



* Berkley * Beverly Hills * Bingham Farms * Birmingham
* Clawson * Huntington Woods * Lathrup Village * Pleasant Ridge
* Royal Oak * Southfield * Southfield Township

AGENDA

Regular Meeting – Wednesday, July 12, 2023 – 8:30 a.m.

Oak Park City Hall, 14000 Oak Park Blvd.

1. Meeting Called to Order
2. Roll Call, Recognition of Visitors & Public Comment
3. Approval of Agenda
4. Approval of Minutes – Regular Meeting – June 14, 2023
5. Approval of Warrants – WA-855
6. **ADMINISTRATIVE REPORTS**
 - A. Annual Actuarial Valuation
 - B. Water and Sewer Rate Survey – 2023/24
 - C. Lead and Copper Rule – System Materials Inventory and 2023 Testing
 - D. GLWA Issues
 - E. 2022/23 Audit
7. **ITEMS NOT ON AGENDA**
8. **MONTHLY REPORTS**
 - A. Water Consumption Reports – June 2023

B. Budget Analysis – June 2023

C. Budget Analysis – July 2022 – June 2023

D. Water Samples – June 2023

E. Precipitation – Inches (Webster Pumping Station)

9. Adjournment

Notice: The Southeastern Oakland County Water Authority will provide necessary, reasonable auxiliary aids and services, such as signers, for the hearing impaired, or audiotapes of printed materials being considered at the meeting to individuals with disabilities. All such requests must be made at least five days prior to said meeting. Individuals with disabilities requiring auxiliary aids or services should contact the Southeastern Oakland County Water Authority by writing or calling: General Manager's Office, 3910 W. Webster Road, Royal Oak, MI 48073; (248) 288-5150.

SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY
Regular Meeting – June 14, 2023
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MINUTES OF THE REGULAR MEETING
OF THE
SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY

Wednesday, June 14, 2023 – Ferndale Public Library

The meeting was called to order at 8:30 a.m. by Mr. Kurt Jones, Vice Chair.

<u>Present</u>	<u>Votes</u>	<u>Municipality</u>
*Shawn Young	2	Berkley
Kurt Jones	1	Bingham Farms
Scott Zielinski (Alternate)	4	Birmingham
Trever Zablocki	1	Clawson
Rocco Fortura	1	Huntington Woods
Susan Montenegro	1	Lathrup Village
Aaron Filipski	9	Royal Oak
Leigh Schultz (Alternate)	<u>15</u>	Southfield
 TOTAL	 34	

<u>Absent</u>		
Jeffrey Campbell	1	Beverly Hills
James Breuckman	1	Pleasant Ridge
Jeffrey Campbell	1	Southfield Twp.

Mr. S. Young, representative for Berkley (2 votes), arrived at 8:42 a.m.

Also Present

Jeff McKeen, General Manager
Robert Jackovich, Operations Manager
Robert Davis, General Counsel
Colette Farris, Organizational Development Manager

-11394-

Motion by Ms. S. Montenegro, supported by Ms. L. Schultz:

That the agenda be approved as submitted.

Yeas: Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (32 votes)
Nays: None
Absent: Young, Campbell, Breuckman, Campbell (5 votes)

Motion Carried.

-11395-

Motion by Mr. A. Filipski, supported by Ms. S. Montenegro:

That the May 10, 2023 Regular Meeting minutes be approved as submitted.

Yeas: Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (32 votes)
Nays: None
Absent: Young, Campbell, Breuckman, Campbell (5 votes)

Motion Carried.

-11396-

Motion by Mr. A. Filipski, supported by Mr. R. Zablocki:

That Warrant No. WA-854 in the amount of \$2,242,902.76 be approved and payments authorized.

ROLL CALL VOTE

Yeas: Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (32 votes)
Nays: None
Absent: Young, Campbell, Breuckman, Campbell (5 votes)

Motion Carried.

-11397-

That the Vice-Chair declare the public meeting on the proposed Budget open at 8:35 a.m. No comments were received. The Vice-Chair declared the public hearing closed at 8:36 a.m.

-11398-

The General Manager offered the Board the opportunity to ask questions or provide ocmments regarding the SOCWA budget for 2023/24. No comments or questions were provided.

-11399-

Motion by Mr. S. Zielinski, supported by Ms. S. Montenegro:

WHEREAS, this Board is required to adopt an annual budget for the fiscal year 2023/24, which budget will be effective July 1, 2023, and

WHEREAS, a notice has been published of a public hearing on the budget in compliance with the provisions of Public Act No. 43 of the Acts of the State Legislature of 1963, and

WHEREAS, a public hearing on the budget was held on June 14, 2023, at 8:30 a.m.,

NOW THEREFORE BE IT RESOLVED, that the budget for the fiscal year 2023/24 be adopted in the following form:

**SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY
 BUDGET
July 1, 2023 Through June 30, 2024**

<u>ESTIMATED REVENUES</u>		
Sale of Water	\$19,015,100	
Sale of Water – Others	10,686,200	
Rentals	131,000	
Water Analysis-Laboratory & Miscellaneous	10,000	
Interest on Investments	<u>150,000</u>	
		\$29,992,300
Lead Service Line Replacements	<u>\$2,500,000</u>	
<u>ESTIMATED EXPENSES</u>		
Source of Supply	\$27,357,000	
Pump Station Operations	1,167,765	
Meters & Mains	263,050	
Administrative & General	<u>830,300</u>	
		\$29,618,115
Lead Service Line Replacements	<u>\$2,500,000</u>	
Revenue minus expenses		\$374,185
Capital Improvements		<u>1,295,000</u>
Working Capital Generated		-\$920,815

ROLL CALL VOTE

Yeas: Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (32 votes)

Nays: None

Absent: Young, Campbell, Breuckman, Campbell (5 votes)

Motion Carried.

-11400-

Motion by Mr. A. Filipski, supported by Ms. L. Schultz:

That the Board adopt the following water service rates. The rates will become effective as of July 1, 2023 and are composed of a 10% monthly fixed charge plus a commodity rate per thousand cubic feet and are summarized in the table below. The proposed commodity rates are identical to those communicated to the Board in February 2023.

	Commodity Rate For 2023/24	Commodity Rate for 2022/23	Change
SOCWA Members	\$17.26	\$16.54	+\$0.72
Bloomfield Hills	\$30.47	\$29.20	+\$1.27
Bloomfield Twp.	\$30.47	\$29.20	+\$1.27

Municipality	Monthly Fixed Charge
Berkley	\$ 7,848
Beverly Hills	\$ 6,618
Bingham Farms	\$ 1,743
Birmingham	\$18,828
Clawson	\$ 5,418
Huntington Woods	\$ 3,740
Lathrup Village	\$ 3,373
Pleasant Ridge	\$ 1,790
Royal Oak	\$40,853
Southfield	\$65,852
Detroit Zoo	\$ 2,094
Rackham Golf Course	\$ 303
Bloomfield Hills	\$16,450
Bloomfield Twp.	\$72,602

ROLL CALL VOTE

Yeas: Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (32 votes)

Nays: None

Absent: Young, Campbell, Breuckman, Campbell (5 votes)

Motion Carried.

-11401-

Motion by Ms. S. Montenegro, supported by Mr. S. Zielinski:

That the report on GLWA Issues be received and filed.

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)
Nays: None
Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

-11402-

Motion by Mr. A. Filipski, supported by Ms. L. Schultz:

That the report on the Annual Organization Meeting and election of Officers, which is scheduled for 8:30 a.m. on Wednesday, July 12, 2023 be received and filed and that the Chair appoint a Nominating Committee composed of three members of the Board who should meet to select candidates to the various offices, for consideration of the Board of Trustees at the Organization Meeting.

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)
Nays: None
Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

-11403-

Motion by Ms. L. Schultz, supported by Ms. S. Montenegro:

That the Board approve the Legal Counsel Retainer Agreement with Davis Listman PLLC for the period from July 1, 2023 to June 30, 2027 and the General Manager is authorized to sign the agreement.

ROLL CALL VOTE

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)
Nays: None
Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

-11404-

Motion by Mr. S. Zielinski, supported by Mr. A. Filipski:

That the Board approve contracting with the MML for Workers' Compensation Insurance for the cost of \$7,502 for the period July 1, 2023 through June 30, 2024.

ROLL CALL VOTE

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)

Nays: None

Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

-11405-

Motion by Ms. S. Montenegro, supported by Ms. L. Schultz:

That the Board approve contracting with the MMRMA for liability and property insurance in the amount of \$20,705 per year for the period July 1, 2023 through June 30, 2024 at the current level of insurance coverage.

ROLL CALL VOTE

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)

Nays: None

Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

-11406-

Motion by Ms. L. Schultz, supported by Mr. A. Filipski:

That the report on Lead and Copper Rule – System Materials Inventory and 2023 Testing be received and filed.

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)

Nays: None

Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

-11407-

Motion by Mr. A. Filipski, supported by Mr. T. Zablocki:

That the Board convene in closed session at 9:05 a.m.

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)
Nays: None
Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

The meeting was called back to order at 9:20 a.m.

-11408-

Motion by Ms. S. Montenegro, supported by Mr. A. Filipski:

That the Board approve the tentative agreement between SOCWA and the Utility Workers.

ROLL CALL VOTE

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)
Nays: None
Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

-11409-

Motion by Ms. S. Montenegro, supported by Ms. L. Schultz:

That the meeting be adjourned.

Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)
Nays: None
Absent: Campbell, Breuckman, Campbell (3 votes)

Motion Carried.

That the meeting be adjourned.

- Yeas: Young, Jones, Zielinski, Zablocki, Fortura, Montenegro, Filipski, Schultz (34 votes)
- Nays: None
- Absent: Campbell, Breuckman, Campbell (3 votes)

The meeting was adjourned at 9:40 a.m.

APPROVED: _____
Chair

Secretary

SOCWA
CHECK WARRANT
JUNE 2023

WA 855
ACCT. 1020

CHECK #	PAYEE	AMOUNT	PURPOSE
58240	ASCENTIS / Cin Time Systems	0.00	Voided Check
58241	Contractors Connection	69.00	Miss Dig
58242	Davis Listman	1,410.75	Legal Services
58243	Durst Lumber Company	28.70	Maintenance of Property & Grounds - Webster
58244	Employee Optical Dental Reimbursement	168.00	Employee Optical Dental Reimbursement
58245	Great Lakes Water Authority	0.00	Voided Check
58246	O'Reilly Auto Parts	15.99	Supplies - Webster
58247	The TM Group Inc	133.75	Accounting Software Consulting
58248	Fran Tatarelli	150.00	Maintenance of Property & Grounds - Webster
58249	UWA Local 413	540.00	Union Dues
58250	SOCRRA	966.81	MSW
58251	TelNet Worldwide - EPAY	0.00	Voided Check
58252	Suburban Commercial Cleaning	500.00	Office Cleaning
58253	Kim Tisler	169.51	Travel/Conference - Mileage Reimbursement
58254	Great Lakes Water Authority	1,896,892.26	Purchase of Water
58255	Airgas USA LLC	142.63	Supplies - Webster
58256	Durst Lumber Company	62.96	Maintenance of Property & Grounds - Webster
58257	Eastern Oil Company	550.48	Maintenance of Equipment - Webster
58258	Galco Industrial Electronics	181.90	Maintenance of Equipment - Shafter
58259	Home Depot Credit Services	59.93	Maintenance of Property & Grounds - Webster, Maintenance of Equip.
58260	Motor City Fasteners LLC	11.34	Maintenance - Birmingham Tanks
58261	Oscar W. Larson Co.	140.76	Maintenance of Equipment - Webster
58262	Southfield Muffler	759.45	Maintenance of Equipment - Webster
58263	Employee Optical Dental Reimbursement	817.00	Employee Optical Dental Reimbursement
58264	TWN Consulting LLC	300.00	Consulting
58265	CMV Landscape & Equipment Company	7,140.00	Maintenance of Equipment
58266	D'Angelo Brothers Inc.	7,590.00	Lead Service Line Replacements - BI
58267	Eurofins Eaton Analytical LLC	445.00	Regulatory Testing
58268	Employee Optical Dental Reimbursement	1,543.81	Employee Optical Dental Reimbursement
58269	Kim Tisler	40.35	Travel/Conference - Mileage Reimbursement
58270	Greeley and Hansen	11,528.94	Consulting (replaces voided check 58135)
58271	Employee Optical Dental Reimbursement	409.00	Employee Optical Dental Reimbursement
58272	Employee Optical Dental Reimbursement	700.40	Employee Optical Dental Reimbursement

SOCWA
CHECK WARRANT
JUNE 2023

WA 855
ACCT. 1020

CHECK #	PAYEE	AMOUNT	PURPOSE
58273	Double Tree Service & Landscaping	4,500.00	Maintenance of Property & Grounds - 14 Mile Tank Station
58274	AT & T - Fiber - EPAY	0.00	Voided Check
58275	Acme Ladder & Supply	56.95	Safety Maintenance - Webster
58276	Plante & Moran, PLLC	1,012.50	Consulting
58277	Billings Lawn Equipment	22.53	Maintenance of Property & Grounds - Webster
58278	Chet's Rent All	528.50	Maintenance of Equipment
58279	Contractors Connection	189.35	Safety Maintenance - Webster
58280	Lillian Dean	459.73	Maintenance of Property & Grounds - Webster
58281	Durst Lumber Company	60.11	Maintenance of Property & Grounds, Tools - Webster
58282	Eastern Oil Company	550.48	Maintenance of Equipment - Webster
58283	Employee Optical Dental Reimbursement	2,905.00	Employee Optical Dental Reimbursement
58284	Home Depot Credit Services	662.34	Maintenance of Equipment, Maintenance of Property & Grounds
58285	Hubbell Roth & Clark Inc	133,037.67	Consulting - Webster Tank Separation Project
58286	MML Workers' Compensation Fund	7,502.00	Workers' Compensation Fund 2023-2024 Premium
58287	Motor City Fasteners LLC	25.12	Maintenance of Equipment
58288	NAPA Auto Parts	23.10	Maintenance of Equipment
58289	Employee Optical Dental Reimbursement	104.00	Employee Optical Dental Reimbursement
58290	Standard Insurance Company	449.73	Life Insurance
58291	The TM Group Inc	487.50	Consulting
58292	Core & Main LP	2,284.80	Maintenance - Webster
58293	Alerus Financial	5,040.64	Deferred Compensation
58294	Paragon Laboratories Inc	2,125.00	Regulatory Testing
58295	Staples	85.82	Office Supplies
58296	Employee Certification	130.00	DOT Physical
58297	Blue Cross Blue Shield of Michigan	23,201.48	Health Insurance
58298	Green Meadows Lawnscape Inc	740.00	Maintenance of Property & Grounds - Oliver, Samoset
58299	MissionSquare	1,808.76	Deferred Compensation
58300	Eurofins Eaton Analytical LLC	890.00	Regulatory Testing
EPAY	Applied Imaging	428.59	Copier & Printer Maintenance
EPAY	Ascentis	121.70	Monthly Time Clock Charges
EPAY	AT&T	534.94	Cell Phones/Internet/Website
EPAY	Consumers Energy	233.26	Natural Gas Service
EPAY	DTE	8,726.83	Electric Service

SOCWA
CHECK WARRANT
JUNE 2023

WA 855
ACCT. 1020

CHECK #	PAYEE	AMOUNT	PURPOSE
EPAY	Pitney Bowes Lease	214.14	Postage Machine
EPAY	Telnet Worldwide	237.95	Telephone
EPAY	Verizon	275.32	Internet/Website/SCADA
		2,133,124.56	

1020 OPERATION & MAINTENANCE FUND **2,133,124.56**

I HEREBY CERTIFY THAT I HAVE EXAMINED THE INVOICES COVERED BY THE ABOVE VOUCHERS FOR RECEIPT OF MATERIALS OR SERVICES RENDERED AND THAT THE PRICES AND COMPUTATIONS ARE CORRECT.

