Attachment 1

Michigan Department of Treasury
5598 (08-18)

# Protecting Local Government Retirement and Benefits Act
# Corrective Action Plan:
# Defined Benefit Pension Retirement Systems

Issued under authority of Public Act 202 of 2017.

## 1. MUNICIPALITY INFORMATION

Local Unit Name: City of Westland Six-Digit Muni Code: 822310

Defined Benefit Pension System Name: MERS

Contact Name (Administrative Officer): Steven J. Smith

Title if not Administrative Officer: Finance Director

Email: ssmith@cityofwestland.com Telephone: (734) 467-3169

## 2. GENERAL INFORMATION

**Corrective Action Plan:** An underfunded local unit of government shall develop and submit for approval a corrective action plan for the local unit of government. The local unit of government shall determine the components of the corrective action plan. This Corrective Action Plan shall be submitted by any local unit of government with at least one defined benefit pension retirement system that has been determined to have an underfunded status. Underfunded status for a defined benefit pension system is defined as being less than 60% funded according to the most recent audited financial statements, and, if the local unit of government is a city, village, township, or county, the annually required contribution (ARC) for all of the defined benefit pension retirement systems of the local unit of government is greater than 10% of the local unit of government's annual governmental fund revenues, based on the most recent fiscal year.

**Due Date**: The local unit of government has **180 days from the date of notification** to submit a corrective action plan to the Municipal Stability Board (the Board). The Board may extend the 180-day deadline by up to an additional 45 days if the local unit of government submits a reasonable draft of a corrective action plan and requests an extension.

**Filing:** Per Sec. 10(1) of PA 202 of 2017 (the Act), this Corrective Action Plan must be approved by the local government's administrative officer and its governing body. ***You must provide proof of your governing body approving this Corrective Action Plan and attach the documentation as a separate PDF document.*** Per Sec. 10(4) of the Act, failure to provide documentation that demonstrates approval from your governing body will result in a determination of noncompliance by the Board.

The submitted plan must demonstrate through distinct supporting documentation how and when the local unit will reach the 60% funded ratio. Or, if the local unit is a city, village, township, or county, the submitted plan may demonstrate how and when the ARC for all of the defined benefit pension systems will be less than 10% of annual governmental fund revenues, as defined by the Act. Supporting documentation for the funding ratio and/or ARC must include an actuarial projection, an actuarial valuation, or an internally developed analysis. The local unit must project governmental fund revenues using a reasonable forecast based on historical trends and projected rates of inflation.

The completed plan must be submitted via email to Treasury at LocalRetirementReporting@michigan.gov for review by the Board. **If you have multiple underfunded retirement systems, you are required to complete separate plans and send a separate email for each underfunded system.** Please attach each plan as a separate PDF document in addition to all applicable supporting documentation.

The subject line of the email(s) should be in the following format: **Corrective Action Plan-2017, Local Unit Name, Retirement System Name** (e.g. Corrective Action Plan-2017, City of Lansing, Employees' Retirement System

Pension Plan). Treasury will send an automatic reply acknowledging receipt of the email. Your individual email settings must allow for receipt of Treasury's automatic reply. This will be the only notification confirming receipt of the application(s).

**Municipal Stability Board:** The Municipal Stability Board (the Board) shall review and vote on the approval of a corrective action plan submitted by a local unit of government. If a corrective action plan is approved, the Board will monitor the corrective action plan for the following two years, and the Board will report on the local unit of government's compliance with the Act not less than every two years.

**Review Process:** Following receipt of the email by Treasury, the Board will accept the corrective action plan submission at the next scheduled meeting of the Board. The Board shall then approve or reject the corrective action plan within 45 days from the date of the meeting.

**Considerations for Approval**: A successful corrective action plan will demonstrate the actions for correcting underfunded status as set forth in Sec. 10(7) of the Act (listed below), as well as any additional solutions to address the underfunded status. Please also include steps already taken to address your underfunded status as well as the date prospective actions will be taken. A local unit of government may also include in its corrective action plan, a review of the local unit of government's budget and finances to determine any alternative methods available to address its underfunded status. A corrective action plan under this section may include the development and implementation of corrective options for the local unit of government to address its underfunded status. The corrective options as described in Sec. 10(7) may include, but are not limited to, any of the following:

(i) Closing the current defined benefit plan.

(ii) Implementing a multiplier limit.

(iii) Reducing or eliminating new accrued benefits.

(iv) Implementing final average compensation standards.

**Implementation:** The local unit of government has up to 180 days after the approval of a corrective action plan to begin to implement the corrective action plan to address its underfunded status. The Board shall monitor each underfunded local unit of government's compliance with this act and any corrective action plan. The Board shall adopt a schedule, not less than every 2 years, to certify that the underfunded local unit of government is in substantial compliance with the Act. If the Board determines that an underfunded local unit of government is not in substantial compliance under this subsection, the Board shall within 15 days provide notification and report to the local unit of government detailing the reasons for the determination of noncompliance with the corrective action plan. The local unit of government has 60 days from the date of the notification to address the determination of noncompliance.

## 3. DESCRIPTIONS OF PRIOR ACTIONS

Prior actions are separated into three categories below: System Design Changes, Additional Funding, and Other Considerations. Please provide a brief description of the prior actions implemented by the local government to address the retirement system's underfunded status within the appropriate category section. Within each category are sample statements that you may choose to use to indicate the changes to your system that will positively affect your funded status. For retirement systems that have multiple divisions, departments, or plans within the same retirement system, please indicate how these changes impact the retirement **system** as a whole.

- **Please Note:** If applicable, prior actions listed within your waiver application(s) may also be included in your corrective action plan.

Please indicate where in the attached supporting documentation these changes are described and the impact of those changes (i.e. what has the local unit of government done to improve its underfunded status, and where can we find the proof of these changes in the supporting documentation?).

**Note:** Please provide the name of the system impacted, the date you made the change, the relevant page number(s) within the supporting documentation, and the resulting change to the system's funded ratio.

**Category of Prior Actions:**

☒ **System Design Changes -** System design changes may include the following: Lower tier of benefits for new hires, final average compensation limitations, freeze future benefit accruals for active employees in the defined benefit system, defined contribution system for new hires, hybrid system for new hires, bridged multiplier for active employees, etc.

**Sample Statement**: *The system's multiplier for current employees was lowered from 2.5X to 2X for the* ***General Employees' Retirement System*** *on* ***January 1, 2017****. On page* ***8*** *of the attached actuarial supplemental valuation, it shows our funded ratio will be* ***60%*** *by fiscal year* ***2020.***

Over the last several years, the City has worked to implement changes to each Division within the MERS pension plan. We have summarized the changes that have been made in Attachment 5a.

☒ **Additional Funding –** Additional funding may include the following: Voluntary contributions above the actuarially determined contribution, bonding, millage increases, restricted funds, etc.

**Sample Statement:** *The local unit provided a lump sum payment of* ***$1 million*** *to the* ***General Employees' Retirement System*** *on* ***January 1, 2017****. This lump sum payment was in addition to the actuarially determined contribution (ADC) of the system. The additional contribution will increase the retirement system's funded ratio to* ***61% by 2025****. Please see page* ***10*** *of the attached enacted budget, which highlights this contribution of* ***$1 million****.*

The City has contributed additional contributions over the last four fiscal years that total $1,720,630. Attachment 3a summarizes the additional contributions.

☐ **Other Considerations** – Other considerations may include the following: outdated Form 5572 information, actuarial assumption changes, amortization policy changes, etc.

**Sample Statement:** *The information provided on the Form 5572 from the audit used actuarial data from* ***2015****. Attached is an updated actuarial valuation for* ***2017*** *that shows our funded ratio has improved to* ***62%*** *as indicated on page* ***13****.*

## 4. DESCRIPTION OF PROSPECTIVE ACTIONS

The corrective action plan allows you to submit a plan of prospective actions which are separated into three categories below: System Design Changes, Additional Funding, and Other Considerations. Please provide a brief description of the additional actions the local government is planning to implement to address the retirement system's underfunded status within the appropriate category section. Within each category are sample statements that you may choose to use to indicate the changes to your system that will positively affect your funded status. For retirement systems that have multiple divisions, departments, or plans within the same retirement system, please indicate how these changes impact the retirement **system** as a whole.

Attachment 1

Please indicate where in the attached supporting documentation these changes are described and the impact of those changes (i.e. what will the local unit of government do to improve its underfunded status, and where can we find the proof of these changes in the supporting documentation?).

**Category of Prospective Actions:**

☒ **System Design Changes -** System design changes may include the following: Lower tier of benefits for new hires, final average compensation limitations, freeze future benefit accruals for active employees in the defined benefit system, defined contribution system for new hires, hybrid system for new hires, bridged multiplier for active employees, etc.

**Sample Statement**: *Beginning with **summer 2018** contract negotiations, the local unit will seek to lower the system's multiplier for current employees from 2.5X to 2X for the **General Employees' Retirement System**. On page **8** of the attached actuarial supplemental valuation, it shows our funded ratio would be **60%** funded by **fiscal year 2020** if these changes were adopted and implemented by **fiscal year 2019.***

See attachment 5a in section 4. Description of Prospective Actions for all documentation.

☐ **Additional Funding –** Additional funding may include the following: voluntary contributions above the actuarially determined contribution, bonding, millage increases, restricted funds, etc.

**Sample Statement:** Beginning in **fiscal year 2019,** t*he local unit will provide a lump sum payment of **$1 million** to the **General Employees' Retirement System**. This lump sum payment will be in addition to the actuarially determined contribution (ADC) of the system. The additional contribution will increase the retirement system's funded ratio to **61% by 2025**. Please see page **10** of the attached enacted budget, which highlights this contribution of **$1 million**. Please see page **12** of the attached supplemental actuarial valuation showing the projected change to the system's funded ratio with this additional contribution.*

☒ **Other Considerations** – Other considerations may include the following: outdated Form 5572 information, actuarial assumption changes, amortization policy changes, etc.

**Sample Statement:** *Beginning in **fiscal year 2019**, the local unit will begin amortizing the unfunded portion of the pension liability using a **level-dollar amortization method over a closed period of 10 years**. This will allow the retirement system to reach a funded status of **62%** by **2022** as shown in the attached actuarial analysis on page **13**.*

See attachment 5a. In 4. Description of Prospective Actions in attachment 5a, there is a section for Other Considerations. The City has summarized additional items to consider.

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## 5. CONFIRMATION OF FUNDING

**Please check the applicable answer:**

Do the corrective actions listed in this plan allow for (insert local unit name) City of Westland to make, at a minimum, the annual required contribution payment for the defined benefit pension system according to your long-term budget forecast?

☒ **Yes**
☐ **No**
**If No, Explain**

## 6. DOCUMENTATION ATTACHED TO THIS CORRECTIVE ACTION PLAN

Documentation should be attached as a .pdf to this Corrective Action Plan. The documentation should detail the corrective action plan that would be implemented to adequately address the local unit of government's underfunded status. Please check all documents that are included as part of this plan and attach in successive order as provided below:

**Naming convention:** when attaching documents please use the naming convention shown below. If there is more than one document in a specific category that needs to be submitted, include a, b, or c for each document. For example, if you are submitting two supplemental valuations, you would name the first document "Attachment 2a" and the second document "Attachment 2b".

| Naming Convention | Type of Document |
|---|---|
| ☒ Attachment – 1 | **This Corrective Action Plan Form (Required)** |
| ☒ Attachment – 1a | **Documentation from the governing body approving this Corrective Action Plan (Required)** |
| ☒ Attachment – 2a | **An actuarial projection, an actuarial valuation, or an internally developed analysis, which illustrates how and when the local unit will reach the 60% funded ratio. Or, if the local unit is a city, village, township, or county, ARC will be less than 10% of governmental fund revenues, as defined by the Act. (Required)** |
| ☒ Attachment – 3a | Documentation of additional payments in past years that is not reflected in your audited financial statements (e.g. enacted budget, system provided information). |
| ☐ Attachment – 4a | Documentation of commitment to additional payments in future years (e.g. resolution, ordinance) |
| ☒ Attachment – 5a | A separate corrective action plan that the local unit has approved to address its underfunded status, which includes documentation of prior actions, prospective actions, and the positive impact on the system's funded ratio |
| ☐ Attachment –6a | Other documentation not categorized above |

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## 7. CORRECTIVE ACTION PLAN CRITERIA

Please confirm that each of the four corrective action plan criteria listed below have been satisfied when submitting this document. Specific detail on corrective action plan criteria can be found in the Corrective Action Plan Development: Best Practices and Strategies document.

| Corrective Action Plan Criteria | Description |
|---|---|
| ☒ Underfunded Status | Is there a description and adequate supporting documentation of how and when the retirement system will reach the 60% funded ratio? Or, if your local unit is a city, village, township, or county, how and when the ARC of all pension systems will be less than 10 percent of governmental fund revenues? |
| ☒ Reasonable Timeframe | Do the corrective actions address the underfunded status in a reasonable timeframe (see CAP criteria issued by the Board)? |
| ☒ Legal and Feasible | Does the corrective action plan follow all applicable laws? Are all required administrative certifications and governing body approvals included? Are the actions listed feasible? |
| ☒ Affordability | Do the corrective action(s) listed allow the local unit to make the annual required contribution payment for the pension system now and into the future without additional changes to this corrective action plan? |

## 8. LOCAL UNIT OF GOVERNMENT'S ADMINISTRATIVE OFFICER APPROVAL OF CORRECTIVE ACTION PLAN

I Steve Smith, as the government's administrative officer *(enter title)* Finance Director (Ex: City/Township Manager, Executive director, and Chief Executive Officer, etc.) approve this Corrective Action Plan and will implement the prospective actions contained in this Corrective Action Plan.

I confirm to the best of my knowledge that because of the changes listed above, one of the following statements will occur:

☒ The MERS Pension Plan (**Insert Retirement Pension System Name)** will achieve a funded status of at least 60% by Fiscal Year 2030 as demonstrated by required supporting documentation listed in section 6.

**OR, if the local unit is a city, village, township, or county:**

☐ The ARC for all of the defined benefit pension retirement systems of ____________ (**Insert local unit name)** will be less than 10% of the local unit of government's annual governmental fund revenues by Fiscal Year ________ as demonstrated by required supporting documentation listed in section 6.

Signature Steven J. Smith Date 11/05/2018

Attachment 1a

# City of Westland

**Richard LeBlanc**
City Clerk

(734) 467-3185
Fax (734) 422-1208
email: clerk@cityofwestland.com

**RESOLUTION NO. 2018-11-197**

**Motion by** **Londeau** **supported by** **Hart**

**WHEREAS:** The City of Westland is requesting approval of application to the State of Michigan for MERS Defined Benefit Pension Retirement Systems Corrective Action Plan, and,

**WHEREAS:** The City of Westland is requesting approval because the MERS Pension Plan will achieve a funded status of at least 60% by Fiscal Year 2030 as demonstrated by required supporting documentation listed in Section 6 of this application.

**NOW, THERFORE, BE IT RESOLVED,** that the City of Westland grants approval of MERS Defined Benefit Pension Retirement Systems Corrective Action Plan.

**CERTIFICATION**

I, Richard LeBlanc, City Clerk for the City of Westland, hereby certify that the foregoing is a true and accurate copy of a resolution **(Resolution No. 2018-11-197)** adopted by the City Council of the City of Westland, Wayne County, at a regular meeting held on the **5th** day of **November, 2018,** and that the public notice of said meeting was given pursuant to Act. No. 267, Public Acts of Michigan, 1976, including in the case of a special or rescheduled meeting, or a meeting recessed for more than thirty-six hours, notice by posting at least eighteen hours prior to the time set for the meeting.

Richard LeBlanc
Westland City Clerk

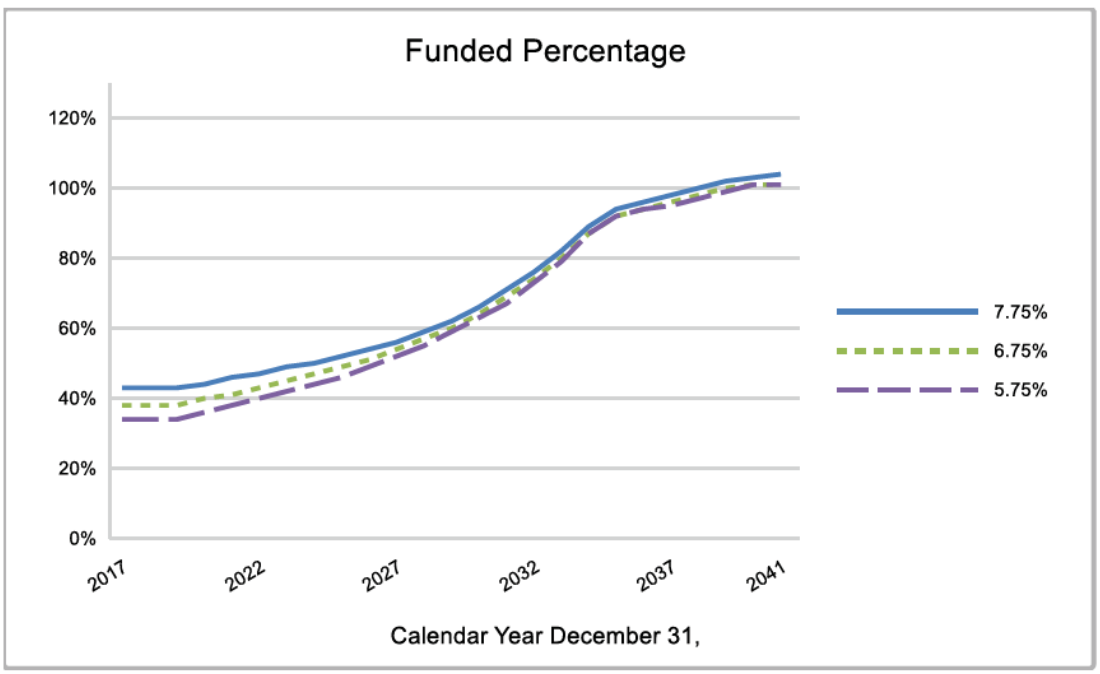

36300 Warren Road • Westland, Michigan 48185

To fulfill Underfunded Status and Reasonable Timeframe approval criteria:

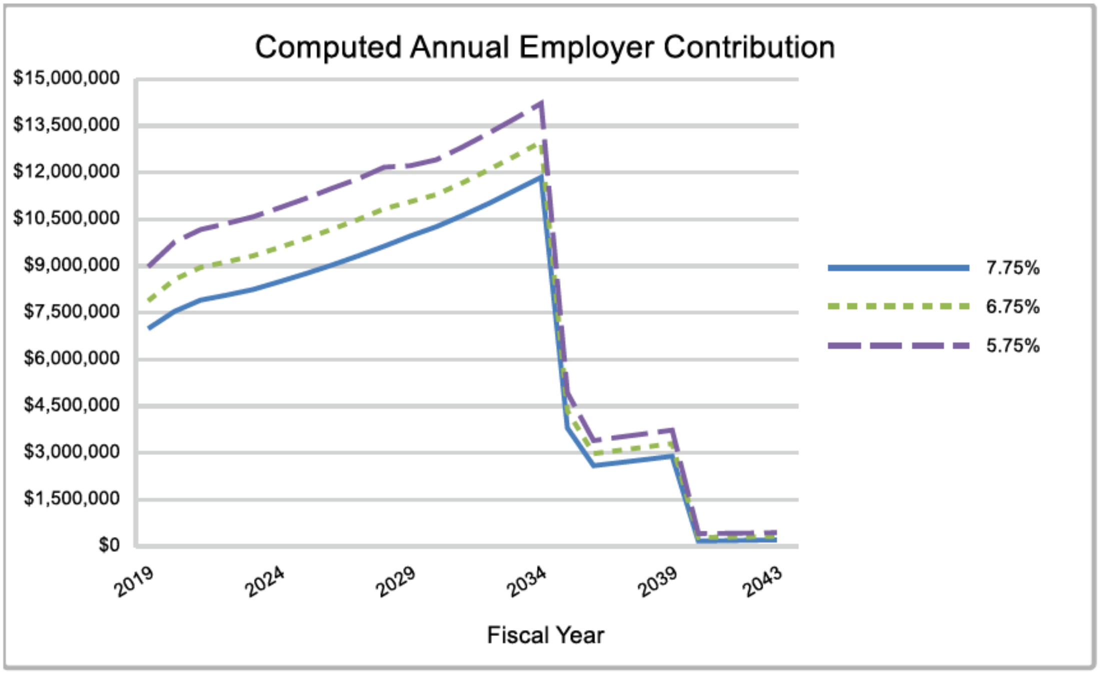
The subsequent pages present the computed annual employer contribution and funded percentage over time as calculated by CBIZ Retirement Plan Services for the Municipal Employees' Retirement System of Michigan (MERS). The assumptions used to calculate the charts are in line with the PA 202 of 2017 assumptions. These assumptions can be found at this website [http://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2017AnnualActuarialValuation-Appendix.pdf](http://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2017AnnualActuarialValuation-Appendix.pdf)

The two pictures in the description below show lines using an interest rate for discounting liabilities and an investment rate of return on the market value of assets of 5.75%, 6.75%, and 7.75%. The current funding plan from MERS is based on the 7.75%. The 7.75 % is used for funding based on what the plan is expected to earn over time. PA 202 of 2017 uniform assumptions requires at a maximum of 7%. MERS has an evaluation of something similar to 7% by using 6.75%. We have included this analysis below of the 6.75%. However, our plan below is to base our funding on the 7.75% based on the plan's strategies and returns projected by MERS Investment Group.

