



# City of Taylor General Employees Retirement System

December 31, 2018 | Actuarial Valuation Report

Nyhart Actuary & Employee Benefits

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**Actuarial Certification**

At the request of the plan sponsor, this report summarizes City of Taylor General Employees Retirement System as of December 31, 2018. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status; and
- Determine Recommended Contribution for the fiscal year January 1, 2020 through December 31, 2020;

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the trustee. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. 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); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable.

**Actuarial Certification**

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart



Nick Meggos, EA, FCA  
Enrolled Actuary No. 17-7406

December 17, 2019  
Date

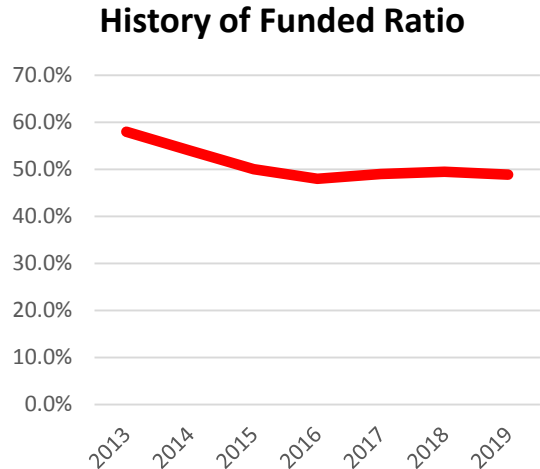


Danielle Winegardner, FSA, EA, MAAA  
Enrolled Actuary No. 17-8260

**Summary Results**

The actuarial valuation’s primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

	December 31, 2017	December 31, 2018
<b>Funded Status Measures</b>		
Accrued Liability	\$82,928,158	\$83,165,689
Actuarial Value of Assets	\$41,054,828	\$40,676,386
Unfunded Accrued Liability	\$41,873,330	\$42,489,303
Funded Percentage (AVA)	49.5%	48.9%
Funded percentage (MVA)	50.5%	45.8%
Interest Rate	7.50%	7.50%
<b>Cost Measures</b>		
Recommended Total Contribution	\$3,964,651	\$4,119,517
Recommended Contribution (as a percentage of payroll)	130.0%	138.0%
<b>Asset Performance</b>		
Market Value of Assets	\$41,838,868	\$38,078,301
Actuarial Value of Assets	\$41,054,828	\$40,676,386
Actuarial Value/Market Value	98%	107%
<b>Member Information</b>		
Active Members	51	48
Terminated Vested Members	24	24
Retirees, Beneficiaries, and Disabled Members	263	266
Total	338	338
Expected Payroll for Current Population	\$3,049,120	\$2,985,903



### **Changes Since Prior Valuation and Key Notes**

- The mortality assumption has been updated from the RP-2006 Healthy Mortality Table projected from 2006 to 2025 with Scale MP-2018 to RP-2006 Healthy Mortality Table projected from 2006 to 2025 with Scale MP 2019. This change resulted in a decrease in accrued liability and normal cost.
- The amortization method has been updated from a 20-year closed amortization period to a 19-year closed amortization period.
- Effective December 31, 2018, there was a change in firm and enrolled actuary for the plan. The methods are substantially the same and the accrued liability, normal cost, and plan assets for the prior year are within 5%. Results from December 31, 2016 and prior plan years shown in this report were obtained from valuation results prepared by Gabriel, Roeder, Smith & Company (GRS).

**Identification of Risks**

The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented in this report. Therefore, it is critical to understand the risks facing this pension plan. The following table shows the risks we believe are most relevant to the City of Taylor General Employees Retirement System. The risks are generally ordered with those we believe to have the most significance at the top. Also shown are possible methods by which a more detailed assessment of the risk can be performed.

