment return was 7.7%. Contributions to the fund were $1,394,369 and benefit payments were $1,817,650.

Valuation assets are defined to be actuarial value using an asset smoothing method. On an actuarial value basis, fund assets are $26,870,606 on July 1, 2019, compared to $25,291,347 on July 1, 2018. Net investment income was $2,002,540 for return of 8%. The development of the actuarial value of assets is shown on page 9.

Actuarial Assumptions, Methods and Plan Provisions

An explicit provision was included in calculating the Actuarially Determined Contribution by adding assumed administrative expenses for the current year. The assumed administrative expenses are a two year average of administrative expenses from the previous two years.

All other actuarial assumptions, methods, and Plan provisions remained the same as the prior valuation. Descriptions of all actuarial assumptions, methods, and Plan provisions can be found on pages 13-16.

Plan Population

The number of active participants decreased from 40 on July 1, 2018 to 36 on July 1, 2019. The number of retirees/beneficiaries/disableds increased from 78 to 81, and the number of deferred vested participants remained at 29.

Discussion of Valuation Results

Plan Experience

Plan experience resulted in an overall experience gain for the plan year ending June 30, 2019. The gain is primarily due to the actuarial assets earning in excess of the assumed 6.75% as well as a net gain on liability.

GASB 67/68

Results under GASB 67 and 68 are presented in a separate report.

Funded Status - Accrued Benefit Basis

Another measure of a plan's funded status is the relationship of the market value of plan assets to the present value of benefits accrued to date. The amounts for the current and prior year are shown in the following table:

	Valuation Date **July 1, 2018**	Valuation Date **July 1, 2019**
a) Present Value of Vested Accrued Benefits	$29,678,099	$30,215,324
b) Present Value of All Accrued Benefits	$30,192,891	$30,676,622
c) Market Value of Assets	$25,729,821	$26,718,920
d) Ratio: (c)/(a)	86.7%	88.4%
e) Ratio: (c)/(b)	85.2%	87.1%

The interest discount utilized for this purpose was 6.75% in 2018 and 2019. The discount rate that is required to value plan liabilities on a settlement basis is typically lower than the "ongoing basis" discount rate. Therefore, these amounts should not be used to assess the plan's funded status on a settlement basis.

Funded Status - Actuarial Accrued Liability Basis

The most common measure of a public sector plan's funded status is dividing the Plan Assets by the Actuarial Accrued Liability. As of the valuation date, this ratio is 82.7% using Actuarial Value of Assets and 82.3% using the Market Value of Assets.

Summary of Valuation Results

	Valuation Date July 1, 2018	Valuation Date July 1, 2019
Participant Data		
Number of Participants		
Active participants	40	36
Terminated vested participants	29	29
Retirees and beneficiaries	78	81
Total	147	146
Covered Payroll	3,224,888	2,611,428
Assets		
Market Value of Assets	25,729,821	26,718,920
Investment Yield	7.7%	5.5%
Actuarial Value of Assets	25,291,347	26,870,606
Investment Yield	6.9%	8.0%
Actuarial Present Values		
Accrued Liability	32,083,624	32,474,104
- Actuarial Value of Assets	25,291,347	26,870,606
Unfunded Accrued Liability	6,792,277	5,603,498
Funded Ratio (Market Value Basis)	80.2%	82.3%
Funded Ratio (Actuarial Value Basis)	78.8%	82.7%
Costs and Contributions		
Normal Cost	291,592	272,815
% of Covered Payroll	9.0%	10.4%
Actuarially Determined Contribution (ADC)	1,262,474	1,252,981
% of Covered Payroll*	39.2%	48.0%
Funded Status of Accumulated Benefits		
Present Value of Accrued Benefits	30,192,891	30,676,622
Funded Ratio (Market Value Basis)	85.2%	87.1%
Funded Ratio (Actuarial Value Basis)	83.8%	87.6%

*Since the Plan has been closed to new members since 2006, Active Participant headcount as well as Covered Payroll have steadily declined (in line with expectations). Coupled with the aggressive funding policy (10-year amortization of the pre-2015 UAL), the ADC when expressed as a % of payroll is sharply increased. In dollar terms, the ADC has remained relatively flat and is expected to remain so through 2024. At that time, the pre-2015 UAL will be fully amortized and the ADC will decrease significantly.

Statement of Assets as of June 30, 2019

Assets	Market Value
Commerce	$7,343,612
Schwab	19,375,308
Total Assets	26,718,920
Liabilities	
None	
Net Assets	$26,718,920

Statement of Income and Disbursements

Market Value of Assets as of July 1, 2018	$25,729,821
Income	
Employer Contributions	1,307,755
Employee Contributions	86,614
Interest and Dividends	696,876
Net Appreciation/(Depreciation)	787,770
Investment Expenses	(20,000)
Total Income	2,859,015
Disbursements	
Employee Benefit Distributions	1,817,650
Administrative Expenses	52,266
Total Expenses	1,869,916
Net Increase (Decrease)	989,099
Market Value of Assets as of June 30, 2019	$26,718,920
Net Rate of Return	5.5%

Development of Actuarial Value of Assets

1. Actuarial Value Beginning of Year	$25,291,347
2. Market Value End of Year	26,718,920
3. Market Value Beginning of Year	25,729,821
4. Non-Investment Cash Flows [1]	(423,281)
5. Investment Income	
a. Market Total: (2) - (3) - (4)	1,412,380
b. Assumed Rate of Return	6.75%
c. Expected Investement Return [2]	1,722,477
d. Gain/(Loss): (5a) - (5c)	(310,097)
6. Phased-In Recognition of Investment Income	
a. Current Year: (1/3) x (5d)	(103,366)
b. (1/3) of Gain/(Loss) during plan year ending June 30, 2018	55,049
c. (1/3) of Gain/(Loss) during plan year ending June 30, 2017	328,380
d. Phased-In Investment Gain to be Recognized in Current Year: (6a) + (6b) + (6c)	280,063
7. Actuarial Value End of Year: (1) + (4) + (5c) + (6d)	$26,870,606
8. Excess of Market Value over Actuarial Value: (2) - (7)	(151,686)
9. Approximate Rate of Return on Actuarial Value	8.0%
10. Ratio of Actuarial Value of Assets to Market Value of Assets: (7) / (2)	100.6%

[1] Contributions less benefit payments
[2] Assumed Rate times (3) + (4) times Assumed Rate/2

