

St. Louis County Retirement Plan

Actuarial Valuation Report

Plan Year January 1, 2019 – December 31, 2019

June 2019

June 26, 2019

Board of Trustees
St. Louis County Retirement Plan
Administration Annex, 5th Floor
41 S. Central Avenue
Clayton, Missouri 63105

Board Members:

Buck Global, LLC. was retained to complete the actuarial valuation of the St. Louis County Retirement Plan for the plan year beginning January 1, 2019. The results of the valuation presented in this report are to be used in determining the contribution for the 2019 plan year.

The computations herein were performed as of January 1, 2019. They were determined using employee data and audited financial data provided by St. Louis County. These data were not audited by Buck, although they were reviewed for reasonableness and consistency with the prior year's information.

Except as noted below, for 2019, all actuarial assumptions and methods used in this report are the same as those used in the previous valuation. The following changes in assumptions and methods have been made effective with the January 1, 2019 valuation:

1. Effective January 1, 2019, the amortization method was changed from a 25-year, open (or rolling) amortization method to a 25-year, closed, layered amortization method. All future changes in the accrued liability due to amendments, gains and losses, and assumption changes are amortized over a 25-year closed, layered method. The initial amortization base was created for the contribution payable during 2019.
2. For Plan A, the mortality changed from a blended Fully Generational table consisting of 70% RP-2000 and 30% RP-2000 Blue Collar projected using Scale BB to a blend of 85% PubG-2010 and 15% PubS-2010 mortality tables using the most recent mortality improvement scale of MP-2018.
3. For Plan B, the mortality changed from a Fully Generational RP-2000 Blue Collar table projected using Scale BB to 100% PubS-2010 mortality table using the most recent mortality improvement scale of MP-2018.

In selecting economic assumptions, the interest rate of 7.50% is based upon a review of the existing portfolio structure, a review of recent experience, and information considered by the Board. The salary increase assumption is based on actual experience and future expectations of inflation, merit, and productivity components in light of current economic conditions and budget considerations. All other actuarial assumptions and methods have been adopted based on anticipated experience and our annual review of the emerging experience.

Please see Schedule K for more detail on the actuarial assumptions and methods.

Other Circumstances Impacting the Valuation Results

During 2018, St. Louis County approved revisions to the Employees' retirement plans for civilian and police employees hired on or after February 1, 2018, which includes changes to vesting, retirement eligibility and benefit provisions in addition to these employees contributing 4% of their salary to the plan.

Please see Schedule L for more detail of the plan provisions for the contributory participants.

Comments on the Valuation Results

The total employer contribution amount for 2019 is \$43,165,958, which is 21.27% of covered payroll. Contributions for Plan A decreased from \$28,692,705 for 2018 to \$27,905,446 for 2019. As a percentage of covered payroll the contribution rate increased from 20.10% to 20.52%. For Plan B, contributions decreased from \$15,657,152 for 2018 to \$15,260,512 for 2019. As a percentage of covered payroll the contribution rate increased from 22.44% to 22.80%. Please note that the 2018 percentage of pay amounts in this paragraph were refined after delivery of the January 1, 2018, valuation report. The 2019 contributions are based on the County's contribution policy, which is to contribute the normal cost plus a 25-year closed, layered amortization of unfunded accrued liability (or 10-year amortization if the assets exceed the accrued liability).

The rate of return on the actuarial value of assets was 4.8%, less than the assumed return of 7.50% for the 2018 plan year. The trust fund experienced a -6.9% rate of return on market value. A detailed analysis of the change in costs may be found in Schedule F.

The funded ratio at January 1, 2019 obtained by comparing the actuarial value of assets to the accrued liability is 73.8% for Plan A and 58.3% for Plan B. On a combined plan basis, the funded ratio is 69.6%.

Where presented, references to "funded ratio" and "unfunded accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Funding Level – Valuation of Current Accrued Benefits

Based on a 7.50% discount rate, the market value of plan assets is less than the value of current accrued benefits (see Schedule G). From January 1, 2018 to January 1, 2019, the funded ratio of Plan A and Plan B decreased from 82.1% to 72.0% and from 67.9% to 59.5% respectively. On a combined plan basis, the funded ratio is 68.8%. The decrease in the funded ratios is primarily due to the unfavorable investment results.

GASB

Disclosure information in accordance with GASB Statements 67 and 68 will be presented in a separate communication, as needed.

Purpose of This Report

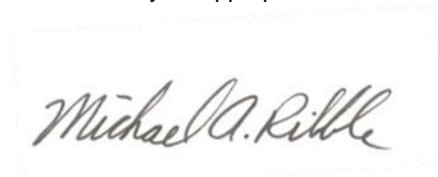
This report is prepared for St. Louis County for its use in its review of the operation of the Plan. It is expected that the County will use the results in this report for the purpose of determining contributions and the funding status of plan benefits. The report will also be used in the preparation of any required reports, including the audited financial report prepared by the plan accountant. The use of this report by other parties and/or for other purposes is not recommended without advance review of the appropriateness of such application by Buck.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, changes expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions, applicable law or regulations. Because of limited scope, Buck performed no analysis of the potential range of such future differences.

Actuarial Status

In my opinion, the actuarial assumptions and methods used to value the plan, as selected by the Board in consultation with the actuary, are reasonable, and in combination represent a reasonable estimate of anticipated experience under the plan.

Michael A. Ribble is a Fellow of the Society of Actuaries, an Enrolled Actuary, and a Member of the American Academy of Actuaries. Mike meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice and appropriately discloses the actuarial position of the plan. I am available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

A handwritten signature in black ink that reads "Michael A. Ribble". The signature is written in a cursive style and is enclosed within a thin, light-colored rectangular border.

Michael A. Ribble, FSA, EA, MAAA, FCA
Principal, Wealth Consulting
Buck Global, LLC.

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Schedule A: Contribution Schedule for 2019

	<u>Plan A</u>
Total Normal Cost	\$12,459,800
As % of Covered Payroll	9.16%
Amortization Payment	\$15,826,828
As % of Covered Payroll	11.64%
Total Annual Cost	\$28,286,628
As % of Covered Payroll	20.80%
Expected Employee Contributions	\$381,182
Total Employer Costs	\$27,905,446
As % of Covered Payroll	20.52%
	<u>Plan B</u>
Normal Cost	\$6,012,534
As % of Covered Payroll	8.98%
Amortization Payment	\$9,309,135
As % of Covered Payroll	13.91%
Total Annual Cost	\$15,321,669
As % of Covered Payroll	22.89%
Expected Employee Contributions	\$61,157
Total Employer Costs	\$15,260,512
As % of Covered Payroll	22.80%

Schedule B: Summary of Valuation Results

Plan A: Civilian

	1/1/2018	1/1/2019
A. Snapshot Figures		
1. Number of Participants Included in Valuation		
Active	2,865	2,811
Vested Terminated	1,290	1,325
Retired and Beneficiaries	<u>2,550</u>	<u>2,644</u>
TOTAL	6,705	6,780
2. Total Covered Payroll ¹	\$ 142,784,262	\$ 136,020,587
2a. Contributory Covered Payroll	N/A	\$ 9,529,547
3. PV of Accrued Benefits	\$ 672,108,856	\$ 691,540,696
4. Plan Assets - Market	\$ 551,516,850	\$ 498,212,332
B. On-Going Figures		
1. Accrued Liability		
Active	\$ 260,012,297	\$ 247,063,288
Vested Terminated	38,814,074	41,506,526
Retired and Beneficiaries	<u>406,284,607</u>	<u>434,026,677</u>
TOTAL	\$ 705,110,978	\$ 722,596,491
1a. Present Value of Future Benefits	\$ 821,508,768	\$ 826,456,670
2. Plan Assets - Actuarial Value	\$ 524,173,566	\$ 532,944,135
3. Plan Assets - Yield		
Market Value	18.9%	-6.9%
Actuarial Value	7.5%	4.8%
4. Unfunded Accrued Liability (1. - 2.)	\$ 180,937,412	\$ 189,652,356
5. Total Normal Cost	\$ 13,593,155	\$ 12,459,800
6. 25-Year Layered Amortization Payment ²	\$ 15,099,550	\$ 15,826,828
7. Total Annual Cost (5. + 6.)	\$ 28,692,705	\$ 28,286,628
8. Expected Employee Contributions (4% of 2a.)	N/A	\$ 381,182
9. Total Employer Annual Cost (7. - 8.)	\$ 28,692,705	\$ 27,905,446
10. Employer Cost as % of Covered Payroll (B.9 / A.2.) ¹	20.10%	20.52%
11. Funded ratio (2. / 1.)	74.3%	73.8%

¹ 2018 figures restated since the January 1, 2018 Valuation.

² Layered 25-Year Amortization starting in 2019. See Schedule J for detailed description.

Schedule B: Summary of Valuation Results

Plan B: Police

	1/1/2018	1/1/2019
A. Snapshot Figures		
1. Number of Participants Included in Valuation		
Active	904	926
Vested Terminated	269	276
Retired and Beneficiaries	<u>498</u>	<u>508</u>
TOTAL	1,671	1,710
2. Total Covered Payroll ³	\$ 69,769,501	\$ 66,925,767
2a. Contributory Covered Payroll	N/A	\$ 1,528,923
3. PV of Accrued Benefits	\$ 231,236,356	\$ 244,487,633
4. Plan Assets - Market	\$ 157,052,750	\$ 145,573,574
B. On-Going Figures		
1. Accrued Liability		
Active	\$ 111,053,981	\$ 110,244,015
Vested Terminated	7,826,926	8,838,679
Retired and Beneficiaries	<u>142,621,490</u>	<u>148,362,298</u>
TOTAL	\$ 261,502,397	\$ 267,444,992
1a. Present Value of Future Benefits	\$ 330,936,949	\$ 332,197,243
2. Plan Assets - Actuarial Value	\$ 149,231,846	\$ 155,893,937
3. Plan Assets - Yield		
Market Value	18.9%	-7.1%
Actuarial Value	7.5%	4.7%
4. Unfunded Accrued Liability (1. - 2.)	\$ 112,270,551	\$ 111,551,055
5. Total Normal Cost	\$ 6,287,974	\$ 6,012,534
6. 25-Year Layered Amortization Payment ⁴	\$ 9,369,178	\$ 9,309,135
7. Total Annual Cost (5. + 6.)	\$ 15,657,152	\$ 15,321,669
8. Expected Employee Contributions (4% of 2a.)	N/A	\$ 61,157
9. Total Employer Annual Cost (7. - 8.)	\$ 15,657,152	\$ 15,260,512
10. Employer Cost as % of Covered Payroll (B.9 / A.2.) ³	22.44%	22.80%
11. Funded ratio (2. / 1.)	57.1%	58.3%

³ 2018 figures restated since the January 1, 2018 Valuation.