<b>Type of Risk</b>	<b>Method to Assess Risk</b>
Investment Return	Scenario Testing; Asset Liability Study
Participant Longevity	Projections and Contribution Strategy; review impact under new Public Plan Mortality tables
Demographic Risk	Scenario Testing

### **Plan Maturity Measures - December 31, 2018**

Each pension plan has a distinct life-cycle. New plans promise future benefits to active employees and then accumulate assets to pre-fund those benefits. As the plan matures, benefits are paid and the pre-funded assets begin to decumulate until ultimately, the plan pays out all benefits. A plan's maturity has a dramatic influence on how risks should be viewed. The following maturity measures illustrate where the City of Taylor General Employees Retirement System falls in its life-cycle.

#### **Duration of Liabilities: 8.47%**

Duration is the most common measure of plan maturity. It is defined as the sensitivity of the liabilities to a change in the interest rate assumption. The metric also approximates the weighted average length of time, in years, until benefits are expected to be paid. A plan with high duration is, by definition, more sensitive to changes in interest rates. A plan with low duration is more susceptible to risk if asset performance deviates from expectations as there would be less time to make up for market losses in adverse market environments while more favorable environments could result in trapped surplus from gains. Conversely, high duration plans can often take on more risk when investing, and low duration plans are less sensitive to interest rate fluctuations.

#### **Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 14.2%**

A plan with a high ratio is more sensitive to fluctuations in salary (if a salary-based plan) and statutory changes. A plan with a low ratio is at higher risk from demographic experience. Such a plan should pay close attention to valuation assumptions as there will be less opportunity to realize future offsetting gains or losses when current experience deviates from assumptions. Plans with a low ratio also have limited opportunities to make alterations to plan design to affect future funded status.

#### **Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: 7.8%**

Younger plans typically have a large payroll base from which to draw in order to fund the plan while mature plans often have a large pool of assets dedicated to providing benefits to a population primarily consisting of members no longer on payroll. Plans with low asset leverage will find it more difficult to address underfunding, as the contributions needed to make up the deficit will represent a higher percentage of payroll than for a plan with high asset leverage.

#### **Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 16.2%**

As a plan enters its decumulation phase, a larger percentage of the pre-funded assets are paid out each year to retirees. A high percentage is not cause for alarm as long as the plan is nearly fully funded. However, such a plan is more sensitive to negative asset performance, especially if cash contributions are not an option to make up for losses.



**Historical Valuation Summary**

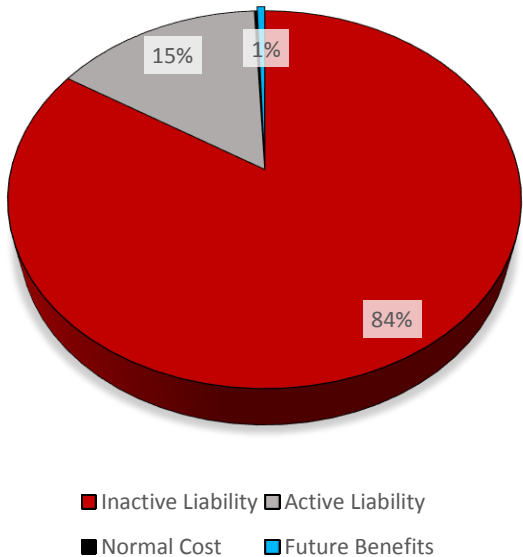
	12/31/2016	12/31/2017	12/31/2018
<b>Funding</b>			
Accrued Liability	\$82,875,223	\$82,928,158	\$83,165,689
Actuarial Value of Assets	\$40,450,820	\$41,054,828	\$40,676,386
Unfunded Actuarial Accrued Liability	\$42,424,403	\$41,873,330	\$42,489,303
Funded Percentage	48.8%	49.5%	48.9%
Total Normal Cost	\$209,962	\$200,901	\$173,696
Interest Rate	7.50%	7.50%	7.50%
Recommended Contribution	\$3,968,766	\$3,964,651	\$4,119,517
<b>Rate of Return</b>			
Actuarial Value of Assets	7.3%	8.7%	4.3%
Market Value of Assets	7.4%	15.9%	-4.1%
<b>Demographic Information</b>			
Active Participants	53	51	48
Terminated Vested Participants	24	24	24
Retired Participants and Beneficiaries	261	263	266
Total Participants	338	338	338
Covered Payroll	\$3,153,836	\$3,049,120	\$2,985,903
Average Covered Pay	\$59,506	\$59,787	\$62,206

**Present Value of Future Benefits**

The Present Value of Future Benefits represents the discounted value of all future benefits expected to be payable to current members, considering future service and compensation not yet earned.