Statement of Accrued Benefits

	July 1, 2018	July 1, 2019
1. Accumulated Plan Benefits		
a. Actuarial Present Value of Vested Benefits		
i. Participants currently receiving payments	18,545,877	19,268,530
ii. Active Participants	8,892,656	8,566,961
iii. Deferred Vested Participants	2,239,566	2,379,833
iv. Total Vested Benefis	29,678,099	30,215,324
b. Actuarial Present Value of Non-Vested Benefits	514,792	461,298
c. Total Actuarial Present Value of Accumulated Plan Benefits: (aiv) + (b)	30,192,891	30,676,622
2. Net Assets (Market Value) available for benefits	25,729,821	26,718,920
3. Funded Ratio		
a. Vested Benefits: (2) / (1aiv)	86.7%	88.4%
b. Accumulated Benefits: (2) / (1c)	85.2%	87.1%
4. Net Assets (Actuarial Value) available for benefits	25,291,347	26,870,606
5. Funded Ratio		
a. Vested Benefits: (4) / (1aiv)	85.2%	88.9%
b. Accumulated Benefits: (4) / (1c)	83.8%	87.6%

Development of Actuarially Determined Contribution

	July 1, 2019
1. Accrued Liability	
a. Active Participants	$10,825,741
b. Terminated Vested Participants	2,379,833
c. Retired Participants	19,268,530
d. Total	32,474,104
2. Actuarial Value of Assets	26,870,606
3. Funded Ratio: (2) / (1d)	82.7%
4. Covered Payroll	2,611,428
5. Unfunded Actuarial Liability (UAL)	5,603,498
a. Outstanding UAL from July 1, 2015	4,724,214
b. Outstanding UAL after July 1, 2015	879,284
6. Normal Cost:	
a. Entry Age Normal Cost	272,815
b. Expected Employee Contributions	78,343
i. As a percentage of Covered Payroll: (6b) / (3)	3.0%
c. Employer Normal Cost without Expenses: (6a) - (6b)	194,472
ii. As a percentage of Covered Payroll: (6c) / (3)	7.4%
d. Assumed Administrative Expenses	48,200
e. Employer Normal Cost including Expenses: (6c) + (6d)	242,672
7. 10-Year Amortization of UAL from July 1, 2015	921,296
8. 15-Year Amortization of Additional UAL after July 1, 2015	89,013
9. Employer Cost	
a. Actuarially Determined Contribution: (6e) + (7) + (8)	1,252,981
b. Payable as of the end of the plan year: (9a) x 1.0675	1,337,557
c. As a percentage of Covered Payroll: (9a) / (4)	48.0%

Historical Investment Returns on Market Value Basis

Year Ended			Rate of Return		
June 30	Annual	Cumulative	Last 5 Years	Last 10 Years	Last 20 Years
1995	8.09%	8.09%	N/A	N/A	N/A
1996	14.35%	11.18%	N/A	N/A	N/A
1997	18.08%	13.43%	N/A	N/A	N/A
1998	17.31%	14.39%	N/A	N/A	N/A
1999	8.46%	13.18%	13.18%	N/A	N/A
2000	9.27%	12.52%	13.42%	N/A	N/A
2001	-5.76%	9.70%	9.12%	N/A	N/A
2002	-10.64%	6.93%	3.20%	N/A	N/A
2003	1.59%	6.32%	0.28%	N/A	N/A
2004	13.39%	7.01%	1.17%	7.01%	N/A
2005	6.21%	6.93%	0.60%	6.82%	N/A
2006	8.62%	7.07%	3.50%	6.27%	N/A
2007	16.67%	7.78%	9.17%	6.14%	N/A
2008	-8.15%	6.56%	6.99%	3.58%	N/A
2009	-18.25%	4.69%	0.21%	0.69%	N/A
2010	12.16%	5.14%	1.31%	0.95%	N/A
2011	19.62%	5.94%	3.28%	3.39%	N/A
2012	0.23%	5.62%	0.19%	4.58%	N/A
2013	12.87%	5.99%	4.41%	5.69%	N/A
2014	17.86%	6.55%	12.34%	6.10%	6.55%
2015	1.99%	6.33%	10.22%	5.67%	6.24%
2016	1.15%	6.09%	6.58%	4.92%	5.59%
2017	11.43%	6.32%	8.87%	4.44%	5.29%
2018	7.69%	6.37%	7.85%	6.12%	4.84%
2019	5.50%	6.34%	5.48%	8.86%	4.69%

Actuarial Methods

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

Actuarial Cost Method

Entry Age Normal

The Entry Age Normal Cost Method on an individual basis is used. Normal costs are computed as a level percentage of pay.

The Unfunded Entry Age Accrued Liability as of July 1, 2015 is amortized over a 10 year period. Each year, the amortization period will decrease by 1 until it reaches 0 years as of July 1, 2025. Any subsequent Unfunded Entry Age Accrued Liability is amortized over an open 15 year period.

Asset Valuation Method

A three-year smoothed value, with difference between actual investment return and expected investment return recognized in equal installments over a three-year period.

Actuarial Assumptions

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

Interest Rates 6.75% per annum (effective July 1, 2018), net of investment expenses

Annual Pay Increases 4.00% per year

Mortality RP-2000 Combined Healthy Table with a 70% Blue Collar adjustment with a fully generational projection of mortality improvement using Scale BB

Turnover Rates are as follows:

Age	Percentage
25	10%
35	8%
45	4%
55	0%

Rate of Disability None assumed.

Retirement

Non-Uniformed: Participants are assumed 60% retirement at their Unreduced Early Retirement Age, if it is prior to their Normal Retirement Age. Retirement rates of 5% are assumed between their Unreduced Early Retirement Age and age 65, at which a retirement rate of 100% is assumed.

Uniformed: Retirement rates are as follows:

Age	Percentage
55	60%
56 - 61	5%
62	100%

Administrative Expenses Average of last two years of administrative expenses (effective July 1, 2019)

Marriage For retired members, actual marital status and spouse birth date is used. For active members, 100% are assumed married with males assumed three years older than their spouses.

Form of Payment It is assumed that all employees will elect a life annuity with 120 months guaranteed.

Summary of Plan Provisions

A summary of the current primary provisions of the Plan are described below. A complete description of the provisions can be found in the local statutes.