⁴ Layered 25-Year Amortization starting in 2019. See Schedule J for detailed description.

Schedule B: Summary of Valuation Results

Total as of January 1, 2019

	Plan A	Plan B	Total
A. Snapshot Figures			
1. Number of Participants Included in Valuation			
Active	2,811	926	3,737
Vested Terminated	1,325	276	1,601
Retired and Beneficiaries	<u>2,644</u>	<u>508</u>	<u>3,152</u>
TOTAL	6,780	1,710	8,490
2. Total Covered Payroll	\$ 136,020,587	\$ 66,925,767	\$ 202,946,354
2a. Contributory Covered Payroll	\$ 9,529,547	\$ 1,528,923	\$ 11,058,470
3. PV of Accrued Benefits	\$ 691,540,696	\$ 243,959,573	\$ 935,500,269
4. Plan Assets - Market	\$ 498,212,332	\$ 145,573,574	\$ 643,785,906
B. On-Going Figures			
1. Accrued Liability			
Active	\$ 247,063,288	\$ 110,244,015	\$ 357,307,303
Vested Terminated	41,506,526	8,838,679	50,345,205
Retired and Beneficiaries	<u>434,026,677</u>	<u>148,362,298</u>	<u>582,388,975</u>
TOTAL	\$ 722,596,491	\$ 267,444,992	\$ 990,041,483
1a. Present Value of Future Benefits	\$ 826,456,670	\$ 332,197,243	\$ 1,158,653,913
2. Plan Assets - Actuarial Value	\$ 532,944,135	\$ 155,893,937	\$ 688,838,072
3. Plan Assets - Yield			
Market Value	-6.9%	-7.1%	-6.9%
Actuarial Value	4.8%	4.7%	4.8%
4. Unfunded Accrued Liability (1. - 2.)	\$ 189,652,356	\$ 111,551,055	\$ 301,203,411
5. Total Normal Cost	\$ 12,459,800	\$ 6,012,534	\$ 18,472,334
6. 25-Year Layered Amortization Payment ⁵	\$ 15,826,828	\$ 9,309,135	\$ 25,135,963
7. Total Annual Cost (5. + 6.)	\$ 28,286,628	\$ 15,321,669	\$ 43,608,297
8. Expected Employee Contributions (4% of 2a.)	\$ 381,182	\$ 61,157	\$ 442,339
9. Total Employer Annual Cost (7. - 8.)	\$ 27,905,446	\$ 15,260,512	\$ 43,165,958
10. Employer Cost as % of Covered Payroll (B.9 / A.2.)	20.52%	22.80%	21.27%
11. Funded ratio (2. / 1.)	73.8%	58.3%	69.6%

⁵ Layered 25-Year Amortization starting in 2019. See Schedule J for detailed description.

Schedule C: Total Benefit Liabilities

Plan A: Civilian

	1/1/2018	1/1/2019
Active Employees		
Retirement Benefits	\$ 367,273,115	\$ 345,523,617
Pre-Retirement Death Benefits	6,394,820	2,838,302
Post-Retirement Death Benefits	<u>2,742,151</u>	<u>2,561,548</u>
TOTAL	\$ 376,410,086	\$ 350,923,467
Vested Terminated Participants		
Retirement Benefits	\$ 37,657,048	\$ 40,953,365
Death Benefits	<u>1,157,026</u>	<u>553,161</u>
TOTAL	\$ 38,814,074	\$ 41,506,526
Retired Participants and Beneficiaries		
Retirement Benefits	\$ 400,047,953	\$ 427,702,696
Post-Retirement Death Benefits	<u>6,236,655</u>	<u>6,323,981</u>
TOTAL	\$ 406,284,608	\$ 434,026,677
Total Benefit Liabilities	\$ 821,508,768	\$ 826,456,670

Schedule C: Total Benefit Liabilities

Plan B: Police

	1/1/2018	1/1/2019
Active Employees		
Basic Retirement Benefit	\$ 156,641,265	\$ 156,965,279
Supplement to Age 65	15,868,300	11,606,508
Duty Death and Disability Benefit	5,077,355	4,768,805
Pre-Retirement Death Benefits	2,493,811	1,240,420
Post-Retirement Death Benefits	<u>407,801</u>	<u>415,254</u>
TOTAL	\$ 180,488,532	\$ 174,996,266
Vested Terminated Participants		
Basic Retirement Benefits	\$ 7,509,191	\$ 8,704,389
Death Benefits	<u>317,735</u>	<u>134,290</u>
TOTAL	\$ 7,826,926	\$ 8,838,679
Retired Participants and Beneficiaries		
Retirement Benefits	\$ 141,381,154	\$ 147,113,719
Post-Retirement Death Benefits	<u>1,240,337</u>	<u>1,248,579</u>
TOTAL	\$ 142,621,491	\$ 148,362,298
Total Benefit Liabilities	\$ 330,936,949	\$ 332,197,243

Schedule D: Investment Experience of the Fund

1. Market Value of Assets as of 12/31/2017 ⁶	\$708,569,600
2. Employer Contributions to the Fund	\$44,342,552
3. Employee Contributions to the Fund	\$269,511
4. Benefits Paid	<u>\$60,783,381</u>
5. Total (1. + 2. + 3. - 4.)	\$692,398,282
6. Income (including unrealized gains and losses, and net of all investment fees and management expenses)	<u>\$ (48,612,376)</u>
7. Market Value of Assets as of 12/31/2018 (5. + 6.)	\$643,785,906
8. Average Fund Balance [1. + ½ * (2. + 3. - 4.)]	\$700,483,941
Investment Yield for 2018	(6.9%)
Investment Yield for 2017	18.9%
Investment Yield for 2016	5.6%
Investment Yield for 2015	1.8%
Investment Yield for 2014	5.5%
Investment Yield for 2013	18.1%
Investment Yield for 2012	14.3%
Investment Yield for 2011	(0.6%)
Investment Yield for 2010	17.0%
Investment Yield for 2009	22.7%

Summary of Plan Assets

Investments at Current Value		
Investment Securities		
Domestic Equity	\$ 224,631,366	
International Equity	177,871,412	
Fixed Income	154,498,311	
Hedge fund of funds	0	
Real Estate Investment Trusts	<u>85,736,735</u>	
Total of Investments		\$ 642,737,824
Cash		\$ 459,888
Accrued Interest and Dividends Receivable and Other		1,551,529
Accounts Payable		<u>963,334</u>
Market Value of Assets 12/31/2018		\$ 643,785,906

⁶ Value does not reflect the revised Market Value of Assets as of December 31, 2017, of \$708,811,382. The difference is reflected in item 6.

Schedule E: Development of Actuarial Value of Plan Assets

	Plan A	Plan B	Total
A. Market Value of Assets - 1/1/2018 ⁷	\$ 551,516,850	\$ 157,052,750	\$ 708,569,600
B. Expected Interest	\$ 41,363,764	\$ 11,778,956	\$ 53,142,720
C. Employer Contributions	\$ 28,710,148	\$ 15,632,404	\$ 44,342,552
D. Employee Contributions	\$ 234,626	\$ 34,885	\$ 269,511
E. Expected Interest on Contributions	\$ 941,734	\$ 530,939	\$ 1,472,673
F. Benefits Paid	\$ 44,754,659	\$ 16,028,722	\$ 60,783,381
G. Expected Interest on Benefits	<u>\$ 1,678,300</u>	<u>\$ 601,077</u>	<u>\$ 2,279,377</u>
H. Expected Market Value of Assets 1/1/2019	\$ 576,334,163	\$ 168,400,135	\$ 744,734,298
I. Market Value of Assets at 1/1/2019	<u>\$ 498,212,332</u>	<u>\$ 145,573,574</u>	<u>\$ 643,785,906</u>
J. Gain/(Loss), 2018 (H. – G.)	\$ (78,121,831)	\$ (22,826,561)	\$ (100,948,392)
K. Gain/(Loss), not recognized in Actuarial Value			
<u>Year</u>	<u>Portion Not Recognized</u>	<u>Total</u>	<u>Amount Not Recognized</u>
2018	3/4	\$ (100,948,392)	\$ (58,591,373)
2017	1/2	\$ 67,602,830	\$ 26,309,413
2016	1/4	\$ (12,569,149)	<u>\$ (2,449,843)</u>
Total			<u>\$ (37,731,803)</u>
L. Accrued Contributions for 2018	\$ 0	\$ 0	\$ 0
M. Actuarial Value of Assets as of January 1, 2019 (H – J + K), Max 120% of Market Value	\$ 532,944,135	\$ 155,893,937	\$ 688,838,072
N. Yield on Actuarial Value of Assets			4.8%

⁷ Value does not reflect the revised Market Value of Assets as of December 31, 2017, of \$708,811,382.