Treasurer

General Manager

Secretary

The payments listed above were presented to the Board of Trustees and were reviewed with no objection on July 12, 2023.

June 15, 2023

Board of Trustees
Southeastern Oakland County Water Authority

Subject: Annual Actuarial Valuation Report - MERS

Board Members:

The Authority has received a copy of the Annual Actuarial Valuation Report as of December 31, 2022, covering the Water Authority's participation in the Michigan Municipal Employees' Retirement System (MERS). A copy of the report is attached.

Funding Level

As of December 31, 2022, the Authority's retirement program was 102% funded. This is a decrease from the funding level of 106% that we had for last year. The decrease in funding level was primarily due to the -10.6% return on the MERS investment portfolio during 2022. The impact of the 2022 market losses was mitigated by MERS' asset smoothing policy, which is described below. The funding levels for 2022 were 107% for the plan for salaried employees, 98% for the plan for union employees hired before 7/1/2011, 93% for the union employees hired after 7/1/2011 and 97% for the salaried employees hired after 7/1/2011. The overall funding level for the last five years is displayed in the table below:

Valuation Date December 31,	Funded Percent
2018	96%
2019	97%
2020	99%
2021	106%
2022	102%

Based on MERS' investment returns in the first quarter of 2023, I estimate that SOCWA's overall funding level was 105% as of March 31, 2023.

Unfunded Accrued Liability

As of December 31, 2022, the Authority had no unfunded accrued liability and the pension plans were overfunded by \$252,289. There was a decrease from the \$666,445 overfunded level as of December 31, 2021.

Changes in Actuarial Calculations

MERS adopted a dedicated gains policy for the 2021 valuation. This policy uses excess market gains to lower the first-year impact on employer contributions. MERS reports that this policy resulted in no change from the assumption of 7.0% annual rate of return in the valuation assets used in this actuarial study. MERS made no other assumption changes for the 2022 valuation.

MERS is continuing to offer the opportunity to phase-in the prior year assumption changes over several years. This results in lower pension contributions during the phase-in period but probably results in higher pension contributions after the phase-in period. SOCWA's projected pension

contributions for 2024/25 are presented in the table below for both the phase-in approach and for the full recognition of the assumption changes. MERS requires that the pension contributions for 2024/25 be at least the phase-in contribution amount, but they recommend that the full impact contributions be used to avoid significantly larger pension contributions in future years. We will decide which level of pension contributions to use as we develop our budget for 2024/25.

Asset Smoothing

In 2016, MERS changed the asset smoothing period from 10 years to 5 years. MERS uses asset smoothing to reduce the amount of volatility in the actuarial funded percentage and the required employee contribution. As of December 31, 2022, the actuarial value of our plan assets was 116% of the market value, which is an increase from the 99% of market value that was used as of December 31, 2021. This means that meeting the actuarial assumption in the next few years will require average annual market returns that are greater than the 7.0% annual investment return assumption. MERS’ average rate of return has been higher than the 7.0% assumption in three of the most recent five years.

Annual Cost

The following is a tabulation of the cost to SOCWA for the Retirement Program:

Fiscal Year	Salaried Monthly Contribution	Union Monthly Contribution	Total Annual Cost
2020/21	\$3,646	\$2,346	\$106,464
2021/22	\$5,035	\$3,667	\$104,424
2022/23	\$3,731	\$4,005	\$92,832
2023/24	\$4,077	\$2,994	\$84,852
2024/25 full impact	\$4,374	\$4,108	\$101,784
2024/25 phase-in	\$4,097	\$3,873	\$95,640

As of December 31, 2022, 25 retirees and beneficiaries received annual pension benefits of \$714,413.

The 2023/24 budgets for both SOCWA and SOCRRA include MERS contributions based on the full impact of the assumption changes but no incremental contributions to the pension plans. I will revisit that assumption with the Board later this calendar year after we have calculated our OPEB unfunded liability as of 6/30/2023.

It is recommended that the Actuarial Valuation Report be received and filed.

Respectfully submitted,

Jeffrey A. McKeen, P.E.
General Manager

Suggested Resolution: “That the Annual Actuarial Valuation Report, covering SOCWA’s participation in the Michigan Municipal Employees Retirement System (MERS), be received and filed.”



Municipal Employees' Retirement System of Michigan

Annual Actuarial Valuation Report

December 31, 2022 - SE Oakland Co Wtr Auth (6309)





Spring 2023

SE Oakland Co Wtr Auth

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 for SE Oakland Co Wtr Auth (6309) as of December 31, 2022. The report includes the determination of liabilities and contribution rates resulting from the participation in the Municipal Employees' Retirement System of Michigan ("MERS"). This report contains the minimum actuarially determined contribution requirement, in alignment with the MERS Plan Document, Actuarial Policy, the Michigan Constitution, and governing statutes. SE Oakland Co Wtr Auth is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees.

The purposes of this valuation are to:

- Measure funding progress as of December 31, 2022,
- Establish contribution requirements for the fiscal year beginning July 1, 2024,
- Provide information regarding the identification and assessment of risk,
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements, and
- Provide information to assist the local unit of government with state reporting requirements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through December 31, 2022. The valuation was based upon information furnished by MERS concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by MERS.

The Municipal Employees' Retirement Act, PA 427 of 1984 and the MERS' Plan Document Article VI Sec. 71 (1)(d), provides the MERS Board with the authority to set actuarial assumptions and methods after consultation with the actuary. As the fiduciary of the plan, the MERS Retirement Board sets certain assumptions for funding and GASB purposes. These assumptions are reviewed regularly through a comprehensive study, most recently in the Fall of 2021. The MERS Retirement Board adopted a Dedicated Gains Policy at the February 17, 2022 Board meeting. The Dedicated Gains Policy automatically reduces the assumed rate of investment return in conjunction with recognizing excess investment gains to mitigate the impact on employer contributions the first year. The policy was effective with the December 31, 2021 annual actuarial valuation.

The Michigan Department of Treasury provides required assumptions to be used for purposes of Public Act 202 reporting. These assumptions are for reporting purposes only and do not impact required contributions. Please refer to the State Reporting page found at the end of this report for information for this filing.

For a full list of all the assumptions used, please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:

<https://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2022AnnualActuarialValuation-Appendix.pdf>

The actuarial assumptions used for this valuation, including the assumed rate of investment return, are reasonable for purposes of the measurement.

This report reflects the impact of COVID-19 experience through December 31, 2022. At this time, no future assumptions have been adjusted as a result of COVID-19. Actual future experience will be reflected in each subsequent annual valuation, as experience emerges.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of SE Oakland Co Wtr Auth as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Rebecca L. Stouffer, Mark Buis, Kurt Dosson, and Shana M. Neeson are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor. GRS maintains independent consulting agreements with certain local units of government for services unrelated to the actuarial consulting services provided in this report.



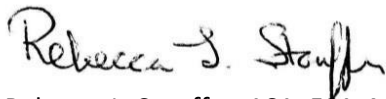
The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

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 MERS 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). GRS is not responsible for the consequences of any unauthorized use. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

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).

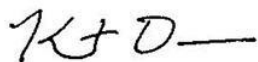
Sincerely,
Gabriel, Roeder, Smith & Company



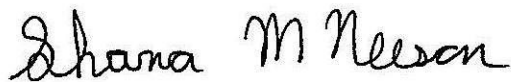
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Executive Summary

Funded Ratio

The funded ratio of a plan is the percentage of the dollar value of the actuarial accrued liability that is covered by the actuarial value of assets. While the funded ratio may be a useful plan measurement, understanding a plan's funding trend may be more important than a particular point in time. Refer to Table 7 to find a history of this information.

	12/31/2022	12/31/2021
Funded Ratio*	102%	106%

* Reflects assets from Surplus divisions, if any.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Required Employer Contributions

Your required employer contributions are shown in the following table. Employee contributions, if any, are in addition to the employer contributions.

Effective with the December 31, 2021 valuation, the MERS Retirement Board adopted a Dedicated Gains Policy which allows for recognition of asset gains in excess of a set threshold in combination with lowering the assumed rate of investment return. Effective with the 2020 and 2019 valuations respectively, the MERS Retirement Board adopted updated demographic and economic assumptions. The combined impact of the prior 2020 and 2019 demographic and economic assumption changes may be phased in. This valuation reflects the last year of phase-in. The combined impact of the past economic and demographic changes will be fully reflected in the 2023 annual actuarial valuation.

By default, MERS will invoice you based on the amount in the “No Phase-in” columns. This amount will be considered the minimum required contribution unless you request to be billed the “Phase-in” rates. If you wish to be billed using the phased-in rates, please contact MERS, at which point the alternate minimum required contribution will be the amount in the “Phase-in” columns.

	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:	12/31/2022	12/31/2022	12/31/2021	12/31/2021	12/31/2022	12/31/2022	12/31/2021	12/31/2021
Fiscal Year Beginning:	July 1, 2024	July 1, 2024	July 1, 2023	July 1, 2023	July 1, 2024	July 1, 2024	July 1, 2023	July 1, 2023
Division								
01 - Sldr	-	-	-	-	\$ 638	\$ 828	\$ 405	\$ 785
10 - Union	-	-	-	-	1,707	1,932	910	1,360
HA - Union hired after 7/1/2011	4.93%	4.95%	4.49%	4.55%	2,166	2,176	1,614	1,634
HB - Sldr after 7/1/2011	11.39%	11.68%	10.75%	11.35%	3,459	3,546	3,118	3,292
Total Municipality - Estimated Monthly Contribution					\$ 7,970	\$ 8,482	\$ 6,047	\$ 7,071
Total Municipality - Estimated Annual Contribution					\$ 95,640	\$ 101,784	\$ 72,564	\$ 84,852

Employee contribution rates:

Valuation Date:	Employee Contribution Rate	
	12/31/2022	12/31/2021
Division		
01 - Sldr	6.00%	6.00%
10 - Union	2.50%	2.50%
HA - Union hired after 7/1/2011	0.00%	0.00%
HB - Sldr after 7/1/2011	0.00%	0.00%

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 “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 one or more Surplus divisions would not immediately lower future contributions, however the assets from the Surplus division(s) 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. With the implemented Dedicated Gains policy, market gains and losses will continue to be smoothed over five years; however, since excess returns are used to lower the investment assumption, there will be fewer gains to smooth in down markets. Having additional funds in Surplus divisions will assist plans with navigating any market volatility.

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), and
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions.

These impacts are reflected in various tables in the report. For more information, please contact your Regional Manager.

Comments on Investment Rate of Return Assumption

A defined benefit plan is funded by employer contributions, participant contributions, and investment earnings. Investment earnings have historically provided a significant portion 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 **7.00%** per year. This, along with all of our other actuarial assumptions, is reviewed at least 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 assumed investment return assumptions, please review the “What If” projection scenarios later in this report.

Assumption and Method Change in 2022

Effective February 17, 2022, the MERS Retirement Board adopted a dedicated gains policy that automatically lowers the assumed rate of investment return by using excess asset gains to mitigate large increases in required contributions to the Plan. Full details of this dedicated gains policy are available in the Actuarial Policy found on the MERS [website](#). Some goals of the dedicated gains policy are to:

- Provide a systematic approach to lower the assumed rate of investment return between experience studies, and
- Use excess gains to cover both the increase in normal cost and any increase in UAL payment the first contribution year after application (i.e., minimize the first-year impact (i.e., increase) in employer contributions).

The dedicated gains policy was implemented with the December 31, 2021 annual actuarial valuation and was reflected in the computed employer contribution amounts beginning in fiscal year 2023.



Investment performance measured for the one-year period ending December 31, 2022 did not result in excess gains for use in lowering the assumed rate of investment return. As a result, this assumption remains at 7.00%.

Furthermore, there were no other assumption or method changes in 2022.

Protecting MI Pension Grant Program

On July 1, 2022, Michigan lawmakers passed the state budget for the 2022-23 fiscal year. As a part of the budget, \$750 million was earmarked for underfunded municipal pension plans in counties, cities, townships, villages and road commissions across the state. Known as the **Protecting MI Pension Grant Program**, the legislation is designed to support municipal plans that are under 60% funded.

As of the valuation date the amount of funds and list of grant recipients is not yet known. Any funds received by municipalities will be considered in a future valuation.

Comments on Asset Smoothing

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. After initial application of asset smoothing, remaining excess market gains are used to buy down the assumed rate of investment return and increase the level of valuation assets, to the extent allowed by the dedicated gains policy. This smoothing method is used to determine your actuarial value of assets (valuation assets), which is then used to determine both your funded ratio and your required contributions. **The (smoothed) actuarial rate of return for 2022 was 3.51%, while the actual market rate of return was (10.61%).** 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 view the "[How Smoothing Works](#)" [video](#) on the [Defined Benefit resource page](#) of the MERS website.

As of December 31, 2022, the actuarial value of assets is 116% of market value due to asset smoothing. This means that there are deferred investment losses, which will put upward pressure on contributions in the short term.

If the December 31, 2022 valuation results were based on market value instead of actuarial value:

- The funded percent of your entire municipality would be 88% (instead of 102%); and
- Your total employer contribution requirement for the fiscal year starting July 1, 2024 would be \$216,984 (instead of \$101,784).

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, 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.

Many assumptions are important in determining the required employer contributions. In the following table, we show the impact of varying the Investment Return assumption. Lower investment returns would generally result in higher required employer contributions, and vice versa. The three economic scenarios below provide a quantitative risk assessment for the impact of investment returns on the plan's projected financial condition for funding purposes.

The relative impact of the economic scenarios 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, 2022 valuation and are for the municipality in total, not by division. These results do not reflect a phase-in of the impact of the actuarial assumptions updated in the 2020 and 2019 valuations. There is no phase-in of dedicated gains.

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. Projections are not predictions. Future valuations will be based on actual future experience.