	<b>December 31, 2018</b>
<b>Present Value of Future Benefits</b>	
Active members	
Retirement	\$12,477,509
Disability	282,381
Death	41,337
Termination	594,852
Total active	\$13,396,079
Inactive members	
Retired and Disabled members	\$64,905,903
Beneficiaries	1,354,075
Terminated vested members	4,148,988
Total inactive	\$70,408,966
<b>Total</b>	<b>\$83,805,045</b>
<b>Present Value of Future Payrolls</b>	<b>\$10,255,176</b>

**Breakdown of Present Value of Future Benefits**



**Accrued Liability**

The Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions. It is not a long-term snapshot of the liabilities.

**December 31, 2018**

<b>Accrued Liabilities</b>	
Active members	
Retirement	\$12,077,829
Disability	254,224
Death	36,887
Termination	387,783
Total Active	\$12,756,723
Inactive members	
Retired and Disabled members	\$64,905,903
Beneficiaries	1,354,075
Terminated vested members	4,148,988
Total Inactive	\$70,408,966
Total	\$83,165,689
Total Normal Cost	\$173,696

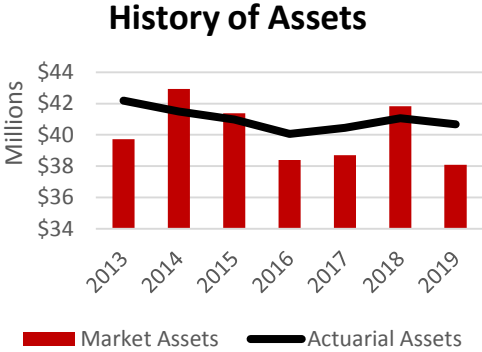
**Asset Information**

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

**Market Value  
December 31, 2018**

**Asset Value Reconciliation**

Value of assets, beginning of year	\$41,838,868
Contributions	
Employer	\$3,968,766
Employee	<u>152,086</u>
Total	\$4,120,852
Investment income, net expenses	\$(1,650,303)
Benefit payments and refunds	(6,176,544)
Administrative expenses	(54,572)
Other expenses	<u>0</u>
Value of assets, end of year	\$38,078,301
Return on Market Value <sup>1</sup>	-4.1%
 <b>Actuarial Value of Plan Assets</b>	 \$40,676,386



<sup>1</sup>Return based on mid-year cash flows

**Asset Information (continued)**

Plan Assets are used to develop funded percentages and contribution requirements.

	<b>December 31, 2018</b>
1. Market value of assets, beginning of year	\$41,838,868
2. Actuarial value of assets, beginning of year	\$41,054,828
3. Market value of assets, end of year	38,078,301
4. Net addition to assets excluding investment income	(2,110,264)
5. Total net investment income (3 - 1 - 4)	(1,650,303)
6. Projected net rate of return	7.5%
7. Projected investment income [6 * (2 + 0.5*4)]	2,999,977
8. Investment income in excess of projected	(4,650,280)
9. Excess investment income recognized	
a. From current year $(\$4,650,280) * 20\%$	(930,056)
b. From 1 year prior $(\$2,996,020) * 20\%$	599,204
c. From 2 years prior $(\$147,737) * 20\%$	(29,547)
d. From 3 years prior $(\$3,081,884) * 20\%$	(616,377)
e. From 4 years prior $(\$1,456,887) * 20\%$	(291,379)
f. Total Cap. Val Change Recognition	(1,268,155)
10. Change in funding value (4 + 7 + 9f)	\$(378,442)
11. Actuarial value of assets, end of year (2 + 10)	40,676,386
12. Return on Actuarial Value	4.3%
13. Actuarial value of assets / Market value of assets	107%