Schedule F: Analysis of Change in Cost

Plan A: Civilian

	Amortization Payment	Normal Cost	Annual Cost
1. Annual Cost 1/1/2018	\$ 15,099,550	\$ 13,593,155	\$ 28,692,705
2. Anticipated Increase/(Decrease)	\$ (142,165)	\$ (411,774)	\$ (553,939)
3. Increase Due to New Entrants	\$ 29,928	\$ 435,581	\$ 465,509
4. Investment Return (Actuarial Value)	\$ 1,167,991		\$ 1,167,991
5. Increase/(Decrease) Due to Liability Experience:			
Salary	\$ (335,101)		\$ (335,101)
Mortality	\$ (118,924)		\$ (118,924)
Turnover	\$ (286,962)		\$ (286,962)
Retirement	\$ (120,437)		\$ (120,437)
Data Corrections and Other	\$ (249,043)		\$ (249,043)
Subtotal	\$ (1,110,467)		\$ (1,110,467)
6. Change in Normal Cost		\$ (1,345,036)	\$ (1,345,036)
7. Change Due to Assumption Changes	\$ 781,991	\$ 187,874	\$ 969,865
8. Total Annual Cost 1/1/2019	\$ 15,826,828	\$ 12,459,800	\$ 28,286,628
9. Expected Employee Contributions			\$ 381,182
10. Total Employer Annual Cost 1/1/2019			\$ 27,905,446

Schedule F: Analysis of Change in Cost

Net Cumulative Effect on Cost - Plan A - Civilian

	1/1/2017 Annual Cost	1/1/2018 Annual Cost	1/1/2019 Annual Cost	Net Cumulative Effect on Cost
Annual Cost Prior Year	\$ 27,574,240	\$ 27,692,908	\$ 28,692,705	
Anticipated Increase/(Decrease)	\$ (334,679)	\$ (474,561)	\$ (553,939)	\$ (1,363,179)
Increase Due to New Entrants	877,528	1,147,428	465,509	2,490,465
Investment Return (Actuarial Value)	255,082	104,016	1,167,991	1,527,089
Increase/(Decrease) Due To:				
Salary	\$ (367,772)	\$ (401,894)	\$ (335,101)	\$ (1,104,767)
Mortality	109,985	(141,462)	(118,924)	(150,401)
Turnover	(93,701)	(67,825)	(286,962)	(448,488)
Retirement	240,156	66,224	(120,437)	185,943
Data Correction & Other	(3,874)	(16,657)	(249,043)	(269,574)
Change in Normal Cost	<u>(564,057)</u>	<u>(804,066)</u>	<u>(1,345,036)</u>	<u>(2,713,159)</u>
Subtotal	\$ (679,263)	\$ (1,365,680)	\$ (2,455,503)	\$ (4,500,446)
Changes Due to Assumption Changes	\$ 0	\$ 1,021,343	\$ 969,865	\$ 1,991,208
Change Due to Proposition P	\$ 0	\$ 567,251	\$ 0	\$ 567,251
Total Annual Cost Current Year	\$ 27,692,908	\$ 28,692,705	\$ 28,286,628	
Expected Employee Contributions	N/A	N/A	\$ 381,182	
Total Employer Annual Cost Current Year	\$ 27,692,908	\$ 28,692,705	\$ 27,905,446	

Schedule F: Analysis of Change in Cost

Plan B: Police

	Amortization Payment	Normal Cost	Annual Cost
1. Annual Cost 1/1/2018	\$ 9,369,178	\$ 6,287,974	\$ 15,657,152
2. Anticipated Increase/(Decrease)	\$ (84,984)	\$ 187,351	\$ 102,367
3. Increase Due to New Entrants	\$ 21,104	\$ 165,374	\$ 186,478
4. Investment Return (Actuarial Value)	\$ 342,046		\$ 342,046
5. Increase/(Decrease) Due to Liability Experience:			
Salary	\$ (728,504)		\$ (728,504)
Mortality	\$ 125,017		\$ 125,017
Turnover	\$ (40,667)		\$ (40,667)
Retirement	\$ 76,142		\$ 76,142
Disability	\$ 0		\$ 0
Data Corrections and Other	\$ (123,867)		\$ (123,867)
Subtotal	\$ (691,879)		\$ (691,879)
6. Change in Normal Cost		\$ (725,123)	\$ (725,123)
7. Change Due to Assumption Change	\$ 353,670	\$ 96,958	\$ 450,628
8. Total Annual Cost 1/1/2019	\$ 9,309,135	\$ 6,012,534	\$ 15,321,669
9. Expected Employee Contributions			\$ 61,157
10. Total Employer Annual Cost 1/1/2019			\$ 15,260,512

Schedule F: Analysis of Change in Cost

Net Cumulative Effect on Cost – Plan B – Police

	1/1/2017 Annual Cost	1/1/2018 Annual Cost	1/1/2019 Annual Cost	Net Cumulative Effect on Cost
Annual Cost Prior Year	\$ 12,364,718	\$ 12,679,446	\$ 15,657,152	
Anticipated Increase/(Decrease)	\$ 55,031	\$ 93,236	\$ 102,367	\$ 250,634
Increase Due to New Entrants	256,026	302,905	186,478	745,409
Investment Return (Actuarial Value)	96,224	25,874	342,046	464,144
Increase/(Decrease) Due To:				
Salary	\$ (129,964)	\$ (179,996)	\$ (728,504)	\$ (1,038,464)
Mortality	53,392	8,259	125,017	186,668
Turnover	(24,890)	15,749	(40,667)	(49,808)
Retirement	129,755	126,896	76,142	332,793
Disability	0	0	0	0
Data Correction & Other	8,772	39,118	(123,867)	(75,977)
Change in Normal Cost	<u>(129,618)</u>	<u>(197,068)</u>	<u>(725,123)</u>	<u>(1,051,809)</u>
Subtotal	\$ (92,553)	\$ (187,042)	\$ (1,417,002)	\$ (1,696,597)
Changes Due to Assumption Change	\$ 0	\$ (297,325)	\$ 450,628	\$ 153,303
Changes Due to Proposition P	\$ 0	\$ 3,040,058	\$ 0	\$ 3,040,058
Total Annual Cost Current Year	\$ 12,679,446	\$ 15,657,152	\$ 15,321,669	
Expected Employee Contributions	N/A	N/A	\$ 61,157	
Total Employer Annual Cost Current Year	\$ 12,679,446	\$ 15,657,152	\$ 15,260,512	

Schedule G: Valuation of Current Accrued Benefits

	Plan A	Plan B	Total
I. Actuarial Present Value of Accrued Plan Benefits			
1. Vested Benefits			
Active Participants	\$ 197,553,019	\$ 68,271,243	\$ 265,824,262
Vested Terminated	41,506,526	8,839,147	50,345,673
Retired, Beneficiaries and Disabled	<u>434,026,677</u>	<u>148,362,297</u>	<u>582,388,974</u>
TOTAL	\$ 673,086,222	\$ 225,472,687	\$ 898,558,909
2. Non-Vested Benefits	<u>\$ 18,454,474</u>	<u>\$ 19,014,946</u>	<u>\$ 37,469,420</u>
3. Total Present Value of Accrued Plan Benefits: (1) + (2)	\$ 691,540,696	\$ 244,487,633	\$ 936,028,329
4. Assets at Market Value	\$ 498,212,332	\$ 145,573,574	\$ 643,785,906
5. Unfunded Accrued Benefits: (3) - (4)	\$ 193,328,364	\$ 98,914,059	\$ 292,242,423
6. Accrued Benefit Funded Ratio: (4) ÷ (3)	72.0%	59.5%	68.8%
7. Number of Employees Fully Vested	1,690	637	2,327
II. Reconciliation of Changes in Present Value			
1. Present Value of Accrued Plan Benefits 1/1/2018	\$ 672,108,855	\$ 231,236,356	\$ 903,345,211
2. Increase (Decrease) due to:			
Benefit Payments	\$ (44,754,659)	\$ (16,028,722)	\$ (60,783,381)
Interest	48,729,864	16,741,650	65,471,514
Assumption Change	8,797,081	3,683,970	12,481,051
Method Change			
Benefits Accumulated & Actuarial Experience	<u>6,659,555</u>	<u>8,854,379</u>	<u>15,513,934</u>
TOTAL	\$ 19,431,841	\$ 13,251,277	\$ 32,683,118
3. Present Value of Accrued Plan Benefits 1/1/2019	\$ 691,540,696	\$ 244,487,633	\$ 936,028,329

Schedule H: Reconciliation of Plan Participants

	Plan A - Civilian			Plan B - Police		
	Active	Vested Terminated	Retired	Active	Vested Terminated	Retired
1/1/2018	2,865	1,290	2,550	904	269	498
Retired	(115)	(46)	161	(12)	(1)	13
Death:						
with Survivor	0	0	0	0	0	0
without Survivor	(5)	0	(66)	0	0	(3)
Disability	0	0	0	0	0	0
Terminations:						
Vested	(85)	85	0	(14)	14	0
Non-Vested	(177)	0	0	(21)	0	0
Net Transfers	(8)	0	0	8	0	0
New Entrants	329	0	0	55	0	0
New Survivors	0	0	0	0	0	0
Return to Active	7	(5)	(2)	6	(6)	0
Lump Sum Distribution	0	0	0	0	0	0
Level Income Expired	0	0	0	0	0	0
Data Correction	0	1	1	0	0	0
1/1/2019	2,811	1,325	2,644	926	276	508
Average Age	48.2	52.1	71.5	39.1	45.4	69.2
Average Service	11.6			11.8		
Average Salary	\$48,389			\$72,274		
Average Annual Benefit		\$6,488	\$16,703		\$9,439	\$29,711