12/31/2022 Valuation Results	Lower Future Annual Returns	Lower Future Annual Returns	Valuation Assumptions
Investment Return Assumption	5.00%	6.00%	7.00%
Accrued Liability	\$ 13,195,787	\$ 11,985,804	\$ 10,947,231
Valuation Assets ¹	\$ 11,199,520	\$ 11,199,520	\$ 11,199,520
Unfunded Accrued Liability	\$ 1,996,267	\$ 786,284	\$ (252,289)
Funded Ratio	85%	93%	102%
Monthly Normal Cost	\$ 12,650	\$ 9,822	\$ 7,677
Monthly Amortization Payment	\$ 13,928	\$ 5,936	\$ 805
Total Employer Contribution²	\$ 26,578	\$ 15,758	\$ 8,482

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

² If assets exceed accrued liabilities for a division, the division may have an overfunding credit 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.

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 economic assumption scenarios. All three projections account for the past investment experience that will continue to affect the actuarial rate of return in the short term.

The 7.00% scenario provides an estimate of computed employer contributions based on current actuarial assumptions, and a projected 7.00% 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 6.00% and 5.00% projection scenarios provide an indication of the potential required employer contribution if



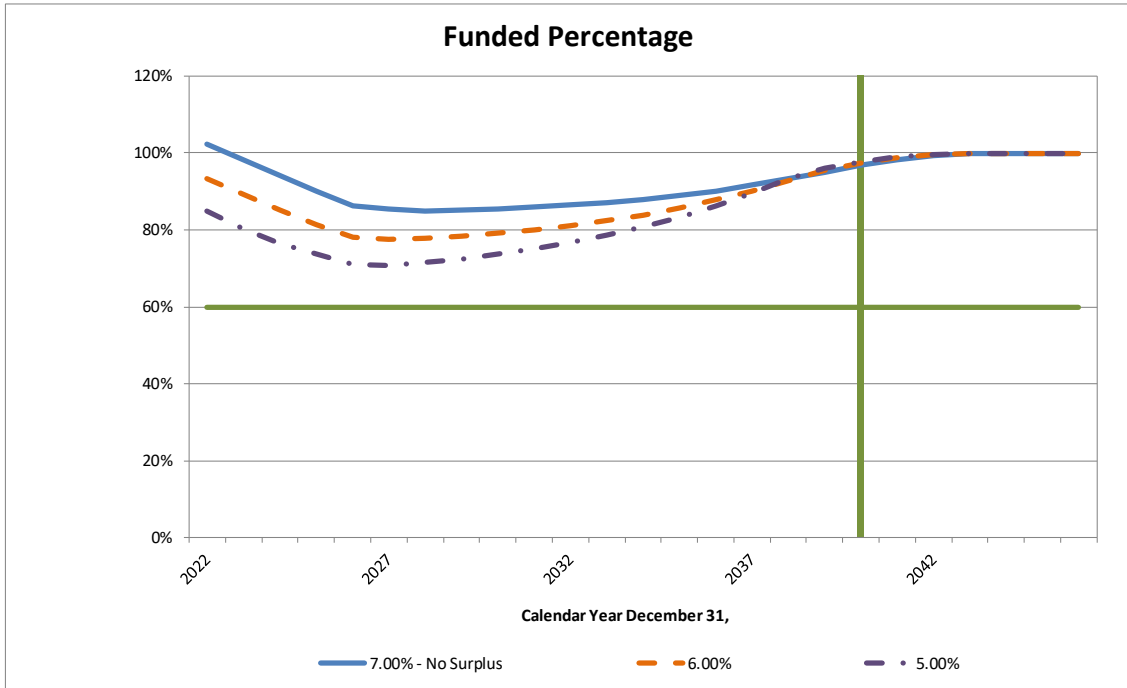
these assumptions were met over the long term.

Valuation Year Ending 12/31	Fiscal Year Beginning 7/1	Actuarial Accrued Liability	Valuation Assets ²	Funded Percentage	Estimated Annual Employer Contribution ³
7.00%¹ - NO PHASE-IN					
2022	2024	\$ 10,947,231	\$ 11,199,520	102%	\$ 101,784
2023	2025	\$ 11,000,000	\$ 10,900,000	98%	\$ 128,000
2024	2026	\$ 11,100,000	\$ 10,400,000	94%	\$ 163,000
2025	2027	\$ 11,000,000	\$ 9,960,000	90%	\$ 210,000
2026	2028	\$ 10,900,000	\$ 9,460,000	86%	\$ 254,000
2027	2029	\$ 10,800,000	\$ 9,260,000	86%	\$ 267,000
6.00%¹ - NO PHASE-IN					
2022	2024	\$ 11,985,804	\$ 11,199,520	93%	\$ 189,096
2023	2025	\$ 12,100,000	\$ 10,800,000	89%	\$ 240,000
2024	2026	\$ 12,100,000	\$ 10,300,000	85%	\$ 289,000
2025	2027	\$ 12,000,000	\$ 9,800,000	81%	\$ 335,000
2026	2028	\$ 11,900,000	\$ 9,320,000	78%	\$ 379,000
2027	2029	\$ 11,800,000	\$ 9,110,000	77%	\$ 398,000
5.00%¹ - NO PHASE-IN					
2022	2024	\$ 13,195,787	\$ 11,199,520	85%	\$ 318,936
2023	2025	\$ 13,300,000	\$ 10,700,000	80%	\$ 371,000
2024	2026	\$ 13,200,000	\$ 10,100,000	77%	\$ 420,000
2025	2027	\$ 13,200,000	\$ 9,700,000	74%	\$ 465,000
2026	2028	\$ 13,000,000	\$ 9,260,000	71%	\$ 510,000
2027	2029	\$ 12,900,000	\$ 9,110,000	71%	\$ 531,000

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.

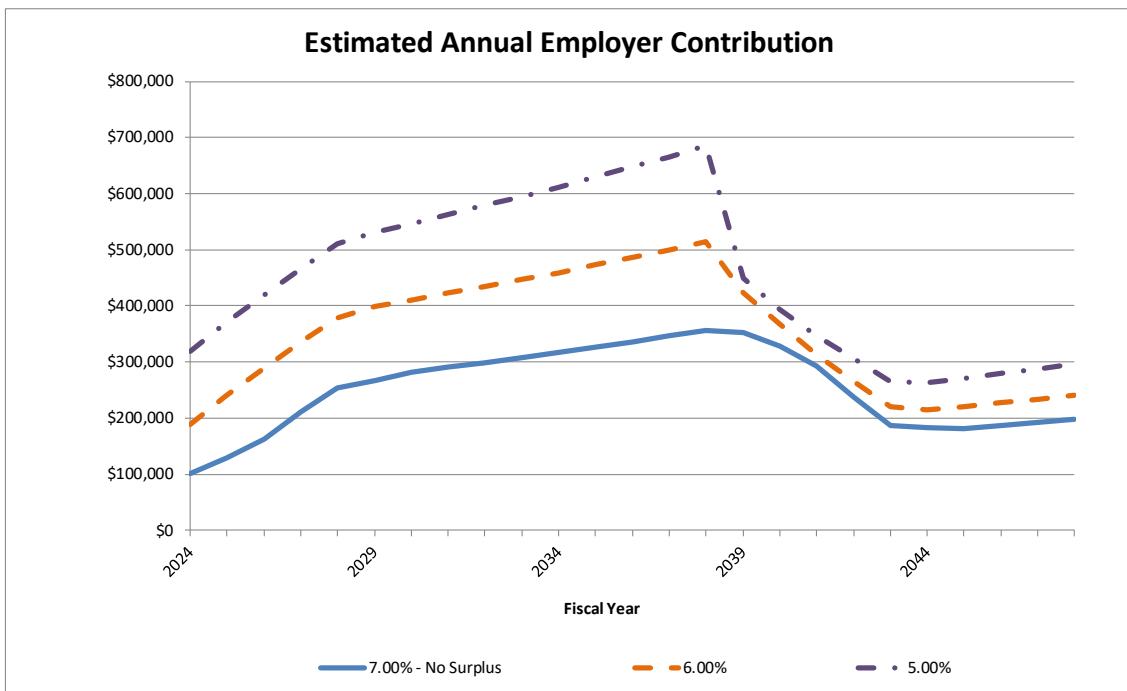
³ All projected contributions are shown with no phase-in.



Notes:

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

The green indicator lines have been added at 60% funded and 18 years following the valuation date for PA 202 purposes.



Notes:

All projected contributions are shown with no phase-in.

Table 1: Employer Contribution Details for the Fiscal Year Beginning July 1, 2024

Division	Total Normal Cost	Employee Contribution Rate	Employer Contributions ¹			Computed Employer Contribution With Phase-In	Blended ER Rate No Phase-In ⁵	Blended ER Rate With Phase-In ⁵	Employee Contribution Conversion Factor ²
			Employer Normal Cost ⁶	Payment of the Unfunded Accrued Liability ⁴	Computed Employer Contribution No Phase-In				
Percentage of Payroll									
01 - Sldr	12.78%	6.00%	-	-	-	-	10.27%	9.62%	
10 - Union	7.81%	2.50%	-	-	-	-	6.10%	5.75%	
HA - Union hired after 7/1/2011	4.81%	0.00%	4.81%	0.14%	4.95%	4.93%	6.10%	5.75%	
HB - Sldr after 7/1/2011	11.50%	0.00%	11.50%	0.18%	11.68%	11.39%	10.27%	9.62%	
Estimated Monthly Contribution³									
01 - Sldr			\$ 828	\$ 0	\$ 828	\$ 638			
10 - Union			1,243	689	1,932	1,707			
HA - Union hired after 7/1/2011			2,114	62	2,176	2,166			
HB - Sldr after 7/1/2011			3,492	54	3,546	3,459			
Total Municipality			\$ 7,677	\$ 805	\$ 8,482	\$ 7,970			
Estimated Annual Contribution³			\$ 92,124	\$ 9,660	\$ 101,784	\$ 95,640			

- 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 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 not to add across.
- ⁵ For linked divisions, the employer will be invoiced the Computed Employer Contribution No 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).
- ⁶ For divisions with a negative employer normal cost, employee contributions cover the normal cost and a portion of the payment of any unfunded accrued liability.

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



Table 2: Benefit Provisions

01 - SIRD: Closed to new hires, linked to Division HB

	2022 Valuation	2021 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 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	6.00%	6.00%
Act 88:	Yes (Adopted 3/10/1965)	Yes (Adopted 3/10/1965)

10 - Union: Closed to new hires, linked to Division HA

	2022 Valuation	2021 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	2.50%	2.50%
Act 88:	Yes (Adopted 3/10/1965)	Yes (Adopted 3/10/1965)

HA - Union hired after 7/1/2011: Open Division, linked to Division 10

	2022 Valuation	2021 Valuation
Benefit Multiplier:	1.00% Multiplier (no max)	1.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/10/1965)	Yes (Adopted 3/10/1965)



HB - Slrd after 7/1/2011: Open Division, linked to Division 01

	2022 Valuation	2021 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/10/1965)	Yes (Adopted 3/10/1965)

Table 3: Participant Summary

Division	2022 Valuation		2021 Valuation		2022 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - SIRD							
Active Employees	2	\$ 249,359	2	\$ 238,233	65.9	31.9	31.9
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	11	438,246	13	459,481	75.2		
Pending Refunds	0		0				
10 - Union							
Active Employees	6	\$ 407,668	6	\$ 374,099	57.3	32.3	32.3
Vested Former Employees	1	548	1	548	44.9	1.6	25.8
Retirees and Beneficiaries	12	273,560	12	273,543	71.0		
Pending Refunds	0		0				
HA - Union hired after 7/1/2011							
Active Employees	6	\$ 343,095	6	\$ 312,757	36.3	2.9	3.3
Vested Former Employees	1	2,059	0	0	40.6	4.3	6.4
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				
HB - SIRD after 7/1/2011							
Active Employees	3	\$ 225,059	3	\$ 212,390	57.9	5.3	7.3
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				
Total Municipality							
Active Employees	17	\$ 1,225,181	17	\$ 1,137,479	51.0	17.1	17.6
Vested Former Employees	2	2,607	1	548	42.8	3.0	16.1
Retirees and Beneficiaries	23	711,806	25	733,024	73.0		
Pending Refunds	0		0				
Total Participants	42		43				

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

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

Table 4: Reported Assets (Market Value)

Division	2022 Valuation		2021 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - Slrd	\$ 4,499,962	\$ 168,684	\$ 5,531,157	\$ 146,800
10 - Union	4,682,937	107,067	5,517,385	89,510
HA - Union hired after 7/1/2011	62,554	0	54,831	0
HB - Slrd after 7/1/2011	153,030	0	148,493	0
Municipality Total³	\$ 9,398,482	\$ 275,751	\$ 11,251,865	\$ 236,310
Combined Assets³	\$9,674,233		\$11,488,175	

¹ Reserve for Employer Contributions and Benefit Payments.

² Reserve for Employee Contributions.

³ Totals may not add due to rounding.

The December 31, 2022 valuation assets (actuarial value of assets) are equal to 1.157665 times the reported market value of assets (compared to 0.998523 as of December 31, 2021). Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Table 5: Flow of Valuation Assets

Year Ended 12/31	Employer Contributions		Employee Contributions	Investment Income (Valuation Assets)	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2012	\$ 174,994	\$ 0	\$ 30,612	\$ 207,396	\$ (538,754)	\$ 0	\$ 0	\$ 5,286,547
2013	228,976	939,000	35,502	398,949	(567,782)	0	0	6,321,192
2014	238,885	469,580	35,877	371,450	(640,292)	0	0	6,796,692
2015	228,758	469,580	34,894	383,851	(574,031)	0	0	7,339,744
2016	198,924	721,170	34,212	415,105	(588,583)	0	0	8,120,572
2017	187,213	737,856	31,611	485,258	(651,239)	0	0	8,911,271
2018	168,654	747,840	31,626	381,715	(645,385)	0	0	9,595,721
2019	136,710	518,886	27,582	444,406	(738,482)	0	0	9,984,823
2020	105,855	11,619	26,062	763,085	(701,978)	0	0	10,189,466
2021	92,604	143,899	25,792	1,709,067	(689,620)	0	0	11,471,208
2022	85,297	0	28,338	332,108	(717,431)	0	0	11,199,520

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.

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 Asset balance includes assets from Surplus divisions, if any.

Years where historical information is not available will be displayed with zero values.