Effective Date	Last amended and restated effective July 1, 2013.
Eligibility	Full-time employees enter the Plan on the July 1 on or immediately following their completion of two years of continuous employment and attainment of age 21. No Employees hired after May 23, 2006 may enter the Plan.
Employee Contributions	Participants are required to contribute 3% of salary. Contributions accumulate at an interest rate of 5%.
Credited Service	Elapsed time, in years and completed months, from date of hire.
Final Average Compensation	Average of the high 60 consecutive months in the last 120 months.
Normal Retirement Age	Age 55 for a uniformed participant and age 65 for a non-uniformed participant.
Normal Retirement Benefit	A benefit equal to Final Average Compensation times 1.7% times Credited Service not to exceed 30 years. If a participant elected not to participate in the City's defined contribution plan, then the multiplier would be 2.0%.
Normal Form of Payment	The benefit is payable for 120 months guaranteed and for the member's lifetime, thereafter.
Unreduced Early Retirement Eligibility	The participant will be eligible to retire with an unreduced benefit prior to their Normal Retirement Age when the sum of their age and Credited Service equals
Early Retirement Age	Age 50 with at least 20 years of Credited Service.
Early Retirement Benefit	The actuarial equivalent of a benefit calculated in the same manner as the Normal Retirement Benefit with Final Average Compensation and Credited Service determined as of the Early Retirement Date.
Late Retirement Benefit	If a member remains employed after his Normal Retirement Date, he will receive a monthly benefit equal to the benefit computed using service and pay as of his late retirement date. Benefits commence on the first day of the month following actual retirement.

Summary of Plan Provisions

Pre-Retirement Death Benefit

The Surviving Spouse of a Participant who is actively employed and has satisfied Early or Normal Retirement eligibility requirements is entitled to a Death Benefit determined as if the Participant had retired on his date of death, selected a Joint & 2/3 Survivor Annuity and died the next day.

The Surviving Spouse of any other actively employed vested participant is entitled to a Death Benefit determined as follows:

i) assume the Participant separated from service on date of death
ii) survived to the earliest possible retirement eligibility date
iii) retired with a Joint and 2/3 Survivor Annuity, and
iv) dies the next day

Vested Termination

Members who terminate employment are eligible for a monthly benefit calculated in the same manner as the Normal Retirement Benefit, multiplied by the applicable vesting percentage:

Sum of Attained Age & Years of Service	Vesting Percentage
50	50%
51	60%
52	70%
53	80%
54	90%
55 and after	100%

However, if a participant has at least 8 years of Credited Service, then they are fully vested.

Refund of Contributions

If a participant terminates employment without a vested benefit, then the participant will receive a refund of contributions with interest. If the sum of benefit payments received by a retiree or beneficiary is less than the sum of contributions with interest, then the difference may be paid to their beneficiary as an additional death benefit.

Optional Forms of Payment

Life Annuity
Joint & 50% Survivor Annuity
Joint & (2/3)% Survivor Annuity
Joint & 100% Survivor Annuity

Distribution of Active Members by Age and by Years of Service

Number of Participants by Age-Service Groups

Attained Age	Years of Service: Under 1		1 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 and up		Total	
	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp	No.	Avg. Comp
Under 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	1	N/A	1	N/A	0	0	0	0	0	0	0	0	0	0	2	N/A
40 to 44	0	0	0	0	0	0	1	N/A	1	N/A	1	N/A	0	0	0	0	0	0	0	0	3	N/A
45 to 49	0	0	0	0	0	0	2	N/A	1	N/A	2	N/A	0	0	0	0	0	0	0	0	5	86,568
50 to 54	0	0	0	0	0	0	0	0	3	N/A	7	104,655	2	N/A	0	0	0	0	0	0	12	86,955
55 to 59	0	0	0	0	0	0	0	0	0	0	4	N/A	2	N/A	2	N/A	0	0	0	0	8	75,792
60 to 64	0	0	0	0	0	0	0	0	2	N/A	0	0	0	0	1	N/A	1	N/A	0	0	4	N/A
65 to 69	0	0	0	0	0	0	1	N/A	0	0	0	0	1	N/A	0	0	0	0	0	0	2	N/A
70 and up	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	5	79,277	8	65,339	14	91,490	5	78,979	3	N/A	1	N/A	0	0	36	83,241

Average Age 53.5

Average Service 22.1

Inactive Participants - Summary by Age

Deferred Vested Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 30	0	$0	$0
30 - 34	0	0	0
35 - 39	1	939	939
40 - 44	5	3,466	693
45 - 49	3	2,751	917
50 - 54	4	4,502	1,126
55 - 59	8	8,144	1,018
60 and over	8	6,281	785
Total	29	26,083	899

Retired Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 55	2	$5,106	$2,553
55 - 59	7	20,102	2,872
60 - 64	13	32,310	2,485
65 - 70	21	45,132	2,149
70 - 75	11	16,633	1,512
75 - 80	15	19,815	1,321
80 and over	12	14,472	1,206
Total	81	153,570	1,896

Summary of Changes in Member Data

	Active Participants	Retired Participants	Terminated Vested Participants	Total
Count as of July 1, 2018	40	78	29	147
New Entrants	0	0	0	0
Rehired	0	0	0	0
Retired	(3)	3	0	0
Lump Sum Payouts	(1)	0	0	(1)
Died with Beneficiary	0	0	0	0
New Alternate Payees	0	0	0	0
New Beneficiaries	0	0	0	0
Died without Beneficiary	0	0	0	0
Certain Period Expired	0	0	0	0
Terminated with Vesting	0	0	0	0
Terminated without Vesting	0	0	0	0
Data Corrections	0	0	0	0
Total Changes	(4)	3	0	(1)
Count as of July 1, 2019	36	81	29	146

Actuarial Standard of Practice 51 (ASOP 51)

The purpose of this section is to identify, assess, and provide illustrations of risks that are significant to the Plan, and in some cases to the Plan's participants.

The results of the actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match the assumptions. As an example, investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these potential differences when making decisions that may affect the future financial health of the Plan, or of the Plan's participants.

In addition, as plans mature they accumulate larger pools of assets and liabilities. This increases the potential risk to plan funding and the finances of those who are responsible for plan funding. As an example, it is more difficult for a plan sponsor to deal with the effects of a 10% investment loss on a plan with $1 Billion in assets and liabilities than if the same plan sponsor is responsible for a 10% investment loss on a plan with $1 Million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) addresses these issues by providing actuaries with guidance for assessing and disclosing the risk associated with measuring pension liabilities and the determination of pension plan contributions. Specifically, it directs the actuary to:

- Identify risks that may be significant to the plan.
- Assess the risks identified as significant to the plan.
- Disclose plan maturity measures and historical information that are significant to\ understanding the plan's risks.

ASOP 51 states that if in the actuary's professional judgment, a more detailed assessment would be significantly beneficial in helping the individuals responsible for the plan to understand the risks identified by the actuary, then the actuary should recommend that such an assessment be performed.

This appendix uses the framework of ASOP 51 to communicate important information about: significant risks to the Plan, the Plan's maturity, and relevant historical Plan data.