Schedule I: Summary of Reported Compensation Increases from 2017 to 2018

Plan A – Civilian

<u>Attained Age 1/1/2019</u>	<u>Number of Participants</u>	<u>2017 Reported Compensation</u>	<u>2018 Reported Compensation</u>	<u>Salary Increase</u>
20-24	31	611,901	1,119,659	82.98%
25-29	152	4,825,548	6,950,471	44.03%
30-34	211	8,279,839	10,119,588	22.22%
35-39	230	9,583,712	11,086,792	15.68%
40-44	221	9,736,198	10,801,333	10.94%
45-49	269	12,906,734	13,978,828	8.31%
50-54	383	17,895,877	19,361,080	8.19%
55-59	434	21,176,181	22,398,615	5.77%
60-64	381	19,078,168	19,870,567	4.15%
65+	163	8,467,027	8,794,555	3.87%
All Ages	2,475	112,561,185	124,481,489	10.59%

Plan B – Police

<u>Attained Age 1/1/2019</u>	<u>Number of Participants</u>	<u>2017 Reported Compensation</u>	<u>2018 Reported Compensation</u>	<u>Salary Increase</u>
20-24	27	994,677	1,444,521	45.23%
25-29	138	6,663,256	8,198,559	23.04%
30-34	166	8,309,553	10,789,154	29.84%
35-39	119	6,496,297	8,192,409	26.11%
40-44	139	8,529,110	10,981,284	28.75%
45-49	137	9,256,393	11,556,571	24.85%
50-54	86	6,515,974	7,819,343	20.00%
55-59	39	2,950,098	3,554,552	20.49%
60-64	11	962,864	1,033,709	7.36%
65+	3	231,402	305,922	32.20%
All Ages	865	50,909,624	63,876,024	25.47%

Schedule J: ASOP 51 Disclosures

Funding future retirement benefits prior to when those benefits become due involves assumptions regarding future economic and demographic experience. These assumptions are applied to calculate actuarial liabilities, current contribution requirements and the funded status of the plan. However, to the extent future experience deviates from the assumptions used, variations will occur in these calculated values. These variations create risk to the plan. Understanding the risks to the funding of the plan is important. Therefore, a new Actuarial Standard of Practice (ASOP) has been adopted. Actuarial Standard of Practice No. 51 ("ASOP 51") requires certain disclosures of potential risks to the plan and provides useful information for intended users of actuarial reports that determine plan contributions or evaluate the adequacy of specified contribution levels to support benefit provisions.

Under ASOP 51, risk is defined as the potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience.

It is important to note that not all risk is negative, but all risk should be understood and accepted based on knowledge, judgement and educated decisions. Future measurements may deviate in ways that produce positive or negative financial impacts to the plan.

In the actuary's professional judgment, the following risks may reasonably be anticipated to significantly affect the plan's future financial condition.

- Investment risk – potential that the investment return will be different than the 6.50% expected in the actuarial valuation
- Longevity risk – potential that participants live longer than expected from the valuation mortality assumptions
- Contribution risk – potential that the contribution will be different than the recommended contribution in the actuarial valuation

The following information is provided to comply with ASOP 51 and furnish beneficial information on potential risks to the plan. This list is not all-inclusive; it is an attempt to identify the most significant risks and how those risks might affect the results shown in this report.

Schedule J: ASOP 51 Disclosures

Note that ASOP 51 does not require the actuary to evaluate the ability or willingness of the plan sponsor to make contributions to the plan when due, or to assess the likelihood or consequences of potential future changes in law. In addition, this valuation report is not intended to provide investment advice or to provide guidance on the management or reduction of risk. Buck welcomes the opportunity to assist in such matters as part of a separate project or projects utilizing the appropriate staff and resources for those objectives.

Investment Risk

Plan costs are very sensitive to the market return. Any lower than assumed return on assets will increase costs:

- The lower market return will cause the market value of assets to be lower than expected.
- The plan uses an actuarial value of assets that smooths the difference between the prior year's expected actuarial value and the market value at year-end. This helps control some of the volatility associated with investment risk.
- Actual returns consistently above or below the assumed return may indicate a need to update the long-term return on asset assumption.
- See page 7 for historical investment returns on market value to see past volatility of returns.

Longevity Risk

Plan costs will be increased as participants are expected to live longer. This is because:

- Benefits are paid over a longer lifetime when life expectancy is expected to increase. The longer duration of payments leads to higher liabilities.
- The mortality assumption for the Plan does assume future improvement in mortality. Any improvement in future mortality greater than that expected by the current mortality assumption would lead to increased costs for the Plan.

Contribution Risk

There is a risk associated with the employer's contribution when the actual amount and recommended amount differ. This is because:

- When the actual contribution is lower than the recommended contribution the Plan may not be sustainable in the long term.
- Any underpayment of the contribution will increase future contribution amounts to help pay off the additional Unfunded Actuarial Accrued Liability associated with any lower than recommended contribution amounts.
- The funding policy has been to make the actuarially determined contribution amount and actual contributions have followed this policy. Therefore, this risk is mitigated at this time.

Historical Information

Schedule M shows past plan participant counts and how the costs of the plans, including past actuarially determined contributions, have varied over time. This past information helps to show potential volatility introduced by risks to the plan.

Schedule J: ASOP 51 Disclosures

Plan A – Civilian

Plan Maturity Measures:

There are certain measures that may aid in understanding the significant risks to the plan.

Ratio of Retired Liability to Total Liability	January 1, 2018	January 1, 2019
1. Retirees and Beneficiaries	406,284,607	434,026,677
2. Total Accrued Liability	705,110,978	722,596,491
3. Ratio [(1) / (2)]	57.6%	60.1%

A mature plan will often have a ratio above 60 - 65 percent. An increasing percentage may indicate a need for a less risky asset allocation which may lead to a lower long-term return on assets assumption and increased costs.

Ratio of Cash Flow to Assets	December 31, 2017	December 31, 2018
1. Actual Contributions	27,700,290	28,944,774
2. Benefit Payments	42,963,710	44,754,659
3. Cash Flow [(1) - (2)]	(15,263,420)	(15,809,885)
4. Market Value of Assets	551,516,850	498,212,332
5. Ratio [(3) / (4)]	-2.8%	-3.2%

When this cash flow ratio is negative more cash is being paid out than deposited in the fund. Negative cash flow means the fund needs to rely on investment returns to cover benefit payments and at the same time may need to invest in more liquid assets to cover the benefit payments. More liquid assets may not garner the same returns as less liquid assets and therefore increase the investment risk. However, the low magnitude of the ratio implies there may already be enough liquid assets to cover the benefit payments, less investment return is needed to cover the shortfall, or only a small portion of assets will need to be converted to cash. Therefore, the investment risk is likely not amplified at this time. This maturity measure should be monitored for continual negative trend with greater magnitude.

Schedule J: ASOP 51 Disclosures

Plan A – Civilian

Contribution Volatility	January 1, 2018	January 1, 2019
1. Market Value of Assets	551,516,850	498,212,332
2. Payroll	142,784,262	136,020,587
3. Asset Volatility Ratio (AVR) [(1) / (2)]	3.9	3.7
4. Accrued Liability	705,110,978	722,596,491
5. Liability Volatility Ratio [(4) / (2)]	4.9	5.3

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 10 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 5. Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to changes in liability. For example, if an assumption change increases the liability of two plans by the same percent the plan with a liability-to-payroll ratio of 10 may experience twice the contribution volatility than a plan with a liability-to-payroll ratio of 5. In comparing the civilian plan, the volatility in contributions due to assets and liabilities is about equal but has slightly higher risk to volatility in employer contributions in regards to changes in accrued liability.

Schedule J: ASOP 51 Disclosures

Plan B – Police

Plan Maturity Measures:

There are certain measures that may aid in understanding the significant risks to the plan.

Ratio of Retired Liability to Total Liability	January 1, 2018	January 1, 2019
1. Retirees and Beneficiaries	142,621,490	148,362,298
2. Total Accrued Liability	261,502,397	267,444,992
3. Ratio [(1) / (2)]	54.5%	55.5%

A mature plan will often have a ratio above 60 - 65 percent. An increasing percentage may indicate a need for a less risky asset allocation which may lead to a lower long-term return on assets assumption and increased costs.

Ratio of Cash Flow to Assets	December 31, 2017	December 31, 2018
1. Actual Contributions	12,680,910	15,667,289
2. Benefit Payments	15,941,663	16,028,722
3. Cash Flow [(1) - (2)]	(3,260,753)	(361,433)
4. Market Value of Assets	157,052,750	145,573,574
5. Ratio [(3) / (4)]	-2.1%	-0.2%

When this cash flow ratio is negative more cash is being paid out than deposited in the fund. Negative cash flow means the fund needs to rely on investment returns to cover benefit payments and at the same time may need to invest in more liquid assets to cover the benefit payments. More liquid assets may not garner the same returns as less liquid assets and therefore increase the investment risk. However, the low magnitude of the ratio implies there may already be enough liquid assets to cover the benefit payments, less investment return is needed to cover the shortfall, or only a small portion of assets will need to be converted to cash. Therefore, the investment risk is likely not amplified at this time. This maturity measure should be monitored for continual negative trend with greater magnitude.

Schedule J: ASOP 51 Disclosures

Plan B – Police

Contribution Volatility	January 1, 2018	January 1, 2019
1. Market Value of Assets	157,052,750	145,573,574
2. Payroll	69,769,501	66,925,767
3. Asset Volatility Ratio (AVR) [(1) / (2)]	2.3	2.2
4. Accrued Liability	261,502,397	267,444,992
5. Liability Volatility Ratio [(4) / (2)]	3.7	4.0

Plans that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 10 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 5. Plans that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to changes in liability. For example, if an assumption change increases the liability of two plans by the same percent the plan with a liability-to-payroll ratio of 10 may experience twice the contribution volatility than a plan with a liability-to-payroll ratio of 5. In comparing the police plan, the volatility in contributions due to liability is about twice as much as the volatility in contributions due to assets meaning that the change in contributions from changes in accrued liability has a higher impact than the change from assets.