**Reserve Allocation**

In financing the Actuarial Accrued Liabilities, the Market Value of Assets were distributed as follows:

<b>Reserves for</b>	<b>December 31, 2017</b>	<b>December 31, 2018</b>
Fund for Active Employees and for pension payments being paid by the Plan	\$0	\$0
Reserve for pension payments being paid directly by Allmerica	\$0	\$0
Active Reserve – Member Contributions	\$2,558,119	\$2,516,965
Terminated Vested Reserve	3,894,924	4,148,988
Retiree Reserve	66,553,515	66,259,978
Excess of Reserves over Assets	\$(31,167,690)	\$(34,847,630)
<b>Total Fund Balance (Market Value)</b>	<b>\$41,838,868</b>	<b>\$38,078,301</b>

**Reconciliation of Gain/Loss**

**December 31, 2018**

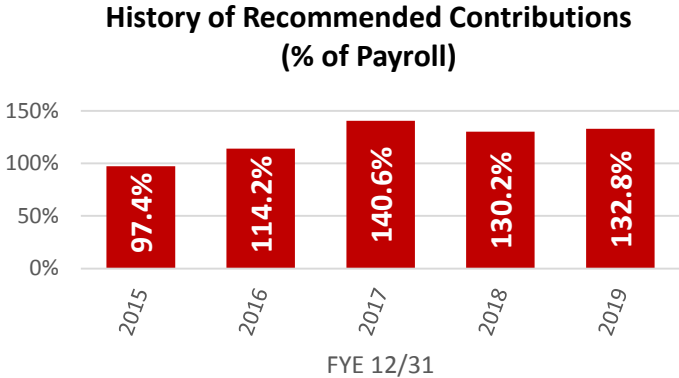
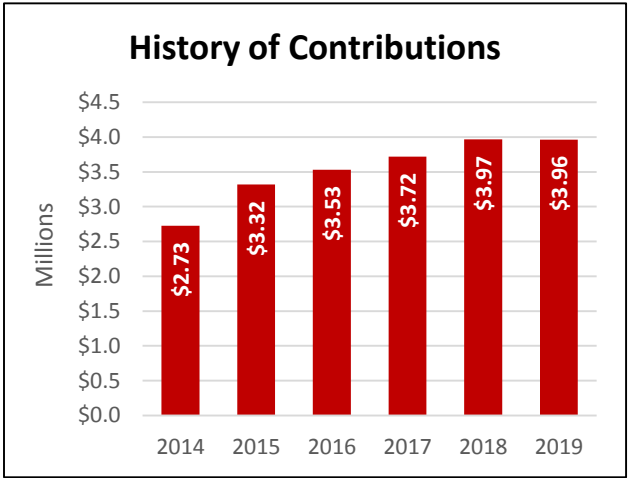
<b>Liability (gain)/loss</b>	
Actuarial liability (12/31/2017)	\$82,928,158
Normal cost	200,901
Benefit payments	(6,176,544)
Expected Interest	6,003,059
Assumption Changes	(200,944)
Plan Provision Changes	0
Expected actuarial liability (12/31/2018)	\$82,754,730
Actual actuarial liability	<u>\$83,165,689</u>
Liability (gain)/loss	\$411,959
<b>Asset (gain)/loss</b>	
Actuarial value of assets (12/31/2017)	\$41,054,828
Contributions	4,120,852
Benefit payments and expenses	(6,231,116)
Expected Investment return	2,999,977
Expected actuarial value of assets (12/31/2018)	\$41,944,541
Actual actuarial value of assets (12/31/2018)	<u>\$40,676,386</u>
Asset (gain)/loss	\$1,268,155
<b>Total (gain)/loss</b>	<b>\$1,679,214</b>

**Contribution Requirements**

**Development of Recommended Contribution**

The minimum recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws. The recommended contribution is composed of the normal cost, administrative expenses, plus an amortization charge.