Actuarial Standard of Practice 51 (ASOP 51)

Maturity Risk

Definition: This is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time.

Identification: The Plan is subject to maturity risk because as Plan assets and liabilities continue to grow, the impact of any gains or losses on the assets or liabilities also becomes larger.

Assessment: Currently assets are equal to 19 times last year's contributions indicating a one-year asset loss of 10% would be equal to 1.9 times last year's contributions.

Retirement Risk

Definition: This is the potential for participants to retire and receive subsidized benefits more valuable than expected.

Identification: This plan has valuable early retirement benefits. If participants retire at earlier ages than anticipated by the actuarial assumptions, it is expected that additional funding will be required.

Investment Risk

Definition: The potential that investment returns will be different than expected.

Identification: To the extent that actual investment returns differ from the assumed investment return, the plan's future assets, funding contributions and funded status may differ significantly from those presented in this valuation.

Interest Rate Risk

Definition: The potential that interest rates will be different than expected.

Identification: The pension liabilities reported herein have been calculated by computing the present value of expected future benefit payments using the interest rate(s) described in the report. If interest rate(s) in future valuations are different from those used in this valuation, future pension liabilities, funding contributions and funded status may differ significantly from those presented in this valuation. As a general rule, using a higher interest rate to compute the present value of future benefit payments will result in a lower pension liability, and vice versa. One aspect that can be used to estimate the impact of different interest rates is the plan's

Assessment: If the interest rate changes by 1%, the estimated percentage change in pension liability is approximately 10%.

Actuarial Standard of Practice 51 (ASOP 51)

Demographic Risks

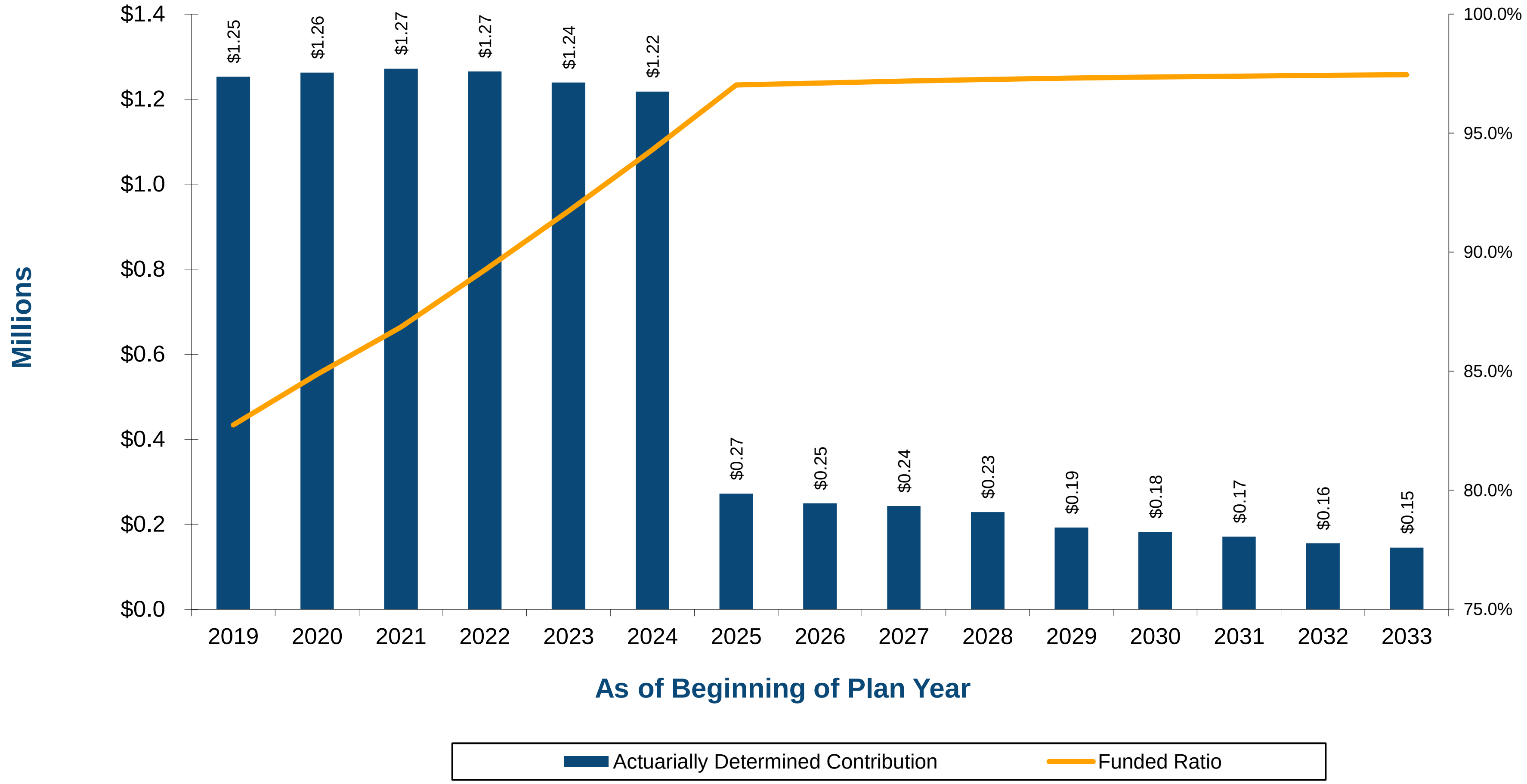
Definition: The potential that mortality or other demographic experience will be different than expected.

Identification: The pension liabilities reported herein have been calculated by assuming that participants will follow patterns of demographic experience (e.g. mortality, withdrawal, disability, retirement, form of payment election, etc.) as described in the appendix. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, funding contributions and funded status may differ significantly from those presented in this valuation.

Glossary of Terms

Actuarial Liability	The difference between the actuarial present value of all Fund benefits and the actuarial value of future normal costs. Also referred to as “actuarial accrued liability.”
Actuarial Assumptions	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure of allocating the dollar amount of the actuarial present value of retirement fund benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”
Experience Gain (Loss)	The difference between actual experience and anticipated experience based on the actuarial assumptions during the period between two actuarial valuation dates.
Actuarial Present Value	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Amortization	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with a lump sum payment.
Normal Cost	The actuarial present value of retirement fund benefits allocated to the current year by the actuarial cost method.
Unfunded Actuarial Liability	The difference between actuarial liability and the valuation assets. Most retirement systems have unfunded actuarial liability. They arise each time new benefits are added, each time an actuarial loss is realized and when actuarial assumptions are modified.
Accumulated Benefits	Sometimes referred to as Accrued Benefits. These are the benefits that have been earned by all plan members as of the valuation date.
Actuarially Determined Contribution	This is the annual contribution determined in accordance with a plan’s funding policy - typically the sum of the Normal Cost and an Amortization payment towards the Unfunded Actuarial Liability.