According to the MERS annual actuarial valuation for December 30, 2017, the pension fund will reach 60 percent funded by approximately the year 2030. This is within the recommended 60 percent funded within 20 years timeframe for those plans below 45 percent funded. See below for information from the 2017 MERS actuary report (page 14 of the report)




The actual employer contribution is approximately $6.7 million for 2019, increases to $8.5 million in 2024, and increases every year thereafter by approximately 2 to 3 percent until the City reaches approximately 80 percent funded in the year 2034. The amount the City will have to contribute after year 2034 dramatically decreases each year until the fund is 100 percent funded in approximately 2040. See below for information from the 2017 MERS actuary report (page 14 of the report).




Below is an analysis of the graph above that compares the annual required contribution (ARC) to the total governmental fund revenue. The ARC is split between the General Fund and Water & Sewer Fund by approximately 75% and 25%, respectively, based on the number of employees in each group. The Total Governmental Fund revenues is projected out using a 2% increase. The total ARC/Total Governmental Fund Revenues do not exceed 10% based on the projection.

| Year | General Fund ARC | Water & Sewer ARC | Total ARC | Estimated Total Governmental Fund Revenues using 2% increase estimate | Total ARC/Total Governmental Fund Revenues |
|---|---|---|---|---|---|
| 2019 | 5,072,841.00 | 1,690,947.00 | 6,763,788.00 | 80,757,317.00 | 8.38% |
| 2020 | 5,587,500.00 | 1,862,500.00 | 7,450,000.00 | 82,372,463.34 | 9.04% |
| 2021 | 5,955,000.00 | 1,985,000.00 | 7,940,000.00 | 84,019,912.61 | 9.45% |
| 2022 | 6,075,000.00 | 2,025,000.00 | 8,100,000.00 | 85,700,310.86 | 9.45% |
| 2023 | 6,210,000.00 | 2,070,000.00 | 8,280,000.00 | 87,414,317.08 | 9.47% |

Attachment 2b

**MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN**
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2017
WESTLAND,CITY OF (8211)

Spring, 2018

Westland,City of

In care of:
Municipal Employees' Retirement System of Michigan
1134 Municipal Way
Lansing, Michigan 48917

This report presents the results of the Annual Actuarial Valuation, prepared as of December 31, 2017. The report includes the determination of liabilities and contribution rates resulting from the participation of Westland,City of (8211) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is an independent, professional retirement services company that was created to administer retirement plans for Michigan municipalities on a not-for-profit basis. This report contains the minimum actuarially determined contribution requirement, in alignment with the MERS Plan Documents, funding policy and Michigan Constitution. Westland,City of is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees under the Michigan Constitution and the MERS Plan Document.

The purpose of the December 31, 2017 annual actuarial valuation is to:

- Measure funding progress
- Establish contribution requirements for the fiscal year beginning July 1, 2019
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements

This valuation report should not be relied upon for any other purpose. Reliance on information contained in this report by anyone for anything other than the intended purpose could be misleading.

The valuation uses financial data, plan provision data, and participant data as of December 31, 2017 furnished by MERS. In accordance with Actuarial Standards of Practice No. 23, the data was checked for internal and year to year consistency as well as general reasonableness, but was not otherwise audited. CBIZ Retirement Plan Services does not assume responsibility for the accuracy or completeness of the data used in this valuation.

The actuarial assumptions and methods are adopted by the MERS Retirement Board, and are reviewed every five years in an Experience Study. The most recent study was completed in 2015. Please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:
www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2017AnnualActuarialValuation-Appendix.pdf.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The actuarial assumptions used for this valuation produce results that we believe are reasonable.

To the best of our knowledge, this report is complete and accurate, was prepared in conformity with generally recognized actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and is in compliance with Act No. 220 of the Public Acts of 1996, as amended, and the MERS Plan Document as revised. All of the undersigned are members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

This information is purely actuarial in nature. It is not intended to serve as a substitute for legal, accounting or investment advice.

**This report was prepared at the request of the Retirement Board and may be provided only in its entirety by the municipality to other interested parties (MERS customarily provides the full report on request to associated third parties such as the auditor for the municipality). CBIZ Retirement Plan Services is not responsible for the consequences of any unauthorized use.**

You should notify MERS if you disagree with anything contained in the report or are aware of any information that would affect the results of the report that have not been communicated to us. If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, that conditions have changed since the calculations were made, that the information provided in this report is inaccurate or is in anyway incomplete, or if you need further information in order to make an informed decision on the subject matter in this report, please contact your Regional Manager at 1.800.767.MERS (6377).

Sincerely,

Cathy Nagy, MAAA, FSA
Jim Koss, MAAA, ASA
Curtis Powell, MAAA, EA


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## Executive Summary

### Funded Ratio and Required Employer Contributions

The MERS Defined Benefit Plan is an agent multiple-employer plan, meaning that assets are pooled for investment purposes but separate accounts are maintained for each individual employer. Each municipality is responsible for their own plan liabilities; MERS does not borrow from one municipality's account to pay for another.

The funded ratio of a plan is the percentage of the dollar value of the accrued benefits that is covered by the actuarial value of assets.

**Your Funded Ratio:**

| | 12/31/2017 * | 12/31/2016 |
|---|---|---|
| **Funded Ratio** | 43% | 43% |

* Reflects assets from Surplus divisions, if any.

Michigan Law requires that pension plans be pre-funded, meaning money is set aside now to pay for future benefits. Pension plans are usually funded by employer and employee contributions, and investment income.

How quickly a plan attains the 100% funding goal depends on many factors such as:

- The current funded ratio
- The future experience of the plan
- The amortization period

It is more important to look at the trend in the funded ratio over a period of time than at a particular point in time.


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## Your Required Employer Contributions:

Your computed employer contributions are shown in the following table. Employee contributions, if any, are in addition to the computed employer contributions. Changes to the assumptions and methods based on the 2015 Experience Study were first reflected in the December 31, 2015 valuations. The impact of these changes is being phased-in over a 5 year period. The phase-in allows the employer to spread the impact of the new assumptions over 5 fiscal years. This valuation reflects the third year of the phase-in.

Your minimum required contribution is the amount in the “Phase-in” columns. By default, MERS will invoice you the phased-in contribution amount, but strongly encourages you to contribute more than the minimum required contribution. If for 2018 your municipality is making employer contributions based on rates without the phase-in applied, contact MERS to ensure the No Phase-in rate is used again for 2019 and not the defaulted phase-in rates.

| | Percentage of Payroll | | | | Monthly $ Based on Projected Payroll | | | |
|---|---|---|---|---|---|---|---|---|
| | Phase-in | No Phase-in | Phase-in | No Phase-in | Phase-in | No Phase-in | Phase-in | No Phase-in |
| Valuation Date: | 12/31/2017 | 12/31/2017 | 12/31/2016 | 12/31/2016 | 12/31/2017 | 12/31/2017 | 12/31/2016 | 12/31/2016 |
| Fiscal Year Beginning: | July 1, 2019 | July 1, 2019 | July 1, 2018 | July 1, 2018 | July 1, 2019 | July 1, 2019 | July 1, 2018 | July 1, 2018 |
| **Division** | | | | | | | | |
| 10 - AFSCME | - | - | - | - | $ 201,197 | $ 210,067 | $ 182,357 | $ 195,662 |
| 11 - Supervisory | - | - | - | - | 95,564 | 99,538 | 89,772 | 95,733 |
| 12 - Mayor, Staff | - | - | - | - | 175,467 | 176,057 | 163,009 | 163,894 |
| 13 - Judges,Crt.Super | - | - | - | - | 43,730 | 45,564 | 38,456 | 41,207 |
| 14 - Court, Union | - | - | - | - | 14,380 | 15,234 | 14,357 | 15,638 |
| 15 - AFSCME 6/21/99 | - | - | - | - | 6,956 | 8,586 | 5,618 | 8,063 |
| 17 - CrtUn Hired10/03 | - | - | - | - | 0 | 0 | 0 | 0 |
| 18 - Dispatchers hired bfr. | - | - | - | - | 23,866 | 25,036 | 21,100 | 22,855 |
| 19 - Mayor Staff hired afte | - | - | - | - | 0 | 0 | 0 | 0 |
| 20 - Crt Admin & Union aft | - | - | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| 21 - Dispatchers on/aft 7/1 | 3.01% | 3.01% | 4.53% | 4.53% | 986 | 986 | 1,299 | 1,299 |
| 22 - Supervisory aft 7/1/10 | 0.00% | 0.00% | 0.00% | 0.00% | 0 | 0 | 0 | 0 |
| 90 - Eld HC Administration | - | - | - | - | 1,503 | 1,605 | 1,098 | 1,251 |
| 91 - Eld HC General | - | - | - | - | 0 | 0 | 0 | 0 |
| **Municipality Total** | | | | | **$ 563,649** | **$ 582,673** | **$ 517,066** | **$ 545,602** |

Employee contribution rates reflected in the valuations are shown below:

| | Employee Contribution Rate | |
|---|---|---|
| Valuation Date: | 12/31/2017 | 12/31/2016 |
| **Division** | | |
| 10 - AFSCME | 5.00% | 5.00% |
| 11 - Supervisory | 5.00% | 5.00% |
| 12 - Mayor, Staff | 5.00% | 5.00% |

| | Employee Contribution Rate | |
|---|---|---|
| Valuation Date: | 12/31/2017 | 12/31/2016 |
| **Division** | | |
| 13 - Judges,Crt.Super | 5.00% | 5.00% |
| 14 - Court, Union | 5.00% | 5.00% |
| 15 - AFSCME 6/21/99 | 5.00% | 5.00% |
| 17 - CrtUn Hired10/03 | 5.00% | 5.00% |
| 18 - Dispatchers hired bfr. | 5.00% | 5.00% |
| 19 - Mayor Staff hired afte | 5.00% | 5.00% |
| 20 - Crt Admin & Union aft | 5.00% | 5.00% |
| 21 - Dispatchers on/aft 7/1 | 3.00% | 3.00% |
| 22 - Supervisory aft 7/1/10 | 5.00% | 5.00% |
| 90 - Eld HC Administration | 5.00% | 5.00% |
| 91 - Eld HC General | 5.00% | 5.00% |

The employer may contribute more than the minimum required contributions, as these additional contributions will earn investment income and may result in lower future contribution requirements. Employers making contributions in excess of the minimum requirements may elect to apply the excess contribution immediately to a particular division, or segregate the excess into one or more of what MERS calls ”Surplus” divisions. An election in the first case would immediately reduce any unfunded accrued liability and lower the amortization payments throughout the remaining amortization period. An election to set up Surplus divisions would not immediately lower future contributions, however the assets from the Surplus divisions could be transferred to an unfunded division in the future to reduce the unfunded liability in future years, or to be used to pay all or a portion of the minimum required contribution in a future year. For purposes of this report, the assets in any Surplus division have been included in the municipality’s total assets, unfunded accrued liability and funded status, however, these assets are not used in calculating the minimum required contribution.

**MERS strongly encourages employers to contribute more than the minimum contribution shown above.**

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly employer contributions for the fiscal year beginning in 2019 for the entire employer would be $875,647, instead of $582,673.

If you are interested in making additional contributions, please contact MERS and they can assist you with evaluating your options.

**How and Why Do These Numbers Change?**

In a defined benefit plan, contributions vary from one annual actuarial valuation to the next as a result of the following:

- Changes in benefit provisions (see Table 2)
- Changes in actuarial assumptions and methods (see the Appendix)
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions. For example:
  - Lower actual investment returns would result in higher required employer contributions, and vice-versa.
  - Smaller than assumed pay increases would lower required employer contributions.
  - Reductions in the number of active employees would lower required contribution dollars, but would usually increase the contribution rate expressed as a percentage of (the now lower) payroll.
  - Retirements at earlier ages than assumed would usually increase required employer contributions.
  - More non-vested terminations of employment than assumed would decrease required contributions.
  - More disabilities or survivor (death) benefits than assumed would increase required contributions.
  - Longer lifetimes after retirement than assumed would increase required employer contributions.

Actuarial valuations do not affect the ultimate cost of the plan; the benefit payments (current and future) determine the cost of the plan. Actuarial valuations only affect the timing of the contributions into the plan. Because assumptions are for the long term, plan experience will not match the actuarial assumptions in any given year (except by coincidence). Each annual actuarial valuation will adjust the required employer contributions up or down based on the prior year's actual experience.

## Comments on Investment Return Assumption and Asset Smoothing

A defined benefit plan is funded by employer contributions, participant contributions, and investment earnings. Investment earnings have historically provided **more than half** of the funding. The larger the share of benefits being provided from investment returns, the smaller the required contributions, and vice versa. Determining the contributions required to prefund the promised retirement benefits requires an assumption of what investment earnings are expected to add to the fund over a long period of time. This is called the **Investment Return Assumption**.

The MERS Investment Return Assumption is **7.75%** per year. This, along with all of our other actuarial assumptions, is reviewed every five years in an Experience Study that compares the assumptions used against actual experience and recommends adjustments if necessary. If your municipality would like to explore contributions at lower investment return assumptions, please review the budget projection scenarios later in this report.

To avoid dramatic spikes and dips in annual contribution requirements due to short term fluctuations in asset markets, MERS applies a technique called **asset smoothing**. This spreads out each year's investment gains or losses over the prior year and the following four years. This smoothing method is used to determine your actuarial value of assets (valuation assets), which is then used to determine


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both your funded ratio and your required contributions. The (smoothed) **actuarial rate of return for 2017 was 6.08%, while the actual market rate of return was 13.07%**. To see historical details of the market rate of return, compared to the smoothed actuarial rate of return, refer to this report's Appendix, or visit our Defined Benefit resource page on the MERS website.

As of December 31, 2017 the actuarial value of assets is 101% of market value due to asset smoothing. This means that meeting the actuarial assumption in the next few years will require average annual market returns that exceed the 7.75% investment return assumption, or contribution requirements will continue to increase.

If the December 31, 2017 valuation results were based on market value instead of the actuarial value:

- The funded percent of your entire municipality would be 42% (instead of 43%); and
- Your total employer contribution requirement for the fiscal year starting July 1, 2019 would be $7,047,528 (instead of $6,992,076).


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## Risk Characteristics of Defined Benefit Plans

It is important to understand that Defined Benefit retirement plans, the plan sponsor, and the plan participants are exposed to certain risks. While risks cannot be eliminated entirely, they can be managed through various strategies. Below are a few examples of risk (this is not an all-inclusive list):

- Economic - investment return, wage inflation, etc.
- Demographic - longevity, disability, retirement, etc.
- Plan Sponsor and Employees - contribution volatility, attract/retain employees, etc.

The MERS Retirement Board adopts certain assumptions and methods to manage the economic and demographic risks, and the contribution volatility risks. For example, the investment risk is the largest economic risk and is managed by having a balanced portfolio and a clearly defined investment strategy. Demographic risks are managed by preparing special studies called experience studies on a regular basis to determine if the assumptions used are reasonable compared to the experience. An Experience Study is completed every five years to review the assumptions and methods. The next Experience Study will be completed in 2020.

Risk can also be managed through a plan design that provides benefits that are sustainable in the long run.

The Actuarial Standards Board has issued Actuarial Standards of Practice (ASOP) No. 51. This standard will be effective for any actuarial work with a measurement date on or after November 1, 2018. This means, the December 31, 2018 and later annual actuarial valuation reports for MERS will have to comply with this standard. This standard will require the actuary to identify risks that, in the actuary's professional judgment may significantly impact the plan's future financial condition. The actuary will have to assess the potential effects of the identified risks on the plan's future financial condition. The assessment may or may not be based on numerical calculations. However, the assessment should reflect the specifics of the plan (i.e. funded status, plan demographics, funding policy, etc.). If the actuary concludes that numerical calculations are necessary to assess the risk, the actuary can use various methods to quantify the risk such as scenario tests, sensitivity tests, stress tests, etc.

Some of these risk assessment measures have already been incorporated in the MERS annual valuation reports. For example, the projections of funded percentage and employer contributions shown on the following pages could be used to gauge the risk associated with long term investment rates of return different than the assumed 7.75% annual rate. A history of the municipality's funded percentage as shown in Table 7, could indicate the trend in funded status over time.

## Alternate Scenarios to Estimate the Potential Volatility of Results ("What If Scenarios")

The calculations in this report are based on assumptions about long-term economic and demographic behavior. These assumptions will never materialize in a given year, except by coincidence. Therefore


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the results will vary from one year to the next. The volatility of the results depends upon the characteristics of the plan. For example:

- Open divisions that have substantial assets compared to their active employee payroll will have more volatile employer contribution rates due to investment return fluctuations.
- Open divisions that have substantial accrued liability compared to their active employee payroll will have more volatile employer contribution rates due to demographic experience fluctuations.
- Small divisions will have more volatile contribution patterns than larger divisions because statistical fluctuations are relatively larger among small populations.
- Shorter amortization periods result in more volatile contribution patterns.

The analysis in this section is intended to review the potential volatility of the actuarial valuation results. It is important to note that calculations in this report are mathematical estimates based upon assumptions regarding future events, which may or may not materialize. Actuarial calculations can and do vary from one valuation to the next, sometimes significantly depending on the group's size.

Many assumptions are important in determining the required employer contributions. In the table below, we show the impact of varying the Investment Return Assumption. Lower investment returns would result in higher required employer contributions, and vice-versa.

The relative impact of each investment return scenario below will vary from year to year, as the participant demographics change. The impact of each scenario should be analyzed for a given year, not from year to year. The results in the table are based on the December 31, 2017 valuation, and are for the municipality in total, not by division. These results do not reflect a 5-year phase in of the impact of the new actuarial assumptions.

| | **Assumed Future Annual Smoothed Investment Return Assumption** | | | |
|---|---|---|---|---|
| | **Lower Future Annual Returns** | | **Valuation Assumption** | **Higher Returns** |
| **12/31/2017 Valuation Results** | **5.75%** | **6.75%** | **7.75%** | **8.75%** |
| Accrued Liability | $ 171,877,869 | $ 153,716,783 | $ 138,551,008 | $ 125,766,191 |
| Valuation Assets[1] | $ 58,878,856 | $ 58,878,856 | $ 58,878,856 | $ 58,878,856 |
| Unfunded Accrued Liability | $ 112,999,013 | $ 94,837,927 | $ 79,672,152 | $ 66,887,335 |
| **Funded Ratio** | 34% | 38% | 43% | 47% |
| Monthly Normal Cost | $ 111,170 | $ 83,036 | $ 61,505 | $ 44,966 |
| Monthly Amortization Payment | $ 634,244 | $ 569,675 | $ 513,452 | $ 455,951 |
| **Total Employer Contribution[2]** | $ 748,339 | $ 657,151 | $ 582,673 | $ 523,350 |

1 The Valuation Assets include assets from Surplus divisions, if any.

2 If assets exceed accrued liabilities for a division, the division's amortization payment is negative and is used to reduce the division's employer contribution requirement. If the overfunding credit is larger than the normal cost, the division's full credit is included in the municipality's amortization payment above but the division's total contribution requirement is zero. This can cause the displayed normal cost and amortization payment to not add up to the displayed total employer contribution.