	<b>December 31, 2018</b>
<b>Funded Position</b>	
1. Present value of future benefits (PVFB)	
Active	\$13,396,079
Inactive	70,408,966
Total	83,805,045
2. Actuarial value of assets	40,676,386
3. Unfunded PVFB (1 - 2)	43,128,659
4. Present value of future employee contributions	512,759
5. Remaining unfunded PVFB after recognition of future employee contributions (3 - 4)	42,615,900
6. Expected Employer Contribution	3,964,651
7. Roll forward of unfunded liability (5 * 1.075 <sup>0.75</sup> - 6)	41,026,594
8. Amortization Period	19 Years
9. Required contribution as of January 1, 2019	\$3,832,109
10. Interest to October 1, 2020	287,408
11. Total required contribution for 2020	\$4,119,517





**Michigan PA 202 Reporting Requirements**

Under Michigan PA 202, reporting of Assets and Liabilities under Plan Assumptions follows what is reported in the audited financial statements under GASB 67/68 for December 31, 2018. In addition, the Plan information is also reported under State Treasury Uniform Assumptions. The Plan Assumptions fall under the guidelines proposed by the Uniform Assumptions other than the Interest Rate which is lowered to 7.00%.

	<b>Plan Assumptions</b>	<b>State Treasury Uniform Assumptions</b>
Interest Rate	7.50%	7.00%
Mortality	RP-2006 Total w/ Scale MP 2018 to 2025	No change
Salary Scale	1.00%, based on plan experience study	Minimum of 3.50%, or based on actuarial experience study conducted within the last 5 years

**PA 202 FY 2019 Reporting**

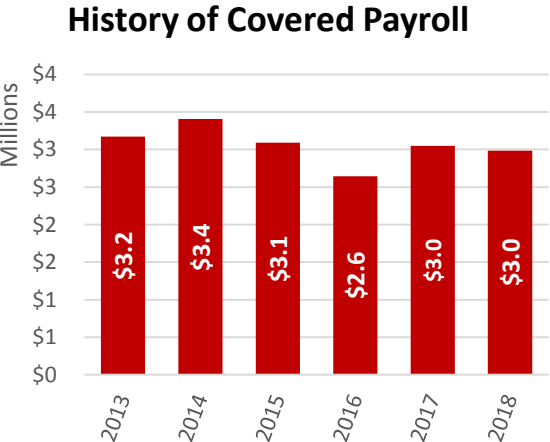
		<b>December 31, 2018</b>
	<b>Plan Assumptions</b>	<b>State Treasury Uniform Assumptions</b>
Accrued Liability	\$82,955,573	\$86,488,766
Market Value of Assets	\$38,078,301	\$38,078,301
Unfunded Accrued Liability, MVA Basis	\$44,877,272	\$48,410,465
<b>Funded Percentage (MVA)</b>	<b>45.9%</b>	<b>44.0%</b>
Actuarially Determined Contribution for Fiscal 2019	\$3,964,651	\$4,094,834

**Demographic Information**

**Demographic Information**

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

	December 31, 2017	December 31, 2018
<b>Participant Counts</b>		
Active Participants	51	48
Receiving Participants	263	266
Terminated Vested Participants	24	24
Total Participants	338	338
<b>Active Participant Demographics</b>		
Average Age	49.7	50.4
Average Service	20.3	21.0
Average Compensation	\$59,787	\$62,206
Covered Payroll	\$3,049,120	\$2,985,903



**Demographic Information**

**Demographic Information (continued)**

	December 31, 2017	December 31, 2018
<b>Retiree Statistics</b>		
Average Age	67.5	68.5
Average Monthly Benefit	\$2,171	\$2,177
<b>Terminated Participant Statistics</b>		
Average Age	48.4	49.5
Average Monthly Benefit	\$1,759	\$1,759

Monitoring the average age of the population is important due to the relationship of actuarial cost to age. Generally speaking, an older population generates a higher actuarial cost.