Retirement Plan for Employees of the City of Creve Coeur
2019 Projections



1. Assumptions are the same as 2019 valuation plus:
   Administrative expenses remain the same
   Employer contributes Actuarially Determined Contribution each year

2. Potential variability of results discussed in ASOP 51 section of the 2019 actuarial valuation

Milliman

RETIREMENT PLAN FOR EMPLOYEES OF THE CITY OF CREVE COEUR

GASB 67 and 68 DISCLOSURE
Fiscal Year: July 1, 2018 to June 30, 2019

Prepared by

Michael Zwiener, FSA, MAAA
Consulting Actuary

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Consulting Actuary

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September 23, 2019

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Certification

Actuarial computations presented in this report under Statements No. 67 and 68 of the Governmental Accounting Standards Board are for purposes of assisting the City of Creve Coeur in fulfilling its financial accounting requirements. No attempt is being made to offer any accounting opinion or advice. This report is for fiscal year July 1, 2018 to June 30, 2019. The reporting date for determining plan assets and obligations is June 30, 2019. The calculations enclosed in this report have been made on a basis consistent with our understanding of the plan provisions. Determinations for purposes other than meeting financial reporting requirements may be significantly different than the results contained in this report. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security or meeting employer funding requirements.

In preparing this report, we relied, without audit, on information as of June 30, 2019 furnished by the City of Creve Coeur. This information includes, but is not limited to, statutory provisions, member census data, and financial information. Please see Milliman's funding valuation report dated September 19, 2019 for more information on the plan's participant group as of June 30, 2019 as well as a summary of the plan provisions and a summary of the actuarial methods and assumptions used for funding purposes.

We performed a limited review of the census and financial information used directly in our analysis and have found them to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

We hereby certify that, to the best of our knowledge, this report, including all costs and liabilities based on actuarial assumptions and methods, is complete and accurate and determined in conformance with generally recognized and accepted actuarial principles and practices, which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions and supporting Recommendations of the American Academy of Actuaries.

Each of the assumptions used in this valuation with the exception of those set by law was set based on industry standard published tables and data, the particular characteristics of the plan, relevant information from the plan sponsor or other sources about future expectations, and our professional judgment regarding future plan experience. We believe the assumptions are reasonable for the contingencies they are measuring, and are not anticipated to produce significant cumulative actuarial gains or losses over the measurement period.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Certification

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuarial assignment, we did not perform an analysis of the potential range of such future measurements.

Milliman's work is prepared solely for the internal use and benefit of the City of Creve Coeur. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions: (a) the Plan Sponsor may provide a copy of Milliman's work, in its entirety, to the Plan Sponsor's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the City of Creve Coeur; and (b) the Plan Sponsor may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Michael Zwiener, FSA, MAAA
Consulting Actuary

William Winningham, EA, MAAA
Consulting Actuary

Overview of GASB 67 and GASB 68

The Governmental Accounting Standards Board (GASB) released new accounting standards for public pension plans and participating employers in 2012. These standards, GASB Statements No. 67 and 68, have substantially revised the accounting requirements previously mandated under GASB Statements No. 25 and 27. The most notable change is the distinct separation of funding from financial reporting. The Annual Required Contribution (ARC) has been eliminated under GASB 67 and 68 and is no longer relevant for financial reporting purposes. As a result, plan sponsors have been encouraged to establish a formal funding policy that is separate from financial reporting calculations.

GASB 67 applies to financial reporting for public pension plans and is required to be implemented for plan fiscal years beginning after June 15, 2013. Note that a plan's fiscal year might not be the same as the employer's fiscal year. Even if the plan does not issue standalone financial statements, but rather is considered a pension trust fund of a government, it is subject to GASB 67. Under GASB 67, enhancements to the financial statement disclosures are required, along with certain required supplementary information.

GASB 68 governs the specifics of accounting for public pension plan obligations for participating employers and is required to be implemented for employer fiscal years beginning after June 15, 2014. GASB 68 requires a liability for pension obligations, known as the Net Pension Liability, to be recognized on the balance sheets of participating employers. Changes in the Net Pension Liability will be immediately recognized as Pension Expense on the income statement or reported as deferred inflows/outflows of resources depending on the nature of the change.

Executive Summary

Relationship Between Valuation Date, Measurement Date, and Reporting Date

The Valuation Date is June 30, 2019. This is the date as of which the actuarial valuation is performed. The Measurement Date is June 30, 2019. This is the date as of which the net pension liability is determined. The Reporting Date is June 30, 2019. This is the plan's and/or employer's fiscal year ending date.

Participant Data as of June 30, 2019

Actives	36
Terminated vested & other inactives	29
Retirees and beneficiaries	81
Total	146

Schedule of Employer Contributions

Fiscal Year Ending June 30	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a % of Covered Payroll
2010	$1,004,897	$1,057,900	($53,003)	$4,625,095	22.87%
2011	1,179,145	1,225,000	(45,855)	4,252,159	28.81%
2012	1,339,314	1,389,538	(50,224)	4,073,539	34.11%
2013	1,204,193	1,261,350	(57,157)	4,016,528	31.40%
2014	1,088,415	1,444,717	(356,302)	3,822,287	37.80%
2015	910,670	1,254,457	(343,787)	3,866,480	32.44%
2016	1,220,627	1,270,404	(49,777)	3,816,272	33.29%
2017	1,139,751	1,200,992	(61,241)	3,557,984	33.75%
2018	1,159,936	1,188,826	(28,890)	3,224,888	36.86%
2019	1,262,474	1,307,755	(45,281)	2,611,428	50.08%

Actuarial Methods and Assumptions Used for Funding Policy

The following actuarial methods and assumptions were used in the June 30, 2019 funding valuation. Please see the valuation report dated September 19, 2019 for further details.