Comparing asset and liability volatility ratios of the Civilian and Police plans shows the Civilian plan carries slightly more contribution volatility risk due to both assets and liability than the Police plan. In particular, the Civilian plan may experience 1.68 times the contribution volatility due to assets and 1.33 times the contribution volatility due to liability than the Police plan.

Schedule K: Actuarial Assumptions and Methods

Interest:

Current Year: 7.50% per year

Prior Year: 7.50% per year

Salary Increases:

3.75% for Plan A per year

3.25% for Plan B per year

Plus additional increase as follows:

Employed on or after 1/1/2001	0% in final year
Employed after 1/1/1996 before 1/1/2001	3% in final year
Employed after 1/1/1991 before 1/1/1996	6% in final year
Employed after 1/1/1986 before 1/1/1991	9% in final year
Employed after 1/1/1981 before 1/1/1986	12% in final year
Employed after 1/1/1976 before 1/1/1981	15% in final year
Employed on or before 1/1/1976	18% in final year

Mortality:

Current Year:

Plan A

- The base table utilizes a blend of 85% PubG-2010 and 15% PubS-2010 mortality tables.
- For disabled participants, the base table utilizes a blend of 85% PubNS-2010 disability and 15% PubS-2010 disability mortality tables.

Plan B

- The base table utilizes 100% PubS-2010 mortality tables.
- For disabled participants, the base table utilizes 100% PubS-2010 disability mortality tables.

Applicable to Plan A and Plan B

- For beneficiaries, the base table utilizes the Pub-2010 contingent survivor mortality tables. Rates prior to age 45 were calculated based on a constant ratio of the age 45 rates in the PubG-2010 table and the Pub-2010 contingent survivor table.
- All mortality rates are projected from 2010 using generational improvement with Scale MP-2018.

Schedule K: Actuarial Assumptions and Methods

Prior Year: Civilian plan mortality is a blended Fully Generational table consisting of 70% RP-2000 and 30% RP-2000 Blue Collar projected using Scale BB.

Police plan mortality is Fully Generational RP-2000 Blue Collar projected using Scale BB.

Termination: Sample Rates:

Age	Civilian Service				Police
	0-1 years	1-2 years	2-3 years	3 or more years	Does not vary by years of service
25	220	165	110	77	56.6
30	220	165	110	66	53.0
35	220	165	110	66	46.0
40	220	165	110	44	37.8
45	220	165	110	33	29.2
50	220	165	110	33	18.8
55	220	165	110	33	6.9

Retirement: Traditional Plan Rates:

Age	Civilian		Police	
	If Meet Rule of 80	Otherwise	If Meet Rule of 80	Otherwise
50	5%	0%	15%	0%
51	5%	0%	15%	0%
52	5%	0%	15%	0%
53	5%	0%	15%	0%
54	5%	0%	15%	0%
55	12%	5%	40%	5%
56	5%	5%	10%	5%
57	5%	5%	10%	5%
58	5%	5%	10%	5%
59	5%	5%	10%	5%
60	15%	5%	10%	5%
61	10%	5%	10%	5%
62	50%	20%	100%	100%
63	10%	10%	100%	100%
64	10%	10%	100%	100%
65	100%	100%	100%	100%

Schedule K: Actuarial Assumptions and Methods

Retirement: Contributory Plan Rates:

<u>Age</u>	<u>Civilian</u>		<u>Police</u>	
	<u>If Meet Rule of 85</u>	<u>Otherwise</u>	<u>If Meet Rule of 85</u>	<u>Otherwise</u>
50	5%	0%	15%	0%
51	5%	0%	15%	0%
52	5%	0%	15%	0%
53	5%	0%	15%	0%
54	5%	0%	15%	0%
55	12%	5%	40%	0%
56	5%	5%	10%	0%
57	5%	5%	10%	5%
58	5%	5%	10%	5%
59	5%	5%	10%	5%
60	15%	5%	10%	5%
61	10%	5%	10%	5%
62	50%	20%	100%	100%
63	10%	10%	100%	100%
64	10%	10%	100%	100%
65	50%	20%	100%	100%
66	10%	10%		
67	100%	100%		

Expenses: None

Assumed Rate of Return on Employee Contributions:

3.5% per year

Service Connected Death and Disability (Police Plan only):

0.1% per year; disability benefits should be offset by any long term disability or worker's compensation benefits and death benefits should be offset by the benefit to which the surviving spouse is entitled under the Federal Social Security Act, whether or not actually received. However, as experience for duty related deaths and disabilities are extremely low, estimating the offsets for future death or disability benefits can be difficult. This valuation does not offset the benefits. We believe costing these benefits in this way is conservative and does not materially impact the results.

Service Connected Death and Disability (Civilian Plan only):

None assumed.

Cost Method

Projected Unit Credit Method. Under this method, the projected benefit of each participant is allocated to his years of service by level proration. The actuarial present value of benefits allocated to the current plan year is the normal cost, and the value of benefits allocated to prior plan years is the accrued liability. Actuarial gains and losses are recognized in the accrued liability as they emerge.

Schedule K: Actuarial Assumptions and Methods

Amortization of Unfunded Liability

Amortization is based on a 25-year closed, level dollar amount. All future changes in the accrued liability due to amendments, gains and losses, and assumption changes are amortized over a 25-year closed, layered method. The initial amortization base was created for the contribution payable during 2019.

Full Funding Policy

If, at any valuation date, the value of plan assets exceeds the Projected Unit Credited Accrued Liability, then all amortizations will be accelerated to ten years. In effect, the contribution determined for the year will be the annual normal cost less a ten-year amortization of the overfunding. For this purpose, the value of plan assets will be the lesser of market or actuarial value.

Ancillary Benefits

These benefits are funded on the same basis as other benefits.

Pre-Retirement Death Benefit

100% of participants are married at death with spouse the same age as participant. Spouses of members not eligible for early retirement at the time of death are costed with a deferred benefit payable at the member's normal retirement date.

Benefit Commencement of Active Terminations

Active terminations are assumed to commence benefits at age 65 for Plan A and at age 62 for Plan B.

Asset Valuation Method

The actuarial value of assets is determined using a method that spreads over a four-year period the difference between the actual investment income and the expected income (based on the funding interest rate). The resulting value is constrained to be within the corridor from 80% to 120% of market value.

Changes in Actuarial Assumptions or Methods

1. Effective January 1, 2019, the amortization method was changed from a 25-year, open (or rolling) amortization method to a 25-year, closed, layered amortization method. All future changes in the accrued liability due to amendments, gains and losses, and assumption changes are amortized over a 25-year closed, layered method. The initial amortization base was created for the contribution payable during 2019.
2. For Plan A, the mortality changed from a blended Fully Generational table consisting of 70% RP-2000 and 30% RP-2000 Blue Collar projected using Scale BB to a blend of 85% PubG-2010 and 15% PubS-2010 mortality tables using the most recent mortality improvement scale of MP-2018.
3. For Plan B, the mortality changed from a Fully Generational RP-2000 Blue Collar table projected using Scale BB to 100% PubS-2010 mortality table using the most recent mortality improvement scale of MP-2018.

Schedule L: Summary of Principal Plan Provisions

Plan A – Civilian

Eligibility: In general, all salaried civilian employees are eligible. Entry date is the first of the month coinciding with or next closest in time to the date of commencement of full time employment. Exclusions: Members of Boards and Commissions, and employees whose customary employment is less than 30 hours per week, or less than 9 months per year. Members hired prior to February 1, 2018, are “Traditional” participants and members hired on or after February 1, 2018, are “Contributory” participants.

Employee Contributions: Contributory participants are required to contribute four percent (4%) of participant’s compensation to the retirement fund each payroll period. Beginning December 31, 2019 and each December 31 thereafter, interest on an employee’s contribution balance is credited at an interest crediting rate equal to the 52-week Treasury rate published nearest to July 1 prior.

Credited Service: All periods of participation.
Credited Service terminates on earlier of date of termination or retirement.

Compensation: Aggregate compensation including any salary reduction amounts excluding reimbursed expenses and all other unusual compensation. For those participants hired on or after January 1, 1996, compensation is limited to the amounts allowed by Section 401(a)(17) of the Internal Revenue Code (\$275,000 in 2018 and \$280,000 in 2019).

Normal Retirement Date: Traditional: Age 65 and 3 years of credited service.
Contributory: Age 67 and 3 years of credited service.

Rule of Eighty Retirement Date: Traditional: Sum of age and credited service equals or exceeds eighty (80).

Rule of Eighty-Five Retirement Date: Contributory: Sum of age and credited service equals or exceeds eighty (85).

Early Retirement Eligibility: Any combination of age and credited service from table below.

<u>Age</u>	<u>Service</u>
55	20
56	18
57	16
58	14
59	12
60	10

Schedule L: Summary of Principal Plan Provisions

Plan A – Civilian

Benefits:

Normal Retirement Benefit	Traditional: 1.5% of final average compensation times credited service. Contributory: 1.3% of final average compensation times credited service.
Supplemental Benefit	\$15 per month per year of credited service payable from service retirement date.
Rule of Eighty or Eighty-Five Retirement	Computed in the same way as normal retirement.
Early Retirement Benefit	Normal Retirement Benefit plus Supplement, reduced by 0.28% per month preceding normal retirement date but not more than 60 months.
Late Retirement Benefit	Computed in the same way as normal retirement.
Pre-Retirement Death Benefit	The spouse of a deceased vested participant (who was either active or had terminated on or after 10/26/86) is eligible for a monthly benefit payable for life.

The amount of the Pre-Retirement Death Benefit is as follows:

If the Participant has attained the earliest retirement age, the amount of monthly income that would have been payable to the spouse if the Participant had retired the day before he died and the income was payable under the Survivor Annuitant Option with 100% continued to the spouse. This benefit would commence immediately.