Changes in the ratio of active to retired participants can be a significant driver of costs in a volatile asset market.

**Participant Reconciliation**

**Participant Reconciliation**

	<b>Active</b>	<b>Terminated Vested</b>	<b>Retired</b>	<b>Totals</b>
<b>Prior Year</b>	51	24	263	338
<b>Active</b>				
To Terminated				
To Retired	(3)		3	0
<b>Terminated Vested</b>				
To Retired				
To Refund				
<b>Retired</b>				
To Death				
<b>Additions</b>				
<b>Removed</b>				
<b>Current Year</b>	48	24	266	338

**Active Participant Schedule**

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	Average Pay
	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 & Up		
Under 25												
25 to 29												
30 to 34												
35 to 39					4	1					5	\$58,585
40 to 44					3	2					5	\$59,006
45 to 49					4	8	2	1			15	\$68,925
50 to 54					2	5	1				8	\$59,991
55 to 59					5	3	1				9	\$60,848
60 to 64					4	1	1				6	\$56,085
65 to 69												
70 & up												
Total					22	20	5	1			48	\$62,206

<b>Accrual of Benefits</b>	A participant shall accumulate a benefit payable at normal retirement date based upon compensation and credited service earned as of the date of determination.
<b>Benefits</b>	
<b>Normal Retirement</b>	See Plan Provisions by Group for the benefit formula applicable to each group.
<b>Early Retirement</b>	Computed as normal retirement benefit based on final average compensation at early retirement date and multiplied by the Table A actuarial reduction factor to reflect retirement prior to normal retirement date.
<b>Late Retirement</b>	Computed as a normal retirement benefit, but increased by a late retirement factor as shown in the Plan Provisions by Group table
<b>Deferred (Vested) Retirement</b>	Computed as a normal retirement benefit based on service and final average compensation at the time of termination of employment.
<b>Death Before Retirement</b>	See Plan Provisions by Group for detail
<b>Death After Retirement</b>	In accordance with optional form elected by the employee
<b>Disability Retirement</b>	See Plan Provisions by Group for detail

**Credited Service** Exact fractional service is used to determine the amount of benefit payable.

**Payment Forms**

Normal Form The assumed normal form of benefit is the straight life form.

**Actuarial Equivalence** 7.5%, and a unisex mortality table based upon a 50% blend of the RP-2014 male and female healthy annuitant mortality tables.

**Plan Provisions Not Included** We are not aware of any plan provisions not included in the valuation

**Adjustments Made for Subsequent Events**

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results of this report

Plan Provisions by Group - Retirement

Group	Retirement Eligibility Age/Service	Deferred Eligibility Age/Service	Early Retirement Eligibility	Annual Amount	AFC (Average Final Compensation)	Covered Compensation in AFC	Member Contribution	Late Retirement Adjustment
<b>Local 1128 AFSCME</b> Hired on/after 8/4/88  Not Eligible: Hired after 12/22/04	55/10 or 50/25	55/10	50/10	2.2% of AFC per year of service to a maximum of 25 years of service.	Average of best 5 <b>consecutive</b> years prior to retirement	Excludes vacation, sick leave and other banks	5% of covered compensation	Increased by 2.2% AFC per year past normal ret date
<b>Local 1917</b> Hired on/after 8/4/88  Not Eligible- Hired after 12/22/04	55/10 or 50/25	55/10	50/10	2.2% of AFC per year of service to a maximum of 25 years of service.	Average of best 5 <b>consecutive</b> years prior to retirement	Excludes vacation, sick leave and other banks	5% of covered compensation	Table H and calculated with AFC at late ret date
<b>Governmental Mgmt. &amp; Administrative Employees</b> hired on/after 5/18/88  Not Eligible: Hired after 3/6/2001, EEs transferred from another bargaining unit on or after November 1, 2008.	55/5	55/5	5 Years of Service	For years of service prior to 1/1/2011, benefit is percentage below times AFC For years of service after 1/1/2011, 2.25% of AFC Benefit is not to exceed 65% of AFC 5 30.0% 6 32.5% 7 35.0% 8 37.5% 9 40.0% 10 42.5% 11 45.0% 12 47.5% 13 52.5% 14 60.0% 15+ 65.0%	Average of best 5 years prior to retirement		5% of covered compensation, Earnings 2% per year	Table H and calculated with AFC at late ret date
<b>Elected Officials</b> hired on/after 11/27/89 Excludes: City Council elected on/after 11/25/1997 Judges elected on/after 10/01/08 Mayor, Clerk, Treasurer elected on/after 11/08/05	55/5	55/5	5 Years of Service	Benefit is percentage below times AFC 5 30.0% 6 32.5% 7 35.0% 8 37.5% 9 40.0% 10 42.5% 11 45.0% 12 47.5% 13 50.0% 14 52.5% 15+ 55.0%	Average of best 5 years prior to retirement		5% of covered compensation, Earnings 5% per year	Table H and calculated with AFC at late ret date