**Table 6: Actuarial Accrued Liabilities and Valuation Assets
as of December 31, 2022**

Division	Actuarial Accrued Liability					Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
	Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total			
01 - Sldr	\$ 1,357,351	\$ 0	\$ 3,693,942	\$ 0	\$ 5,051,293	\$ 5,404,727	107.0%	\$ (353,434)
10 - Union	2,776,772	2,257	2,856,921	0	5,635,950	5,545,220	98.4%	90,730
HA - Union hired after 7/1/2011	71,697	6,488	0	0	78,185	72,416	92.6%	5,769
HB - Sldr after 7/1/2011	181,803	0	0	0	181,803	177,157	97.4%	4,646
Total	\$ 4,387,623	\$ 8,745	\$ 6,550,863	\$ 0	\$ 10,947,231	\$ 11,199,520	102.3%	\$ (252,289)

The following results show the combined accrued liabilities and assets for each set of linked divisions. These results are already shown in the table on the prior page(s).

Table 6 (continued)

Division	Actuarial Accrued Liability					Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
	Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total			
Linked Divisions HA, 10	\$ 2,848,469	\$ 8,745	\$ 2,856,921	\$ 0	\$ 5,714,135	\$ 5,617,636	98.3%	\$ 96,499
Linked Divisions HB, 01	1,539,154	0	3,693,942	0	5,233,096	5,581,884	106.7%	(348,788)

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

The December 31, 2022 valuation assets (actuarial value of assets) are equal to 1.157665 times the reported market value of assets. Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Table 7: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2008	\$ 7,881,076	\$ 5,133,759	65%	\$ 2,747,317
2009	7,462,383	5,239,859	70%	2,222,524
2010	7,855,442	5,394,858	69%	2,460,584
2011	8,377,763	5,412,299	65%	2,965,464
2012	8,316,621	5,286,547	64%	3,030,074
2013	8,705,043	6,321,192	73%	2,383,851
2014	8,784,053	6,796,692	77%	1,987,361
2015	9,420,504	7,339,744	78%	2,080,760
2016	9,769,039	8,120,572	83%	1,648,467
2017	9,841,449	8,911,271	91%	930,178
2018	9,973,168	9,595,721	96%	377,447
2019	10,339,958	9,984,823	97%	355,135
2020	10,285,603	10,189,466	99%	96,137
2021	10,804,763	11,471,208	106%	(666,445)
2022	10,947,231	11,199,520	102%	(252,289)

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012, 2015, 2019, 2020 and 2021 actuarial valuations.

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

Years where historical information is not available will be displayed with zero values.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Tables 8 and 9: Division-Based Comparative Schedules

Division 01 - Slrd

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2012	\$ 4,949,585	\$ 2,433,035	49%	\$ 2,516,550
2013	5,101,725	3,292,866	65%	1,808,859
2014	5,025,403	3,686,009	73%	1,339,394
2015	5,355,347	4,099,273	77%	1,256,074
2016	5,464,520	4,449,641	81%	1,014,879
2017	5,480,511	4,755,880	87%	724,631
2018	5,505,599	4,993,029	91%	512,570
2019	5,495,103	5,250,829	96%	244,274
2020	5,160,548	5,214,684	101%	(54,136)
2021	5,213,654	5,669,571	109%	(455,917)
2022	5,051,293	5,404,727	107%	(353,434)

Notes: Actuarial assumptions were revised for the 2012, 2015, 2019, 2020 and 2021 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-01: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2012	5	\$ 361,194	\$ 14,574	5.00%
2013	5	370,547	\$ 10,707	5.00%
2014	5	384,165	\$ 8,436	5.00%
2015	5	381,329	\$ 8,636	5.00%
2016	3	258,033	\$ 6,746	6.00%
2017	3	266,264	\$ 5,011	6.00%
2018	2	236,324	\$ 3,646	6.00%
2019	2	237,829	\$ 2,035	6.00%
2020	2	235,298	\$ 685	6.00%
2021	2	238,233	\$ 785	6.00%
2022	2	249,359	\$ 828	6.00%

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 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 10 - Union

Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2012	\$ 3,365,164	\$ 2,851,766	85%	\$ 513,398
2013	3,597,559	3,020,291	84%	577,268
2014	3,748,692	3,096,011	83%	652,681
2015	4,044,821	3,218,962	80%	825,859
2016	4,280,982	3,639,779	85%	641,203
2017	4,311,458	4,104,137	95%	207,321
2018	4,404,831	4,529,022	103%	(124,191)
2019	4,739,895	4,630,293	98%	109,602
2020	4,966,457	4,829,119	97%	137,338
2021	5,368,706	5,598,613	104%	(229,907)
2022	5,635,950	5,545,220	98%	90,730

Notes: Actuarial assumptions were revised for the 2012, 2015, 2019, 2020 and 2021 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

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		
2012	13	\$ 648,571	\$ 5,582	2.50%
2013	13	679,000	\$ 6,361	2.50%
2014	12	637,160	\$ 6,663	2.50%
2015	11	595,186	\$ 7,667	2.50%
2016	11	615,497	\$ 6,525	2.50%
2017	11	591,067	\$ 3,571	2.50%
2018	9	513,873	\$ 2,346	2.50%
2019	8	463,090	\$ 2,927	2.50%
2020	8	477,741	\$ 2,915	2.50%
2021	6	374,099	\$ 1,360	2.50%
2022	6	407,668	\$ 1,932	2.50%

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 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HA - Union hired after 7/1/2011

Table 8-HA: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2012	\$ 1,872	\$ 1,746	93%	\$ 126
2013	5,898	5,140	87%	758
2014	6,036	8,383	139%	(2,347)
2015	10,387	10,916	105%	(529)
2016	0	13,354	0%	(13,354)
2017	0	17,597	0%	(17,597)
2018	2,308	21,008	910%	(18,700)
2019	10,956	25,661	234%	(14,705)
2020	25,226	37,050	147%	(11,824)
2021	45,559	54,750	120%	(9,191)
2022	78,185	72,416	93%	5,769

Notes: Actuarial assumptions were revised for the 2012, 2015, 2019, 2020 and 2021 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HA: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2012	2	\$ 54,500	3.96%	0.00%
2013	2	70,501	3.77%	0.00%
2014	1	40,863	3.01%	0.00%
2015	1	48,443	3.75%	0.00%
2016	0	0	0.00%	0.00%
2017	0	0	0.00%	0.00%
2018	1	37,307	4.21%	0.00%
2019	3	137,152	3.85%	0.00%
2020	4	208,019	4.05%	0.00%
2021	6	312,757	4.55%	0.00%
2022	6	343,095	4.95%	0.00%

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 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HB - Slrd after 7/1/2011

Table 8-HB: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2012	\$ 0	\$ 0	0%	\$ 0
2013	(139)	2,895	0%	(3,034)
2014	3,922	6,289	160%	(2,367)
2015	9,949	10,593	107%	(644)
2016	23,537	17,798	76%	5,739
2017	49,480	33,657	68%	15,823
2018	60,430	52,662	87%	7,768
2019	94,004	78,040	83%	15,964
2020	133,372	108,613	81%	24,759
2021	176,844	148,274	84%	28,570
2022	181,803	177,157	97%	4,646

Notes: Actuarial assumptions were revised for the 2012, 2015, 2019, 2020 and 2021 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HB: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2012	0	\$ 0	\$ 0	0.00%
2013	1	36,492	9.49%	0.00%
2014	1	38,955	8.94%	0.00%
2015	1	41,016	9.54%	0.00%
2016	2	99,610	9.15%	0.00%
2017	3	160,921	9.24%	0.00%
2018	4	171,431	9.26%	0.00%
2019	4	235,500	9.56%	0.00%
2020	3	206,576	10.77%	0.00%
2021	3	212,390	11.35%	0.00%
2022	3	225,059	11.68%	0.00%

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 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Table 10: Division-Based Layered Amortization Schedule

Division 01 - Slrd

Table 10-01: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 7/1/2024		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Experience	12/31/2020	\$ (86,416)	15	\$ (91,617)	13	\$ (9,072)
Experience	12/31/2021	(378,767)	15	(410,047)	14	(38,352)
Experience	12/31/2022	99,815	15	110,477	15	9,816
Total				\$ (391,187)		\$ (37,608)

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, 2022 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2022 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.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 10 - Union

Table 10-10: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 7/1/2024		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Experience	12/31/2022	\$ 84,141	15	\$ 93,129	15	\$ 8,268
Total				\$ 93,129		\$ 8,268

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, 2022 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2022 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.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HA - Union hired after 7/1/2011

Table 10-HA: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 7/1/2024		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Experience	12/31/2022	\$ 7,506	15	\$ 8,308	15	\$ 744
Total				\$ 8,308		\$ 744

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, 2022 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2022 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.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HB - Slrd after 7/1/2011

Table 10-HB: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 7/1/2024		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
(Gain)/Loss	12/31/2016	\$ 5,684	15	\$ 5,188	9	\$ 696
(Gain)/Loss	12/31/2017	9,710	15	9,304	10	1,140
(Gain)/Loss	12/31/2018	(9,005)	15	(9,006)	11	(1,020)
(Gain)/Loss	12/31/2019	6,852	15	7,039	12	744
Assumption	12/31/2019	1,874	15	1,842	12	192
Experience	12/31/2020	8,812	15	9,342	13	924
Experience	12/31/2021	3,079	15	3,336	14	312
Experience	12/31/2022	(23,765)	15	(26,304)	15	(2,340)
Total				\$ 741		\$ 648

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, 2022 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2022 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.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

GASB Statement No. 68 Information

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

Actuarial Valuation Date:		12/31/2022
Measurement Date of the Total Pension Liability (TPL):		12/31/2022
At 12/31/2022, the following employees were covered by the benefit terms:		
Inactive employees or beneficiaries currently receiving benefits:		23
Inactive employees entitled to but not yet receiving benefits (including refunds):		2
Active employees:		<u>17</u>
		42
Total Pension Liability as of 12/31/2021 measurement date:	\$	10,569,340
Total Pension Liability as of 12/31/2022 measurement date:	\$	10,710,773
Service Cost for the year ending on the 12/31/2022 measurement date:	\$	98,615
Change in the Total Pension Liability due to:		
- Benefit changes ¹ :	\$	0
- Differences between expected and actual experience ² :	\$	16,404
- Changes in assumptions ² :	\$	0
Average expected remaining service lives of all employees (active and inactive):		3

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.

Covered employee payroll (Needed for Required Supplementary Information):	\$	1,225,181
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Note: Covered employee payroll may differ from the GASB Statement No. 68 definition.

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

	1% Decrease <u>(6.25%)</u>	Current Discount Rate <u>(7.25%)</u>	1% Increase <u>(8.25%)</u>
Change in Net Pension Liability as of 12/31/2022:	\$ 1,000,588	\$ 0	\$ (865,035)

Note: The current discount rate shown for GASB Statement No. 68 purposes is higher than the MERS assumed rate of return. This is because for GASB Statement No. 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.

01 - Slrd

1/1/2021	Other Leave - Service Granted
1/1/2021	Service Credit Qualification - 80 hours
1/1/2021	Base Wages
12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2016	Participant Contribution Rate 6.00%
7/1/2011	Member Contribution Rate 5.00%
7/1/2010	Member Contribution Rate 2.50%
7/1/2001	Benefit B-4 (80% max)
1/1/1998	Flexible E 2% COLA Adopted (01/01/1998)
1/1/1992	Flexible E 2% COLA Adopted (01/01/1992)
7/1/1987	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/1987	Benefit B-3 (80% max)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
7/1/1985	Benefit C-2/Base B-1 (No Max)
7/1/1984	Benefit B-1 (No Max)
7/1/1981	Member Contribution Rate 0.00%
1/8/1975	Exclude Temporary Employees
7/1/1966	Benefit C-1 (Old) (No Max)
3/10/1965	Covered by Act 88
7/1/1959	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1959	10 Year Vesting
7/1/1959	Benefit C (Old) (No Max)
7/1/1959	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years
	Fiscal Month - July

10 - Union

1/1/2021	Other Leave - Service Granted
1/1/2021	Service Credit Qualification - 80 hours
1/1/2021	Base Wages
12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2012	Member Contribution Rate 2.50%
7/1/2011	Member Contribution Rate 1.25%
10/1/2003	Temporary 30 Years & Out (10/01/2003 - 03/03/2004)
1/1/2003	Flexible E 1% COLA Adopted (01/01/2003)
7/1/2002	Benefit B-3 (80% max)
1/1/1998	Flexible E 2% COLA Adopted (01/01/1998)
1/1/1992	Flexible E 1% COLA Adopted (01/01/1992)
7/1/1990	Benefit B-2 (No Max)
7/1/1989	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/1988	Benefit C-2/Base B-1 (No Max)



10 - Union

12/1/1984	Benefit B-1 (No Max)
7/1/1981	Member Contribution Rate 0.00%
1/8/1975	Exclude Temporary Employees
7/1/1966	Benefit C-1 (Old) (No Max)
3/10/1965	Covered by Act 88
7/1/1959	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1959	10 Year Vesting
7/1/1959	Benefit C (Old) (No Max)
7/1/1959	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years
	Fiscal Month - July

HA - Union hired after 7/1/2011

1/1/2021	Base Wages
1/1/2021	Other Leave - Service Granted
1/1/2021	Service Credit Qualification - 80 hours
7/1/2011	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/2011	Exclude Temporary Employees
7/1/2011	6 Year Vesting
7/1/2011	1.0% Multiplier
3/10/1965	Covered by ACT 88
	Defined Benefit Normal Retirement Age - 60
	No Early Reduced Conditions
	Fiscal Month - July

HB - Slrd after 7/1/2011

1/1/2021	Base Wages
1/1/2021	Other Leave - Service Granted
1/1/2021	Service Credit Qualification - 80 hours
1/1/2013	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/2013	6 Year Vesting
1/1/2013	1.5% Multiplier
3/10/1965	Covered by ACT 88
	Defined Benefit Normal Retirement Age - 60
	No Early Reduced Conditions
	Fiscal Month - July

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
All Divisions	2.00%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Not Linked Divisions: The default funding policy for closed not linked divisions, including open divisions with zero active members, is to follow a non-accelerated amortization, where each closed period decreases by one year each year until the period is exhausted. In select instances, closed not linked division(s) may follow an accelerated amortization policy.

Risk Commentary

Determination of the accrued liability, the employer contribution, and the funded ratio requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability, the actuarially determined contribution and the funded ratio that result from the differences between actual experience and the actuarial assumptions.

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

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

- **Investment Risk** – actual investment returns may differ from the expected returns;
- **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
- **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
- **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
- **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>12/31/2022</u>	<u>12/31/2021</u>	<u>12/31/2020</u>	<u>12/31/2019</u>	<u>12/31/2018</u>
1. Ratio of the market value of assets to total payroll	7.9	10.1	9.3	9.2	9.1
2. Ratio of actuarial accrued liability to payroll	8.9	9.5	9.1	9.6	10.4
3. Ratio of actives to retirees and beneficiaries	0.7	0.7	0.7	0.7	0.6
4. Ratio of market value of assets to benefit payments	13.5	16.7	14.9	13.3	13.6
5. Ratio of net cash flow to market value of assets (boy)	-5.3%	-4.1%	-5.7%	-0.6%	3.4%

RATIO OF MARKET VALUE OF ASSETS TO TOTAL PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

RATIO OF MARKET VALUE OF ASSETS TO BENEFIT PAYMENTS

The MERS' Actuarial Policy requires a total minimum contribution equal to the excess (if any) of three times the expected annual benefit payments over the projected market value of assets as of the participating municipality or court's Fiscal Year for which the contribution applies. The ratio of market value of assets to benefit payments as of the valuation date provides an indication of whether the division is at risk for triggering the minimum contribution rule in the near term. If the division triggers this minimum contribution rule, the required employer contributions could increase dramatically relative to previous valuations.