Schedule L: Summary of Principal Plan Provisions

Plan A – Civilian

If the Participant had not attained the earliest retirement age, the amount of monthly income that would have been payable to the spouse had the participant terminated employment the day before his death, survived to the earliest retirement age and retired electing the Survivor Annuitant Option with 100% continued to the spouse. This benefit would be payable when the Participant would have attained the earliest retirement age.

Post-Retirement Death Benefits

1. For participants eligible for Early, Rule of Eighty, Rule of Eighty-Five or Normal Retirement at date of termination: \$10,000.
2. For other participants: None.

Duty Death Benefit

For a participant who dies as a direct and proximate result of injuries sustained while in performance of employment, (and death occurs within 2 years) the following monthly benefits are payable:

1. To the surviving spouse: 40% of participant's last monthly compensation.
2. To each surviving unmarried child under 18, 10% of last monthly compensation.

However, total benefits shall not exceed 75% of final compensation. Benefits above reduced by Social Security Benefits.

Benefits on Termination of Employment

A nonvested participant receives a refund of employee contributions with interest at date of termination.

A vested participant receives an annuity, beginning on his normal retirement date equal to his normal retirement benefit

A Traditional participant is vested if he has five (5) years of credited service or if he is at least age 65 and his age plus credited service is at least 70, provided he has at least three (3) years of credited service.

A Contributory participant is vested if he has seven (7) years of credited service or if he is at least age 65 and his age plus credited service is at least 70, provided he has at least three (3) years of credited service.

Schedule L: Summary of Principal Plan Provisions

Plan A – Civilian

Final Average Compensation

Average over the 36 consecutive months from the last 120 that produce highest average.

Cost of Living Adjustments

No automatic adjustments are made. A one-time increase was made for all retirees who retired prior to January 1, 1984. This increase was 5% of each retiree's original pension for each full year elapsed since retirement. This increase was doubled to 10% per year for retirees who retired prior to August 1977. No increase was greater than 100%. This increase was effective January 1, 1986.

An additional increase was made effective for benefits payable on or after March 1, 1990. The increase was 12% for those who retired prior to January 1, 1984 and 6% for those who retired on or after January 1, 1984 but before January 1, 1988. There was no increase for those who retired on or after January 1, 1988.

An additional increase was made effective for benefits payable on or after March 1, 1993 for retirees and survivors. The increase is 10% for those who retired prior to January 1, 1988 and 5% for those who retired on or after January 1, 1988 but before January 1, 1991. There was no increase for those who retired on or after January 1, 1991.

An additional increase was made effective for benefits payable on or after September 1, 1997 for retirees, survivors, service connected disability benefits and service connected death benefits. The increase is 15% for those retired prior to January 1, 1991 and 7.5% for those who retired on or after January 1, 1991 but before January 1, 1996. There was no increase for those retired on or after January 1, 1996.

An additional increase was made effective for benefits payable on or after May 1, 2001 for retirees, survivors, service connected disability benefits and service connected death benefits. The increase is 9% for those retired prior to January 1, 1997 and 4.5% for those who retired on or after January 1, 1997 but before January 1, 1999. There was no increase for those retired on or after January 1, 1999.

Schedule L: Summary of Principal Plan Provisions

Plan A – Civilian

Cost of Living Adjustments (continued)

An additional increase was made effective for benefits payable on or after September 1, 2005 for retirees, survivors, service connected disability benefits and service connected death benefits. The increase is 9% for those retired prior to January 1, 2001 and 4.5% for those who retired on or after January 1, 2001, but before January 1, 2003. There was no increase for those retired on or after January 1, 2003.

Changes in Provisions from Prior Valuation

The addition of the approved revisions to the Employees' retirement plans for civilian employees hired on or after February 1, 2018 included the change in provisions below for the Contributory participants in comparison to the Traditional participants.

Summary of Revisions

Normal Retirement Date:	Age 67 and 3 years of credited service for Contributory participants compared to age 65 and 3 years of credited service for Traditional participants.
Vesting Service Requirements:	A Contributory participant is vested if he has 7 years of credited service compared to a Traditional participant being vested if he has 5 years of credited service.
Eligibility for Early Retirement:	A Contributory participant is eligible for early retirement if he meets the rule of eighty-five (85) compared to a Traditional participant being eligible for early retirement if he meets the rule of eighty (80).
Benefit Accrual Rates:	Basic retirement benefit for Contributory participants is 1.3% of final average compensation times credited service times reduction factor compared to 1.5% of final average compensation times credited service times reduction factor for Traditional participants.
Employee Contributions:	Contributory participants are required to contribute four percent (4%) of participant's compensation to the retirement fund each payroll period.

Schedule L: Summary of Principal Plan Provisions

Plan B – Police

Eligibility: All commissioned police officers of the St. Louis County Police Department. Members hired prior to February 1, 2018, are “Traditional” participants and members hired on or after February 1, 2018, are “Contributory” participants.

Employee Contributions: Contributory participants are required to contribute four percent (4%) of participant’s compensation to the retirement fund each payroll period. Beginning December 31, 2019 and each December 31 thereafter, interest on an employee’s contribution balance is credited at an interest crediting rate equal to the 52-week Treasury rate published nearest to July 1 prior.

Credited Service: Same as under Plan A.

Compensation: Aggregate compensation including any salary reduction amounts excluding reimbursed expenses and all other unusual compensation. For those participants hired on or after January 1, 1996, compensation is limited to the amounts allowed by Section 401(a)(17) of the Internal Revenue Code (\$275,000 in 2018 and \$280,000 in 2019).

Service Retirement Date: Age 60 with 10 years of credited service or age 65 with 3 years of credited service. (Not earlier than date of termination of employment.)

Rule of Eighty Retirement Date: Traditional: Sum of age and credited service equals or exceeds eighty (80).

Rule of Eighty-Five Retirement Date: Contributory: Sum of age and credited service equals or exceeds eighty (85).

Early Retirement Date: Traditional: Age 55 with 10 years of credited service.

Contributory: Age 57 with 10 years of credited service.

Benefits:

Normal Retirement Benefit Traditional: 1.6% of final average compensation times credited service.

Contributory: 1.4% of final average compensation times credited service.

Supplemental Benefit \$30 per month per year of credited service, payable from service retirement date to age 65 plus \$5 per month per year of credited service, payable for life.

Schedule L: Summary of Principal Plan Provisions

Plan B – Police

Rule of Eighty or Eighty-Five Retirement

Normal Retirement Benefit plus Supplement, payable from Rule of Eighty or Eighty-Five Retirement Date, as applicable.

Early Retirement Benefit

Normal Retirement Benefit plus Supplement, reduced by 0.52% per month preceding normal retirement date but not more than 60 months.

Late Retirement Benefit

Computed in the same way as normal retirement.

Post-Retirement Death Benefit

1. For participants eligible for Early, Rule of Eighty, Rule of Eighty-Five, Normal Retirement, or Service Disability Retirement at date of termination: \$10,000.
2. For other participants: None.

Duty Death Benefit

For a participant who dies as a direct and proximate result of injuries sustained while in performance of employment, (and death occurs within 2 years) the following monthly benefits are payable:

1. To the surviving spouse: 40% of participant's last monthly compensation.
2. To each surviving unmarried child under 18, 10% of last monthly compensation.

However, total benefits shall not exceed 75% of final compensation. Benefits above reduced by Social Security Benefits.

Duty Disability Benefit

For Total and Permanent Disability resulting from employment, the following monthly benefits are payable:

1. 50% of last monthly compensation, plus
2. 10% of last monthly compensation for each unmarried child under 18.

However, total benefit not to exceed 80% of final monthly compensation. Benefit above reduced by:

1. 64% of Social Security benefits, and
2. 100% of Worker's Compensation benefits.

Schedule L: Summary of Principal Plan Provisions

Plan B – Police

Pre-Retirement Death Benefit

The spouse of a deceased vested participant (who was either active or had terminated on or after 10/26/86) is eligible for a monthly benefit payable for life.

The amount of the Pre-Retirement Death Benefit is as follows:

If the Participant has attained the earliest retirement age, the amount of monthly income that would have been payable to the spouse if the Participant had retired the day before he died and the income was payable under the Survivor Annuitant Option with 100% continued to the spouse. This benefit would commence immediately.

If the Participant had not attained the earliest retirement age, the amount of monthly income that would have been payable to the spouse had the participant terminated employment the day before his death, survived to the earliest retirement age and retired electing the Survivor Annuitant Option with 100% continued to the spouse. This benefit would have payable when the Participant would have attained the earliest retirement age.

Benefits on Termination of Employment

A nonvested participant receives a refund of employee contributions with interest at date of termination.

A vested participant receives an annuity, beginning on his normal retirement date equal to his normal retirement benefit.

A Traditional participant is vested if he has five (5) years of credited service or if he is at least age 65 and his age plus credited service is at least 70, provided he has at least three (3) years of credited service.

A Contributory participant is vested if he has seven (7) years of credited service or if he is at least age 65 and his age plus credited service is at least 70, provided he has at least three (3) years of credited service.

Schedule L: Summary of Principal Plan Provisions

Plan B – Police

Final Average Compensation

Average over the 36 consecutive months from the last 120 that produce highest average.

Cost of Living Adjustments

No automatic adjustments are made. A one-time increase was made for all retirees who retired prior to January 1, 1984. This increase was 5% of each retiree's original pension for each full year lapsed since retirement. This increase was doubled to 10% per year for retirees who retired prior to August 1977. No increase was greater than 100%. This increase was effective January 1, 1986.

An additional increase was made effective for benefits payable on or after March 1, 1990. The increase was 12% for those who retired prior to January 1, 1984 and 6% for those who retired on or after January 1, 1984 but before January 1, 1988. There was no increase for those who retired on or after January 1, 1988.