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## Projection Scenarios

The next two pages show projections of the plan's funded ratio and computed employer contributions under the actuarial assumptions used in the valuation and alternate assumed long-term investment return assumption scenarios. All four projections take into account the past investment losses that will continue to affect the actuarial rate of return in the short term. Under the 7.75% scenarios in the table on the next page, two sets of projections are shown:

- Based on the phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. This projects your minimum required contribution.
- Based on no phase-in of the increased contribution requirements.

The 7.75% scenarios provide an estimate of computed employer contributions based on current actuarial assumptions, and a projected 7.75% market return. The other two scenarios may be useful if the municipality chooses to budget more conservatively, and make contributions in addition to the minimum requirements. The 6.75% and 5.75% projections provide an indication of the potential required employer contribution if MERS were to realize annual investment returns of 6.75% and 5.75% over the long-term.

The projections are shown both in tabular and graphical form in total for the employer. The tables show projections for six years. The graphs show projections for twenty five years.


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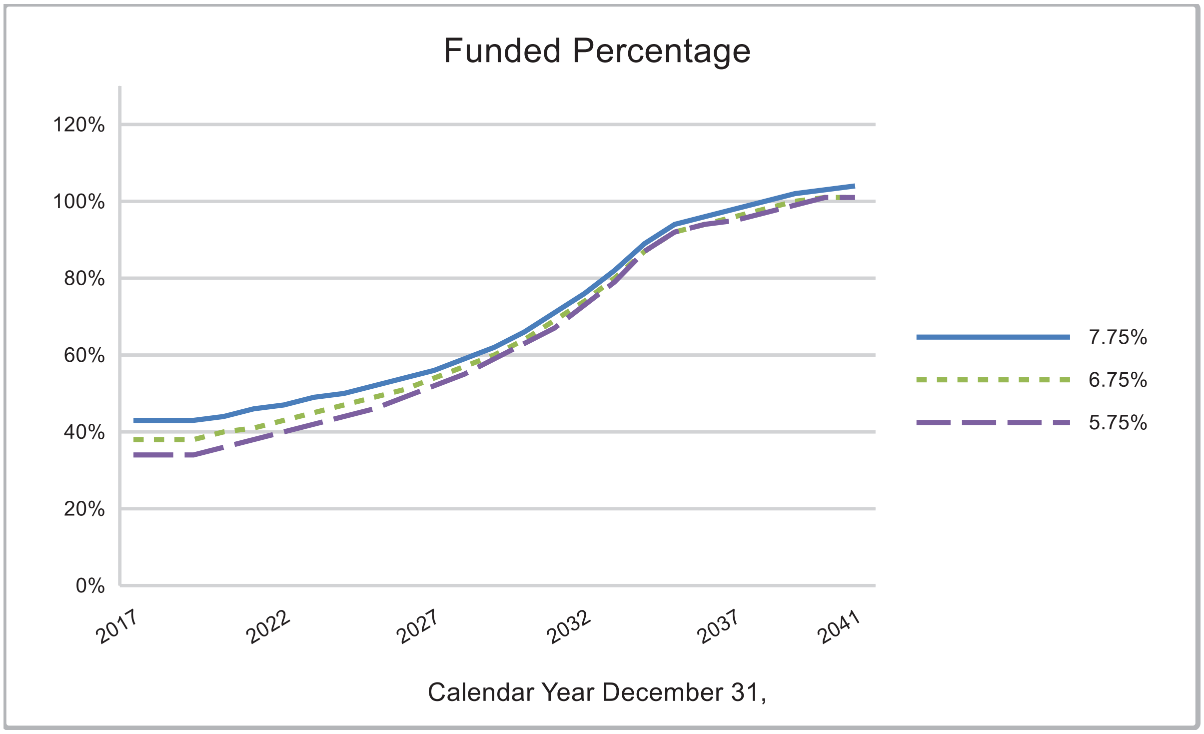
| Valuation Year Ending 12/31 | Fiscal Year Beginning 7/1 | Actuarial Accrued Liability | Valuation Assets[2] | Funded Percentage | Computed Annual Employer Contribution |
|---|---|---|---|---|---|
| **7.75%[1]** | | | | | |
| **WITH 5-YEAR PHASE-IN** | | | | | |
| 2017 | 2019 | $ 138,551,008 | $ 58,878,856 | 43% | $ 6,763,788 |
| 2018 | 2020 | 140,600,000 | 60,000,000 | 43% | 7,450,000 |
| 2019 | 2021 | 142,500,000 | 60,400,000 | 42% | 7,940,000 |
| 2020 | 2022 | 144,100,000 | 63,000,000 | 44% | 8,100,000 |
| 2021 | 2023 | 145,300,000 | 65,900,000 | 45% | 8,280,000 |
| 2022 | 2024 | 146,300,000 | 68,400,000 | 47% | 8,530,000 |
| **NO 5-YEAR PHASE-IN** | | | | | |
| 2017 | 2019 | $ 138,551,008 | $ 58,878,856 | 43% | $ 6,992,076 |
| 2018 | 2020 | 140,600,000 | 60,000,000 | 43% | 7,540,000 |
| 2019 | 2021 | 142,500,000 | 60,500,000 | 43% | 7,910,000 |
| 2020 | 2022 | 144,100,000 | 63,300,000 | 44% | 8,070,000 |
| 2021 | 2023 | 145,300,000 | 66,200,000 | 46% | 8,250,000 |
| 2022 | 2024 | 146,300,000 | 68,700,000 | 47% | 8,500,000 |
| **6.75%[1]** | | | | | |
| **NO 5-YEAR PHASE-IN** | | | | | |
| 2017 | 2019 | $ 153,716,783 | $ 58,878,856 | 38% | $ 7,885,812 |
| 2018 | 2020 | 155,800,000 | 59,500,000 | 38% | 8,570,000 |
| 2019 | 2021 | 157,600,000 | 59,800,000 | 38% | 8,960,000 |
| 2020 | 2022 | 159,000,000 | 62,900,000 | 40% | 9,130,000 |
| 2021 | 2023 | 160,200,000 | 66,300,000 | 41% | 9,330,000 |
| 2022 | 2024 | 161,000,000 | 69,200,000 | 43% | 9,600,000 |
| **5.75%[1]** | | | | | |
| **NO 5-YEAR PHASE-IN** | | | | | |
| 2017 | 2019 | $ 171,877,869 | $ 58,878,856 | 34% | $ 8,980,068 |
| 2018 | 2020 | 173,800,000 | 58,900,000 | 34% | 9,770,000 |
| 2019 | 2021 | 175,500,000 | 59,200,000 | 34% | 10,200,000 |
| 2020 | 2022 | 176,900,000 | 62,800,000 | 36% | 10,400,000 |
| 2021 | 2023 | 177,800,000 | 66,800,000 | 38% | 10,600,000 |
| 2022 | 2024 | 178,300,000 | 70,400,000 | 40% | 10,900,000 |

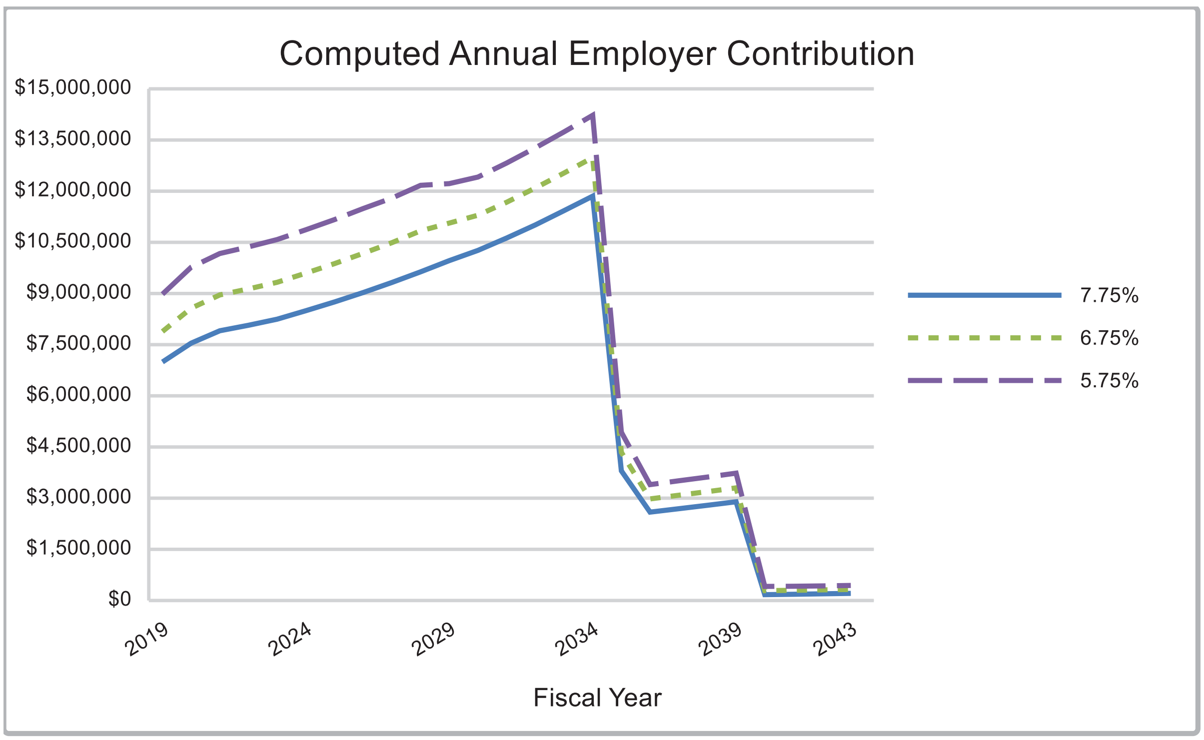
1 Represents both the interest rate for discounting liabilities and the future investment return assumption on the Market Value of assets.

2 Valuation Assets do not include assets from Surplus divisions, if any.




Notes:

All projected funded percentages are shown with no phase-in.




Notes:

All projected contributions are shown with no phase-in.

Attachment 2b



## Employer Contribution Details For the Fiscal Year Beginning July 1, 2019

### Table 1

| Division | Total Normal Cost | Employee Contribut. Rate | Employer Contributions[1]: Employer Normal Cost | Employer Contributions[1]: Payment of the Unfunded Accrued Liability[4] | Employer Contributions[1]: Computed Employer Contribut. No Phase-In | Computed Employer Contribut. With Phase-In | Blended ER Rate No Phase-In[5] | Blended ER Rate With Phase-In[5] | Employee Contribut. Conversion Factor[2] |
|---|---|---|---|---|---|---|---|---|---|
| **Percentage of Payroll** | | | | | | | | | |
| 10 - AFSCME | 20.32% | 5.00% | - | - | - | - | | | |
| 11 - Supervisory | 20.89% | 5.00% | - | - | - | - | 164.63% | 157.91% | |
| 12 - Mayor, Staff | 22.10% | 5.00% | - | - | - | - | | | |
| 13 - Judges,Crt.Super | 20.26% | 5.00% | - | - | - | - | | | |
| 14 - Court, Union | 19.56% | 5.00% | - | - | - | - | | | |
| 15 - AFSCME 6/21/99 | 16.28% | 5.00% | - | - | - | - | | | |
| 17 - CrtUn Hired10/03 | 14.39% | 5.00% | - | - | - | - | | | |
| 18 - Dispatchers hired | 19.56% | 5.00% | - | - | - | - | 24.73% | 23.62% | |
| 19 - Mayor Staff hired | 23.41% | 5.00% | - | - | - | - | | | |
| 20 - Crt Admin & Union | 8.33% | 5.00% | - | - | - | - | | | |
| 21 - Dispatchers on/aft | 8.77% | 3.00% | 5.77% | -2.76% | 3.01% | 3.01% | 24.73% | 23.62% | 0.91% |
| 22 - Supervisory aft 7/ | 8.43% | 5.00% | 3.43% | -11.89% | 0.00% | 0.00% | 164.63% | 157.91% | 0.85% |
| 90 - Eld HC Administrat | 0.00% | 5.00% | - | - | - | - | | | |
| 91 - Eld HC General | 0.00% | 5.00% | - | - | - | - | | | |
| **Estimated Monthly Contribution[3]** | | | | | | | | | |
| 10 - AFSCME | | | $ 9,282 | $ 200,785 | $ 210,067 | $ 201,197 | | | |
| 11 - Supervisory | | | 6,238 | 93,300 | 99,538 | 95,564 | | | |
| 12 - Mayor, Staff | | | 5,868 | 170,189 | 176,057 | 175,467 | | | |
| 13 - Judges,Crt.Super | | | 4,449 | 41,115 | 45,564 | 43,730 | | | |
| 14 - Court, Union | | | 2,340 | 12,894 | 15,234 | 14,380 | | | |
| 15 - AFSCME 6/21/99 | | | 11,363 | (2,777) | 8,586 | 6,956 | | | |
| 17 - CrtUn Hired10/03 | | | 1,767 | (2,126) | 0 | 0 | | | |
| 18 - Dispatchers hired | | | 10,562 | 14,474 | 25,036 | 23,866 | | | |
| 19 - Mayor Staff hired | | | 6,313 | (8,404) | 0 | 0 | | | |

**Table 1** (continued)

| Division | Total Normal Cost | Employee Contribut. Rate | Employer Contributions[1] | | | Computed Employer Contribut. With Phase-In | Blended ER Rate No Phase-In[5] | Blended ER Rate With Phase-In[5] | Employee Contribut. Conversion Factor[2] |
|---|---|---|---|---|---|---|---|---|---|
| | | | Employer Normal Cost | Payment of the Unfunded Accrued Liability[4] | Computed Employer Contribut. No Phase-In | | | | |
| 20 - Crt Admin & Union | | | 744 | (3,761) | 0 | 0 | | | |
| 21 - Dispatchers on/aft | | | 1,887 | (901) | 986 | 986 | | | |
| 22 - Supervisory aft 7/ | | | 692 | (2,398) | 0 | 0 | | | |
| 90 - Eld HC Administrat | | | 0 | 1,605 | 1,605 | 1,503 | | | |
| 91 - Eld HC General | | | 0 | (543) | 0 | 0 | | | |
| **Total Municipality** | | | **$ 61,505** | **$ 513,452** | **$ 582,673** | **$ 563,649** | | | |
| **Estimated Annual Contribution[3]** | | | **$ 738,060** | **$ 6,161,424** | **$ 6,992,076** | **$ 6,763,788** | | | |

1 The above employer contribution requirements are in addition to the employee contributions, if any.

2 If employee contributions are increased/decreased by 1.00% of pay, the employer contribution requirement will decrease/increase by the Employee Contribution Conversion Factor. The conversion factor is usually under 1%, because employee contributions may be refunded at termination of employment, and not used to fund retirement pensions. Employer contributions will all be used to fund pensions.

3 For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. For divisions that will have no new hires (i.e. closed divisions), invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the Appendix.

4 If projected assets exceed projected liabilities as of the beginning of the July 1, 2019 fiscal year, the negative unfunded accrued liability is treated as overfunding credit and is used to reduce the contribution. This amortization is used to reduce the employer contribution rate. Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions to not add across.

5 For linked divisions, the employer will be invoiced the Computed Employer Contribution with Phase-in rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-MERS (6377).

**Please see the Comments on Asset Smoothing in the Executive Summary of this report.**

## Benefit Provisions

### Table 2

| 10 - AFSCME: Closed to new hires | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 8 years | 8 years |
| **Early Retirement (Unreduced):** | 55/15<br>25 and Out | 55/15<br>25 and Out |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **COLA for Current Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **DC Plan for New Hires:** | 5/1/2015 | 5/1/2015 |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |

| 11 - Supervisory: Closed to new hires, linked to Division 22 | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 6 years | 6 years |
| **Early Retirement (Unreduced):** | 55/15<br>25 and Out | 55/15<br>25 and Out |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **COLA for Current Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |

**Table 2** (continued)

## 12 - Mayor, Staff: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.80% Multiplier for Svc < 30 yrs, 1.00% for Svc > 30 yrs (no max) | 2.80% Multiplier for Svc < 30 yrs, 1.00% for Svc > 30 yrs (no max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 6 years | 6 years |
| **Early Retirement (Unreduced):** | 55/15<br>25 and Out | 55/15<br>25 and Out |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **COLA for Current Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **DC Plan for New Hires:** | 5/1/2015 | 5/1/2015 |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |

## 13 - Judges,Crt.Super: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 6 years | 6 years |
| **Early Retirement (Unreduced):** | 55/15<br>25 and Out | 55/15<br>25 and Out |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **COLA for Current Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **DC Plan for New Hires:** | 1/1/2017 | |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |


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**Table 2** (continued)

## 14 - Court, Union: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) | 2.80% Multiplier for Svc < 25 yrs, 1.00% for Svc > 25 yrs (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 6 years | 6 years |
| **Early Retirement (Unreduced):** | 55/15<br>25 and Out | 55/15<br>25 and Out |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **COLA for Current Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **DC Plan for New Hires:** | 1/1/2017 | |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |

## 15 - AFSCME 6/21/99: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.25% Multiplier (80% max) | 2.25% Multiplier (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 8 years | 8 years |
| **Early Retirement (Unreduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **DC Plan for New Hires:** | 5/1/2015 | 5/1/2015 |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |

## 17 - CrtUn Hired10/03: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.00% Multiplier (no max) | 2.00% Multiplier (no max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 8 years | 8 years |
| **Early Retirement (Unreduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 5 years | 5 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **DC Plan for New Hires:** | 1/1/2017 | |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |


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## **Table 2** (continued)

### 18 - Dispatchers hired bfr. 7/1/14: Closed to new hires, linked to Division 21

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.50% Multiplier (80% max) | 2.50% Multiplier (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 8 years | 8 years |
| **Early Retirement (Unreduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **Act 88:** | Yes (Adopted 7/1/2007) | Yes (Adopted 7/1/2007) |

### 19 - Mayor Staff hired after 1/1/08: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.80% Multiplier for Svc < 30 yrs, 1.00% for Svc > 30 yrs (no max) | 2.80% Multiplier for Svc < 30 yrs, 1.00% for Svc > 30 yrs (no max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 6 years | 6 years |
| **Early Retirement (Unreduced):** | 55/15<br>25 and Out | 55/15<br>25 and Out |
| **Early Retirement (Reduced):** | - | - |
| **Final Average Compensation:** | 3 years | 3 years |
| **COLA for Future Retirees:** | 2.50% (Non-Compound) | 2.50% (Non-Compound) |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **DC Plan for New Hires:** | 5/1/2015 | 5/1/2015 |
| **Act 88:** | Yes (Adopted 1/1/2008) | Yes (Adopted 1/1/2008) |

### 20 - Crt Admin & Union aft 7/1/10: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 1.50% Multiplier (no max) | 1.50% Multiplier (no max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 8 years | 8 years |
| **Early Retirement (Unreduced):** | - | - |
| **Early Retirement (Reduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Final Average Compensation:** | 5 years | 5 years |
| **Employee Contributions:** | 5% | 5% |
| **DC Plan for New Hires:** | 1/1/2017 | |
| **Act 88:** | Yes (Adopted 12/18/1989) | Yes (Adopted 12/18/1989) |


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## Table 2 (continued)

### 21 - Dispatchers on/aft 7/1/14: Open Division, linked to Division 18

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 1.75% Multiplier (no max) | 1.75% Multiplier (no max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 10 years | 10 years |
| **Early Retirement (Unreduced):** | - | - |
| **Early Retirement (Reduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Final Average Compensation:** | 5 years | 5 years |
| **Employee Contributions:** | 3% | 3% |
| **Act 88:** | Yes (Adopted 7/1/2007) | Yes (Adopted 7/1/2007) |

### 22 - Supervisory aft 7/1/10: Open Division, linked to Division 11

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 1.50% Multiplier (no max) | 1.50% Multiplier (no max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 10 years | 10 years |
| **Early Retirement (Unreduced):** | - | - |
| **Early Retirement (Reduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Final Average Compensation:** | 5 years | 5 years |
| **Employee Contributions:** | 5% | 5% |
| **Act 88:** | No | No |