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.



State Reporting

The following information has been prepared to provide some of the information necessary to complete the Public Act 202 pension reporting requirements for the State of Michigan’s Local Government Retirement System Annual Report (Form No. 5572). Additional resources are available at www.mersofmich.com and on the State [website](#).

Form 5572		
Line Reference	Description	Result
10	Membership as of December 31, 2022	
11	Indicate number of active members	17
12	Indicate number of inactive members (excluding pending refunds)	2
13	Indicate number of retirees and beneficiaries	23
14	Investment Performance for Calendar Year Ending December 31, 2022¹	
15	Enter actual rate of return - prior 1-year period	(10.37)%
16	Enter actual rate of return - prior 5-year period	4.95%
17	Enter actual rate of return - prior 10-year period	6.79%
18	Actuarial Assumptions	
19	Actuarial assumed rate of investment return ²	7.00%
20	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Level Percent
21	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any ³	15
22	Is each division within the system closed to new employees? ⁴	No
23	Uniform Assumptions	
24	Enter retirement pension system's actuarial value of assets using uniform assumptions	\$10,450,406
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions ⁵	\$11,093,320
27	Actuarially Determined Contribution (ADC) using uniform assumptions, Fiscal Year Ending June 30, 2023	\$137,664

1. The Municipal Employees’ Retirement System’s investment performance has been provided to GRS from MERS Investment Staff and is included here for reporting purposes. The investment performance figures reported are net of investment expenses on a rolling calendar year basis for the previous 1-, 5-, and 10-year periods as required under PA 530.
2. Net of administrative and investment expenses.
3. Populated with the longest amortization period remaining in the amortization schedule, across all divisions in the plan. This is when each division and the plan in total is expected to reach 100% funded if all assumptions are met.
4. If all divisions within the employer are closed, “yes.” If at least one division is open (including shadow divisions), “no.”
5. Line 25 actuarial accrued liability is determined under PA 202 uniform assumptions which differ from the valuation assumptions. In particular, the assumed rate of return for PA 202 purposes is 6.85%.

July 6, 2023

Board of Trustees
Southeastern Oakland County Water Authority

Subject: Water and Sewer Rate Survey – 2023/24

Board Members:

Attached is a survey of the water and sewage rates effective July 1, 2023 charged by the municipalities in the Southeastern Oakland County area and the City of Detroit. This report is submitted to the Board for its review and study. Please let us know if you have any concerns about the calculations for your community. We are especially concerned that you verify that we have properly included any tax-based charges in the calculations for your city. Any revisions received will be made before the survey is posted on our website on August 1, 2023.

Respectfully submitted,

Jeffrey A. McKeen, P.E.
General Manager

Suggested Resolution: “That the report on Water and Sewer Rate Survey – 2023/24 be received and filed.”

BERKLEY
07/01/2023 Water Rate Survey

Billing Cycle	Quarterly
Average Single Family Home Taxable Value	\$102,266
Water Service	\$4.82 per 100 cu ft.
Sewage Disposal	\$5.39 per 100 cu ft.
Quarterly Meter Service Charge	
0.75" Meter	\$26.93
1.00" Meter	44.96
1.50" Meter	89.75
2.00" Meter	143.60
3.00" Meter	314.12
4.00" Meter	522.81
Other charges for water or water infrastructure/operations (please explain):	
Storm Water Utility Fixed Charge	\$82.95 quarterly per equivalent residential unit
Water or sewer specific millages (infrastructure, debt service, etc.)	None
Minimum Bill	per quarter
Non water charges included in minimum bill	\$17.21 Residential Refuse
Sewer District	G.W.K.D.D.

BINGHAM FARMS
07/01/2023 Water Rate Survey

Billing Cycle	Quarterly
Average Single Family Home Taxable Value	\$279,949
Water Service	\$32.43 per 1,000 cu ft.
Sewage Disposal	\$47.22 per 1,000 cu ft.
Quarterly Meter Service Charge	
5/8" Meter	\$1.73
1.00" Meter	3.45
1 1/2" Meter	5.87
2.00" Meter	9.32
3.00" Meter	12.59
4.00" Meter	15.53
6.00" Meter	25.88
Other charges for water or water related infrastructure/operations (please explain):	
Wells	236.10 per quarter
Water or sewer specific millages (infrastructure, debt service, etc.)	None
Minimum Water Charge	\$64.86 per quarter
Minimum Sewage Charge	94.44 per quarter
Sewer District	Evergreen & Farmington

BEVERLY HILLS
07/01/2023 Water Rate Survey

Billing Cycle	Quarterly
Average Single Family Home Taxable Value	\$171,048
Water Service	\$2.8240 per 100 cu ft.
Sewage Disposal	\$8.3646 per 100 cu ft.
Meter Service Charge	None
Other charges for water or water related infrastructure/operations (please explain):	
Debt Service	\$45.00 per bill
Infrastructure	\$100.00 per bill
Wells	per quarter
Water or sewer specific millages (infrastructure, debt service, etc.)	None
Minimum bill (water & sewer customers)	per quarter
Non water charges included in minimum bill	
Sewer District	Evergreen & G.W.K.D.D.

BIRMINGHAM
07/01/2023 Water Rate Survey

Billing Cycle	Quarterly
Average Single Family Home Taxable Value	\$290,500
Water Service	\$45.85 per 1,000 cu ft.
Sewage Disposal	\$73.23 per 1,000 cu ft.
Quarterly Meter Service Charge	
5/8" Meter	\$5.00
1.00" Meter	8.00
1 1/2" Meter	12.00
2.00" Meter	16.00
3.00" Meter	24.00
4.00" Meter	32.00
6.00" Meter	48.00
8.00" Meter	64.00
Other charges for water or water related infrastructure/operations (please explain):	
Storm Water Utility Fixed Charge (Evergreen-Farmington Only)	\$70.50 quarterly per equivalent residential unit
Water or sewer specific millages (infrastructure, debt service, etc.)	None
Minimum bill	\$5.00 per quarter
Non water charges included in minimum bill	
Sewer District	G.W.K.D.D.(33%) & Evergreen-Farmington (67%)

CLAWSON
07/01/2023 Water Rate Survey

Billing Cycle	Quarterly
Average Single Family Home Taxable Value	\$75,578
Water Service	\$35.48 per 1,000 cu ft.
Sewage Disposal	\$89.33 per 1,000 cu ft.
Meter Service Charge	None
Other charges for water or water related infrastructure/operations (please explain):	
Fixed Water Charge	14.70 per bill
Fixed Sewer Charge	21.21 per bill
Fixed Sewer Debt Charge	9.00 per bill
Water or sewer specific millages (infrastructure, debt service, etc.)	0.6500 Drain/Sewer
Minimum bill	per quarter
Non water charges included in minimum bill	
Sewer District	G.W.K.D.D. & Evergreen

HUNTINGTON WOODS
07/01/2023 Water Rate Survey

Billing Cycle	Quarterly
Average Single Family Home Taxable Value	\$178,000
Metered Water Consumption	\$14.03 per 100.25 cu ft.
Meter Service Charge	
Other charges for water or water related infrastructure/operations (please explain):	
Sewer Bond Debit Repayment	\$1.92 100.25 cu ft
Ready to Serve Fee	\$17.00 per quarter
Water or sewer specific millages (infrastructure, debt service, etc.)	1.2687 Sewer Debt 0.1666 GWK Drain Debt
Minimum bill	
Non water charges included in minimum bill	
Sewer District	G.W.K.D.D.

LATHRUP VILLAGE
07/01/2023 Water Rate Survey

Billing Cycle	Monthly
Average Single Family Home Taxable Value	\$81,037
Water Service	\$45.69 per 1,000 cu ft.
Sewage Disposal	\$87.37 per 1,000 cu ft.
Monthly Meter Service Charge	
5/8" Meter	\$2.65
3/4" Meter	2.93
1.00" Meter	3.78
1 1/2" Meter	5.27
2.00" Meter	6.49
4.00" Meter	12.92
Other charges for water or water related infrastructure/operations (please explain):	
Capital Improvement Surcharge	\$10.70 per month
Monthly Bill Charge	\$1.00 per month
Water or sewer specific millages (infrastructure, debt service, etc.)	None
Minimum Bill	per month
Non water charges included in minimum bill	
Sewer District	Evergreen

PLEASANT RIDGE
07/01/2023 Water Rate Survey

Billing Cycle	Bi-Monthly
Average Residential Taxable Value	\$159,628
Water Service	\$42.63 per 1,000 cu ft.
Sewage Disposal	\$42.94 per 1,000 cu ft.
Bi-Monthly Ready-to-Serve Charge	
Residential	\$47.46
Non Residential 5/8" Meter	47.46
Non Residential 3/4" Meter	65.85
Non Residential 1.00" Meter	96.25
Non Residential 1 1/2" Meter	121.57
Non Residential 2.00" Meter	136.74
Non Residential 3.00" Meter	182.34
Other charges for water or water related infrastructure/operations (please explain):	
Storm water charge	\$55.34 Per equivalent residential unit
Infrastructure charge per bill	\$0.83 Per foot of street frontage
Average street frontage	57 Feet
Water or sewer specific millages (infrastructure, debt service, etc.)	1.6987 Water Infrastructure
Minimum bill	Bi-monthly
Non-water charges included in minimum bill	\$27.10 Garbage collection
Sewer District	G.W.K.D.D.

ROYAL OAK
07/01/2023 Water Rate Survey

Billing Cycle Quarterly

Average Single Family Home Taxable Value \$114,318

Water Service

First 2,000 cu ft. \$44.80 per 1,000 cu ft.
After first 2,000 cu ft. 51.50 per 1,000 cu ft.

Sewage Disposal

First 2,000 cu ft. \$87.00 per 1,000 cu ft.
After first 2,000 cu ft. 100.10 per 1,000 cu ft.

Meter Service Charge None

Other charges for water or water related infrastructure/operations (please explain):

Billing & Admin. Fee \$16.00 per quarter

Water or sewer specific millages
(infrastructure, debt service, etc.)

0.5723 Chapter 20 Drain Debt

Minimum bill per quarter

Non water charges included in minimum bill

Sewer District G.W.K.D.D.

SOUTHFIELD
07/01/2023 Water Rate Survey

Billing Cycle	Bi-Monthly
Average Residential Taxable Value	\$59,570
Water Service	\$57.93 per 1,000 cu ft.
Sewage Disposal	\$82.92 per 1,000 cu ft.
Bi-Monthly Meter Service Charge	
5/8" Meter	\$5.42
3/4" Meter	5.42
1.00" Meter	5.50
1 1/2" Meter	8.44
2.00" Meter	11.66
3.00" Meter	34.70
4.00" Meter	45.46
6.00" Meter	66.76
8.00" Meter	66.76
Other charges for water or water related infrastructure/operations (please explain): Capital Improvements charges rolled into Water and Sewer per 1,000 cu. ft. amounts above	18.64 per 1,000 cu ft.
Water or sewer specific millages (infrastructure, debt service, etc.)	0.2150 County Drains at Large
Minimum bill Non water charges included in minimum bill	Bi-monthly
Sewer District	Evergreen & G.W.K.D.D.

Quarterly Bill
4,000 Cu. Ft. Consumption Served by a 5/8" Meter

Municipality	Cost of Water	Meter Charge	Sewage Disposal	Combined Water and Sewage	Other Charges	Water/Sewer Specific Millage	Total Quarterly Bill
Berkley	192.80	26.93	215.60		82.95		518.28
Beverly Hills	112.96		334.58		145.00		592.54
Bingham Farms	129.72	1.73	188.88				320.33
Birmingham	183.40	5.00	292.92		70.50		551.82
Clawson	141.92		357.32		44.91	12.28	556.43
Huntington Woods				560.08	93.65	63.87	717.59
Lathrup Village	182.76	7.95	349.48		35.10		575.29
Pleasant Ridge	170.52	71.19	171.76		153.98	67.79	635.24
Royal Oak	192.60		374.20		16.00	16.36	599.16
Southfield	231.72	8.13	331.68			3.20	574.73
						LOW	320.33
						AVERAGE	564.14
						HIGH	717.59

Quarterly Cost Per 1,000 Cu. Ft.
 Combined Water Sewer Charges

Municipality	Quarterly Consumption served by a 5/8" Meter				
	4,000 Cu Ft	8,000 Cu Ft	12,000 Cu Ft	16,000 Cu Ft	20,000 Cu Ft
Berkley	129.57	115.84	111.26	108.97	107.59
Beverly Hills	148.14	130.01	123.97	120.95	119.14
Bingham Farms	80.08	79.87	79.79	79.76	79.74
Birmingham	137.96	128.52	125.37	123.80	122.86
Clawson	139.11	131.96	129.58	128.38	127.67
Huntington Woods	179.40	169.29	165.92	164.24	163.22
Lathrup Village	143.82	138.44	136.65	135.75	135.75
Pleasant Ridge	158.81	122.19	109.98	103.88	100.22
Royal Oak	149.79	150.69	151.00	151.15	151.24
Southfield	143.68	142.27	141.79	141.56	141.42
LOW	80.08	79.87	79.79	79.76	79.74
AVERAGE	141.04	130.91	127.53	125.84	124.88
HIGH	179.40	169.29	165.92	164.24	163.22

July 5, 2023

Board of Trustees
Southeastern Oakland County Water Authority

Subject: Lead and Copper Rule – System Materials Inventory and 2023 Testing

Board Members:

I have discussed EGLE’s draft CDSMI guidance with Brad Shepler from HRC. As a reminder, each community will need to complete their final CDSMI by January 1, 2025 but EGLE has yet to develop final guidance on what will be required in the CDSMI.

HRC is already assisting Berkley, Bingham Farms, Birmingham, Beverly Hills and Southfield with the preparation of their CDSMI. HRC has developed the attached proposal for consideration by the remainder of the member communities for developing a CDSMI, for each community using their data and service line verification results and using the anticipated guidance from EGLE. This proposal is different than previous community proposals from HRC in that the work to complete the CDSMI depends on the number of service lines in each community and the amount of work that has already been done in preparing the data that is required for the inventory. Therefore, a uniform proposal for the communities would not be appropriate. If your community is interested in using the services of HRC, please work directly with Brad Shepler to set up an agreement between HRC and your community for the appropriate level of service required.