**Plan Provisions by Group – Death Before Retirement Benefits**

Death Before Retirement Benefits			
Group	Eligibility		Annual Amount
	Payable To	Years of Service	
<p><b>Local 1128 AFSCME</b>                      Hired on/after 8/4/88</p> <p><u>Not Eligible:</u>                      Hired after 12/22/04</p>	EE's Spouse or dependent Child(ren)	10	Refund of employee's contributions or 50% of the employee's vested benefit, whichever is higher. If the employee is not eligible to retire at date of death, the benefit begins at the earliest date the employee could have retired had the employee survived. If the employee is not married nor has any dependent child(ren) at date of death, or has less than the required years of service, the employee's named beneficiary will receive a refund of employee's contributions.
<p><b>Local 1917</b>                      Hired on/after 8/4/88</p> <p><u>Not Eligible:</u>                      Hired after 12/22/04</p>	EE's Spouse for Life	10	Equal to 50% of the retirement benefit the employee could have received if eligible for retirement at date of death. If the employee is not eligible to retire at date of death, the benefit begins at earliest date the employee could have retired had the employee survived. If the employee is not married at date of death, or has less than the required years of service, the employee's named beneficiary will receive a refund of employee's contributions.
<p><b>Governmental Mgmt. &amp; Administrative Employees</b>                      hired on/after 5/18/88</p> <p><u>Not Eligible:</u>                      Hired after 3/6/2001,                      EEs transferred from another bargaining unit on or after November 1, 2008.</p>	EE's Spouse for Life	5	If an employee who is vested in the pension plan dies prior to retirement, his/her beneficiary will receive the employee's accrued pension benefit for life actuarially adjusted based on the age of the beneficiary at the time the benefit is paid. Beneficiary shall be defined as: spouse or (in the absence of a spouse) minor children until the age of 21.
<p><b>Elected Officials</b>                      hired on/after 11/27/89</p> <p><u>Excludes:</u>                      City Council elected on/after 11/25/1997                      Judges elected on/after 10/01/08                      Mayor, Clerk, Treasurer elected on/after 11/08/05</p>	EE's Spouse for Life	5	Equal to 50% of the retirement benefit the employee could have received if eligible for retirement at date of death. If the employee is not eligible to retire at date of death, the benefit begins at earliest date the employee could have retired if he had survived. If the employee is not married at date of death, or has less than 5 years of service, the employee's named beneficiary will receive a refund of employee's contributions with interest.