### 90 - Eld HC Administration: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.50% Multiplier (80% max) | 2.50% Multiplier (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 10 years | 10 years |
| **Early Retirement (Unreduced):** | - | - |
| **Early Retirement (Reduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Final Average Compensation:** | 3 years | 3 years |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **Act 88:** | No | No |


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## **Table 2** (continued)

### 91 - Eld HC General: Closed to new hires

| | 2017 Valuation | 2016 Valuation |
|---|---|---|
| **Benefit Multiplier:** | 2.25% Multiplier (80% max) | 2.25% Multiplier (80% max) |
| **Normal Retirement Age:** | 60 | 60 |
| **Vesting:** | 6 years | 6 years |
| **Early Retirement (Unreduced):** | - | - |
| **Early Retirement (Reduced):** | 50/25<br>55/15 | 50/25<br>55/15 |
| **Final Average Compensation:** | 3 years | 3 years |
| **Employee Contributions:** | 5% | 5% |
| **RS50% Percentage:** | 50% | 50% |
| **Act 88:** | No | No |


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## Participant Summary

### Table 3

| Division | 2017 Valuation Number | 2017 Valuation Annual Payroll[1] | 2016 Valuation Number | 2016 Valuation Annual Payroll[1] | 2017 Valuation Average Age | 2017 Valuation Average Benefit Service[2] | 2017 Valuation Average Eligibility Service[2] |
|---|---|---|---|---|---|---|---|
| 10 - AFSCME | | | | | | | |
| Active Employees | 19 | $ 1,061,426 | 22 | $ 1,257,026 | 54.7 | 21.4 | 21.4 |
| Vested Former Employees | 6 | 92,826 | 7 | 100,840 | 53.3 | 12.3 | 12.3 |
| Retirees and Beneficiaries | 130 | 3,526,912 | 129 | 3,392,901 | 69.5 | | |
| 11 - Supervisory | | | | | | | |
| Active Employees | 7 | $ 484,454 | 11 | $ 776,560 | 47.7 | 17.4 | 18.2 |
| Vested Former Employees | 3 | 50,077 | 3 | 50,077 | 48.9 | 11.2 | 12.7 |
| Retirees and Beneficiaries | 42 | 1,675,123 | 40 | 1,521,665 | 68.7 | | |
| 12 - Mayor, Staff | | | | | | | |
| Active Employees | 5 | $ 502,920 | 5 | $ 490,049 | 52.6 | 15.5 | 16.6 |
| Vested Former Employees | 8 | 159,108 | 9 | 176,933 | 52.4 | 10.2 | 12.0 |
| Retirees and Beneficiaries | 54 | 2,417,078 | 56 | 2,407,533 | 68.9 | | |
| 13 - Judges,Crt.Super | | | | | | | |
| Active Employees | 6 | $ 422,749 | 7 | $ 447,305 | 52.1 | 19.6 | 19.6 |
| Vested Former Employees | 2 | 35,783 | 2 | 35,783 | 51.5 | 8.8 | 17.3 |
| Retirees and Beneficiaries | 20 | 658,529 | 19 | 618,902 | 69.1 | | |
| 14 - Court, Union | | | | | | | |
| Active Employees | 4 | $ 185,283 | 4 | $ 187,332 | 47.3 | 18.4 | 18.4 |
| Vested Former Employees | 3 | 12,960 | 4 | 37,286 | 51.3 | 6.5 | 12.5 |
| Retirees and Beneficiaries | 14 | 339,057 | 14 | 331,732 | 68.6 | | |
| 15 - AFSCME 6/21/99 | | | | | | | |
| Active Employees | 23 | $ 1,227,090 | 25 | $ 1,280,621 | 50.1 | 14.5 | 14.8 |
| Vested Former Employees | 5 | 64,930 | 4 | 49,527 | 46.1 | 12.1 | 12.1 |
| Retirees and Beneficiaries | 10 | 156,426 | 9 | 133,336 | 62.7 | | |
| 17 - CrtUn Hired10/03 | | | | | | | |
| Active Employees | 5 | $ 226,874 | 6 | $ 258,945 | 41.4 | 11.1 | 11.1 |
| Vested Former Employees | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Retirees and Beneficiaries | 2 | 16,364 | 1 | 6,833 | 58.8 | | |
| 18 - Dispatchers hired bf | | | | | | | |
| Active Employees | 13 | $ 890,751 | 16 | $ 1,016,151 | 50.2 | 15.2 | 17.9 |
| Vested Former Employees | 5 | 30,359 | 5 | 30,359 | 44.6 | 5.2 | 13.5 |
| Retirees and Beneficiaries | 9 | 270,288 | 6 | 165,625 | 59.5 | | |
| 19 - Mayor Staff hired af | | | | | | | |
| Active Employees | 5 | $ 453,863 | 6 | $ 550,957 | 42.3 | 6.7 | 14.9 |
| Vested Former Employees | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Retirees and Beneficiaries | 2 | 33,931 | 1 | 11,471 | 61.6 | | |

**Table 3** (continued)

| Division | 2017 Valuation Number | 2017 Valuation Annual Payroll[1] | 2016 Valuation Number | 2016 Valuation Annual Payroll[1] | 2017 Valuation Average Age | 2017 Valuation Average Benefit Service[2] | 2017 Valuation Average Eligibility Service[2] |
|---|---|---|---|---|---|---|---|
| 20 - Crt Admin & Union af | | | | | | | |
| Active Employees | 5 | $ 260,317 | 7 | $ 326,219 | 41.5 | 3.8 | 6.7 |
| Vested Former Employees | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Retirees and Beneficiaries | 0 | 0 | 0 | 0 | 0.0 | | |
| 21 - Dispatchers on/aft 7 | | | | | | | |
| Active Employees | 8 | $ 260,974 | 5 | $ 178,499 | 36.7 | 1.1 | 6.8 |
| Vested Former Employees | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Retirees and Beneficiaries | 0 | 0 | 0 | 0 | 0.0 | | |
| 22 - Supervisory aft 7/1/ | | | | | | | |
| Active Employees | 3 | $ 165,831 | 2 | $ 120,241 | 50.8 | 3.9 | 3.9 |
| Vested Former Employees | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Retirees and Beneficiaries | 0 | 0 | 0 | 0 | 0.0 | | |
| 90 - Eld HC Administratio | | | | | | | |
| Active Employees | 0 | $ 0 | 0 | $ 0 | 0.0 | 0.0 | 0.0 |
| Vested Former Employees | 1 | 11,191 | 1 | 11,191 | 50.4 | 5.4 | 10.0 |
| Retirees and Beneficiaries | 2 | 75,842 | 2 | 75,842 | 76.8 | | |
| 91 - Eld HC General | | | | | | | |
| Active Employees | 0 | $ 0 | 0 | $ 0 | 0.0 | 0.0 | 0.0 |
| Vested Former Employees | 6 | 19,232 | 6 | 19,232 | 35.2 | 4.3 | 6.5 |
| Retirees and Beneficiaries | 21 | 179,554 | 21 | 179,554 | 71.0 | | |
| **Total Municipality** | | | | | | | |
| **Active Employees** | **103** | **$ 6,142,532** | **116** | **$ 6,889,905** | **48.7** | **14.1** | **15.6** |
| **Vested Former Employees** | **39** | **476,466** | **41** | **511,228** | **47.6** | **8.8** | **11.7** |
| **Retirees and Beneficiaries** | **306** | **9,349,104** | **298** | **8,845,394** | **68.7** | | |
| **Total Participants** | **448** | | **455** | | | | |

1 Annual payroll for active employees; annual deferred benefits payable for vested former employees; annual benefits being paid for retirees and beneficiaries.

2 Description can be found under Miscellaneous and Technical Assumptions in the Appendix.

## Reported Assets (Market Value)

### Table 4

| Division | 2017 Valuation | | 2016 Valuation | |
|---|---|---|---|---|
| | Employer and Retiree[1] | Employee[2] | Employer and Retiree[1] | Employee[2] |
| 10 - AFSCME | $ 18,814,798 | $ 294,737 | $ 18,028,871 | $ 275,074 |
| 11 - Supervisory | 6,868,835 | 219,641 | 6,685,296 | 264,668 |
| 12 - Mayor, Staff | 5,343,126 | 154,721 | 4,824,671 | 127,334 |
| 13 - Judges,Crt.Super | 4,186,741 | 63,420 | 3,918,872 | 47,580 |
| 14 - Court, Union | 2,937,469 | 13,878 | 2,758,619 | 4,534 |
| 15 - AFSCME 6/21/99 | 7,076,567 | 285,242 | 6,252,367 | 228,748 |
| 17 - CrtUn Hired10/03 | 909,602 | 16,732 | 786,491 | 6,365 |
| 18 - Dispatchers hired bfr. 7/1/14 | 5,396,359 | 164,656 | 4,676,752 | 148,495 |
| 19 - Mayor Staff hired after 1/1/08 | 2,145,020 | 169,356 | 1,850,730 | 177,713 |
| 20 - Crt Admin & Union aft 7/1/10 | 467,753 | 56,988 | 408,300 | 41,829 |
| 21 - Dispatchers on/aft 7/1/14 | 120,273 | 12,084 | 55,361 | 5,494 |
| 22 - Supervisory aft 7/1/10 | 359,822 | 15,155 | 181,109 | 8,519 |
| 90 - Eld HC Administration | 393,781 | 20,028 | 417,656 | 19,682 |
| 91 - Eld HC General | 1,673,858 | 39,109 | 1,644,902 | 38,433 |
| **Municipality Total** | **$ 56,694,004** | **$ 1,525,747** | **$ 52,489,997** | **$ 1,394,468** |
| **Combined Assets** | **$58,219,751** | | **$53,884,465** | |

1 Reserve for Employer Contributions and Benefit Payments

2 Reserve for Employee Contributions

The December 31, 2017 valuation assets (actuarial value of assets) are equal to 1.011321 times the reported market value of assets (compared to 1.077095 as of December 31, 2016). The derivation of valuation assets is described, and detailed calculations of valuation assets are shown, in the Appendix.



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## Flow of Valuation Assets

### Table 5

| Year Ended 12/31 | Employer Contributions | | Employee Contributions | Investment Income (Valuation Assets) | Benefit Payments | Employee Contribution Refunds | Net Transfers | Valuation Asset Balance |
|---|---|---|---|---|---|---|---|---|
| | Required | Additional | | | | | | |
| 2007 | $ 3,689,790 | | $ 0 | $ 4,224,149 | $ (4,917,969) | $ 0 | $ 0 | $ 55,371,148 |
| 2008 | 3,744,910 | | 3,850 | 2,507,290 | (5,165,635) | (1,963) | 144,925 | 56,604,525 |
| 2009 | 3,639,367 | | 14,943 | 2,188,328 | (5,565,064) | 0 | 31,045 | 56,913,144 |
| 2010 | 3,480,225 | | 20,097 | 2,757,931 | (6,180,543) | (653) | 475,142 | 57,465,343 |
| 2011 | 3,297,691 | $ 0 | 20,585 | 2,479,952 | (6,883,884) | 0 | 257,119 | 56,636,806 |
| 2012 | 3,410,979 | 0 | 21,448 | 2,172,479 | (7,215,099) | 0 | 423,543 | 55,450,156 |
| 2013 | 3,935,037 | 0 | 188,658 | 2,991,268 | (7,392,674) | 0 | 192,480 | 55,364,925 |
| 2014 | 4,403,242 | 1,220,132 | 299,758 | 3,198,143 | (7,865,543) | 0 | 1,560,374 | 58,181,031 |
| 2015 | 4,903,859 | 264,668 | 362,187 | 2,733,978 | (8,332,862) | 0 | 0 | 58,112,861 |
| 2016 | 5,133,653 | 182,413 | 343,428 | 2,764,401 | (8,498,067) | 0 | 0 | 58,038,689 |
| 2017 | 5,951,992 | 53,417 | 336,047 | 3,326,256 | (8,818,642) | (8,903) | 0 | 58,878,856 |

Notes:

Transfers in and out are usually related to the transfer of participants between municipalities, and to employer and employee payments for service credit purchases (if any) that the governing body has approved.

Additional employer contributions, if any, are shown separately starting in 2011. Prior to 2011, additional contributions are combined with the required employer contributions.

The investment income column reflects the recognized investment income based on Valuation Assets. It does not reflect the market value investment return in any given year.

The Valuation Assets include assets from Surplus divisions, if any.

## Actuarial Accrued Liabilities and Valuation Assets
## As of December 31, 2017

### Table 6

| Division | Actuarial Accrued Liability | Valuation Assets[1] | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 10 - AFSCME | | | | |
| Active Employees | $ 8,217,512 | $ 271,815 | 3.3% | $ 7,945,697 |
| Vested Former Employees | 841,901 | 10,026 | 1.2% | 831,875 |
| Retirees And Beneficiaries | 39,789,777 | 19,044,033 | 47.9% | 20,745,744 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 48,849,190** | **$ 19,325,874** | **39.6%** | **$ 29,523,316** |
| 11 - Supervisory | | | | |
| Active Employees | $ 2,789,647 | $ 194,480 | 7.0% | $ 2,595,167 |
| Vested Former Employees | 357,763 | 22,099 | 6.2% | 335,664 |
| Retirees And Beneficiaries | 19,701,460 | 6,952,146 | 35.3% | 12,749,314 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 22,848,870** | **$ 7,168,725** | **31.4%** | **$ 15,680,145** |
| 12 - Mayor, Staff | | | | |
| Active Employees | $ 2,704,223 | $ 119,303 | 4.4% | $ 2,584,920 |
| Vested Former Employees | 1,137,027 | 35,418 | 3.1% | 1,101,609 |
| Retirees And Beneficiaries | 27,355,407 | 5,405,367 | 19.8% | 21,950,040 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 31,196,657** | **$ 5,560,088** | **17.8%** | **$ 25,636,569** |
| 13 - Judges,Crt.Super | | | | |
| Active Employees | $ 2,898,310 | $ 63,420 | 2.2% | $ 2,834,890 |
| Vested Former Employees | 332,025 | 0 | 0.0% | 332,025 |
| Retirees And Beneficiaries | 7,532,196 | 4,234,857 | 56.2% | 3,297,339 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 10,762,531** | **$ 4,298,277** | **39.9%** | **$ 6,464,254** |
| 14 - Court, Union | | | | |
| Active Employees | $ 1,136,319 | $ 13,878 | 1.2% | $ 1,122,441 |
| Vested Former Employees | 77,478 | 0 | 0.0% | 77,478 |
| Retirees And Beneficiaries | 3,828,525 | 2,970,881 | 77.6% | 857,644 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 5,042,322** | **$ 2,984,759** | **59.2%** | **$ 2,057,563** |
| 15 - AFSCME 6/21/99 | | | | |
| Active Employees | $ 4,757,026 | $ 5,045,386 | 106.1% | $ (288,360) |
| Vested Former Employees | 411,897 | 411,897 | 100.0% | 0 |
| Retirees And Beneficiaries | 1,987,869 | 1,987,869 | 100.0% | 0 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 7,156,792** | **$ 7,445,152** | **104.0%** | **$ (288,360)** |

**Table 6** (continued)

| Division | Actuarial Accrued Liability | Valuation Assets[1] | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 17 - CrtUn Hired10/03 | | | | |
| Active Employees | $ 478,067 | $ 725,903 | 151.8% | $ (247,836) |
| Vested Former Employees | 0 | 0 | 0.0% | 0 |
| Retirees And Beneficiaries | 210,918 | 210,918 | 100.0% | 0 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 688,985** | **$ 936,821** | **136.0%** | **$ (247,836)** |
| 18 - Dispatchers hired bfr. 7/1/14 | | | | |
| Active Employees | $ 4,167,076 | $ 1,771,329 | 42.5% | $ 2,395,747 |
| Vested Former Employees | 170,517 | 170,517 | 100.0% | 0 |
| Retirees And Beneficiaries | 3,677,705 | 3,677,705 | 100.0% | 0 |
| Pending Refunds | 4,420 | 4,420 | 100.0% | 0 |
| Total | **$ 8,019,718** | **$ 5,623,971** | **70.1%** | **$ 2,395,747** |
| 19 - Mayor Staff hired after 1/1/08 | | | | |
| Active Employees | $ 963,299 | $ 1,866,186 | 193.7% | $ (902,887) |
| Vested Former Employees | 0 | 0 | 0.0% | 0 |
| Retirees And Beneficiaries | 454,708 | 454,708 | 100.0% | 0 |
| Pending Refunds | 19,683 | 19,683 | 100.0% | 0 |
| Total | **$ 1,437,690** | **$ 2,340,577** | **162.8%** | **$ (902,887)** |
| 20 - Crt Admin & Union aft 7/1/10 | | | | |
| Active Employees | $ 103,903 | $ 520,387 | 500.8% | $ (416,484) |
| Vested Former Employees | 0 | 0 | 0.0% | 0 |
| Retirees And Beneficiaries | 0 | 0 | 0.0% | 0 |
| Pending Refunds | 10,295 | 10,295 | 100.0% | 0 |
| Total | **$ 114,198** | **$ 530,682** | **464.7%** | **$ (416,484)** |
| 21 - Dispatchers on/aft 7/1/14 | | | | |
| Active Employees | $ 25,345 | $ 131,304 | 518.1% | $ (105,959) |
| Vested Former Employees | 0 | 0 | 0.0% | 0 |
| Retirees And Beneficiaries | 0 | 0 | 0.0% | 0 |
| Pending Refunds | 2,551 | 2,551 | 100.0% | 0 |
| Total | **$ 27,896** | **$ 133,855** | **479.8%** | **$ (105,959)** |
| 22 - Supervisory aft 7/1/10 | | | | |
| Active Employees | $ 90,703 | $ 379,222 | 418.1% | $ (288,519) |
| Vested Former Employees | 0 | 0 | 0.0% | 0 |
| Retirees And Beneficiaries | 0 | 0 | 0.0% | 0 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 90,703** | **$ 379,222** | **418.1%** | **$ (288,519)** |
| 90 - Eld HC Administration | | | | |
| Active Employees | $ 0 | $ 0 | 0.0% | $ 0 |
| Vested Former Employees | 59,756 | 20,028 | 33.5% | 39,728 |
| Retirees And Beneficiaries | 580,820 | 398,466 | 68.6% | 182,354 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 640,576** | **$ 418,494** | **65.3%** | **$ 222,082** |


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**Table 6** (continued)

| Division | Actuarial Accrued Liability | Valuation Assets[1] | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 91 - Eld HC General | | | | |
| Active Employees | $ 0 | $ 57,479 | 0.0% | $ (57,479) |
| Vested Former Employees | 49,313 | 49,313 | 100.0% | 0 |
| Retirees And Beneficiaries | 1,625,339 | 1,625,339 | 100.0% | 0 |
| Pending Refunds | 228 | 228 | 100.0% | 0 |
| Total | **$ 1,674,880** | **$ 1,732,359** | **103.4%** | **$ (57,479)** |
| **Total Municipality** | | | | |
| **Active Employees** | **$ 28,331,430** | **$ 11,160,092** | **39.4%** | **$ 17,171,338** |
| **Vested Former Employees** | **3,437,677** | **719,298** | **20.9%** | **2,718,379** |
| **Retirees and Beneficiaries** | **106,744,724** | **46,962,289** | **44.0%** | **59,782,435** |
| **Pending Refunds** | **37,177** | **37,177** | **100.0%** | **0** |
| **Total** | **$ 138,551,008** | **$ 58,878,856** | **42.5%** | **$ 79,672,152** |
| The following results show the combined accrued liabilities and assets for each set of linked divisions. These results are already included in the table above. | | | | |
| Linked Divisions 22, 11 | | | | |
| Active Employees | $ 2,880,350 | $ 573,702 | 19.9% | $ 2,306,648 |
| Vested Former Employees | 357,763 | 22,099 | 6.2% | 335,664 |
| Retirees and Beneficiaries | 19,701,460 | 6,952,146 | 35.3% | 12,749,314 |
| Pending Refunds | 0 | 0 | 0.0% | 0 |
| Total | **$ 22,939,573** | **$ 7,547,947** | **32.9%** | **$ 15,391,626** |
| Linked Divisions 21, 18 | | | | |
| Active Employees | $ 4,192,421 | $ 1,902,633 | 45.4% | $ 2,289,788 |
| Vested Former Employees | 170,517 | 170,517 | 100.0% | 0 |
| Retirees and Beneficiaries | 3,677,705 | 3,677,705 | 100.0% | 0 |
| Pending Refunds | 6,971 | 6,971 | 100.0% | 0 |
| Total | **$ 8,047,614** | **$ 5,757,826** | **71.5%** | **$ 2,289,788** |

[1] Includes both employer and employee assets.