The sample kits for the 2023 lead and copper testing have been distributed to the member communities. The testing period began on June 1, and we encourage you to complete the collection of the samples early in the testing period. Conveniently, EGLE modified their sampling form about three weeks after the start of the sampling period. EGLE’s new forms are available on their website. If your community has any lead and copper testing issues, please contact Bob Jackovich.

Respectfully submitted,

Jeffrey A. McKeen, P.E.
General Manager

Suggested Resolution: “That the report on Lead and Copper Rule – System Materials Inventory and 2023 Testing be received and filed.”



Memorandum

To: Jeff McKeen, P.E., General Manager

From: Bradley Shepler, P.E., Nicole Selais

Date: July 5, 2023

Subject: SOCWA Member Community CDSMI Assistance

HRC Job No. 20230554

As you are aware, the 2018 revisions to the Michigan Safe Drinking Water Act (MI-SDWA) Lead and Copper Rule (LCR) requires that water supplies develop and maintain a Complete Distribution System Materials Inventory (CDSMI). The purpose of the CDSMI is to characterize, record and maintain a comprehensive inventory of distribution system materials, specifically including service line materials on both public and private portions of the water service line. **This CDSMI must be submitted to EGLE by January 1, 2025.**

It is understood that SOCWA and its member communities have completed Step 1 of the revised MI-SDWA LCR which was to submit a Preliminary Distribution System Materials Inventory (PDSMI) and are working their way through Step 2 of the process by completing the random material verification process. EGLE had recommended that Step 2 of this process be completed by the end of calendar year 2022 to allow time to undertake any additional activities that may be necessary to complete the CDSMI by January 1, 2025. So, it is advised that the member communities accelerate their random material verification process to try and have the data available for evaluation as soon as possible.

Step 3 of the revised MI-SDWA LCR is to evaluate the service line verification data that has been collected. Guidance for this step was recently provided by EGLE and includes the following activities;

- Evaluate the data collected during the random service line verification process.
- Compare pre-verification records with the field-verified findings to determine reliability of existing records.
- Determine whether additional verification activities are necessary for records found to be unreliable.
- Continue developing the CDSMI and work towards the completed product.

Evaluating the service line material verification data, documenting and justifying the decision-making process for what is considered reliable versus unreliable data and developing a format for completing the CDSMI can be a complicated and overwhelming task. HRC has been assisting numerous water supplies in completing their random material verification process and preparing them for completing their CDSMI by completing the following tasks;

- Reviewing existing records.
- Identifying service lines of known and unknown material based on EGLE's Minimum Service Line Material Verification Requirements guidance document.
- Assisting with or conducting physical service line material verifications.
- Thoroughly tracking and documenting the materials found during the physical verifications process.

HRC is currently helping a number of SOCWA member communities navigate the steps in the revised MI-SDWA LCR including the Cities of Berkley, Birmingham, Bloomfield Hills and Southfield, Villages of Beverly Hills and Bingham Farms and Bloomfield Twp. As offered previously, HRC is willing and able to assist additional SOCWA member communities with completing the necessary steps to complete the CDSMI. However, unlike other proposals provided, the level of effort required to complete a CDSMI for a particular water system will differ proportionately to the availability and quality of the records and verification data collected during Steps 1 and 2 of this process. Therefore, a common-to-all type budgetary cost would not be applicable for this work as different member communities would require different levels of effort to complete their CDSMI. If you know of any SOCWA member communities that are interested in additional assistance, please let us know and we can contact them to discuss the tasks they have completed to-date and the specific scope required moving forward. HRC can then provide a community specific proposal.

In summary, there are commonalities in the methodologies utilized to collect and analyze the existing service line records and physical verification data, preparing the final service line identification database, developing documentation and justifications of the materials inventory evaluation and completing the CDSMI which allow for cost savings among those SOCWA member communities participating. HRC is available to advise, assist or complete the CDSMI (or any previous steps not currently completed) for any SOCWA member community that would desire HRC's assistance.

July 5, 2023

Board of Trustees
Southeastern Oakland County Water Authority

Subject: GLWA Issues

Board Members:

This report is intended to update the Board on the issues regarding GLWA and the Highland Park unpaid bill issue that have been discussed at recent Board meetings.

Highland Park Cases

Highland Park did pay the incremental \$1 million required by the recent order in the Wayne County case. This payment continues the stays of the various court actions until October 1, 2023. It appears that settlement discussions are ongoing.

GLWA has proposed to refund the \$1 million incremental payment from Highland Park to its customers. GLWA has calculated the amount of money that has been included in rates for unpaid Highland Park bills. Only 12.6% of Highland Park charges were for water service while the remaining 87.4% were for sewer and industrial waste control services. The 12.6% for water customers was then split among customers based on the amount of Highland Park charges that had been assigned to each customer. For SOCWA, this results in an amount of \$8,200 that will be credited to a water bill early in the 2023/24 fiscal year.

My concern with GLWA's proposed refund is that it is only applied to this particular \$1,000,000 payment and not to the routine payments from Highland Park. I have expressed that concern to GLWA management.

For SOCWA, the proposed \$8,200 credit amounts to \$0.0063 per MCF. Given the miniscule size of this credit, I am not proposing to reduce SOCWA rates for 2023/24. As an alternative, SOCWA could provide a credit to the SOCWA members and customers on a future bill. I have attached an example credit calculation which divides the \$8,200 credit based on 2022/23 water consumption. Those credits range from \$2,519 for Southfield to \$14 for Rackham Golf Course.

For the sewer customers of GLWA, the credits are significantly larger. As an example, the credit allocated to the George Kuhn Drainage District is \$159,200. I am not aware of what the Oakland County Water Resources Commissioner's office is proposing to do regarding this credit.

We are also continuing to advocate for GLWA booking a portion of the payments received from Highland Park to the water fund. Historically, GLWA has booked all Highland Park payments to the sewer fund because the amount owed to the sewer system predated GLWA supplying water to Highland Park starting in 2012.

Mr. Davis is continuing to follow developments in the Highland Park cases through GLWA's outside legal counsel.

Main Break on 120" Water Main

SOCWA withheld \$44,984.91 from our GLWA payment that was due on June 9, 2023. This amount has been segregated in a separate account at Flagstar. GLWA denied our initial claim for payment but they have not responded to our withheld payment. Mr. Davis and I are awaiting a response from GLWA.

Respectfully submitted,

Jeffrey A. McKeen, P.E.
General Manager

Suggested Resolution: "That the report on GLWA Issues be received and filed."

PROPOSED DISTRIBUTION OF GLWA HIGHLAND PARK CREDIT

Proposed Credit Amount

\$8,200.00

<u>Community</u>	<u>22-23 Water Sales (MCF)</u>	<u>% Proposed Credit</u>	
Berkley	48,458.33	3.64%	\$298.55
Beverly Hills	42,824.70	3.22%	\$263.84
Bingham Farms	11,731.10	0.88%	\$72.28
Birmingham	122,175.77	9.18%	\$752.73
Bloomfield Hills	60,962.48	4.58%	\$375.59
Bloomfield Twp.	257,035.84	19.31%	\$1,583.60
Clawson	36,299.99	2.73%	\$223.64
Huntington Woods	23,206.32	1.74%	\$142.97
Lathrup Village	15,134.53	1.14%	\$93.24
Pleasant Ridge	11,210.80	0.84%	\$69.07
Royal Oak	278,758.56	20.94%	\$1,717.43
Southfield	<u>408,913.41</u>	30.72%	\$2,519.32
	1,316,711.83		
Detroit Zoo	11,916.80	0.90%	\$73.42
Rackham	2,322.60	0.17%	\$14.31
	1,330,951.23		\$8,200.00

June 16, 2023

Board of Trustees
Southeastern Oakland County Water Authority

Subject: 2022/23 Audit

Board Members:

Plante Moran has prepared the attached letter regarding the 2022/23 audit. The first two pages outline the audit for this year. The fee for this year's audit is \$29,850. Plante Moran's fee estimate does not include time related to the implementation of GASB96, Subscription-Based Information Technology Arrangements. Our initial investigation into this topic has revealed that SOCWA has only a small number of software subscriptions that would require additional audit work under GASB96, and that work should be very minor.

The remainder of the letter is the annual engagement letter for the 2022/23 audit. This letter is substantially the same as the letter for the 2021/22 audit except for several slight modifications that do not change the agreement. I have executed the letter.

Plante Moran has already begun the preparation of the 2022/23 audit. We anticipate that the audit will be conducted largely in person and will begin on September 5, 2023. The bulk of the audit work will be completed during early September. I anticipate that we will review a draft audit with the Audit Committee in October and that the final audit will be reviewed with the Board at the November Board meeting.

The pre-audit meeting with the Audit Committee and representatives of Plante Moran will be held immediately following the August Board meeting.

Respectfully submitted,

Jeffrey A. McKeen, P.E.
General Manager

Suggested Resolution: "That the report on the 2022/23 audit be received and filed."



Plante & Moran, PLLC
P.O. Box 307
3000 Town Center, Suite 100
Southfield, MI 48075
Tel: 248.352.2500
Fax: 248.352.0018
plantemoran.com

May 22, 2023

Jeffrey McKeen
Southeastern Oakland County
Water Authority
3910 W. Webster Road
Royal Oak, MI 48073

Dear Jeff:

Thank you for selecting Plante & Moran, PLLC ("PM") to assist you. We are sending this letter and the accompanying Professional Services Agreement, the terms of which are incorporated into this engagement letter, to confirm the nature, limitations, and terms of the services we will provide to the Southeastern Oakland County Water Authority ("Client").

Scope of Services

We will audit Client's financial statements as of and for the year ended June 30, 2023.

In addition, the supplemental information accompanying the financial statements will be subjected to the auditing procedures applied in our audit of the financial statements.

In connection with our audit engagement, we will assist you in drafting your financial statements, supplementary information, and related notes. This assistance is considered a non-audit service; you agree to the contemporaneous provision of these audit and non-audit services.

Martin Olejnik is the engagement partner for the services specified in this letter and is responsible for supervising PM's services performed as part of this engagement.

If you determine that you need additional services, including accounting, consulting, or tax assistance, PM may be available to provide them under the terms of separate engagement letters and for additional fees.

Timing of Services

We expect to perform the procedures starting September 5, 2023.

Fees and Payment Terms

Our fee for this engagement will be based on the value of the services provided, which is primarily a function of the time that PM staff expend at our current hourly rates. We estimate that our fee for this engagement will be approximately \$29,850, plus all reasonable and necessary travel and out-of-pocket costs incurred (expected to be none).

Any fee estimate for the engagement does not include time related to the implementation of GASB 96, *Subscription-Based Information Technology Arrangements*. These services include assistance with the identification and reporting of SBITAs. Our fee for any such services will be based on the value of the services provided, which is primarily a function of the time that PM staff expend at our current hourly rates.

Jeffrey McKeen
Southeastern Oakland County
Water Authority

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May 22, 2023

Invoices for audit services, other services, and out-of-pocket costs will be rendered as services are provided and are due when received. In the event an invoice is not paid timely, a late charge in the amount of 1.25 percent per month will be added, beginning 30 days after the date of the invoice.

If you agree with our understanding of this engagement, as set forth in this engagement letter and the accompanying Professional Services Agreement, please sign the enclosed copy of this letter and return it to us with the accompanying Professional Services Agreement.

Thank you for the opportunity to serve you.

Very truly yours,

Plante & Moran, PLLC



Martin J. Olejnik, CPA
Partner

Agreed and Accepted

We accept this engagement letter and the accompanying Professional Services Agreement (collectively, "Agreement"), which set forth the entire agreement between the Southeastern Oakland County Water Authority and Plante & Moran, PLLC with respect to the services specified in the Scope of Services section of this engagement letter.

Southeastern Oakland County Water Authority

Jeffrey McKeen

Date

General Manager

Title

Professional Services Agreement – Audit Services Addendum to Plante & Moran, PLLC Engagement Letter

This Professional Services Agreement is part of the engagement letter (collectively, “Agreement”) for audit services dated May 22, 2023 between Plante & Moran, PLLC (referred to herein as “PM”) and Southeastern Oakland County Water Authority (referred to herein as “Client”). Any work performed in connection with the engagement before the date of this letter will also be governed by the terms and conditions of this Agreement.

- 1. Financial Statements** – The financial statements of Client being audited by PM are to be presented in accordance with accounting principles generally accepted in the United States of America (GAAP).
- 2. Management Responsibilities** – Client management is responsible for the preparation and fair presentation of these financial statements in accordance with the applicable financial reporting framework, including compliance with the requirements of accounting principles generally accepted in the United States of America and the completeness and accuracy of the information presented and disclosed therein. Management is also responsible for the capability and integrity of Client personnel responsible for Client’s underlying accounting and financial records.

Client personnel will provide PM, in a timely and orderly manner, with access to all information of which management is aware that is relevant to the preparation and fair presentation of the financial statements, such as records, documentation, and other matters and additional information that the auditor may request from management for the purpose of the audit.

This includes providing assistance and information PM requests during the course of its audit, including retrieval of records and preparation of schedules, analyses of accounts, and confirmations. A written request for information to be provided will be submitted under separate cover and supplemented by additional written and oral requests as necessary during the course of PM’s audit. In addition, Client will provide PM with all information in its possession that has a material impact on any material transaction and that information will be complete, truthful, and accurate. Client will allow PM unrestricted access to personnel within Client from whom PM determines it necessary to obtain audit evidence.

Client represents and warrants that any and all information that it transmits, or otherwise makes available, to PM will be done so in full compliance with all applicable federal, state, local, and foreign privacy and data protection laws, as well as all other applicable regulations and directives, as may be amended from time to time (collectively, “Data Privacy Laws”). Client shall not disclose personal data of data subjects (“Personal Data”) who are entitled to certain rights and protections afforded by Data Privacy Laws to PM without prior notification to PM. Client shall make reasonable efforts to limit the disclosure of Personal Data to PM to the minimum necessary to accomplish the intended purpose of the disclosure to PM.

Management is responsible for making all management decisions and performing all management functions relating to the financial statements, supplementary financial information, and related notes and for accepting full responsibility for such decisions, even if PM provides advice as to the application of accounting principles or assists in drafting the financial statements, supplementary financial information, and related notes. Client has designated Jeffrey McKeen to oversee financial statement related services PM provides. Management will be required to acknowledge in the management representation letter that it has reviewed and approved the financial statements, supplementary financial information, and related notes prior to their issuance and have accepted responsibility for the adequacy of the financial statements.

Management is responsible for the design and implementation of programs and controls to prevent and detect fraud, and for informing PM about all known or suspected fraud affecting Client involving (a) management, (b) employees who have significant roles in internal control, and (c) others where the fraud could have a material effect on the financial statements. Management’s responsibilities include informing PM of its knowledge of any allegations of fraud or suspected fraud affecting Client received in communications from employees, former employees, regulators, or others. In addition, management is responsible for identifying and ensuring that the entity complies with applicable laws and regulations.