An additional increase was made effective for benefits payable on or after March 1, 1993 for retirees and survivors. The increase is 10% for those who retired prior to January 1, 1988 and 5% for those who retired on or after January 1, 1988 but before January 1, 1991. There was no increase for those who retired on or after January 1, 1991.

An additional increase was made effective for benefits payable on or after September 1, 1997 for retirees, survivors, service connected disability benefits and service connected death benefits. The increase is 15% for those retired prior to January 1, 1991 and 7.5% for those who retired on or after January 1, 1991 but before January 1, 1996. There was no increase for those retired on or after January 1, 1996.

Schedule L: Summary of Principal Plan Provisions

Plan B – Police

Cost of Living Adjustments (continued)

An additional increase was made effective for benefits payable on or after May 1, 2001 for retirees, survivors, service connected disability benefits and service connected death benefits. The increase is 9% for those retired prior to January 1, 1997 and 4.5% for those who retired on or after January 1, 1997 but before January 1, 1999. There was no increase for those retired on or after January 1, 1999.

An additional increase was made effective for benefits payable on or after September 1, 2005 for retirees, survivors, service connected disability benefits and service connected death benefits. The increase is 9% for those retired prior to January 1, 2001 and 4.5% for those who retired on or after January 1, 2001, but before January 1, 2003. There was no increase for those retired on or after January 1, 2003.

Schedule L: Summary of Principal Plan Provisions

Plan B – Police

Changes in Provisions from Prior Valuation

The addition of the approved revisions to the Employees' retirement plans for police employees hired on or after February 1, 2018 included the change in provisions below for the Contributory participants in comparison to the Traditional participants.

Summary of Revisions

Early Retirement Date:	Age 57 and 10 years of credited service for Contributory participants compared to age 55 and 10 years of credited service for the Traditional participants.
Vesting Service Requirements:	A Contributory participant is vested if he has 7 years of credited service compared to a Traditional participant being vested if he has 5 years of credited service.
Eligibility for Early Retirement:	A Contributory participant is eligible for early retirement if he meets the rule of eighty-five (85) compared to a Traditional participant being eligible for early retirement if he meets the rule of eighty (80).
Benefit Accrual Rates:	Basic retirement benefit for Contributory participants is 1.4% of final average compensation times credited service times reduction factor compared to 1.6% of final average compensation times credited service times reduction factor for Traditional participants.
Employee Contributions:	Contributory participants are required to contribute four percent (4%) of participant's compensation to the retirement fund each payroll period.

Schedule M: Plan History

Plan A – Civilian

	<u>2019</u> ⁽²⁾	<u>2018</u> ⁽¹⁾	<u>2017</u>	<u>2016</u> ⁽²⁾	<u>2015</u> ⁽¹⁾	<u>2014</u>	<u>2013</u>	<u>2012</u> ⁽¹⁾	<u>2011</u>	<u>2010</u> ⁽¹⁾	<u>2009</u> ⁽²⁾
1. Plan Participants											
a. Actives Under NRA	2,643	2,708	2,730	2,906	2,923	2,865	2,848	2,965	2,896	2,926	3,038
b. Inactive and Active Past NRA	<u>4,137</u>	<u>3,997</u>	<u>3,861</u>	<u>3,666</u>	<u>3,515</u>	<u>3,420</u>	<u>3,291</u>	<u>3,164</u>	<u>3,080</u>	<u>3,046</u>	<u>2,938</u>
c. Total	6,780	6,705	6,591	6,572	6,438	6,285	6,139	6,129	5,976	5,972	5,976
2. Present Value of Benefits	\$ 826,456,670	\$ 821,508,767	\$ 786,321,423	\$ 763,212,365	\$ 724,254,742	\$ 689,758,628	\$ 659,269,531	\$ 647,991,127	\$ 585,078,137	\$ 571,529,958	\$ 562,472,896
3. Valuation Assets	<u>532,944,135</u>	<u>524,173,566</u>	<u>502,424,431</u>	<u>481,818,735</u>	<u>450,764,297</u>	<u>420,326,072</u>	<u>382,560,817</u>	<u>345,003,578</u>	<u>349,809,209</u>	<u>350,425,407</u>	<u>302,692,760</u>
4. Unfunded Liability: (2) - (3)	\$ 293,512,535	\$ 297,335,201	\$ 283,896,992	\$ 281,393,630	\$ 163,668,345	\$ 160,811,884	\$ 172,219,375	\$ 192,843,839	\$ 133,278,809	\$ 116,742,323	\$ 147,373,370
5. Total Normal Cost	\$ 12,459,800	\$ 13,593,155	\$ 13,270,880	\$ 13,325,941	\$ 12,887,549	\$ 12,738,395	\$ 12,389,298	\$ 12,762,322	\$ 12,054,234	\$ 12,177,245	\$ 12,534,530
6. Amortization Payment	<u>15,826,828</u>	<u>15,099,550</u>	<u>14,422,028</u>	<u>14,248,299</u>	<u>13,461,332</u>	<u>13,226,395</u>	<u>14,164,634</u>	<u>15,860,947</u>	<u>10,961,865</u>	<u>9,601,780</u>	<u>12,121,109</u>
7. Total Annual Cost: (5) +(6)	\$ 28,286,628	\$ 28,692,705	\$ 27,692,908	\$ 27,574,240	\$ 26,348,881	\$ 25,964,790	\$ 26,553,932	\$ 28,623,269	\$ 23,016,099	\$ 21,779,025	\$ 24,655,639
8. Expected Employee Contributions	<u>\$ 381,182</u>										
9. Total Employer Cost: (7) - (8)	\$ 27,905,446										
10. Earnings for Actives ⁵	\$ 136,020,587	\$ 142,784,262	\$ 148,060,092	\$ 142,780,407	\$ 138,298,787	\$ 138,888,219	\$ 130,827,512	\$ 135,388,262	\$ 135,094,717	\$ 137,657,943	\$ 141,470,278
11. Employer Costs as a % of Earnings ⁵											
a. Normal Cost	9.16%	9.52%	8.96%	9.33%	9.32%	9.17%	9.47%	9.43%	8.92%	8.84%	8.86%
b. Amortization Payment	11.64%	10.58%	9.74%	9.98%	9.73%	9.52%	10.83%	11.71%	8.12%	6.98%	8.57%
c. Expected Employee Contributions	<u>-0.28%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
d. Total	20.52%	9.52%	18.70%	19.31%	19.05%	18.69%	20.30%	21.14%	17.04%	15.82%	17.43%

(1) Reflects a revision in actuarial assumptions

(2) Reflects a revision in actuarial assumptions and amortization of unfunded liability

Schedule M: Plan History

Plan B – Police

	<u>2019</u> ⁽²⁾	<u>2018</u> ⁽¹⁾	<u>2017</u>	<u>2016</u> ⁽²⁾	<u>2015</u> ⁽¹⁾	<u>2014</u>	<u>2013</u>	<u>2012</u> ⁽¹⁾	<u>2011</u>	<u>2010</u> ⁽¹⁾	<u>2009</u> ⁽²⁾
1. Plan Participants											
a. Actives Under NRA	916	897	852	822	811	810	814	813	759	767	763
b. Inactive and Active Past NRA	<u>794</u>	<u>774</u>	<u>758</u>	<u>720</u>	<u>692</u>	<u>655</u>	<u>633</u>	<u>595</u>	<u>577</u>	<u>533</u>	<u>514</u>
c. Total	1,710	1,671	1,610	1,542	1,503	1,465	1,447	1,408	1,336	1,300	1,277
2. Present Value of Benefits	\$ 332,197,243	\$ 330,936,949	\$ 290,061,048	\$ 279,341,873	\$ 264,489,950	\$ 243,307,428	\$ 232,943,031	\$ 228,042,469	\$ 205,267,720	\$ 198,340,450	\$ 195,806,232
3. Valuation Assets	<u>155,893,937</u>	<u>149,231,846</u>	<u>141,988,801</u>	<u>135,563,362</u>	<u>126,796,865</u>	<u>119,762,479</u>	<u>110,613,304</u>	<u>101,673,968</u>	<u>107,137,842</u>	<u>110,995,970</u>	<u>97,656,436</u>
4. Unfunded Liability: (2) - (3)	\$ 176,303,306	\$ 181,705,103	\$ 148,072,247	\$ 143,778,511	\$ 84,854,928	\$ 74,243,970	\$ 75,040,027	\$ 79,418,640	\$ 56,023,135	\$ 45,537,635	\$ 54,522,839
5. Total Normal Cost	\$ 6,012,534	\$ 6,287,974	\$ 5,020,395	\$ 4,789,894	\$ 4,566,306	\$ 4,130,906	\$ 3,902,742	\$ 3,804,404	\$ 3,326,044	\$ 3,581,620	\$ 3,708,957
6. Amortization Payment	<u>9,309,135</u>	<u>9,369,178</u>	<u>7,659,051</u>	<u>7,574,824</u>	<u>6,979,116</u>	<u>6,106,390</u>	<u>6,171,864</u>	<u>6,531,994</u>	<u>4,607,770</u>	<u>3,745,362</u>	<u>4,484,374</u>
7. Total Annual Cost: (5) +(6)	\$ 15,321,669	\$ 15,657,152	\$ 12,679,446	\$ 12,364,718	\$ 11,545,422	\$ 10,237,296	\$ 10,074,606	\$ 10,336,398	\$ 7,933,814	\$ 7,326,982	\$ 8,193,331
8. Expected Employee Contributions	<u>\$ 61,157</u>										
9. Total Employer Cost: (7) - (8)	\$ 15,260,512										
10. Earnings for Actives ⁵	\$ 66,925,767	\$ 69,769,501	\$ 56,136,605	\$ 51,954,979	\$ 50,938,684	\$ 48,132,114	\$ 45,633,400	\$ 45,438,855	\$ 43,020,898	\$ 44,419,461	\$ 44,578,698
11. Employer Costs as a % of Earnings ⁵											
a. Normal Cost	8.98%	9.01%	8.94%	9.22%	8.96%	8.58%	8.55%	8.37%	7.73%	8.06%	8.32%
b. Amortization Payment	13.91%	13.43%	13.64%	14.58%	13.70%	12.69%	13.52%	14.38%	10.71%	8.43%	10.06%
c. Expected Employee Contributions	<u>-0.09%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
d. Total	22.80%	22.44%	22.59%	23.80%	22.67%	21.27%	22.08%	22.75%	18.44%	16.49%	18.38%