**Please see the Comments on Asset Smoothing in the Executive Summary of this report.**


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## Actuarial Accrued Liabilities - Comparative Schedule

### Table 7

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2003 | $ 77,912,357 | $ 45,066,599 | 58% | $ 32,845,758 |
| 2004 | 81,988,242 | 47,121,078 | 57% | 34,867,164 |
| 2005 | 85,133,646 | 49,394,852 | 58% | 35,738,794 |
| 2006 | 89,836,497 | 52,375,178 | 58% | 37,461,319 |
| 2007 | 94,315,225 | 55,371,148 | 59% | 38,944,077 |
| 2008 | 98,730,066 | 56,604,525 | 57% | 42,125,541 |
| 2009 | 98,241,028 | 56,913,144 | 58% | 41,327,884 |
| 2010 | 104,515,192 | 57,465,343 | 55% | 47,049,849 |
| 2011 | 109,980,544 | 56,636,806 | 52% | 53,343,738 |
| 2012 | 112,765,537 | 55,450,156 | 49% | 57,315,381 |
| 2013 | 116,937,134 | 55,364,925 | 47% | 61,572,209 |
| 2014 | 124,252,898 | 58,181,031 | 47% | 66,071,867 |
| 2015 | 133,503,204 | 58,112,861 | 44% | 75,390,343 |
| 2016 | 135,877,079 | 58,038,689 | 43% | 77,838,390 |
| 2017 | 138,551,008 | 58,878,856 | 43% | 79,672,152 |

Notes: Actuarial assumptions were revised for the 2004, 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

The Valuation Assets include assets from Surplus divisions, if any.


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## Division 10 - AFSCME

### Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2007 | $ 37,678,474 | $ 25,550,013 | 68% | $ 12,128,461 |
| 2008 | 39,098,491 | 25,913,848 | 66% | 13,184,643 |
| 2009 | 37,723,120 | 25,897,447 | 69% | 11,825,673 |
| 2010 | 41,161,682 | 25,310,384 | 61% | 15,851,298 |
| 2011 | 43,501,978 | 24,082,892 | 55% | 19,419,086 |
| 2012 | 43,671,476 | 22,514,449 | 52% | 21,157,027 |
| 2013 | 44,138,105 | 21,226,299 | 48% | 22,911,806 |
| 2014 | 45,652,918 | 21,353,018 | 47% | 24,299,900 |
| 2015 | 47,820,990 | 20,292,751 | 42% | 27,528,239 |
| 2016 | 48,456,382 | 19,715,088 | 41% | 28,741,294 |
| 2017 | 48,849,190 | 19,325,874 | 40% | 29,523,316 |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-10: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2007 | 73 | $ 3,569,659 | $ 103,555 | 0.00% |
| 2008 | 64 | 3,212,901 | $ 110,759 | 0.00% |
| 2009 | 60 | 3,036,678 | $ 98,111 | 0.00% |
| 2010 | 39 | 1,999,220 | $ 104,594 | 0.00% |
| 2011 | 33 | 1,726,319 | $ 121,970 | 0.00% |
| 2012 | 31 | 1,624,572 | $ 130,882 | 0.00% |
| 2013 | 30 | 1,675,602 | $ 136,981 | 5.00% |
| 2014 | 27 | 1,609,707 | $ 146,494 | 5.00% |
| 2015 | 25 | 1,493,752 | $ 182,990 | 5.00% |
| 2016 | 22 | 1,257,026 | $ 195,662 | 5.00% |
| 2017 | 19 | 1,061,426 | $ 210,067 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.


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## Division 11 - Supervisory

### Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2007 | $ 14,793,303 | $ 8,255,091 | 56% | $ 6,538,212 |
| 2008 | 14,861,825 | 8,299,185 | 56% | 6,562,640 |
| 2009 | 15,133,232 | 8,167,959 | 54% | 6,965,273 |
| 2010 | 16,632,476 | 8,150,048 | 49% | 8,482,428 |
| 2011 | 17,673,379 | 7,771,867 | 44% | 9,901,512 |
| 2012 | 18,169,765 | 7,444,904 | 41% | 10,724,861 |
| 2013 | 18,757,700 | 7,464,615 | 40% | 11,293,085 |
| 2014 | 19,469,702 | 7,442,113 | 38% | 12,027,589 |
| 2015 | 21,803,355 | 7,616,899 | 35% | 14,186,456 |
| 2016 | 22,408,742 | 7,485,771 | 33% | 14,922,971 |
| 2017 | 22,848,870 | 7,168,725 | 31% | 15,680,145 |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-11: Computed Employer Contributions - Comparative Schedule

| Valuation Date | Active Employees | | Computed Employer | Employee Contribution |
|---|---|---|---|---|
| December 31 | Number | Annual Payroll | Contribution[1] | Rate[2] |
| 2007 | 19 | $ 1,112,416 | 47.02% | 0.00% |
| 2008 | 17 | 1,001,081 | 52.73% | 0.00% |
| 2009 | 14 | 896,075 | 59.03% | 0.00% |
| 2010 | 12 | 734,838 | 80.29% | 0.00% |
| 2011 | 12 | 748,325 | 91.04% | 0.00% |
| 2012 | 12 | 800,836 | 99.18% | 0.00% |
| 2013 | 13 | 886,764 | 94.63% | 0.00% |
| 2014 | 13 | 876,793 | 95.99% | 5.00% |
| 2015 | 12 | 902,306 | $ 91,896 | 5.00% |
| 2016 | 11 | 776,560 | $ 95,733 | 5.00% |
| 2017 | 7 | 484,454 | $ 99,538 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.



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## Division 12 - Mayor, Staff

### Table 8-12: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2007 | $ 25,942,078 | $ 10,669,899 | 41% | $ 15,272,179 |
| 2008 | 27,170,684 | 10,626,319 | 39% | 16,544,365 |
| 2009 | 27,501,883 | 10,081,849 | 37% | 17,420,034 |
| 2010 | 27,749,055 | 9,417,997 | 34% | 18,331,058 |
| 2011 | 28,277,400 | 8,707,405 | 31% | 19,569,995 |
| 2012 | 29,126,900 | 7,891,129 | 27% | 21,235,771 |
| 2013 | 30,051,798 | 7,033,112 | 23% | 23,018,686 |
| 2014 | 30,313,776 | 6,739,462 | 22% | 23,574,314 |
| 2015 | 31,590,826 | 5,887,609 | 19% | 25,703,217 |
| 2016 | 31,268,603 | 5,333,780 | 17% | 25,934,823 |
| 2017 | 31,196,657 | 5,560,088 | 18% | 25,636,569 |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-12: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2007 | 19 | $ 1,484,613 | 71.55% | 0.00% |
| 2008 | 19 | 1,557,187 | $ 104,016 | 0.00% |
| 2009 | 16 | 1,423,820 | $ 105,252 | 0.00% |
| 2010 | 14 | 1,264,697 | $ 106,666 | 0.00% |
| 2011 | 12 | 1,054,905 | $ 112,654 | 0.00% |
| 2012 | 11 | 966,046 | $ 122,162 | 0.00% |
| 2013 | 9 | 823,528 | $ 129,048 | 5.00% |
| 2014 | 8 | 740,275 | $ 133,783 | 5.00% |
| 2015 | 6 | 588,300 | $ 248,168 | 5.00% |
| 2016 | 5 | 490,049 | $ 163,894 | 5.00% |
| 2017 | 5 | 502,920 | $ 176,057 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.

## Division 13 - Judges,Crt.Super

### Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2007 | $ 6,740,566 | $ 4,318,418 | 64% | $ 2,422,148 |
| 2008 | 7,340,314 | 4,427,177 | 60% | 2,913,137 |
| 2009 | 7,458,469 | 4,376,669 | 59% | 3,081,800 |
| 2010 | 7,542,995 | 4,392,150 | 58% | 3,150,845 |
| 2011 | 7,947,231 | 4,377,098 | 55% | 3,570,133 |
| 2012 | 8,276,034 | 4,316,264 | 52% | 3,959,770 |
| 2013 | 8,826,653 | 4,475,700 | 51% | 4,350,953 |
| 2014 | 9,310,272 | 4,363,206 | 47% | 4,947,066 |
| 2015 | 9,974,634 | 4,185,938 | 42% | 5,788,696 |
| 2016 | 10,486,551 | 4,272,246 | 41% | 6,214,305 |
| 2017 | 10,762,531 | 4,298,277 | 40% | 6,464,254 |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-13: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2007 | 14 | $ 816,474 | 32.41% | 0.00% |
| 2008 | 11 | 710,205 | 40.27% | 0.00% |
| 2009 | 9 | 613,899 | 44.87% | 0.00% |
| 2010 | 9 | 616,308 | 45.26% | 0.00% |
| 2011 | 8 | 547,893 | 54.59% | 0.00% |
| 2012 | 6 | 407,321 | 78.80% | 0.00% |
| 2013 | 7 | 483,998 | 72.83% | 0.00% |
| 2014 | 6 | 412,831 | $ 30,860 | 5.00% |
| 2015 | 6 | 426,936 | $ 38,056 | 5.00% |
| 2016 | 7 | 447,305 | $ 41,207 | 5.00% |
| 2017 | 6 | 422,749 | $ 45,564 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.


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## Division 14 - Court, Union

### Table 8-14: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2007 | $ 3,439,418 | $ 2,503,686 | 73% | $ 935,732 |
| 2008 | 3,717,159 | 2,614,830 | 70% | 1,102,329 |
| 2009 | 3,671,874 | 2,706,231 | 74% | 965,643 |
| 2010 | 4,191,537 | 3,155,327 | 75% | 1,036,210 |
| 2011 | 4,313,574 | 3,165,096 | 73% | 1,148,478 |
| 2012 | 4,447,797 | 3,250,962 | 73% | 1,196,835 |
| 2013 | 4,616,231 | 3,064,068 | 66% | 1,552,163 |
| 2014 | 4,729,501 | 3,091,828 | 65% | 1,637,673 |
| 2015 | 5,117,024 | 3,039,569 | 59% | 2,077,455 |
| 2016 | 5,248,105 | 2,976,178 | 57% | 2,271,927 |
| 2017 | 5,042,322 | 2,984,759 | 59% | 2,057,563 |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-14: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2007 | 12 | $ 466,201 | $ 10,894 | 0.00% |
| 2008 | 11 | 445,884 | $ 12,649 | 0.00% |
| 2009 | 11 | 466,161 | $ 11,327 | 0.00% |
| 2010 | 8 | 340,696 | $ 9,882 | 0.00% |
| 2011 | 8 | 331,832 | $ 10,685 | 0.00% |
| 2012 | 7 | 299,896 | $ 10,482 | 0.00% |
| 2013 | 5 | 213,707 | $ 11,127 | 0.00% |
| 2014 | 5 | 217,176 | $ 11,953 | 0.00% |
| 2015 | 5 | 226,205 | $ 15,593 | 0.00% |
| 2016 | 4 | 187,332 | $ 15,638 | 5.00% |
| 2017 | 4 | 185,283 | $ 15,234 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.

## Division 15 - AFSCME 6/21/99

### Table 8-15: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2007 | $ 2,648,808 | $ 1,963,699 | 74% | $ 685,109 |
| 2008 | 3,078,330 | 2,359,885 | 77% | 718,445 |
| 2009 | 3,095,761 | 2,873,617 | 93% | 222,144 |
| 2010 | 3,120,823 | 3,552,535 | 114% | (431,712) |
| 2011 | 3,555,009 | 4,180,874 | 118% | (625,865) |
| 2012 | 3,845,372 | 4,862,218 | 126% | (1,016,846) |
| 2013 | 4,471,259 | 5,827,586 | 130% | (1,356,327) |
| 2014 | 5,312,661 | 5,869,892 | 111% | (557,231) |
| 2015 | 6,280,239 | 6,605,257 | 105% | (325,018) |
| 2016 | 6,593,812 | 6,980,777 | 106% | (386,965) |
| 2017 | 7,156,792 | 7,445,152 | 104% | (288,360) |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-15: Computed Employer Contributions - Comparative Schedule

| Valuation Date | Active Employees | | Computed Employer | Employee Contribution |
|---|---|---|---|---|
| December 31 | Number | Annual Payroll | Contribution[1] | Rate[2] |
| 2007 | 47 | $ 2,124,296 | 15.43% | 0.00% |
| 2008 | 45 | 2,092,637 | 16.14% | 0.00% |
| 2009 | 43 | 1,995,996 | 14.93% | 0.00% |
| 2010 | 31 | 1,406,641 | 10.67% | 0.00% |
| 2011 | 30 | 1,374,595 | 10.16% | 0.00% |
| 2012 | 28 | 1,307,104 | 5.84% | 0.00% |
| 2013 | 28 | 1,359,058 | 0.00% | 5.00% |
| 2014 | 30 | 1,485,798 | 7.92% | 5.00% |
| 2015 | 27 | 1,386,439 | $ 10,843 | 5.00% |
| 2016 | 25 | 1,280,621 | $ 8,063 | 5.00% |
| 2017 | 23 | 1,227,090 | $ 8,586 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.


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## Division 17 - CrtUn Hired10/03

### Table 8-17: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2007 | $ 88,296 | $ 35,309 | 40% | $ 52,987 |
| 2008 | 146,801 | 76,138 | 52% | 70,663 |
| 2009 | 193,355 | 142,689 | 74% | 50,666 |
| 2010 | 261,221 | 261,771 | 100% | (550) |
| 2011 | 345,168 | 383,905 | 111% | (38,737) |
| 2012 | 394,032 | 465,460 | 118% | (71,428) |
| 2013 | 509,355 | 611,122 | 120% | (101,767) |
| 2014 | 598,566 | 693,773 | 116% | (95,207) |
| 2015 | 751,788 | 917,417 | 122% | (165,629) |
| 2016 | 582,805 | 853,981 | 147% | (271,176) |
| 2017 | 688,985 | 936,821 | 136% | (247,836) |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-17: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees Number | Active Employees Annual Payroll | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| 2007 | 8 | $ 241,798 | 12.24% | 0.00% |
| 2008 | 10 | 309,370 | 13.86% | 0.00% |
| 2009 | 10 | 346,940 | 13.23% | 0.00% |
| 2010 | 10 | 359,743 | 12.55% | 0.00% |
| 2011 | 10 | 375,088 | 12.10% | 0.00% |
| 2012 | 10 | 390,645 | 10.64% | 0.00% |
| 2013 | 12 | 463,879 | $ 3,718 | 0.00% |
| 2014 | 9 | 371,273 | $ 2,675 | 0.00% |
| 2015 | 8 | 346,077 | $ 2,310 | 0.00% |
| 2016 | 6 | 258,945 | $ 0 | 5.00% |
| 2017 | 5 | 226,874 | $ 0 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.


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## Division 18 - Dispatchers hired bfr. 7/1/14

### Table 8-18: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2009 | 650 | (1,203) | -185% | 1,853 |
| | | | | |
| 2013 | 35,352 | 43,721 | 124% | (8,369) |
| 2014 | 5,617,354 | 4,241,972 | 76% | 1,375,382 |
| 2015 | 6,524,729 | 4,713,697 | 72% | 1,811,032 |
| 2016 | 7,117,043 | 5,197,249 | 73% | 1,919,794 |
| 2017 | 8,019,718 | 5,623,971 | 70% | 2,395,747 |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-18: Computed Employer Contributions - Comparative Schedule

| Valuation Date | Active Employees | | Computed Employer | Employee Contribution |
|---|---|---|---|---|
| December 31 | Number | Annual Payroll | Contribution[1] | Rate[2] |
| 2008 | 0 | $ 0 | 0.00% | 0.00% |
| 2009 | 0 | 0 | 0.00% | 0.00% |
| 2010 | 0 | 0 | 0.00% | 0.00% |
| 2011 | 0 | 0 | 0.00% | 0.00% |
| | | | | |
| 2013 | 7 | 284,781 | 20.32% | 5.00% |
| 2014 | 21 | 1,119,651 | $ 21,884 | 5.00% |
| 2015 | 18 | 1,067,422 | $ 23,974 | 5.00% |
| 2016 | 16 | 1,016,151 | $ 22,855 | 5.00% |
| 2017 | 13 | 890,751 | $ 25,036 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.

## Division 19 - Mayor Staff hired after 1/1/08

### Table 8-19: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2008 | $ 20,777 | $ 8,211 | 40% | $ 12,566 |
| 2009 | 88,219 | 73,579 | 83% | 14,640 |
| 2010 | 143,232 | 332,743 | 232% | (189,511) |
| 2011 | 285,001 | 773,874 | 272% | (488,873) |
| 2012 | 359,064 | 1,259,767 | 351% | (900,703) |
| 2013 | 570,475 | 1,870,355 | 328% | (1,299,880) |
| 2014 | 753,472 | 1,663,999 | 221% | (910,527) |
| 2015 | 1,022,607 | 2,041,331 | 200% | (1,018,724) |
| 2016 | 1,223,499 | 2,184,826 | 179% | (961,327) |
| 2017 | 1,437,690 | 2,340,577 | 163% | (902,887) |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-19: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2008 | 2 | $ 116,818 | 16.58% | 5.00% |
| 2009 | 5 | 362,871 | 16.55% | 5.00% |
| 2010 | 5 | 394,431 | 11.88% | 5.00% |
| 2011 | 5 | 425,324 | 6.72% | 5.00% |
| 2012 | 6 | 470,563 | 0.00% | 5.00% |
| 2013 | 7 | 565,300 | 0.00% | 5.00% |
| 2014 | 7 | 612,128 | 4.49% | 5.00% |
| 2015 | 6 | 543,033 | $ 0 | 5.00% |
| 2016 | 6 | 550,957 | $ 0 | 5.00% |
| 2017 | 5 | 453,863 | $ 0 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.


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## Division 20 - Crt Admin & Union aft 7/1/10

### Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2014 | 25,511 | 116,082 | 455% | (90,571) |
| 2015 | 57,297 | 280,653 | 490% | (223,356) |
| 2016 | 89,620 | 484,832 | 541% | (395,212) |
| 2017 | 114,198 | 530,682 | 465% | (416,484) |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-20: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2014 | 5 | 205,168 | 0.00% | 5.00% |
| 2015 | 6 | 279,949 | 0.00% | 5.00% |
| 2016 | 7 | 326,219 | 0.00% | 5.00% |
| 2017 | 5 | 260,317 | $ 0 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.

## Division 21 - Dispatchers on/aft 7/1/14

### Table 8-21: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2015 | 4,996 | 29,260 | 586% | (24,264) |
| 2016 | 12,814 | 65,547 | 512% | (52,733) |
| 2017 | 27,896 | 133,855 | 480% | (105,959) |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-21: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2015 | 2 | 71,131 | 3.68% | 3.00% |
| 2016 | 5 | 178,499 | 4.53% | 3.00% |
| 2017 | 8 | 260,974 | 3.01% | 3.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.


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## Division 22 - Supervisory aft 7/1/10

### Table 8-22: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2015 | $ 8,908 | $ 58,110 | 652% | $ (49,202) |
| 2016 | 20,637 | 204,247 | 990% | (183,610) |
| 2017 | 90,703 | 379,222 | 418% | (288,519) |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-22: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees Number | Active Employees Annual Payroll | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| 2015 | 2 | $ 119,585 | 1.50% | 5.00% |
| 2016 | 2 | 120,241 | 0.00% | 5.00% |
| 2017 | 3 | 165,831 | 0.00% | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.

## Division 90 - Eld HC Administration

### Table 8-90: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2014 | $ 650,226 | $ 582,419 | 90% | $ 67,807 |
| 2015 | 670,149 | 528,222 | 79% | 141,927 |
| 2016 | 655,410 | 471,055 | 72% | 184,355 |
| 2017 | 640,576 | 418,494 | 65% | 222,082 |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-90: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees | | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| | Number | Annual Payroll | | |
| 2014 | 0 | $ 0 | $ 376 | 0.00% |
| 2015 | 0 | 0 | $ 918 | 0.00% |
| 2016 | 0 | 0 | $ 1,251 | 5.00% |
| 2017 | 0 | 0 | $ 1,605 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.