Valuation Timing	Actuarially determined contribution rates are calculated as of June 30
Actuarial Cost Method	Entry Age Normal
Amortization Method	
Level percent or level dollar	Level percent
Closed, open, or layered periods	Layered, 10 years for UAL as of 07/01/2015, 15 years for other UAL
Asset Valuation Method	
Smoothing period	3 years
Corridor	None
Inflation	2.50%
Salary Increases	4.00%
Investment Rate of Return	6.75%
Retirement Age	Retirement rates are summarized in the 2019 Actuarial Valuation
Turnover	Turnover rates are summarized in the 2019 Actuarial Valuatior
Mortality	RP-2000 Combined Healthy Table with a 70% Blue Collar adjustment with a fully generational projection of mortality improvement using Scale BB

Statement of Fiduciary Net Position

	June 30, 2018	June 30, 2019
Assets		
Cash and cash equivalents	$190,534	$256,115
Receivables and prepaid expenses:		
Receivable contributions	0	0
Receivable investment income	51,559	50,999
Receivables from brokers for unsettled trades	56,550	0
Prepaid expenses	0	0
Total receivables	108,109	50,999
Investments:		
Fixed income	6,967,728	7,052,451
Stocks	16,744,161	17,701,106
Short-term investments	0	0
Real estate	1,030,188	967,336
Alternative investments	742,887	690,913
Total investments	25,484,964	26,411,806
Invested securities lending cash collateral	0	0
Capital assets net of accumulated depreciation	0	0
Total assets	25,783,607	26,718,920
Liabilities		
Accrued expenses and benefits payable	0	0
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	53,786	0
Total liabilities	53,786	0
Net position restricted for pensions	$25,729,821	$26,718,920

Statement of Changes in Fiduciary Net Position

	June 30, 2019
Additions	
Member contributions	$86,614
Employer contributions	1,307,755
Total contributions	1,394,369
Investment income (loss):	
Net increase in fair value of investments	1,484,646
Less investment expenses:	
Direct investment expense	20,000
Net investment income	1,464,646
Other income	0
Total additions	2,859,015
Deductions	
Service benefits	1,817,650
Disability benefits	N/A
Death benefits	N/A
Refunds of member contributions	N/A
Administrative expenses	52,266
Total deductions	1,869,916
Net increase (decrease)	989,099
Net position restricted for pensions	
Beginning of year (June 30, 2018)	25,729,821
End of year (June 30, 2019)	$26,718,920

Money-Weighted Rate of Return

Fiscal Year Ending June 30	Net Money-Weighted Rate of Return
2010	12.16%
2011	19.62%
2012	0.23%
2013	12.87%
2014	17.86%
2015	1.99%
2016	1.15%
2017	11.43%
2018	7.83%
2019	5.69%

Calculation of Money-Weighted Rate of Return

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the beginning of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - July 1, 2018	$25,729,821	12.00	1.00	$27,193,934
Monthly net external cash flows:				
July	(140,940)	12.00	1.00	(148,960)
August	155,563	11.00	0.92	163,689
September	(140,807)	10.00	0.83	(147,426)
October	(141,898)	9.00	0.75	(147,912)
November	871,249	8.00	0.67	904,161
December	(143,022)	7.00	0.58	(147,687)
January	(146,123)	6.00	0.50	(150,223)
February	(174,604)	5.00	0.42	(178,710)
March	(152,125)	4.00	0.33	(154,929)
April	(146,295)	3.00	0.25	(148,333)
May	(146,270)	2.00	0.17	(147,653)
June	(170,275)	1.00	0.08	(171,031)
Ending Value - June 30, 2019	26,718,920			26,718,920
Money-Weighted Rate of Return	5.69%			

Long-Term Expected Rate of Return

The assumption for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of June 30, 2019.

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
US Cash	0.00%	0.68%
US Core Fixed Income	30.00%	1.70%
US Large Caps	22.00%	4.56%
US Small Caps	8.00%	5.95%
US Mid Caps	5.00%	4.98%
US Large Value	4.00%	4.56%
US Small Value	1.00%	5.56%
Non-US Equity	17.00%	6.48%
Non-US Small Cap	6.00%	6.85%
US REITs	4.00%	5.11%
Commodities	3.00%	2.76%
Assumed Inflation - Mean		2.50%
Long-Term Expected Rate of Return		**6.75%**

Depletion Date Projection

GASB 67 and 68 generally require that a blended discount rate be used to measure the Total Pension Liability (the Actuarial Accrued Liability calculated using the Individual Entry Age Normal Cost Method). The long-term expected return on plan investments may be used to discount liabilities to the extent that the plan's Fiduciary Net Position (fair market value of assets) is projected to cover benefit payments and administrative expenses. A 20-year high quality (AA/Aa or higher) municipal bond rate must be used for periods where the Fiduciary Net Position is not projected to cover benefit payments and administrative expenses. Determining the discount rate under GASB 67 and 68 will often require that the actuary perform complex projections of future benefit payments and asset values. GASB 67 and 68 (paragraph 29) do allow for alternative evaluations of projected solvency, if such evaluation can reliably be made. GASB does not contemplate a specific method for making an alternative evaluation of sufficiency; it is left to professional judgment.

The following circumstances justify an alternative evaluation of sufficiency for the City of Creve Coeur:

- The City of Creve Coeur has at least a 5-year history of paying at least 100% of the Actuarially Determined Contribution (previously termed the Annual Required Contribution).

- The Actuarially Determined Contribution is based on a closed amortization period for the majority of the unfunded liability and a 15 year amortization for unfunded liability realized since July 1, 2015.

- GASB 67 and 68 specify that the projections regarding future solvency assume that plan assets earn the assumed rate of return and there are no future changes in the plan provisions or actuarial methods and assumptions, which means that the projections would not reflect any adverse future experience which might impact the plan's funded position.

Based on these circumstances, it is our professional opinion that the detailed depletion date projections outlined in GASB 67 and 68 will show that the Fiduciary Net Position is always projected to be sufficient to cover benefit payments and administrative expenses.

Net Pension Liability

Net Pension Liability	June 30, 2018	June 30, 2019
Total pension liability	$32,083,619	$32,474,104
Fiduciary net position	25,729,821	26,718,920
Net pension liability	6,353,798	5,755,184
Fiduciary net position as a % of total pension liability	80.20%	82.28%
Covered payroll	3,224,888	2,611,428
Net pension liability as a % of covered payroll	197.02%	220.38%

The total pension liability was determined by an actuarial valuation as of the measurement date, calculated based on the discount rate and actuarial assumptions below.

Discount Rate

Discount rate	6.75%	6.75%
Long-term expected rate of return, net of investment expense	6.75%	6.75%
Municipal bond rate	N/A	N/A

The plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total pension liability is equal to the long-term expected rate of return.

Other Key Actuarial Assumptions

The plan has not had a formal actuarial experience study performed.