Management is responsible for providing PM with complete, accurate, and timely information that could bear on PM’s independence under applicable professional standards, including, but not limited to, information and representations regarding affiliates of Client, business or personal relationships between Client and PM, and business, personal and employment relationships between those in a financial reporting oversight role, including members of governance, and PM (collectively, Independence Information). Client represents and warrants (a) that it has provided PM any and all Independence Information existing as of the date of this Agreement; (b) that such Independence Information is accurate and complete as of the date of this Agreement; (c) that it will notify PM of any changes to Independence Information that has been provided as of the date of this Agreement; and (d) that,

Professional Services Agreement – Audit Services

after the date of this Agreement, it will provide any new Independence Information to PM as soon as it becomes known to Client.

- 3. Objective of an Audit of Financial Statements** – The objective of PM's audit is the expression of an opinion on the Client's financial statements specified in the accompanying engagement letter. PM offers no guarantee, express or implied, that its opinion will be unmodified or that it will be able to form an opinion about these financial statements in the event that Client's internal controls or accounting and financial records prove to be unreliable or otherwise not auditable. If PM's opinion is to be modified, PM will discuss the reasons with Client management in advance of the issuance of its audit report. If, for any reason, PM is prevented from completing its audit or is unable to form an opinion on these financial statements, PM may terminate the engagement and decline to issue a report.
- 4. Supplementary Information** – In any document that contains supplementary information to the basic financial statements that indicates that the auditor has reported on such supplementary information, management agrees to include the auditor's report on that supplementary information. In addition, management agrees to present the supplementary information with the audited financial statements or to make the audited financial statements readily available no later than the date of issuance by Client of the supplementary information and the auditor's report thereon.
- 5. Internal Controls** – Client is responsible for the design, implementation, and maintenance of internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error, including controls established for the purpose of preventing or detecting errors in financial reporting, preventing fraud or misappropriation of assets, and identifying and complying with applicable laws and regulations. PM, in making its risk assessments, will consider internal control relevant to Client's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. PM's audit will not be designed to provide assurance on the design or operating effectiveness of Client's internal controls or to identify all conditions that represent significant deficiencies in those internal controls. PM will communicate all significant deficiencies and material weaknesses in internal controls relevant to the audit of the financial statements, instances of fraud, or misappropriation of assets that come to PM's attention.
- 6. Audit Procedures and Limitations** – PM's audit will be conducted in accordance with auditing standards generally accepted in the United States of America (GAAS) and will include examination, on a test basis, of evidence supporting the amounts and disclosures in the Client financial statements specified in this engagement letter. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. An audit in accordance with GAAS involves judgment about the number of transactions to be tested and the overall approach to testing in each area. As a result, PM's audit can only be designed to provide reasonable rather than absolute assurance that these financial statements are free from material misstatement. In addition, an audit in accordance with GAAS is not designed to detect errors or fraud that are immaterial to the financial statements. Because of the inherent limitations of an audit, together with the inherent limitations of internal control, an unavoidable risk that some material misstatements may not be detected always exists, even in an audit properly planned and performed in accordance with GAAS. In recognition of these limitations, Client acknowledges that PM's audit cannot guarantee that all instances of error or fraud will be identified.
- 7. Auditor Communications** – PM is obligated to communicate certain matters related to the audit to those responsible for governance of Client, including instances of error or fraud and significant deficiencies and material weaknesses in internal control that PM identifies during its audit. PM will communicate these matters to the members of Client's governing board, and Client acknowledges and agrees that communication in this manner is sufficient for Client's purposes.
- 8. Communication to Group Auditor** – In instances where PM has been engaged as a component auditor for the purposes of a Group Audit, the terms of the engagement may include communication of certain matters related to the audit to the Group Auditor. Client permits such communication. PM will discuss matters being communicated with those responsible for governance of Client.
- 9. Accounting and Financial Records** – Client agrees that it is responsible for providing PM with accounting and financial records that are closed, complete, accurate, and in conformity with the requirements of GAAP, for providing schedules and analyses of accounts that PM requests, and for making all Client financial records and related information available to PM for purposes of PM's audit, whether obtained from within or outside of the general ledger and subsidiary ledgers. Where PM has provided estimates of the timing of its work and completion of PM's engagement and issuance of PM's report, those estimates are dependent on Client providing PM with all such accounting and financial records, schedules, and analyses on the date PM's work commences. PM will assess the condition of Client's accounting and financial records, schedules, and analyses of accounts prior to commencing its work. In the event that such records, schedules, and analyses are not closed, complete, accurate, or in conformity with GAAP, PM may have to reschedule its work, including the dates on which PM expects to complete its on-site procedures and issue its audit report.

Professional Services Agreement – Audit Services

In any circumstance where PM's work is rescheduled due to Client's failure to provide information as described in the preceding paragraph, PM offers no guarantee, express or implied, that PM will be able to meet any previously established deadlines related to the completion of the audit work or issuance of its audit report. Because rescheduling audit work imposes additional costs on PM, in any circumstance where PM has provided estimated fees, those estimated fees may be adjusted for the additional time PM incurs as a result of rescheduling its work. These fee adjustments will be determined in accordance with the Fee Adjustments provision of this Agreement.

10. Audit Adjustments – PM will recommend adjustments to Client's accounting records that PM believes are appropriate. Client management is responsible for adjusting Client accounting records and financial statements to correct material misstatements and for affirming to PM in writing that the effects of any unrecorded adjustments identified during PM's audit are immaterial, both individually and in the aggregate, to the Client's financial statements specified in this Agreement.

11. Management Representations – Client is responsible for the financial statements being audited and the implicit and explicit representations and assertions regarding the recognition, measurement, presentation, and disclosure of information therein. During the course of the audit, PM will request information and explanations from Client officers, management, and other personnel regarding accounting and financial matters, including information regarding internal controls, operations, future plans, and the nature and purpose of specific transactions. PM will also require that management make certain representations to PM in writing as a precondition to issuance of PM's report.

PM's audit procedures will be significantly affected by the representations and assertions PM receives from management and, accordingly, false representations could cause material error or fraud to go undetected by PM's procedures. Accordingly, Client acknowledges and agrees that it will instruct each person providing information, explanations, or representations to an auditor to provide true and complete information, to the best of his or her knowledge and belief. It is also agreed that any deliberate misrepresentation by any director, officer, or member of management, or any other person acting under the direction thereof ("Client Personnel"), intended to influence, coerce, manipulate, or mislead PM in the conduct of its audit of the financial statements will be considered a material breach of this Agreement. In addition, as a condition of its audit engagement, Client agrees to indemnify and hold PM and its partners, affiliates, and employees harmless from any and all claims, including associated attorneys' fees and costs, based on PM's failure to detect material misstatements in Client's financial statements resulting in whole or in part from deliberate false or misleading representations, whether oral or written, made to PM by Client Personnel. This indemnity will be inoperative only if, and to the extent that, a court having competent jurisdiction has determined that PM failed to conduct its audit in accordance with generally accepted auditing standards and such failure resulted in PM not determining such misrepresentation by Client Personnel was false.

12. Use of Report – PM's report on the financial statements must be associated only with the financial statements that were the subject of PM's audit engagement. Client may make copies of the audit report, but only if the entire financial statements (including related footnotes and supplemental information, as appropriate) are reproduced and distributed with that report. Client agrees not to reproduce or associate PM's audit report with any other financial statements, or portions thereof, that are not the subject of this engagement.

If PM's report on the financial statements being audited is to be published in any manner or if Client intends to make reference to PM in a publication of any type, Client agrees to submit proofs of the publication to PM for review prior to such publication and cooperate with PM in PM's performance of any additional audit procedures PM deems necessary in the circumstances, the nature and extent of which will be at PM's sole discretion. Client acknowledges and agrees that additional fees for such work will be determined in accordance with the Fee Adjustments provision of this Agreement. With regard to the electronic dissemination of audited financial statements, including financial statements published electronically on Client's Internet website, Client understands that electronic sites are a means to distribute information and, therefore, PM is not required to read the information contained in these sites or to consider the consistency of other information in the electronic site with the original document.

13. Securities Offerings – PM's audit does not contemplate, and does not include, any services in connection with any offering of securities, whether registered or exempt from registration. In the event Client elects to incorporate or make reference to PM's report in connection with any offering of debt or equity securities and requests PM's consent to such incorporation or reference, Client understands that additional procedures will need to be performed. In the event PM agrees in writing to perform such additional procedures, the nature and extent of which will be at PM's sole discretion, it is agreed and acknowledged that PM's performance of such additional procedures will be subject to all of the terms and conditions of this Agreement. Additional fees for such work will be determined based on the actual time that PM staff expend at current hourly rates, plus all reasonable and necessary travel and out-of-pocket costs incurred, and that payment for all such additional fees will be made in accordance with the payment terms provided in this Agreement.

Professional Services Agreement – Audit Services

If Client incorporates or makes reference to PM's report in connection with any offering of debt or equity securities without obtaining consent from PM as described above, Client agrees to include the following provision in the offering document:

Plante & Moran, PLLC, our independent auditor, has not performed or been engaged to perform any services in connection with the offering of securities. Nor has Plante & Moran, PLLC performed or been engaged to perform any procedures on the financial statements of Client since the date of the Plante & Moran, PLLC report included herein. Plante & Moran, PLLC also has not performed any procedures relating to this offering document.

14. Tax Return Preparation – This engagement does not include preparation of any tax returns or filings. If Client requires tax services, including tax consulting or preparation of tax returns, those services will be detailed in a separate engagement letter.

15. Confidentiality, Ownership, and Retention of Workpapers – During the course of this engagement, PM and PM staff may have access to Client's confidential, proprietary information, including, but not limited to, information regarding general ledger balances, financial transactions, trade secrets, business methods, plans, or projects. PM acknowledges that such information, regardless of its form, is confidential and proprietary to Client. PM will comply with all applicable ethical standards, laws, and regulations as to the retention, protection, use and distribution of such confidential client information. Except to the extent set forth herein, PM will not disclose such information to any third party without the prior written consent of Client.

In the interest of facilitating PM's services to Client, PM may communicate or exchange data by internet, e-mail, facsimile transmission, or other electronic method. While PM will use its best efforts to keep such communications and transmissions secure in accordance with PM's obligations under applicable laws and professional standards, Client recognizes and accepts that PM has no control over the unauthorized interception of these communications or transmissions once they have been sent, and consents to PM's use of these electronic devices during this engagement.

Professional standards require that PM create and retain certain workpapers for engagements of this nature. All workpapers created in the course of this engagement are and shall remain the property of PM. PM will maintain the confidentiality of all such workpapers as long as they remain in PM's possession.

Both Client and PM acknowledge, however, that PM may be required to make its workpapers available to regulatory authorities or by court order or subpoena in a legal, administrative, arbitration, or similar proceeding in which PM is not a party. Disclosure of confidential information in accordance with requirements of regulatory authorities or pursuant to court order or subpoena shall not constitute a breach of the provisions of this Agreement. In the event that a request for any confidential information or workpapers covered by this Agreement is made by regulatory authorities or pursuant to a court order or subpoena, PM agrees to inform Client in a timely manner of such request and to cooperate with Client should it attempt, at Client's cost, to limit such access. This provision will survive the termination of this Agreement. PM's efforts in complying with such requests will be deemed billable to Client as a separate engagement. PM shall be entitled to compensation for its time and reasonable reimbursement of its expenses (including legal fees) in complying with the request.

Both Client and PM acknowledge that upon completion of the audit PM is required to send an electronic copy of Client's financial report, PM's official letter of comments and recommendations, and auditing procedures report directly to the State of Michigan pursuant to Michigan Department of Treasury Regulations. Client authorizes and directs PM to provide such information and disclosure of such information shall not constitute a breach of the provisions of this Agreement.

PM reserves the right to destroy, and it is understood that PM will destroy, workpapers created in the course of this engagement in accordance with PM's record retention and destruction policies, which are designed to meet all relevant regulatory requirements for retention of workpapers. PM has no obligation to maintain workpapers other than for its own purposes or to meet those regulatory requirements.

Upon Client's written request, PM may, at its sole discretion, allow others to view any workpapers remaining in its possession if there is a specific business purpose for such a review. PM will evaluate each written request independently. Client acknowledges and agrees that PM will have no obligation to provide such access or to provide copies of PM's workpapers, without regard to whether access had been granted with respect to any prior requests.

16. Consent to Disclosures to Service Providers – In some circumstances, PM may use third-party service providers in connection with its services, including affiliates of PM within or outside the United States. In those circumstances, PM will be solely responsible for the provision of any services by any such third-party service providers and for the protection of any information provided to such third-party service providers. PM will require any such third-party service provider to: (i) maintain the confidentiality of any information furnished and (ii) not use

Professional Services Agreement – Audit Services

any information for any purpose unrelated to PM's services. Client, by its duly authorized signature on the accompanying engagement letter, consents to PM's disclosure of all or any portion of Client's information, including tax return information, to such third-party service providers, including affiliates of PM outside of the United States, if and to the extent such information is relevant to the services such third-party service providers may provide and agrees that PM's disclosure of such information for such purposes shall not constitute a breach of the provisions of this Agreement. Client's foregoing consent shall be continuing until the services provided for this Agreement are completed.

17. Fee Quotes – In any circumstance where PM has provided estimated fees, fixed fees, or not-to-exceed fees ("Fee Quotes"), these Fee Quotes are based on information provided by Client regarding the nature and condition of its accounting, financial, and tax records; the nature and character of transactions reflected in those records; and the design and operating effectiveness of its internal controls. Client acknowledges that the following circumstances may result in an increase in fees:

- Client's failure to prepare for the audit as evidenced by accounts and records that have not been subject to normal year-end closing and reconciliation procedures;
- Client's failure to complete the audit preparation work by the applicable due dates;
- Significant unanticipated or undisclosed transactions, audit issues, or other such unforeseeable circumstances;
- Delays by Client causing scheduling changes or disruption of fieldwork;
- After audit or post fieldwork circumstances requiring revisions to work previously completed or delays in resolution of issues that extend the period of time necessary to complete the audit;
- Issues with the prior audit firm, prior year account balances, or report disclosures that impact the current year engagement;
- An excessive number of audit adjustments.

PM will use best efforts to advise Client in the event these circumstances occur; however, it is acknowledged that the exact impact on the Fee Quotes may not be determinable until the conclusion of the engagement. Such fee adjustments will be determined in accordance with the Fee Adjustments provision of this Agreement.