## Division 91 - Eld HC General

### Table 8-91: Actuarial Accrued Liabilities - Comparative Schedule

| Valuation Date December 31 | Actuarial Accrued Liability | Valuation Assets | Percent Funded | Unfunded (Overfunded) Accrued Liabilities |
|---|---|---|---|---|
| 2014 | $ 1,818,939 | $ 2,023,267 | 111% | $ (204,328) |
| 2015 | 1,875,662 | 1,916,148 | 102% | (40,486) |
| 2016 | 1,713,056 | 1,813,112 | 106% | (100,056) |
| 2017 | 1,674,880 | 1,732,359 | 103% | (57,479) |

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

### Table 9-91: Computed Employer Contributions - Comparative Schedule

| Valuation Date December 31 | Active Employees Number | Active Employees Annual Payroll | Computed Employer Contribution[1] | Employee Contribution Rate[2] |
|---|---|---|---|---|
| 2014 | 0 | $ 0 | $ 0 | 0.00% |
| 2015 | 0 | 0 | $ 0 | 0.00% |
| 2016 | 0 | 0 | $ 0 | 5.00% |
| 2017 | 0 | 0 | $ 0 | 5.00% |

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

**Note:** The contributions shown in Table 9 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 6.

See the Benefit Provision History on page 60 for past benefit provision changes.



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## Division 10 - AFSCME

### Table 10-10: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ 27,528,239 | 21 | $ 28,550,260 | 17 | $ 2,318,832 |
| (Gain)/Loss | 12/31/2016 | 595,607 | 19 | 665,819 | 17 | 54,072 |
| (Gain)/Loss | 12/31/2017 | 401,932 | 17 | 449,550 | 17 | 36,516 |
| **Total** | | | | **$ 29,665,629** | | **$ 2,409,420** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 11 - Supervisory

### Table 10-11: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019 Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ 14,186,456 | 23 | $ 14,986,504 | 21 | $ 1,053,288 |
| (Gain)/Loss | 12/31/2016 | 360,455 | 22 | 405,861 | 21 | 28,524 |
| (Gain)/Loss | 12/31/2017 | 480,735 | 21 | 537,690 | 21 | 37,788 |
| **Total** | | | | **$ 15,930,055** | | **$ 1,119,600** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 12 - Mayor, Staff

### Table 10-12: Layered Amortization Schedule

| | | | | Amounts for Fiscal Year Beginning 7/1/2019 | | |
|---|---|---|---|---|---|---|
| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
| Initial | 12/31/2015 | $ 25,703,217 | 21 | $ 25,450,953 | 17 | $ 2,067,108 |
| (Gain)/Loss | 12/31/2016 | (237,076) | 19 | (265,018) | 17 | (21,528) |
| (Gain)/Loss | 12/31/2017 | (36,500) | 17 | (40,824) | 17 | (3,312) |
| **Total** | | | | **$ 25,145,111** | | **$ 2,042,268** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

## Division 13 - Judges,Crt.Super

### Table 10-13: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019 Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ 5,788,696 | 23 | $ 6,096,636 | 19 | $ 458,172 |
| (Gain)/Loss | 12/31/2016 | 285,342 | 22 | 321,281 | 19 | 24,144 |
| (Gain)/Loss | 12/31/2017 | 131,599 | 19 | 147,190 | 19 | 11,064 |
| **Total** | | | | **$ 6,565,107** | | **$ 493,380** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

## Division 14 - Court, Union

### Table 10-14: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ 2,077,455 | 23 | $ 2,206,202 | 19 | $ 165,804 |
| (Gain)/Loss | 12/31/2016 | 116,860 | 22 | 131,577 | 19 | 9,888 |
| Plan Amendments | 12/31/2016 | 6,828 | 22 | 7,693 | 19 | 576 |
| (Gain)/Loss | 12/31/2017 | (256,250) | 19 | (286,609) | 19 | (21,540) |
| **Total** | | | | **$ 2,058,863** | | **$ 154,728** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 15 - AFSCME 6/21/99

### Table 10-15: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ (325,018) | 10 | $ (210,027) | 10 | $ (25,692) |
| (Gain)/Loss | 12/31/2016 | (149,193) | 10 | (158,607) | 9 | (21,180) |
| (Gain)/Loss | 12/31/2017 | 99,025 | 10 | 110,757 | 10 | 13,548 |
| **Total** | | | | **$ (257,877)** | | **$ (33,324)** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.



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## Division 17 - CrtUn Hired10/03

### Table 10-17: Layered Amortization Schedule

| | | | | Amounts for Fiscal Year Beginning 7/1/2019 | | |
|---|---|---|---|---|---|---|
| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
| Initial | 12/31/2015 | $ (165,629) | 10 | $ (150,727) | 10 | $ (18,432) |
| (Gain)/Loss | 12/31/2016 | (102,098) | 15 | (112,491) | 14 | (10,536) |
| Plan Amendments | 12/31/2016 | (12,433) | 10 | (13,215) | 9 | (1,764) |
| (Gain)/Loss | 12/31/2017 | 38,179 | 10 | 42,702 | 10 | 5,220 |
| **Total** | | | | **$ (233,731)** | | **$ (25,512)** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 18 - Dispatchers hired bfr. 7/1/14

### Table 10-18: Layered Amortization Schedule

| | | | | Amounts for Fiscal Year Beginning 7/1/2019 | | |
|---|---|---|---|---|---|---|
| **Type of UAL** | **Date Established** | **Original Balance[1]** | **Original Amortization Period[2]** | **Outstanding UAL Balance[3]** | **Remaining Amortization Period[2]** | **Annual Amortization Payment** |
| Initial | 12/31/2015 | $ 1,811,032 | 23 | $ 2,006,878 | 21 | $ 141,048 |
| (Gain)/Loss | 12/31/2016 | (38,360) | 22 | (43,190) | 21 | (3,036) |
| (Gain)/Loss | 12/31/2017 | 453,908 | 21 | 507,684 | 21 | 35,676 |
| **Total** | | | | **$ 2,471,372** | | **$ 173,688** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 19 - Mayor Staff hired after 1/1/08

### Table 10-19: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ (1,018,724) | 10 | $ (904,034) | 10 | $ (110,580) |
| (Gain)/Loss | 12/31/2016 | 41,692 | 10 | 44,327 | 9 | 5,916 |
| (Gain)/Loss | 12/31/2017 | 27,928 | 10 | 31,237 | 10 | 3,816 |
| **Total** | | | | **$ (828,470)** | | **$ (100,848)** |

[1] For each type of UAL (layer), this is the original balance as of the date the layer was established.

[2] According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

[3] This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

## Division 20 - Crt Admin & Union aft 7/1/10

### Table 10-20: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ (223,356) | 10 | $ (227,704) | 10 | $ (27,852) |
| (Gain)/Loss | 12/31/2016 | (161,838) | 15 | (178,320) | 14 | (16,704) |
| (Gain)/Loss | 12/31/2017 | (4,182) | 10 | (4,677) | 10 | (576) |
| **Total** | | | | **$ (410,701)** | | **$ (45,132)** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

## Division 21 - Dispatchers on/aft 7/1/14

### Table 10-21: Layered Amortization Schedule

| | | | | Amounts for Fiscal Year Beginning 7/1/2019 | | |
|---|---|---|---|---|---|---|
| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
| Initial | 12/31/2015 | $ (24,264) | 10 | $ (24,548) | 10 | $ (3,000) |
| (Gain)/Loss | 12/31/2016 | (25,866) | 15 | (28,493) | 14 | (2,676) |
| (Gain)/Loss | 12/31/2017 | (51,660) | 15 | (57,780) | 15 | (5,136) |
| **Total** | | | | **$ (110,821)** | | **$ (10,812)** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 22 - Supervisory aft 7/1/10

### Table 10-22: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ (49,202) | 10 | $ (40,622) | 10 | $ (4,968) |
| (Gain)/Loss | 12/31/2016 | (138,881) | 15 | (153,020) | 14 | (14,340) |
| (Gain)/Loss | 12/31/2017 | (95,195) | 15 | (106,473) | 15 | (9,468) |
| **Total** | | | | **$ (300,115)** | | **$ (28,776)** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 90 - Eld HC Administration

### Table 10-90: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ 141,927 | 20 | $ 151,477 | 16 | $ 12,852 |
| (Gain)/Loss | 12/31/2016 | 36,132 | 18 | 40,268 | 16 | 3,420 |
| (Gain)/Loss | 12/31/2017 | 31,458 | 16 | 35,185 | 16 | 2,988 |
| **Total** | | | | **$ 226,930** | | **$ 19,260** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## Division 91 - Eld HC General

### Table 10-91: Layered Amortization Schedule

| Type of UAL | Date Established | Original Balance[1] | Original Amortization Period[2] | Amounts for Fiscal Year Beginning 7/1/2019: Outstanding UAL Balance[3] | Remaining Amortization Period[2] | Annual Amortization Payment |
|---|---|---|---|---|---|---|
| Initial | 12/31/2015 | $ (40,486) | 10 | $ (40,938) | 10 | $ (5,004) |
| (Gain)/Loss | 12/31/2016 | (56,469) | 10 | (60,030) | 9 | (8,016) |
| (Gain)/Loss | 12/31/2017 | 47,540 | 10 | 53,172 | 10 | 6,504 |
| **Total** | | | | **$ (47,796)** | | **$ (6,516)** |

1 For each type of UAL (layer), this is the original balance as of the date the layer was established.

2 According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

3 This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.


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## GASB 68 Information

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. Statement 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at www.mersofmich.com.

| | |
|---|---|
| Actuarial Valuation Date: | 12/31/2017 |
| Measurement Date of Total Pension Liability (TPL): | 12/31/2017 |

At 12/31/2017, the following employees were covered by the benefit terms:

| | |
|---|---|
| Inactive employees or beneficiaries currently receiving benefits: | 306 |
| Inactive employees entitled to but not yet receiving benefits: | 39 |
| Active employees: | 103 |
| | 448 |

| | |
|---|---|
| Covered employee payroll: (Needed for Required Supplementary Information) | $ 6,142,532 |
| Average expected remaining service lives of all employees (active and inactive): | 2 |
| Total Pension Liability as of 12/31/2016 measurement date: | $ 132,490,333 |
| Total Pension Liability as of 12/31/2017 measurement date: | $ 135,152,137 |
| Service Cost for the year ending on the 12/31/2017 measurement date: | $ 1,068,107 |

Change in the Total Pension Liability due to:

| | |
|---|---|
| - Benefit changes[1]: | $ 0 |
| - Differences between expected and actual experience[2]: | $ 132,393 |
| - Changes in assumptions[2]: | $ 0 |

[1] A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

[2] Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Sensitivity of the Net Pension Liability to changes in the discount rate:

| | 1% Decrease (7.00%) | Current Discount Rate (8.00%) | 1% Increase (9.00%) |
|---|---|---|---|
| Change in Net Pension Liability as of 12/31/2017: | $ 14,519,094 | - | $ (12,267,798) |

Note: The current discount rate shown for GASB 68 purposes is higher than the MERS assumed rate of return. This is because for GASB 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.

## Benefit Provision History

The following benefit provision history is provided by MERS. Any corrections to this history or discrepancies between this information and information displayed elsewhere in the valuation report should be reported to MERS. All provisions are listed by date of adoption.

### 10 - AFSCME

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 5/1/2015 | DC Adoption Date 05-01-2015 |
| 4/1/2013 | Member Contribution Rate 5.00% |
| 6/1/2003 | Temporary 18 Years & Out (06/01/2003 - 09/03/2003) |
| 1/1/2001 | 25 Years & Out |
| 1/1/2001 | 2.8% Mult. for Svc < 25 yrs , 1% for Svc > 25 yrs (80% max) |
| 6/17/1997 | Temporary 25 Years & Out (06/17/1997 - 10/03/1997) |
| 6/17/1997 | Temporary 2.8% Mult. for Svc < 25 yrs , 1% for Svc > 25 yrs (80% max) (06/17/1997 - 10/03/1997) |
| 1/1/1997 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 1/1/1997 | 8 Year Vesting |
| 1/1/1997 | Benefit F50 (With 25 Years of Service) |
| 1/1/1997 | Benefit B-4 (80% max) |
| 9/1/1995 | 10 Year Vesting |
| 8/1/1995 | 8 Year Vesting |
| 8/1/1995 | Temporary 25 Years & Out (08/01/1995 - 10/01/1995) |
| 8/1/1995 | Temporary Benefit RS 50 (50% Post-Ret. Spouse Benefits) (08/01/1995 - 10/01/1995) |
| 8/1/1995 | Temporary Benefit B-4 (80% max) (08/01/1995 - 10/01/1995) |
| 9/1/1992 | Temporary Benefit RS 50 (50% Post-Ret. Spouse Benefits) (09/01/1992 - 02/28/1993) |
| 9/1/1992 | Temporary Benefit B-4 (80% max) (09/01/1992 - 02/28/1993) |
| 3/1/1991 | Temporary Benefit RS 50 (50% Post-Ret. Spouse Benefits) (03/01/1991 - 07/03/1991) |
| 3/1/1991 | Temporary Benefit B-4 (80% max) (03/01/1991 - 07/03/1991) |
| 7/1/1990 | Benefit B-3 (80% max) |
| 12/18/1989 | Covered by Act 88 |
| 7/1/1987 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/1987 | Benefit B-2 |
| 7/1/1984 | Benefit B-1 |
| 3/1/1981 | Member Contribution Rate 0.00% |
| 4/1/1980 | Benefit F55 (With 15 Years of Service) |
| 3/3/1975 | Exclude Temporary Employees |
| 11/27/1972 | Blanket Resolution (All Service) |
| 1/1/1972 | Flexible E 2% COLA Adopted (01/01/1972) |
| 1/1/1972 | E2 2.5% COLA for future retirees (04/01/1971) |
| 1/1/1972 | E1 2.5% COLA for past retirees (04/01/1971) |
| 6/1/1967 | Benefit C-1 (Old) |
| 10/1/1966 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 10/1/1966 | 10 Year Vesting |
| 10/1/1966 | Benefit C (Old) |
| 10/1/1966 | Member Contribution Rate 3.00% Under $4,200.00 - Then 5.00% |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |


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## 10 - AFSCME

| | |
|---|---|
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 11 - Supervisory

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 7/1/2014 | Participant Contribution Rate 5% |
| 6/1/2003 | Temporary 18 Years & Out (06/01/2003 - 09/03/2003) |
| 1/1/2001 | 25 Years & Out |
| 1/1/2001 | 2.8% Mult. for Svc < 25 yrs , 1% for Svc > 25 yrs (80% max) |
| 2/1/2000 | 6 Year Vesting |
| 10/3/1997 | Benefit B-4 (80% max) |
| 6/17/1997 | Temporary 25 Years & Out (06/17/1997 - 10/02/1997) |
| 6/17/1997 | 2.8% Mult. for Svc < 25 yrs , 1% for Svc > 25 yrs (80% max) |
| 1/1/1997 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 1/1/1997 | Benefit B-4 (80% max) |
| 1/1/1997 | Benefit F50 (With 25 Years of Service) |
| 7/1/1993 | Member Contribution Rate 0.00% |
| 9/1/1992 | Temporary Benefit RS 50 (50% Post-Ret. Spouse Benefits) (09/01/1992 - 02/28/1993) |
| 9/1/1992 | Temporary Benefit B-4 (80% max) (09/01/1992 - 02/28/1993) |
| 3/1/1991 | Temporary Benefit RS 50 (50% Post-Ret. Spouse Benefits) (03/01/1991 - 07/03/1991) |
| 3/1/1991 | Temporary Benefit B-4 (80% max) (03/01/1991 - 07/03/1991) |
| 1/1/1991 | Benefit B-3 (80% max) |
| 7/1/1990 | 8 Year Vesting |
| 12/18/1989 | Covered by Act 88 |
| 7/1/1987 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/1987 | 2.25% Multiplier (no max) |
| 7/1/1987 | Member Contribution Rate 5.00% |
| 7/1/1984 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 7/1/1984 | 10 Year Vesting |
| 7/1/1984 | Benefit B-1 |
| 4/1/1980 | Benefit F55 (With 15 Years of Service) |
| 3/3/1975 | Exclude Temporary Employees |
| 11/27/1972 | Blanket Resolution (All Service) |
| 1/1/1972 | Flexible E 2% COLA Adopted (01/01/1972) |
| 1/1/1972 | E2 2.5% COLA for future retirees (04/01/1971) |
| 1/1/1972 | E1 2.5% COLA for past retirees (04/01/1971) |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 12 - Mayor, Staff

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 5/1/2015 | DC Adoption Date 05-01-2015 |
| 1/1/2013 | Member Contribution Rate 5.00% |
| 6/1/2003 | Temporary 18 Years & Out (06/01/2003 - 09/03/2003) |
| 2/1/1999 | 2.8% Mult. for Svc < 30 yrs , 1% for Svc > 30 yrs |


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## 12 - Mayor, Staff

| | |
|---|---|
| 7/1/1997 | Benefit B-3 (80% max) |
| 7/2/1996 | 2.8% Mult. for Svc < 25 yrs , 1% for Svc > 25 yrs (80% max) |
| 7/1/1996 | 25 Years & Out |
| 7/1/1996 | 2.8% Multiplier (80% max) |
| 1/1/1995 | Benefit F50 (With 25 Years of Service) |
| 9/1/1992 | Temporary Benefit B-4 (80% max) (09/01/1992 - 02/28/1993) |
| 4/1/1992 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 4/1/1992 | 6 Year Vesting |
| 4/1/1992 | Benefit B-4 (80% max) |
| 3/1/1991 | Temporary 2.5% Multiplier (no max) (03/01/1991 - 07/03/1991) |
| 12/18/1989 | Covered by Act 88 |
| 7/1/1987 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/1987 | 2.25% Multiplier (no max) |
| 7/1/1984 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 7/1/1984 | Benefit B-1 |
| 7/1/1980 | Member Contribution Rate 0.00% |
| 4/1/1980 | 10 Year Vesting |
| 4/1/1980 | Benefit F55 (With 15 Years of Service) |
| 11/27/1972 | Blanket Resolution (All Service) |
| 1/1/1972 | Flexible E 2% COLA Adopted (01/01/1972) |
| 1/1/1972 | E2 2.5% COLA for future retirees (04/01/1971) |
| 1/1/1972 | E1 2.5% COLA for past retirees (04/01/1971) |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 13 - Judges,Crt.Super

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 1/1/2017 | DC Adoption Date 01-01-2017 |
| 7/1/2014 | Participant Contribution Rate 5% |
| 7/2/1996 | 2.8% Mult. for Svc < 25 yrs , 1% for Svc > 25 yrs (80% max) |
| 7/1/1996 | 25 Years & Out |
| 7/1/1996 | 2.8% Multiplier (80% max) |
| 11/1/1990 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 11/1/1990 | Benefit B-4 (80% max) |
| 1/1/1990 | 6 Year Vesting |
| 12/18/1989 | Covered by Act 88 |
| 7/1/1987 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/1987 | Benefit B-3 (80% max) |
| 7/1/1984 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 7/1/1984 | 10 Year Vesting |
| 7/1/1984 | Benefit B-1 |
| 3/1/1981 | Member Contribution Rate 0.00% |
| 4/1/1980 | Benefit F55 (With 15 Years of Service) |
| 3/3/1975 | Exclude Temporary Employees |
| 11/27/1972 | Blanket Resolution (All Service) |


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## 13 - Judges,Crt.Super

| | |
|---|---|
| 1/1/1972 | Flexible E 2% COLA Adopted (01/01/1972) |
| 1/1/1972 | E2 2.5% COLA for future retirees (04/01/1971) |
| 1/1/1972 | E1 2.5% COLA for past retirees (04/01/1971) |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 14 - Court, Union