(1) Reflects a revision in actuarial assumptions

(2) Reflects a revision in actuarial assumptions and amortization of unfunded liability

Schedule N: Active Participant Distributions

Plan A – Civilian

As of January 1, 2019
Age/Service

Age	0	1	2	3	4	5	6	7	8	9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
16-19	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
20-24	40	18	8	4	-	1	-	-	-	-	-	-	-	-	-	-	-	71
25-29	63	62	35	28	18	9	4	1	1	-	-	-	-	-	-	-	-	221
30-34	49	47	27	45	22	21	20	7	8	2	20	-	-	-	-	-	-	268
35-39	30	28	28	25	25	15	13	15	8	3	56	14	1	-	-	-	-	261
40-44	25	26	13	14	14	13	12	10	6	12	44	42	18	-	-	-	-	249
45-49	24	22	15	17	21	10	11	5	6	1	43	65	48	9	-	-	-	297
50-54	25	21	13	21	29	15	6	13	6	7	52	65	61	58	17	2	-	411
55-59	23	26	23	20	19	16	8	12	9	11	50	79	42	40	51	28	3	460
60-64	19	15	11	14	19	15	14	5	6	16	62	44	22	37	34	35	32	400
65-69	4	8	4	3	6	4	8	6	2	-	21	15	8	8	9	12	9	127
70+	-	-	2	6	2	-	2	-	1	1	9	7	6	1	1	1	2	41
Grand Total	306	274	179	197	175	119	98	74	53	53	357	331	206	153	112	78	46	2,811

Schedule N: Active Participant Distributions

Plan A – Civilian

As of January 1, 2019
Age/Salary

Age	Under 20,000	20,000- 24,999	25,000- 29,999	30,000- 34,999	35,000- 39,999	40,000- 44,999	45,000- 49,999	50,000- 54,999	55,000- 59,999	60,000- 64,999	65,000- 69,999	70,000- 74,999	75,000- 79,999	80,000 Plus	Grand Total
16-19	1	3	-	-	-	-	1	-	-	-	-	-	-	-	5
20-24	5	13	16	7	13	9	3	2	3	-	-	-	-	-	71
25-29	6	19	23	24	28	47	26	19	10	9	2	4	-	4	221
30-34	7	14	27	25	34	43	40	28	11	11	11	7	4	6	268
35-39	5	8	20	25	36	45	34	23	18	9	12	8	6	12	261
40-44	4	6	34	23	29	30	34	24	18	16	5	4	5	17	249
45-49	2	7	28	34	37	33	37	24	23	17	10	5	11	29	297
50-54	3	14	37	41	59	44	39	54	26	25	18	11	8	32	411
55-59	5	14	58	40	46	39	49	41	40	36	24	9	14	45	460
60-64	5	8	39	32	57	46	32	40	26	26	19	17	8	45	400
65-69	1	1	12	14	10	13	12	12	5	6	12	5	3	21	127
70+	-	2	7	7	-	9	3	1	2	4	1	1	1	3	41
Grand Total	44	109	301	272	349	358	310	268	182	159	114	71	60	214	2,811

Schedule N: Active Participant Distributions

Plan A – Civilian

As of January 1, 2019
Service/Salary

Service	Under 20,000	20,000- 24,999	25,000- 29,999	30,000- 34,999	35,000- 39,999	40,000- 44,999	45,000- 49,999	50,000- 54,999	55,000- 59,999	60,000- 64,999	65,000- 69,999	70,000- 74,999	75,000- 79,999	80,000 Plus	Grand Total
0	26	70	56	30	40	41	10	17	2	1	2	2	-	9	306
1	2	9	51	34	32	30	38	14	19	18	10	4	-	13	274
2	2	9	26	22	29	21	26	13	9	7	2	1	5	7	179
3	2	3	34	19	31	32	25	13	6	8	6	7	4	7	197
4	3	2	21	20	30	22	21	15	7	4	8	8	4	10	175
5	2	2	9	16	18	18	16	11	3	6	2	3	6	7	119
6	1	5	15	13	11	10	6	9	7	3	4	3	2	9	98
7	-	2	7	7	11	11	11	10	-	4	2	1	2	6	74
8	-	1	6	7	5	13	6	1	4	2	2	1	1	4	53
9	-	-	10	5	5	9	6	6	3	-	2	1	1	5	53
10-14	1	4	31	31	49	45	48	42	32	24	7	7	6	30	357
15-19	4	1	29	41	49	33	36	39	31	20	14	5	9	20	331
20-24	1	1	5	20	12	34	27	25	15	15	13	9	6	23	206
25-29	-	-	1	6	14	15	11	23	15	13	11	9	9	26	153
30-34	-	-	-	1	5	10	15	12	17	16	12	3	2	19	112
35-39	-	-	-	-	6	6	6	12	9	13	8	4	1	13	78
40+	-	-	-	-	2	8	2	6	3	5	9	3	2	6	46
Grand Total	44	109	301	272	349	358	310	268	182	159	114	71	60	214	2,811

Schedule N: Active Participant Distributions

Plan B – Police

As of January 1, 2019
Age/Service

Age	0	1	2	3	4	5	6	7	8	9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Grand Total
16-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20-24	14	16	14	3	-	-	-	-	-	-	-	-	-	-	-	-	-	47
25-29	14	21	39	29	23	13	9	7	1	-	-	-	-	-	-	-	-	156
30-34	5	26	11	11	14	10	12	19	19	13	35	-	-	-	-	-	-	175
35-39	5	5	5	8	2	3	7	16	8	1	55	9	-	-	-	-	-	124
40-44	1	2	4	2	2	1	2	7	3	1	23	65	27	-	-	-	-	140
45-49	3	2	2	1	1	-	2	4	2	6	8	30	66	14	-	-	-	141
50-54	3	-	-	-	-	-	1	-	2	1	7	7	27	37	5	-	-	90
55-59	-	1	-	-	-	-	-	1	-	-	2	7	18	6	2	2	-	39
60-64	-	-	-	-	-	-	-	-	-	-	-	3	-	2	2	1	3	11
65-69	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	3
70+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	45	73	75	54	42	27	33	54	35	22	130	121	139	60	9	4	3	926

Schedule N: Active Participant Distributions

Plan B – Police

As of January 1, 2019
Age/Salary

Age	Under 20,000	20,000- 24,999	25,000- 29,999	30,000- 34,999	35,000- 39,999	40,000- 44,999	45,000- 49,999	50,000- 54,999	55,000- 59,999	60,000- 64,999	65,000- 69,999	70,000- 74,999	75,000- 79,999	80,000 Plus	Grand Total
16-19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20-24	-	-	1	9	2	3	11	12	6	3	-	-	-	-	47
25-29	1	-	-	3	2	2	12	28	58	34	13	1	-	2	156
30-34	-	-	-	1	1	2	6	25	28	28	38	28	11	7	175
35-39	2	-	-	1	1	2	-	7	11	20	24	23	15	18	124
40-44	1	-	-	1	-	-	-	3	5	5	9	14	30	72	140
45-49	-	-	-	-	-	-	1	3	4	7	6	5	27	88	141
50-54	-	-	-	1	-	-	1	-	-	3	6	1	13	65	90
55-59	-	-	-	-	-	-	-	1	-	1	-	1	5	31	39
60-64	-	-	-	-	-	-	-	-	-	-	-	-	3	8	11
65-69	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
70+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Grand Total	4	-	1	16	6	9	31	79	112	101	96	73	104	294	926

Schedule N: Active Participant Distributions

Plan B – Police

As of January 1, 2019
Service/Salary

Service	Under 20,000	20,000- 24,999	25,000- 29,999	30,000- 34,999	35,000- 39,999	40,000- 44,999	45,000- 49,999	50,000- 54,999	55,000- 59,999	60,000- 64,999	65,000- 69,999	70,000- 74,999	75,000- 79,999	80,000 Plus	Grand Total
0	1	-	1	15	5	1	10	6	1	2	2	-	-	1	45
1	-	-	-	-	1	2	14	41	11	2	1	1	-	-	73
2	1	-	-	-	-	2	2	26	37	6	-	-	-	1	75
3	1	-	-	-	-	1	3	2	30	14	1	-	1	1	54
4	-	-	-	1	-	1	-	-	20	10	9	-	1	-	42
5	-	-	-	-	-	1	1	2	6	14	2	1	-	-	27
6	-	-	-	-	-	-	-	1	3	18	9	1	1	-	33
7	-	-	-	-	-	1	-	-	2	19	20	9	2	1	54
8	-	-	-	-	-	-	-	1	-	12	11	6	2	3	35
9	-	-	-	-	-	-	-	-	1	1	12	6	1	1	22
10-14	1	-	-	-	-	-	-	-	1	2	28	48	25	25	130
15-19	-	-	-	-	-	-	-	-	-	1	-	-	39	81	121
20-24	-	-	-	-	-	-	-	-	-	-	-	1	22	116	139
25-29	-	-	-	-	-	-	-	-	-	-	1	-	8	51	60
30-34	-	-	-	-	-	-	1	-	-	-	-	-	2	6	9
35-39	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4
40+	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
Grand Total	4	-	1	16	6	9	31	79	112	101	96	73	104	294	926