Valuation date	June 30, 2018	June 30, 2019
Measurement date	June 30, 2018	June 30, 2019
Actuarial cost method	Entry Age Normal	Entry Age Normal
Inflation	2.50%	2.50%
Salary increases including inflation	4.00%	4.00%
Mortality	RP-2000 Combined Healthy Table with a 70% Blue Collar adjustment with a fully generational projection of mortality improvement using Scale BB	RP-2000 Combined Healthy Table with a 70% Blue Collar adjustment with a fully generational projection of mortality improvement using Scale BB

Please see Milliman's funding valuation report dated September 19, 2019 for more detail.

Changes in Net Pension Liability

Changes in Net Pension Liability	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
	Increase (Decrease)		
Balances as of June 30, 2018	$32,083,619	$25,729,821	$6,353,798
Changes for the year:			
Service cost	291,592		291,592
Interest on total pension liability	2,124,982		2,124,982
Effect of plan changes	0		0
Effect of economic/demographic gains or losses	(208,439)		(208,439)
Effect of assumptions changes or inputs	0		0
Benefit payments	(1,817,650)	(1,817,650)	0
Employer contributions		1,307,755	(1,307,755)
Member contributions		86,614	(86,614)
Net investment income		1,464,646	(1,464,646)
Administrative expenses		(52,266)	52,266
Balances as of June 30, 2019	32,474,104	26,718,920	5,755,184

Sensitivity Analysis

The following presents the net pension liability of the City of Creve Coeur, calculated using the discount rate of 6.75%, as well as what the City of Creve Coeur's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.75%) or 1 percentage point higher (7.75%) than the current rate.

	1% Decrease 5.75%	Current Discount Rate 6.75%	1% Increase 7.75%
Total pension liability	$35,975,761	$32,474,104	$29,498,890
Fiduciary net position	26,718,920	26,718,920	26,718,920
Net pension liability	9,256,841	5,755,184	2,779,970

Schedule of Changes in Net Pension Liability and Related Ratios

	Fiscal Year Ending June 30									
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Total Pension Liability										
Service cost	$291,592	$255,915	$409,425	$424,445	$371,341	$447,610	N/A	N/A	N/A	N/A
Interest on total pension liability	2,124,982	2,089,956	2,059,465	1,994,674	1,918,318	1,827,698	N/A	N/A	N/A	N/A
Effect of plan changes	0	0	0	0	0	0	N/A	N/A	N/A	N/A
Effect of economic/demographic gains or losses	(208,439)	187,078	(279,360)	21,701	64,357	3,949	N/A	N/A	N/A	N/A
Effect of assumption changes or inputs	0	793,015	0	0	1,832,668	0	N/A	N/A	N/A	N/A
Benefit payments	(1,817,650)	(1,657,854)	(1,544,910)	(1,457,024)	(1,392,018)	(1,508,007)	N/A	N/A	N/A	N/A
Net change in total pension liability	390,485	1,668,110	644,620	983,796	2,794,666	771,250	N/A	N/A	N/A	N/A
Total pension liability, beginning	32,083,619	30,415,509	29,770,889	28,787,093	25,992,427	25,221,177	N/A	N/A	N/A	N/A
Total pension liability, ending (a)	32,474,104	32,083,619	30,415,509	29,770,889	28,787,093	25,992,427	N/A	N/A	N/A	N/A
Fiduciary Net Position										
Employer contributions	$1,307,755	$1,188,826	$1,200,992	$1,270,402	$1,254,457	$1,444,717	N/A	N/A	N/A	N/A
Member contributions	86,614	99,041	107,272	112,251	93,099	74,183	N/A	N/A	N/A	N/A
Net investment income	1,464,646	1,893,838	2,499,524	251,339	426,117	3,245,642	N/A	N/A	N/A	N/A
Benefit payments	(1,817,650)	(1,657,854)	(1,544,910)	(1,457,024)	(1,392,017)	(1,508,007)	N/A	N/A	N/A	N/A
Administrative expenses	(52,266)	(44,133)	0	0	0	0	N/A	N/A	N/A	N/A
Net change in plan fiduciary net position	989,099	1,479,718	2,262,878	176,968	381,656	3,256,535	N/A	N/A	N/A	N/A
Fiduciary net position, beginning	25,729,821	24,250,103	21,987,225	21,810,257	21,428,601	18,172,066	N/A	N/A	N/A	N/A
Fiduciary net position, ending (b)	26,718,920	25,729,821	24,250,103	21,987,225	21,810,257	21,428,601	N/A	N/A	N/A	N/A
Net pension liability, ending = (a) - (b)	$5,755,184	$6,353,798	$6,165,406	$7,783,664	$6,976,836	$4,563,826	N/A	N/A	N/A	N/A
Fiduciary net position as a % of total pension liability	82.28%	80.20%	79.73%	73.85%	75.76%	82.44%	N/A	N/A	N/A	N/A
Covered payroll	$2,611,428	$3,224,888	$3,557,984	$3,816,272	$3,866,480	$3,822,287	N/A	N/A	N/A	N/A
Net pension liability as a % of covered payroll	220.38%	197.02%	173.28%	203.96%	180.44%	119.40%	N/A	N/A	N/A	N/A

This schedule is presented to illustrate the requirement to show information for 10 years. However, recalculations of prior years are not required, and if prior years are not reported in accordance with the current GASB standards, they should not be reported.

Pension Expense

Pension Expense	July 1, 2017 to June 30, 2018	July 1, 2018 to June 30, 2019
Service cost	$255,915	$291,592
Interest on total pension liability	2,089,956	2,124,982
Effect of plan changes	0	0
Administrative expenses	44,133	52,266
Member contributions	(99,041)	(86,614)
Expected investment return net of investment expenses	(1,683,258)	(1,720,975)
Recognition of Deferred Inflows/Outflows of Resources		
Recognition of economic/demographic gains or losses	(28,883)	(71,161)
Recognition of assumption changes or inputs	396,508	396,507
Recognition of investment gains or losses	254,614	305,881
Pension Expense	1,229,944	1,292,478

As of June 30, 2019, the deferred inflows and outflows of resources are as follows:

Deferred Inflows / Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual experience	($69,480)	$0
Changes of assumptions	0	0
Net difference between projected and actual earnings	(54,146)	0
Contributions made subsequent to measurement date	0	0
Total	(123,626)	0

Amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2020	$522
2021	(184,563)
2022	9,150
2023	51,265
2024	0
Thereafter*	0

* Note that additional future deferred inflows and outflows of resources may impact these numbers.