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 1/1/2017 | DC Adoption Date 01-01-2017 |
| 7/1/2016 | Participant Contribution Rate 5% |
| 10/1/2003 | 2.8% Mult. for Svc < 25 yrs , 1% for Svc > 25 yrs (80% max) |
| 7/1/1998 | Benefit B-4 (80% max) |
| 7/1/1998 | 25 Years & Out |
| 7/1/1998 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 7/1/1998 | 6 Year Vesting |
| 9/1/1992 | Temporary Benefit RS 50 (50% Post-Ret. Spouse Benefits) (09/01/1992 - 02/28/1993) |
| 9/1/1992 | Temporary Benefit B-4 (80% max) (09/01/1992 - 02/28/1993) |
| 1/1/1990 | 8 Year Vesting |
| 12/18/1989 | Covered by Act 88 |
| 7/1/1987 | Benefit B-2 |
| 7/1/1987 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/1984 | Benefit B-1 |
| 7/1/1984 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 7/1/1984 | 10 Year Vesting |
| 3/1/1981 | Member Contribution Rate 0.00% |
| 4/1/1980 | Benefit F55 (With 15 Years of Service) |
| 3/3/1975 | Exclude Temporary Employees |
| 11/27/1972 | Blanket Resolution (All Service) |
| 1/1/1972 | Flexible E 2% COLA Adopted (01/01/1972) |
| 1/1/1972 | E2 2.5% COLA for future retirees (04/01/1971) |
| 1/1/1972 | E1 2.5% COLA for past retirees (04/01/1971) |
| | Fiscal Month - July |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |
| | Defined Benefit Normal Retirement Age - 60 |

## 15 - AFSCME 6/21/99

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 5/1/2015 | DC Adoption Date 05-01-2015 |
| 4/1/2013 | Member Contribution Rate 5.00% |
| 7/1/1999 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/1999 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 7/1/1999 | 8 Year Vesting |
| 7/1/1999 | Benefit B-3 (80% max) |
| 7/1/1999 | Benefit F50 (With 25 Years of Service) |


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## 15 - AFSCME 6/21/99

| | |
|---|---|
| 7/1/1999 | Benefit F55 (With 15 Years of Service) |
| 7/1/1999 | Member Contribution Rate 0.00% |
| 7/1/1999 | E2 2.5% COLA for future retirees (07/01/1999) |
| 12/18/1989 | Covered by Act 88 |
| 3/3/1975 | Exclude Temporary Employees |
| 11/27/1972 | Blanket Resolution (All Service) |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 17 - CrtUn Hired10/03

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 1/1/2017 | DC Adoption Date 01-01-2017 |
| 7/1/2016 | Participant Contribution Rate 5% |
| 1/1/2004 | E2 2.5% COLA for future retirees (10/01/2003) |
| 10/1/2003 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 10/1/2003 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 10/1/2003 | 8 Year Vesting |
| 10/1/2003 | Benefit B-2 |
| 10/1/2003 | Benefit F50 (With 25 Years of Service) |
| 10/1/2003 | Benefit F55 (With 15 Years of Service) |
| 10/1/2003 | Member Contribution Rate 0.00% |
| 12/18/1989 | Covered by Act 88 |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 18 - Dispatchers hired bfr. 7/1/14

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 7/1/2014 | Exclude Temporary Employees |
| 1/1/2009 | E2 2.5% COLA for future retirees (07/01/2008) |
| 7/1/2007 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/2007 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 7/1/2007 | 8 Year Vesting |
| 7/1/2007 | Benefit B-4 (80% max) |
| 7/1/2007 | Benefit F50 (With 25 Years of Service) |
| 7/1/2007 | Benefit F55 (With 15 Years of Service) |
| 7/1/2007 | Member Contribution Rate 5.00% |
| 7/1/2007 | Covered by Act 88 |
| 7/1/2007 | Day of work defined as 8 Hours a Day for Group employees. |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |


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## 19 - Mayor Staff hired after 1/1/08

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 5/1/2015 | DC Adoption Date 05-01-2015 |
| 1/1/2008 | Day of work defined as 7 Hours a Day for All employees. |
| 1/1/2008 | 25 Years & Out |
| 1/1/2008 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 1/1/2008 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 1/1/2008 | 6 Year Vesting |
| 1/1/2008 | 2.8% Mult. for Svc < 30 yrs , 1% for Svc > 30 yrs |
| 1/1/2008 | Benefit F55 (With 15 Years of Service) |
| 1/1/2008 | Member Contribution Rate 5.00% |
| 1/1/2008 | E2 2.5% COLA for future retirees (01/01/2008) |
| 1/1/2008 | Covered by Act 88 |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 20 - Crt Admin & Union aft 7/1/10

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 1/1/2017 | DC Adoption Date 01-01-2017 |
| 8/1/2012 | Day of work defined as 7 Hours a Day for All employees. |
| 8/1/2012 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 8/1/2012 | Exclude Temporary Employees |
| 8/1/2012 | 8 Year Vesting |
| 8/1/2012 | Benefit C-1 (New) |
| 8/1/2012 | Member Contribution Rate 5.00% |
| 12/18/1989 | Covered by Act 88 |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 21 - Dispatchers on/aft 7/1/14

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 7/1/2014 | 1.75% multiplier |
| 7/1/2014 | Participant Contribution Rate 3% |
| 7/1/2014 | Day of work defined as 8 Days a Day for All employees. |
| 7/1/2014 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 7/1/2014 | Non Standard Compensation Definition |
| 7/1/2014 | Exclude Temporary Employees |
| 7/1/2014 | 10 Year Vesting |
| 7/1/2007 | Covered by Act 88 |
| | Fiscal Month - July |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |
| | Defined Benefit Normal Retirement Age - 60 |


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## 22 - Supervisory aft 7/1/10

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 4/1/2015 | Day of work defined as 8 Hours a Day for Full Time employees. |
| 4/1/2015 | Benefit FAC-5 (5 Year Final Average Compensation) |
| 4/1/2015 | Exclude Temporary Employees requiring less than 12 months |
| 4/1/2015 | 10 Year Vesting |
| 4/1/2015 | Benefit C-1 (New) |
| 4/1/2015 | Participant Contribution Rate 5% |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 90 - Eld HC Administration

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 7/1/2014 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/2014 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 7/1/2014 | Exclude Temporary Employees requiring less than 12 months |
| 7/1/2014 | 10 Year Vesting |
| 7/1/2014 | Benefit B-4 (80% max) |
| 7/1/2014 | Member Contribution Rate 5.00% |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |

## 91 - Eld HC General

| | |
|---|---|
| 4/1/2017 | Service Credit Purchase Estimates - No |
| 7/1/2014 | Benefit FAC-3 (3 Year Final Average Compensation) |
| 7/1/2014 | Benefit RS 50 (50% Post-Ret. Spouse Benefits) |
| 7/1/2014 | Exclude Temporary Employees requiring less than 12 months |
| 7/1/2014 | 6 Year Vesting |
| 7/1/2014 | Benefit B-3 (80% max) |
| 7/1/2014 | Member Contribution Rate 5.00% |
| | Fiscal Month - July |
| | Defined Benefit Normal Retirement Age - 60 |
| | Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years |


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## Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology can be found in the Appendix. Some actuarial assumptions are specific to this municipality and its divisions. These are listed below.

### Increase in Final Average Compensation

| Division | FAC Increase Assumption |
|---|---|
| 10 - AFSCME | 3.00% |
| 11 - Supervisory | 3.00% |
| 12 - Mayor, Staff | 3.00% |
| 13 - Judges,Crt.Super | 3.00% |
| 14 - Court, Union | 3.00% |
| 15 - AFSCME 6/21/99 | 3.00% |
| 17 - CrtUn Hired10/03 | 3.00% |
| 18 - Dispatchers hired bfr. | 3.00% |
| 19 - Mayor Staff hired after | 3.00% |
| 20 - Crt Admin & Union aft 7 | 3.00% |
| 21 - Dispatchers on/aft 7/1/ | 0.00% |
| 22 - Supervisory aft 7/1/10 | 3.00% |

### Withdrawal Rate Scaling Factor

| Division | Withdrawal Rate Scaling Factor |
|---|---|
| All Divisions | 77% |

### Miscellaneous and Technical Assumptions

Loads – None.

## Amortization Policy for Closed Divisions

| Closed Division | Amortization Option |
|---|---|
| 10 - AFSCME | Accelerated to 15-Year Amortization |
| 12 - Mayor, Staff | Accelerated to 15-Year Amortization |
| 13 - Judges,Crt.Super | Accelerated to 15-Year Amortization |
| 14 - Court, Union | Accelerated to 15-Year Amortization |
| 15 - AFSCME 6/21/99 | Accelerated to 15-Year Amortization |
| 17 - CrtUn Hired10/03 | Non-Accelerated Amortization |
| 19 - Mayor Staff hired after | Accelerated to 15-Year Amortization |
| 20 - Crt Admin & Union aft 7 | Non-Accelerated Amortization |
| 90 - Eld HC Administration | Accelerated to 5-Year Amortization |
| 91 - Eld HC General | Accelerated to 5-Year Amortization |

Please see the Appendix on the MERS website for a detailed description of the amortization options available for closed divisions within an open municipality.


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**Additional Funding**

The City also has contributed additional contributions over the last four fiscal years that total $1,720,630. See below for information from the 2017 MERS actuary report (page 26 of the report).

## Flow of Valuation Assets

**Table 5**

| Year Ended 12/31 | Employer Contributions | | Employee Contributions | Investment Income (Valuation Assets) | Benefit Payments | Employee Contribution Refunds | Net Transfers | Valuation Asset Balance |
|---|---|---|---|---|---|---|---|---|
| | Required | Additional | | | | | | |
| 2007 | $ 3,689,790 | | $ 0 | $ 4,224,149 | $ (4,917,969) | $ 0 | $ 0 | $ 55,371,148 |
| 2008 | 3,744,910 | | 3,850 | 2,507,290 | (5,165,635) | (1,963) | 144,925 | 56,604,525 |
| 2009 | 3,639,367 | | 14,943 | 2,188,328 | (5,565,064) | 0 | 31,045 | 56,913,144 |
| 2010 | 3,480,225 | | 20,097 | 2,757,931 | (6,180,543) | (653) | 475,142 | 57,465,343 |
| 2011 | 3,297,691 | $ 0 | 20,585 | 2,479,952 | (6,883,884) | 0 | 257,119 | 56,636,806 |
| 2012 | 3,410,979 | 0 | 21,448 | 2,172,479 | (7,215,099) | 0 | 423,543 | 55,450,156 |
| 2013 | 3,935,037 | 0 | 188,658 | 2,991,268 | (7,392,674) | 0 | 192,480 | 55,364,925 |
| 2014 | 4,403,242 | 1,220,132 | 299,758 | 3,198,143 | (7,865,543) | 0 | 1,560,374 | 58,181,031 |
| 2015 | 4,903,859 | 264,668 | 362,187 | 2,733,978 | (8,332,862) | 0 | 0 | 58,112,861 |
| 2016 | 5,133,653 | 182,413 | 343,428 | 2,764,401 | (8,498,067) | 0 | 0 | 58,038,689 |
| 2017 | 5,951,992 | 53,417 | 336,047 | 3,326,256 | (8,818,642) | (8,903) | 0 | 58,878,856 |

# City of Westland – MERS pension plan – Corrective Action Plan

Below is laid out in a similar manner as Form 5598. Form 5598 will refer to this document. Please use form 5598 as the corrective action plan and use this attachment as the referenced documentation accordingly.

**3. Descriptions of Prior Actions**

**System Design Changes**

Over the last several years, the City has worked to implement changes to each Division within the MERS pension plan. The changes below helped fund the pension liability through additional employee contributions. The changes below also helped lower or limit the total pension liability depending on the change. Below summarizes the changes that have been made in each group.

**Divisions 13, 14, 17 and 20 - Court Workers both Union & Non Union Employees (20 Active Employees in DB, 29 Total Active Employees)**

- All employees must contribute 5% of their salary towards their defined benefit plan.
- Court Admin - Effective July 1, 2010 up until June 30, 2016. Employees Received a Defined benefit plan with a reduced multiplier of 1.5%, Five year average final Comp and a retirement age of 60.
- DB Plans are closed - Effective July 1, 2016 the defined Benefit plan is closed to new employees. All new employees in this division are offered a defined contribution plan (to date we have 7 employees in the defined Contribution plan)

**Divisions 12 & 19 Mayors Appointed Staff (5 Active Employees in DB, 19 Total Active Employees)**

- Effective January 1, 2013 all employees in this division must contribute 5% of their salary towards their pension.
- DB Plans are closed - Employees hired after 5/1/2015 are enrolled in a Defined Contribution plan.

**Divisions 10 and 15 – AFSCME local 1602 Department of Public services and Clerical (42 Active Employees in DB, 63 Total Active Employees)**

- Effective April 1, 2013 all employees must contribute 5% of their salary towards their pension.
- DB Plans are closed - Effective March 19, 2010 the defined benefit plan is closed to new employees. All new employees after this date are offered a defined contribution plan. Currently of the 63 employees in these divisions 24 have the defined contribution plans.

**<u>Divisions 11 and 22 UAW Local 174 Supervisors Union (10 Active Employees in DB, 14 Total Active Employees)</u>**

- Effective July 1, 2010 all employees hired after this date receive a multiplier of 1.5%, Five year average compensation, 10 year vesting and normal retirement of age 60. Employees promoted from the AFSCME division retain the pension plan they're in.
- Effective July 1, 2014 all employees must contribute 5% towards their pension.
- Effective July 1, 2018 all employees must contribute 6% towards their pension.
- DB Plans are closed - Employees hired after 7/1/18 are enrolled in a Defined Contribution plan.

**<u>Divisions 18 and 21 Dispatchers Union (21 Active Employees in DB, 21 Total Active Employees)</u>**

- Effective for employees hired after July 1, 2014 the Multiplier for pensions was reduced from 2.8% to 1.75%, 10 year vesting and a 5 year average final comp on base wages only
- Employees hired before July 1, 2014 must contribute 5% towards their pension.
- Employees hired after July 1, 2014 must contribution 3% towards their pension.

**<u>Additional Funding</u>**

See Attachment 3a for documentation regarding additional funding in prior fiscal years.

**4. Description of Prospective Actions**

**<u>System Design Changes</u>**

The union contracts below have the following expiration dates:

- 18th District Court Workers Association – June 30, 2019
- WPFFU Local 1279 – June 30, 2020
- UAW Local 174 Supervisors – December 31, 2022
- WPOA Lieutenants and Sergeants – December 31, 2019
- 18th District Court Non Union – June 30, 2019
- Appointed Officials and Mayor's Office – December 31, 2018
- WPOAM Patrol & Dispatch – June 30, 2019
- AFSCME Local 1602 – December 31, 2022
- Deputy City Clerk – December 31, 2018
- City Clerk – December 31, 2018

The expiration dates above will provide an opportunity for the City to negotiate plan provisions in a manner to further lower or limit the pension liability as the City has done in the past with other contracts:

- Bring employee contributions in line with the recently negotiated UAW contract of 6 percent of salary is contributed towards their pension.
- Bridged Multipliers
- Dispatch - Close the DB Pension plan for new hires. All new hires would enter into the DC plan similar to other union groups.
- Police & Fire – Close the DB Pension plan for new hires. All new hires would enter into the DC plan similar to other union groups.

**Other Considerations**

To fulfill Underfunded Status and Reasonable Timeframe approval criteria:

See attachment 2a for documentation to fulfill Underfunded Status and Reasonable Timeframe approval criteria.

To fulfill Legal and Feasible and Affordability approval criteria:

The City is required to contribute the annual required contribution calculated by the actuary each year by law. The City has always paid at least the required amount calculated by the actuaries.

The City's analysis on the next few pages shows the City's operational forecast of the General Fund. The analysis includes various increases of revenues and expenditures over time based on historical trends and future expectations. The analysis also includes only recurring revenue sources available for general purposes. All restricted revenue and related expenditures or one time revenues are excluded from the analysis. For example, the MERS plan does not include the Police & Fire Pension plan. This plan is separate and is funded through the ACT 345 millage tax revenue. Therefore, these restricted revenues and related expenditures are excluded from the analysis. In addition, the forecast adds the additional contributions for OPEB per the OPEB corrective action plan and it still allows the City to pay the ARC for pension. Per the financial analysis, the OPEB corrective action plan will not effect this pension corrective action plan. The General Fund portion of the additional $500,000 ($437,500 for General Fund) contribution for the OPEB trust is included in the forecast analysis.

Per the analysis on the next few pages, the City expects uses of fund balance that total approximately $360,000 over the next 4 years. The General Fund's total fund balance at the end of fiscal year ending June 30, 2018 is estimated at approximately $7.8 million.

Attachment 5a

# City of Westland
## General Fund Forecast for fiscal years ending June 30, 2019 through June 30, 2050
## Excludes Restricted Revenues and Related Expenditures and One-Time Revenues

| Analysis Determination | Summary Category | Grouping | FYE 2019 | FYE 2020 | FYE 2021 | FYE 2022 | FYE 2023 | FYE 2024 |
|---|---|---|---|---|---|---|---|---|
| **Unrestricted** | **Revenues** | Taxes | 13,395,493.70 | 13,663,403.57 | 13,936,671.64 | 14,215,405.08 | 14,499,713.18 | 14,789,707.44 |
| | | State Shared Revenue | 8,569,234.73 | 8,783,465.59 | 9,003,052.23 | 9,228,128.54 | 9,458,831.75 | 9,695,302.55 |
| | | Charges for Services | 4,797,115.82 | 4,845,086.97 | 4,893,537.84 | 4,942,473.22 | 4,991,897.95 | 5,041,816.93 |
| | | Court fines and fees | 5,486,160.56 | 5,650,745.38 | 5,820,267.74 | 5,994,875.78 | 6,174,722.05 | 6,359,963.71 |
| | | Licenses and permits | 57,423.30 | 57,997.53 | 58,577.51 | 59,163.28 | 59,754.91 | 60,352.46 |
| | | Interest income | 276,300.47 | 281,826.48 | 287,463.01 | 293,212.27 | 299,076.51 | 305,058.04 |
| | | Cable Franchise fees | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 |
| | | Shared Services Reimbursement | 11,096,497.73 | 11,207,462.71 | 11,319,537.34 | 11,432,732.71 | 11,547,060.04 | 11,662,530.64 |
| | | Other revenue | 3,487,763.80 | 3,518,398.02 | 3,549,338.57 | 3,580,588.54 | 3,612,151.00 | 3,644,029.08 |
| | | | **48,893,533.38** | **49,735,929.53** | **50,595,989.16** | **51,474,122.68** | **52,370,750.67** | **53,286,304.13** |
| | **Expenditures** | Salary | 20,018,374.62 | 20,218,558.37 | 20,420,743.95 | 20,624,951.39 | 20,831,200.90 | 21,039,512.91 |
| | | Fringes | 852,669.78 | 861,196.47 | 869,808.44 | 878,506.52 | 887,291.59 | 896,164.50 |
| | | General & Administrative | 10,520,360.79 | 10,415,157.18 | 10,311,005.61 | 10,311,005.61 | 10,311,005.61 | 10,311,005.61 |
| | | Utilities | 729,412.41 | 744,000.66 | 758,880.68 | 774,058.29 | 789,539.46 | 805,330.24 |
| | | Healthcare | 8,219,379.42 | 8,548,154.59 | 8,890,080.78 | 9,245,684.01 | 9,615,511.37 | 10,000,131.82 |
| | | Dental | 250,273.17 | 252,775.90 | 255,303.66 | 257,856.70 | 260,435.27 | 263,039.62 |
| | | Life | 74,711.89 | 76,953.25 | 79,261.85 | 81,639.70 | 84,088.90 | 86,611.56 |
| | | Optical | 24,758.66 | 25,501.42 | 26,266.46 | 27,054.45 | 27,866.09 | 28,702.07 |
| | | Insurance | 1,747,558.67 | 1,782,509.84 | 1,818,160.04 | 1,854,523.24 | 1,891,613.70 | 1,929,445.98 |
| | | Pension | 5,072,841.00 | 5,587,500.00 | 5,955,000.00 | 6,075,000.00 | 6,210,000.00 | 6,397,500.00 |
| | | DC Pension | 152,173.73 | 153,695.47 | 155,232.42 | 156,784.75 | 158,352.59 | 159,936.12 |
| | | Debt | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 |
| | | Other expenditures | 397,765.78 | 407,601.84 | 417,709.86 | 428,098.28 | 438,775.84 | 449,751.57 |
| | | Additional OPEB Contribution | 437,500.00 | 437,500.00 | 437,500.00 | 437,500.00 | 437,500.00 | 437,500.00 |
| | **Expenditures** | | **48,872,888.48** | **49,886,213.57** | **50,770,062.31** | **51,527,771.51** | **52,318,289.88** | **53,179,740.58** |
| **Grand Total** | **Net Income (Loss)** | | **20,644.90** | **(150,284.04)** | **(174,073.15)** | **(53,648.83)** | **52,460.79** | **106,563.55** |