Plan Provisions by Group – Disability Retirement

Disability Retirement		
Group	Eligibility	Annual Amount
<p><b>Local 1128 AFSCME</b> Hired on/after 8/4/88</p> <p><u>Not Eligible:</u> Hired after 12/22/04</p>	<p>10 years of service credited in System, and must be eligible to receive Social Security disability benefits.</p>	<p>2% of final average compensation per year of service. The benefit is recalculated at normal retirement based on normal retirement benefit formula.</p>
<p><b>Local 1917</b> Hired on/after 8/4/88</p> <p><u>Not Eligible-</u> Hired after 12/22/04</p>	<p>10 years of service credited in System, and must be eligible to receive Social Security disability benefits.</p>	<p>2.2% of final average compensation per year of service. The benefit is re-calculated at normal retirement based on normal retirement benefit formula.</p>
<p><b>Governmental Mgmt. &amp; Administrative Employees</b> hired on/after 5/18/88</p> <p><u>Not Eligible:</u> Hired after 3/6/2001, EEs transferred from another bargaining unit on or after November 1, 2008.</p>	<p>No age or service requirement, but must be eligible to receive Social Security disability benefits.</p>	<p>66 2/3% of earnings with a maximum benefit of \$2,000/month. The benefit is re-calculated at normal retirement based on normal retirement benefit formula.</p>
<p><b>Elected Officials</b> hired on/after 11/27/89</p> <p><u>Excludes:</u> City Council elected on/after 11/25/1997 Judges elected on/after 10/01/08 Mayor, Clerk, Treasurer elected on/after 11/08/05</p>	<p>No age or service requirement, but must be eligible to receive Social Security disability benefits.</p>	<p>66 2/3% of earnings with a maximum benefit of \$2,000/month. The benefit is re-calculated at normal retirement based on normal retirement benefit formula.</p>

**Actuarial Assumptions and Methods**

<b>Valuation Date</b>	December 31, 2018
<b>Participant Information as of</b>	December 31, 2018
<b>Asset Information as of</b>	December 31, 2018
<b>Cost Method</b>	Aggregate
<b>Amortization Method</b>	Level dollar, closed
<b>Remaining amortization period</b>	19 years
<b>Payroll Growth Assumptions</b>	1.00%
<b>Asset Valuation Method</b>	Spreads actual vs. expected investment income over a period of four years
<b>Interest Rates</b>	
Investment Rate of Return	7.50%, net of expenses The interest rate is the long term rate of return on assets. This assumption is supported by the investment mix of the plan assets and long-term capital market return assumptions.
<b>Mortality Rates</b>	
Healthy	RP-2006 Healthy mortality table, projected from 2006 to 2025 with Scale MP-2019.
Disabled	RP-2006 Disabled mortality table, projected from 2006 to 2025 with Scale MP-2019.  As the plan is not large enough to have credible experience, mortality assumptions are set to reflect general population trends.
<b>Marital Status and Ages</b>	100% of males and 100% of females are assumed to be married for purposes of death benefits.

**Actuarial Assumptions**

**Expense Loading**

The present value of future benefits for actives was loaded by 1.5% for groups that include vacation and sick leave banks in final average compensation.

**Retirement Rates**

Normal Retirement

For all members from Local 1128 AFSCME and Local 1917:

Retirement Ages	% of Active Members
	Retiring within Next Year
50	50%
51	50%
52	50%
53	50%
54	50%
55	50%
56	10%
57	10%
58	10%
59	10%
60	100%

All other members were assumed to retire at their earliest normal retirement age

Retirement rates, Disability rates, and Withdrawal rates are based on the most recent experience study.

**Disability Rates**

Disability decrements do not operate during the first 5 years of service.

Sample Age	Probability of Becoming Disabled within Next Year	
	MALE	FEMALE
20	0.07%	0.03%
25	0.09%	0.05%
30	0.10%	0.07%
35	0.14%	0.13%
40	0.21%	0.19%
45	0.32%	0.28%
50	0.52%	0.45%
55	0.92%	0.76%

**Withdrawal Rates**

Withdrawal rates vary by age. Rates of withdrawal from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	% of Active Members Withdrawing within Next Year
20	7.94%
25	7.72%
30	7.22%
35	6.28%
40	5.15%
45	3.98%
50	2.56%
55	0.94%
60	0.09%

**Changes Since the Prior Year**

There are no changes from the prior year.