Schedule of Deferred Inflows and Outflows of Resources

	Original Amount	Date Established	Original Rec. Period*	Amount Recognized in Pension Expense for FYE 06/30/2019	Amount Recognized in Pension Expense through 06/30/2019	Balance of Deferred Inflows as of 06/30/2019	Balance of Deferred Outflows as of 06/30/2019
Economic/ demographic gains or losses	($208,439)	6/30/2019	1.5	($138,959)	($138,959)	($69,480)	$0
	187,078	6/30/2018	2.0	93,539	187,078	0	0
	(279,359)	6/30/2017	2.2	(25,741)	(279,359)	0	0
	21,701	6/30/2016	2.5	0	21,701	0	0
		Total		(71,161)	(209,539)	(69,480)	0
Assumption changes or inputs	0	6/30/2019	0.0	0	0	0	0
	793,015	6/30/2018	2.0	396,507	793,015	0	0
		Total		396,507	793,015	0	0
Investment gains or losses	256,329	6/30/2019	5.0	51,266	51,266	0	205,063
	(210,580)	6/30/2018	5.0	(42,116)	(84,232)	(126,348)	0
	(968,561)	6/30/2017	5.0	(193,712)	(581,136)	(387,425)	0
	1,272,820	6/30/2016	5.0	254,564	1,018,256	0	254,564
	1,179,391	6/30/2015	5.0	235,879	1,179,391	0	0
		Total		305,881	1,583,545	(513,773)	459,627

	Balance of Deferred Inflows as of 06/30/2019	Balance of Deferred Outflows as of 06/30/2019
Total for economic/demographic gains or losses and assumption changes or inputs	(69,480)	0
Net deferred (inflows)/outflows for investment gains or losses	(54,146)	0
Total deferred (inflows)/outflows	(123,626)	0
Total net deferrals	(123,626)	

* Investment (gains)/losses are recognized in pension expense over a period of five years; economic/demographic (gains)/losses and assumption changes or inputs are recognized over the average remaining service life for all active and inactive members.

Milliman Financial Reporting Valuation

	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Deferred (Inflows)	Deferred Outflows	Net Investment (Inflows)/ Outflows	Net Deferrals	Net Pension Liability plus Net Deferrals	Annual Expense
Balances as of June 30, 2018	($32,083,619)	$25,729,821	($6,353,798)	($25,741)	$490,046	($4,594)	$459,711	($5,894,087)	
Service cost	(291,592)		(291,592)						291,592
Interest on total pension liability	(2,124,982)		(2,124,982)						2,124,982
Effect of plan changes	0		0						0
Effect of liability gains or losses	208,439		208,439	(208,439)			(208,439)		
Effect of assumption changes or inputs	0		0				0		
Benefit payments	1,817,650	(1,817,650)	0						
Administrative expenses		(52,266)	(52,266)						52,266
Member contributions		86,614	86,614						(86,614)
Expected net investment income		1,720,975	1,720,975						(1,720,975)
Investment gains or losses		(256,329)	(256,329)			256,329	256,329		
Employer contributions		1,307,755	1,307,755					1,307,755	
Recognition of liability gains or losses				164,700	(93,539)		71,161		(71,161)
Recognition of assumption changes or inputs					(396,507)		(396,507)		396,507
Recognition of investment gains or losses						(305,881)	(305,881)		305,881
Annual expense								(1,292,478)	1,292,478
Balances as of June 30, 2019	(32,474,104)	26,718,920	(5,755,184)	(69,480)	0	(54,146)	(123,626)	(5,878,810)	

Glossary

Actuarially Determined Contribution	A target or recommended contribution to a defined benefit pension plan for the reporting period, determined based on the funding policy and most recent measurement available when the contribution for the reporting period was adopted.
Deferred Inflows/Outflows of Resources	Portion of changes in net pension liability that is not immediately recognized in Pension Expense. These changes include differences between expected and actual experience, changes in assumptions, and differences between expected and actual earnings on plan investments.
Discount Rate	Single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the sum of: 1) The actuarial present value of benefit payments projected to be made in future periods where the plan assets are projected to be sufficient to meet benefit payments, calculated using the Long-Term Expected Rate of Return. 2) The actuarial present value of projected benefit payments not included in (1), calculated using the Municipal Bond Rate.
Fiduciary Net Position	Equal to market value of assets.
Long-Term Expected Rate of Return	Long-term expected rate of return on pension plan investments expected to be used to finance the payment of benefits, net of investment expenses.
Money-Weighted Rate of Return	The internal rate of return on pension plan investments, net of investment expenses.
Municipal Bond Rate	Yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.
Net Pension Liability	Total Pension Liability minus the Plan's Fiduciary Net Position (unfunded accrued liability).
Projected Benefit Payments	All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and expected future service.
Service Cost	The portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total Pension Liability	The portion of actuarial present value of projected benefit payments that is attributable to past periods of member service using the Entry Age Normal cost method based on the requirements of GASB 67 and 68.

City Council
300 North New Ballas Rd
Creve Coeur, MO 63141

SCHEDULED

Meeting: 12/09/19 06:00 PM
Department: City Council
Category: Report
Prepared By: Lori Obermoeller
Department Head: Lori Obermoeller

STAFF REPORT

Lump-Sum Buyout Pension Plan Summary Report

Staff will provide an update on the Voluntary Pension Buyout Program that was offered to participants who have separated from service with a vested accrued benefit and who have not yet begun to receive retirement benefits under the City of Creve Coeur Plan.

MEMORANDUM

DATE: December 3, 2019

TO: Mark Perkins, City Administrator

FROM: Lori Obermoeller, Director of Finance

SUBJECT: One-Time Lump-Sum Buyout Program

The Voluntary One-Time Lump-Sum Buyout Program ended November 30, 2019. Twenty-nine (29) letters were mailed to participants who have separated from service with a vested accrued benefit and who have not yet begun to receive retirement benefits under the Plan. Two (2) letters were returned due to no longer at that address. Two (2) participants decided to take normal retirement starting December 1. A total of eight (8) participants decided to take the Buyout, offered at 80% of the present value of the participants normal retirement benefit. Depending on how you look at it, about 28% – 32% accepted the Buyout Offer.

In October, the Pension Board authorized $800,000 to be moved from Equities to a separate fixed account in Schwab. $800,000 was approximately 40% of the $2,000,000 for participants that were eligible for the Buyout Program. The amount of the Buyout for the eight (8) participants was $493,677. Because Equities were about 1% over funded, the full $800,000 was moved to Fixed Income at Commerce Bank. Commerce Bank will distribute the buyout funds to the participants within the next few weeks, and the remaining balance will be put in the Fixed Income portfolio.

Three (3) participants took the Cash Option, three (3) took the Rollover Option and two (2) did a combination of the Rollover/Cash Option. I'd be happy to answer any questions.