Attachment 5a

# City of Westland

## General Fund Forecast for fiscal years ending June 30, 2019 through June 30, 2050

## Excludes Restricted Revenues and Related Expenditures and One-Time Revenues

| Analysis Determination | Summary Category | Grouping | FYE 2025 | FYE 2026 | FYE 2027 | FYE 2028 | FYE 2029 | FYE 2030 |
|---|---|---|---|---|---|---|---|---|
| **Unrestricted** | **Revenues** | Taxes | 15,085,501.59 | 15,387,211.62 | 15,694,955.86 | 16,008,854.97 | 16,329,032.07 | 16,655,612.71 |
| | | State Shared Revenue | 9,937,685.11 | 10,186,127.24 | 10,440,780.42 | 10,701,799.93 | 10,969,344.93 | 11,243,578.55 |
| | | Charges for Services | 5,092,235.10 | 5,143,157.45 | 5,194,589.03 | 5,246,534.92 | 5,299,000.27 | 5,351,990.27 |
| | | Court fines and fees | 6,550,762.62 | 6,747,285.50 | 6,949,704.06 | 7,158,195.19 | 7,372,941.04 | 7,594,129.27 |
| | | Licenses and permits | 60,955.99 | 61,565.55 | 62,181.20 | 62,803.01 | 63,431.04 | 64,065.36 |
| | | Interest income | 311,159.20 | 317,382.39 | 323,730.03 | 330,204.63 | 336,808.73 | 343,544.90 |
| | | Cable Franchise fees | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 |
| | | Shared Services Reimbursement | 11,779,155.95 | 11,896,947.51 | 12,015,916.98 | 12,136,076.15 | 12,257,436.91 | 12,380,011.28 |
| | | Other revenue | 3,676,225.95 | 3,708,744.79 | 3,741,588.81 | 3,774,761.27 | 3,808,265.46 | 3,842,104.69 |
| | | | **54,221,224.78** | **55,175,965.31** | **56,150,989.66** | **57,146,773.35** | **58,163,803.72** | **59,202,580.31** |
| | **Expenditures** | Salary | 21,249,908.04 | 21,462,407.12 | 21,677,031.19 | 21,893,801.50 | 22,112,739.52 | 22,333,866.91 |
| | | Fringes | 905,126.15 | 914,177.41 | 923,319.18 | 932,552.38 | 941,877.90 | 951,296.68 |
| | | General & Administrative | 10,311,005.61 | 10,311,005.61 | 10,362,560.64 | 10,414,373.44 | 10,466,445.31 | 10,518,777.53 |
| | | Utilities | 821,436.85 | 837,865.59 | 854,622.90 | 871,715.36 | 889,149.66 | 906,932.66 |
| | | Healthcare | 10,400,137.10 | 10,816,142.58 | 11,248,788.28 | 11,698,739.82 | 12,166,689.41 | 12,653,356.98 |
| | | Dental | 265,670.02 | 268,326.72 | 271,009.98 | 273,720.08 | 276,457.28 | 279,221.86 |
| | | Life | 89,209.91 | 91,886.21 | 94,642.79 | 97,482.08 | 100,406.54 | 103,418.74 |
| | | Optical | 29,563.13 | 30,450.02 | 31,363.52 | 32,304.43 | 33,273.56 | 34,271.77 |
| | | Insurance | 1,968,034.90 | 2,007,395.59 | 2,047,543.51 | 2,088,494.38 | 2,130,264.26 | 2,172,869.55 |
| | | Pension | 6,621,412.50 | 6,853,161.94 | 7,093,022.61 | 7,341,278.40 | 7,598,223.14 | 7,864,160.95 |
| | | DC Pension | 161,535.48 | 163,150.84 | 164,782.34 | 166,430.17 | 168,094.47 | 169,775.41 |
| | | Debt | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 |
| | | Other expenditures | 461,034.83 | 472,635.28 | 484,562.93 | 496,828.13 | 509,441.59 | 522,414.39 |
| | | Additional OPEB Contribution | 437,500.00 | 437,500.00 | 437,500.00 | 437,500.00 | 437,500.00 | 437,500.00 |
| | **Expenditures** | | **54,096,683.07** | **55,041,213.47** | **56,065,858.45** | **57,120,328.72** | **58,205,671.21** | **59,322,972.00** |
| **Grand Total** | **Net Income (Loss)** | | **124,541.71** | **134,751.84** | **85,131.22** | **26,444.63** | **(41,867.49)** | **(120,391.70)** |

Attachment 5a

**City of Westland**

**General Fund Forecast for fiscal years ending June 30, 2019 through June 30, 2050**

**Excludes Restricted Revenues and Related Expenditures and One-Time Revenues**

| Analysis Determination | Summary Category | Grouping | FYE 2031 | FYE 2032 | FYE 2033 | FYE 2034 | FYE 2035 | FYE 2036 |
|---|---|---|---|---|---|---|---|---|
| **Unrestricted** | **Revenues** | Taxes | 16,988,724.97 | 17,328,499.47 | 17,675,069.46 | 18,028,570.85 | 18,389,142.26 | 18,756,925.11 |
| | | State Shared Revenue | 11,524,668.01 | 11,812,784.71 | 12,108,104.33 | 12,410,806.94 | 12,721,077.11 | 13,039,104.04 |
| | | Charges for Services | 5,405,510.17 | 5,459,565.28 | 5,514,160.93 | 5,569,302.54 | 5,624,995.56 | 5,681,245.52 |
| | | Court fines and fees | 7,821,953.15 | 8,056,611.75 | 8,298,310.10 | 8,547,259.40 | 8,803,677.18 | 9,067,787.50 |
| | | Licenses and permits | 64,706.01 | 65,353.07 | 66,006.60 | 66,666.67 | 67,333.33 | 68,006.67 |
| | | Interest income | 350,415.80 | 357,424.12 | 364,572.60 | 371,864.05 | 379,301.33 | 386,887.36 |
| | | Cable Franchise fees | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 |
| | | Shared Services Reimbursement | 12,503,811.39 | 12,628,849.51 | 12,755,138.00 | 12,882,689.38 | 13,011,516.28 | 13,141,631.44 |
| | | Other revenue | 3,876,282.31 | 3,910,801.71 | 3,945,666.31 | 3,980,879.54 | 4,016,444.92 | 4,052,365.94 |
| | | | **60,263,615.09** | **61,347,432.88** | **62,454,571.59** | **63,585,582.64** | **64,741,031.25** | **65,921,496.84** |
| | **Expenditures** | Salary | 22,557,205.58 | 22,782,777.64 | 23,010,605.42 | 23,240,711.47 | 23,473,118.58 | 23,707,849.77 |
| | | Fringes | 960,809.64 | 970,417.74 | 980,121.92 | 989,923.14 | 999,822.37 | 1,009,820.59 |
| | | General & Administrative | 10,571,371.42 | 10,624,228.28 | 10,677,349.42 | 10,730,736.17 | 10,784,389.85 | 10,838,311.80 |
| | | Utilities | 925,071.31 | 943,572.74 | 962,444.19 | 981,693.07 | 1,001,326.94 | 1,021,353.47 |
| | | Healthcare | 13,159,491.26 | 13,685,870.91 | 14,233,305.75 | 14,802,637.98 | 15,394,743.50 | 16,010,533.24 |
| | | Dental | 282,014.07 | 284,834.22 | 287,682.56 | 290,559.38 | 293,464.98 | 296,399.63 |
| | | Life | 106,521.30 | 109,716.94 | 113,008.44 | 116,398.70 | 119,890.66 | 123,487.38 |
| | | Optical | 35,299.92 | 36,358.92 | 37,449.69 | 38,573.18 | 39,730.37 | 40,922.29 |
| | | Insurance | 2,216,326.94 | 2,260,653.48 | 2,305,866.55 | 2,351,983.88 | 2,399,023.56 | 2,447,004.03 |
| | | Pension | 8,139,406.58 | 8,424,285.81 | 8,719,135.82 | 9,024,305.57 | 3,000,000.00 | 3,090,000.00 |
| | | DC Pension | 171,473.17 | 173,187.90 | 174,919.78 | 176,668.98 | 178,435.67 | 180,220.02 |
| | | Debt | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 |
| | | Other expenditures | 535,758.01 | 549,484.32 | 563,605.60 | 578,134.56 | 593,084.39 | 608,468.69 |
| | | Additional OPEB Contribution | 437,500.00 | 437,500.00 | 437,500.00 | 437,500.00 | 2,625,000.00 | 2,625,000.00 |
| | **Expenditures** | | **60,473,357.79** | **61,657,997.46** | **62,878,103.70** | **64,134,934.65** | **61,277,139.43** | **62,374,479.48** |
| **Grand Total** | **Net Income (Loss)** | | **(209,742.70)** | **(310,564.58)** | **(423,532.11)** | **(549,352.01)** | **3,463,891.82** | **3,547,017.37** |

Attachment 5a

# City of Westland

## General Fund Forecast for fiscal years ending June 30, 2019 through June 30, 2050

## Excludes Restricted Revenues and Related Expenditures and One-Time Revenues

| Analysis Determination | Summary Category | Grouping | FYE 2037 | FYE 2038 | FYE 2039 | FYE 2040 | FYE 2041 | FYE 2042 |
|---|---|---|---|---|---|---|---|---|
| **Unrestricted** | **Revenues** | Taxes | 19,132,063.61 | 19,514,704.88 | 19,904,998.98 | 20,303,098.96 | 20,709,160.94 | 21,123,344.16 |
| | | State Shared Revenue | 13,365,081.64 | 13,699,208.68 | 14,041,688.90 | 14,392,731.12 | 14,752,549.40 | 15,121,363.14 |
| | | Charges for Services | 5,738,057.97 | 5,795,438.55 | 5,853,392.94 | 5,911,926.87 | 5,971,046.14 | 6,030,756.60 |
| | | Court fines and fees | 9,339,821.12 | 9,620,015.76 | 9,908,616.23 | 10,205,874.72 | 10,512,050.96 | 10,827,412.49 |
| | | Licenses and permits | 68,686.73 | 69,373.60 | 70,067.34 | 70,768.01 | 71,475.69 | 72,190.45 |
| | | Interest income | 394,625.10 | 402,517.61 | 410,567.96 | 418,779.32 | 427,154.90 | 435,698.00 |
| | | Cable Franchise fees | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 |
| | | Shared Services Reimbursement | 13,273,047.75 | 13,405,778.23 | 13,539,836.01 | 13,675,234.37 | 13,811,986.72 | 13,950,106.58 |
| | | Other revenue | 4,088,646.18 | 4,125,289.21 | 4,162,298.68 | 4,199,678.24 | 4,237,431.60 | 4,275,562.49 |
| | | | **67,127,573.39** | **68,359,869.80** | **69,619,010.31** | **70,905,634.88** | **72,220,399.62** | **73,563,977.18** |
| | **Expenditures** | Salary | 23,944,928.27 | 24,184,377.55 | 24,426,221.33 | 24,670,483.54 | 24,917,188.37 | 25,166,360.26 |
| | | Fringes | 1,019,918.80 | 1,030,117.99 | 1,040,419.17 | 1,050,823.36 | 1,061,331.59 | 1,071,944.91 |
| | | General & Administrative | 10,892,503.36 | 10,946,965.87 | 11,001,700.70 | 11,056,709.21 | 11,111,992.75 | 11,167,552.72 |
| | | Utilities | 1,041,780.54 | 1,062,616.15 | 1,083,868.48 | 1,105,545.85 | 1,127,656.76 | 1,150,209.90 |
| | | Healthcare | 16,650,954.57 | 17,316,992.75 | 18,009,672.46 | 18,730,059.36 | 19,479,261.74 | 20,258,432.21 |
| | | Dental | 299,363.62 | 302,357.26 | 305,380.83 | 308,434.64 | 311,518.99 | 314,634.18 |
| | | Life | 127,192.00 | 131,007.76 | 134,937.99 | 138,986.13 | 143,155.72 | 147,450.39 |
| | | Optical | 42,149.95 | 43,414.45 | 44,716.89 | 46,058.39 | 47,440.14 | 48,863.35 |
| | | Insurance | 2,495,944.11 | 2,545,862.99 | 2,596,780.25 | 2,648,715.85 | 2,701,690.17 | 2,755,723.97 |
| | | Pension | 3,182,700.00 | 3,278,181.00 | 3,376,526.43 | - | - | - |
| | | DC Pension | 182,022.22 | 183,842.45 | 185,680.87 | 187,537.68 | 189,413.06 | 191,307.19 |
| | | Debt | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 |
| | | Other expenditures | 624,301.58 | 640,597.67 | 657,372.09 | 674,640.49 | 692,419.10 | 710,724.72 |
| | | Additional OPEB Contribution | 2,625,000.00 | 2,625,000.00 | 2,625,000.00 | 5,250,000.00 | 5,250,000.00 | 5,250,000.00 |
| | **Expenditures** | | **63,503,867.60** | **64,666,442.47** | **65,863,386.06** | **66,243,103.08** | **67,408,176.97** | **68,608,312.35** |
| **Grand Total** | **Net Income (Loss)** | | **3,623,705.79** | **3,693,427.33** | **3,755,624.25** | **4,662,531.81** | **4,812,222.65** | **4,955,664.83** |

Attachment 5a

# City of Westland

## General Fund Forecast for fiscal years ending June 30, 2019 through June 30, 2050

## Excludes Restricted Revenues and Related Expenditures and One-Time Revenues

| Analysis Determination | Summary Category | Grouping | FYE 2043 | FYE 2044 | FYE 2045 | FYE 2046 | FYE 2047 | FYE 2048 |
|---|---|---|---|---|---|---|---|---|
| **Unrestricted** | **Revenues** | Taxes | 21,545,811.04 | 21,976,727.26 | 22,416,261.81 | 22,864,587.04 | 23,321,878.78 | 23,788,316.36 |
| | | State Shared Revenue | 15,499,397.22 | 15,886,882.15 | 16,284,054.20 | 16,691,155.55 | 17,108,434.44 | 17,536,145.30 |
| | | Charges for Services | 6,091,064.16 | 6,151,974.81 | 6,213,494.55 | 6,275,629.50 | 6,338,385.80 | 6,401,769.65 |
| | | Court fines and fees | 11,152,234.86 | 11,486,801.91 | 11,831,405.97 | 12,186,348.14 | 12,551,938.59 | 12,928,496.75 |
| | | Licenses and permits | 72,912.35 | 73,641.47 | 74,377.89 | 75,121.67 | 75,872.88 | 76,631.61 |
| | | Interest income | 444,411.96 | 453,300.20 | 462,366.21 | 471,613.53 | 481,045.80 | 490,666.72 |
| | | Cable Franchise fees | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 | 1,727,543.27 |
| | | Shared Services Reimbursement | 14,089,607.65 | 14,230,503.73 | 14,372,808.76 | 14,516,536.85 | 14,661,702.22 | 14,808,319.24 |
| | | Other revenue | 4,314,074.70 | 4,352,972.02 | 4,392,258.31 | 4,431,937.47 | 4,472,013.42 | 4,512,490.13 |
| | | | **74,937,057.21** | **76,340,346.81** | **77,774,570.97** | **79,240,473.03** | **80,738,815.21** | **82,270,379.04** |
| | **Expenditures** | Salary | 25,418,023.86 | 25,672,204.10 | 25,928,926.14 | 26,188,215.40 | 26,450,097.56 | 26,714,598.53 |
| | | Fringes | 1,082,664.36 | 1,093,491.00 | 1,104,425.91 | 1,115,470.17 | 1,126,624.87 | 1,137,891.12 |
| | | General & Administrative | 11,223,390.48 | 11,279,507.43 | 11,335,904.97 | 11,392,584.49 | 11,449,547.42 | 11,506,795.15 |
| | | Utilities | 1,173,214.10 | 1,196,678.38 | 1,220,611.95 | 1,245,024.19 | 1,269,924.67 | 1,295,323.16 |
| | | Healthcare | 21,068,769.49 | 21,911,520.27 | 22,787,981.08 | 23,699,500.33 | 24,647,480.34 | 25,633,379.55 |
| | | Dental | 317,780.52 | 320,958.32 | 324,167.91 | 327,409.59 | 330,683.68 | 333,990.52 |
| | | Life | 151,873.90 | 156,430.12 | 161,123.02 | 165,956.71 | 170,935.41 | 176,063.47 |
| | | Optical | 50,329.25 | 51,839.13 | 53,394.30 | 54,996.13 | 56,646.01 | 58,345.39 |
| | | Insurance | 2,810,838.45 | 2,867,055.22 | 2,924,396.33 | 2,982,884.25 | 3,042,541.94 | 3,103,392.78 |
| | | Pension | - | - | - | - | - | - |
| | | DC Pension | 193,220.26 | 195,152.46 | 197,103.99 | 199,075.03 | 201,065.78 | 203,076.43 |
| | | Debt | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 | 375,108.57 |
| | | Other expenditures | 729,574.73 | 748,987.17 | 768,980.69 | 789,574.64 | 810,789.04 | 832,644.64 |
| | | Additional OPEB Contribution | 5,250,000.00 | 5,250,000.00 | 5,250,000.00 | 5,250,000.00 | 5,250,000.00 | 5,250,000.00 |
| | **Expenditures** | | **69,844,787.97** | **71,118,932.18** | **72,432,124.86** | **73,785,799.50** | **75,181,445.28** | **76,620,609.33** |
| **Grand Total** | **Net Income (Loss)** | | **5,092,269.24** | **5,221,414.63** | **5,342,446.11** | **5,454,673.54** | **5,557,369.93** | **5,649,769.71** |

Attachment 5a

**City of Westland**
**General Fund Forecast for fiscal years ending June 30, 2019 through June 30, 2050**
**Excludes Restricted Revenues and Related Expenditures and One-Time Revenues**

| Analysis Determination | Summary Category | Grouping | FYE 2049 | FYE 2050 |
|---|---|---|---|---|
| **Unrestricted** | **Revenues** | Taxes | 24,264,082.69 | 24,749,364.34 |
| | | State Shared Revenue | 17,974,548.94 | 18,423,912.66 |
| | | Charges for Services | 6,465,787.35 | 6,530,445.22 |
| | | Court fines and fees | 13,316,351.65 | 13,715,842.20 |
| | | Licenses and permits | 77,397.93 | 78,171.91 |
| | | Interest income | 500,480.05 | 510,489.65 |
| | | Cable Franchise fees | 1,727,543.27 | 1,727,543.27 |
| | | Shared Services Reimbursement | 14,956,402.44 | 15,105,966.46 |
| | | Other revenue | 4,553,371.61 | 4,594,661.90 |
| | | | **83,835,965.92** | **85,436,397.61** |
| | **Expenditures** | Salary | 26,981,744.52 | 27,251,561.96 |
| | | Fringes | 1,149,270.03 | 1,160,762.73 |
| | | General & Administrative | 11,564,329.13 | 11,622,150.78 |
| | | Utilities | 1,321,229.63 | 1,347,654.22 |
| | | Healthcare | 26,658,714.74 | 27,725,063.33 |
| | | Dental | 337,330.42 | 340,703.73 |
| | | Life | 181,345.38 | 186,785.74 |
| | | Optical | 60,095.76 | 61,898.63 |
| | | Insurance | 3,165,460.63 | 3,228,769.85 |
| | | Pension | - | - |
| | | DC Pension | 205,107.20 | 207,158.27 |
| | | Debt | 375,108.57 | 375,108.57 |
| | | Other expenditures | 855,162.94 | 878,366.23 |
| | | Additional OPEB Contribution | 5,250,000.00 | 5,250,000.00 |
| | **Expenditures** | | **78,104,898.94** | **79,635,984.03** |
| **Grand Total** | **Net Income (Loss)** | | **5,731,066.97** | **5,800,413.58** |

In conclusion, in attachment 5a, the City has documented the corrective action plan to address four approval criteria identified as part of the best practices document issued by the Municipal Stability Board, which are the underfunded status, reasonable timeframe, legal and feasible, and affordability.