18. Payment Terms – PM's invoices for professional services are due upon receipt unless otherwise specified in the engagement letter. In the event any of PM's invoices are not paid in accordance with the terms of this Agreement, PM may elect, at PM's sole discretion, to suspend work until PM receives payment in full for all amounts due or terminate this engagement. In the event that work is suspended, for nonpayment or other reasons, and subsequently resumed, PM offers no guarantee, express or implied, that PM will be able to meet any previously established deadlines related to the completion of PM's services or issuance of PM's report upon resumption of PM's work, whether imposed by agreement or by law. Client agrees that in the event PM stops work or terminates this Agreement as a result of Client's failure to pay fees on a timely basis for services rendered by PM as provided in this Agreement, or if PM terminates this Agreement for any other reason, PM shall not be liable for any damages that occur as a result of PM ceasing to render services.

19. Fee Adjustments – Any fee adjustments for reasons described in this Agreement will be determined based on the actual time expended by PM staff at PM's current hourly rates, plus all reasonable and necessary travel and out-of-pocket costs incurred, and included as an adjustment to PM's invoices related to this engagement. Client acknowledges and agrees that payment for all such fee adjustments will be made in accordance with the payment terms provided in this Agreement.

20. Conditions of PM Visit to Client Facilities – Client agrees that some or all of PM's services may be provided remotely. In order to facilitate the provision of services remotely, Client agrees to provide documentation and other information reasonably required by PM for PM's performance of the engaged services electronically to the extent possible throughout the course of the engagement. In the event in-person visits to Client's facility(ies) are requested by Client or otherwise determined by PM to be necessary for the performance of the engaged services, Client agrees, upon PM's request, to provide to PM Client's policies and procedures that Client has implemented relating to workplace safety and the prevention of the transmission of disease at its facility(ies). In addition, Client affirms that it is in compliance with applicable Centers for Disease Control and Prevention and OSHA guidance pertaining to the prevention of the transmission of disease (collectively, "Applicable Preventative Guidance") and agrees that it shall continue to comply with Applicable Preventative Guidance throughout any in-person visits by PM to Client's facility(ies). Notwithstanding the foregoing, PM reserves the right to suspend or refrain from any in-person visit by PM to Client's facility(ies) or impose further conditions on any such in-person visit if and as PM deems necessary. Client agrees and acknowledges that any determination by PM to visit Client's facility(ies) is not

Professional Services Agreement – Audit Services

and shall not be construed to be or relied on by Client as a determination by PM of Client's compliance with Applicable Preventative Guidance.

- 21. Release for Biological Agent Liability** – Client acknowledges that there is an inherent risk of exposure to infectious diseases associated with any in-person interaction or in-person visit to property. Accordingly, Client, for itself and its successors and assigns, hereby releases PM and each of PM's officers, directors, partners, members, managers, employees, affiliated, parent or subsidiary entities, and approved third-party service providers (collectively, "PM Persons") from any and all claims or causes of action that the Client has, or hereafter may or shall have, against any of them in connection with, related to, or arising out of infectious diseases or the transmission thereof associated with a visit by one or more of the PM Persons to any Client facility(ies) or other in-person interaction with Client personnel.
- 22. Exclusion of Certain Damages** – Unless arising from gross negligence, in no event shall either party be liable to the other, whether a claim be in tort, contract, or otherwise, for any indirect, consequential, punitive, exemplary, lost profits, or similar damages in claims relating to PM's services provided under this engagement.
- 23. Receipt of Legal Process** – In the event PM is required to respond to a subpoena, court order, or other legal process (in a matter involving Client but not PM) for the production of documents and/or testimony relative to information PM obtained and/or prepared during the course of this engagement, Client agrees to compensate PM for the affected PM staff's time at such staff's current hourly rates, and to reimburse PM for all of PM's out-of-pocket costs incurred associated with PM's response unless otherwise reimbursed by a third party.
- 24. Subsequent Discovery of Facts** – After the date of PM's report on the financial statements, PM has no obligation to make any further or continuing inquiry or perform any other auditing procedures with respect to the audited financial statements covered by PM's report, unless new information that may affect the report comes to PM's attention. If PM becomes aware of information that relates to these financial statements but was not known to PM at the date of its report, and that is of such a nature and from such a source that PM would have investigated it had it come to PM's attention during the course of the audit, PM will, as soon as practicable, undertake to determine whether the information is reliable and whether the facts existed at the date of PM's report. In this connection, PM will discuss the matter with Client and request cooperation in whatever investigation and modification of the financial statements that may be necessary. Additional fees for such work will be determined based on the actual time that PM staff expend at PM's current hourly rates, plus all reasonable and necessary travel and out-of-pocket costs incurred, and Client acknowledges and agrees that payment for all such additional fees will be made in accordance with the payment terms provided in this Agreement.
- 25. Termination of Engagement** – This engagement may be terminated by either party upon written notice. Upon notification of termination of this engagement, PM will cease providing services under the engagement. Client shall compensate PM for all time expended and reimburse PM for all out-of-pocket expenditures incurred by PM through the date of termination of this engagement.
- 26. Entire Agreement** – This Agreement is contractual in nature and includes all of the relevant terms that will govern the engagement for which it has been prepared. The terms of this Agreement supersede any prior oral or written representations or commitments by or between the parties regarding the subject matter hereof. Any material changes or additions to the terms set forth in this Agreement will only become effective if evidenced by a written amendment to this Agreement, signed by all of the parties.
- 27. Severability** – If any provision of this Agreement (in whole or part) is held to be invalid or otherwise unenforceable, the other provisions shall remain in full force and effect.
- 28. Force Majeure** – Neither party shall be deemed to be in breach of this Agreement as a result of any delays or nonperformance directly or indirectly resulting from circumstances or causes beyond its reasonable control, including, without limitation, fire or other casualty, acts of God, war, other violence, epidemic, pandemic or other public health emergency or government mandated shut down (each individually a "Force Majeure Event"). A Force Majeure Event shall not excuse any payment obligation relating to fees or costs incurred prior to any such Force Majeure Event.
- 29. Electronic Signatures** – The parties intend that any electronic signature shall be given full legal effect as if it were a handwritten signature.
- 30. Governing Law** – This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan, and jurisdiction over any action to enforce this Agreement, or any dispute arising from or relating to this Agreement shall reside exclusively within the State of Michigan.

End of Professional Services Agreement – Audit Services

**SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY
WATER CONSUMPTION
AVERAGE M.G. PER DAY**

June 2023

<u>Purchase from GLWA</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Buchanan	0.00	0.00	0.00	0.00
Lamb	0.42	0.00	0.09	1.36
Shafter	1.00	0.95	1.29	3.06
12 Mile	9.81	10.14	10.25	11.37
14 Mile	13.67	11.77	11.43	9.85
16 Mile	2.55	1.20	2.41	1.77
Bloomfield Hills	2.09	1.95	1.73	2.38
Bloomfield Twp	<u>8.54</u>	<u>7.17</u>	<u>7.01</u>	<u>8.65</u>
Total:	38.08	33.18	34.21	38.44
<u>Sold by SOCWA</u>				
Berkley	1.25	1.05	1.18	1.21
Beverly Hills	1.39	1.10	1.15	1.36
Bingham Farms	0.4	0.34	0.37	0.45
Birmingham	3.73	3.22	3.38	3.86
Bloomfield Hills	2.09	1.95	1.94	2.38
Bloomfield Twp	9.29	7.43	7.78	9.53
Clawson	0.75	0.88	0.85	0.90
Huntington Woods	0.77	0.60	0.63	0.70
Lathrup Village	0.55	0.50	0.50	0.36
Pleasant Ridge	0.41	0.30	0.34	0.37
Royal Oak	6.59	5.61	6.67	7.17
Southfield	10.53	9.84	9.79	10.24
Detroit (Zoo & Rackham)	<u>0.49</u>	<u>0.44</u>	<u>0.41</u>	<u>0.47</u>
Total:	38.24	33.26	34.99	39.00
Water Sales Over or Under Water Purchase	0.16	0.08	0.78	0.56
Per Cent	0.42%	0.24%	2.28%	1.46%

SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY
INCOME STATEMENT
06/01/23 - 06/30/23

	Period Actual	Period Budget	Variance
REVENUES			
SALE OF WATER MEMBERS	1,944,628.29	1,660,166.00	284,462.29
SALE OF WATER OTHERS	1,478,156.53	1,205,551.00	272,605.53
TOTAL SALE OF WATER REVENUES	3,422,784.82	2,865,717.00	557,067.82
RENTALS	21,395.10	21,493.00	(97.90)
WATER ANALYSIS & MISC	0.00	1,000.00	(1,000.00)
INTEREST ON INVESTMENTS	9,811.24	3,000.00	6,811.24
GRANT REVENUE	15,478.46	0.00	15,478.46
TOTAL OTHER REVENUES	46,684.80	25,493.00	21,191.80
TOTAL REVENUES	3,469,469.62	2,891,210.00	578,259.62
LEAD SERVICE REPLACEMENT	0.00	200,000.00	(200,000.00)
EXPENSES			
PURCHASE OF WATER FOR RESALE	1,896,892.26	8,139,337.00	(6,242,444.74)
POWER, PUMPING & GROUNDS WEBSTER	42,352.92	47,627.23	(5,274.31)
POWER, PUMPING & GROUNDS	18,340.90	28,016.52	(9,675.62)
COMPUTER OPERATIONS	4,672.41	8,361.50	(3,689.09)
PURIFICATION	7,866.37	11,607.59	(3,741.22)
METERS & MAINS	17,077.44	18,744.25	(1,666.81)
ADMINISTRATION & GENERAL	38,260.63	43,850.00	(5,589.37)
TOTAL EXPENSES	2,025,462.93	8,297,544.09	(6,272,081.16)
LEAD SERVICE LINE REPLACEMENT	7,590.00	200,000.00	(192,410.00)
CURRENT PERIOD INCOME	1,444,006.69	(5,406,334.09)	6,850,340.78

SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY
INCOME STATEMENT
07/01/22 - 06/30/23

	Period Actual	Period Budget	Variance
REVENUES			
SALE OF WATER MEMBERS	18,513,040.74	17,585,999.00	927,041.74
SALE OF WATER OTHERS	10,295,473.92	10,056,200.00	239,273.92
TOTAL SALE OF WATER REVENUES	28,808,514.66	27,642,199.00	1,166,315.66
RENTALS	139,880.86	130,600.00	9,280.86
WATER ANALYSIS & MISC	46,519.48	10,000.00	36,519.48
INTEREST ON INVESTMENTS	138,198.07	30,000.00	108,198.07
GRANT REVENUE	92,020.00	0.00	92,020.00
TOTAL OTHER REVENUES	416,618.41	170,600.00	246,018.41
TOTAL REVENUES	29,225,133.07	27,812,799.00	1,412,334.07
LEAD SERVICE REPLACEMENT	2,548,388.23	1,500,000.00	1,048,388.23
EXPENSES			
PURCHASE OF WATER FOR RESALE	18,940,237.67	25,154,337.00	(6,214,099.33)
POWER, PUMPING & GROUNDS WEBSTER	587,074.04	574,145.00	12,929.04
POWER, PUMPING & GROUNDS	232,458.99	328,020.00	(95,561.01)
COMPUTER OPERATIONS	81,288.44	100,350.00	(19,061.56)
PURIFICATION	121,868.05	139,290.00	(17,421.95)
METERS & MAINS	215,928.81	225,235.00	(9,306.19)
ADMINISTRATION & GENERAL	779,271.78	828,000.00	(48,728.22)
IN TRANSIT	6,556,763.12	0.00	6,556,763.12
TOTAL EXPENSES	27,514,890.90	27,349,377.00	165,513.90
LEAD SERVICE LINE REPLACEMENT	2,555,998.23	1,500,000.00	1,055,998.23
CURRENT PERIOD INCOME	1,710,242.17	463,422.00	1,246,820.17

SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY

Water Supplier Bacteriological Analysis Report for the Michigan Department of Environmental Quality

System Name: S.O.C.W.A. WSSN-6150

Oakland County, Michigan

Month: **June 2023**

of Weeks: **5**

Community	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	
(Sample Location)	Sta.	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A
City of Berkley (WSSN #0630)													
Einstein Bagel	27350 Woodward Ave.	BE-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Auto One	3080 11 Mile Rd.	BE-2	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
DPW Building	3226 Bacon St.	BE-3	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Public Safety Building	2395 12 Mile Rd.	BE-4	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A	
Weekly Average			0.68		0.68		0.68		0.68		0.68	0.68	
Village of Beverly Hills (WSSN #0690)													
Valvoline Oil Change	31005 Greenfield Rd.	BH-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Public Safety Building	18600 W. 13 Mile Rd.	BH-2	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A	
Northbrook Church	22055 W. 14 Mile Rd.	BH-3	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Weekly Average			0.67		0.67		0.67		0.67		0.67	0.67	
Village of Bingham Farms (WSSN #0715)													
Tel Bingham Offices	30100 Telegraph Rd.	BF-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
OAC Building	32270 Telegraph Rd.	BF-2	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Weekly Average			0.70		0.70		0.70		0.70		0.70	0.70	
City of Birmingham (WSSN #0730)													
D.R.S.	925 Eton St.	BI-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Adams Fire Station	572 Adams Rd.	BI-2	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A	
Police Station	151 Martin St.	BI-3	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A	
Chesterfield Fire Station	1600 W. Maple Rd.	BI-4	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A	
Chanelle Pastry	159 Eton	BI-5	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Weekly Average			0.64		0.64		0.64		0.64		0.64	0.64	
City of Clawson (WSSN #1440)													
Auger's Collision	726 S. Rochester Rd.	CL-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
Police Station	425 Livernois Rd.	CL-2	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A	
DPW Building	635 Elmwood Ave.	CL-3	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
National Coney	1331 Maple Rd.	CL-4	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
			0.68		0.68		0.68		0.68		0.68	0.68	
City of Huntington Woods (WSSN #3310)													
Community Center	26325 Scotia St.	HW-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	
H.W. D.P.W.	12795 W. 11 Mile Rd.	HW-2	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A	

Community			Date:	06/01/23	Date:	06/08/23	Date:	06/15/23	Date:	06/22/23	Date:	06/29/23
(Sample Location)		Sta.	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A
Rackham Golf Course	10100 W. 10 Mile Rd.	HW-3	0.60	A	0.60	A	0.60	A	0.70	A	0.70	A
			0.67		0.67		0.67		0.70		0.70	0.68
City of Lathrup Village (WSSN #3800)												
Lathrup DPW	19101 12 Mile Rd.	LV-1	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
Hellenic Coney Island	27000 Evergreen Rd.	LV-2	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Lathrup City Hall	27400 Southfield Rd.	LV-3	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
			0.67		0.67		0.67		0.67		0.67	0.67
City of Pleasant Ridge (WSSN #5390)												
D.P.W.	92 Amherst St.	PR-1	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
Sunoco Station	23701 Woodward Ave.	PR-2	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Community Center	4 Ridge Rd.	PR-3	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
			0.67		0.67		0.67		0.67		0.67	0.67

Cl₂ (Chlorine measured in mg/L)

P/A (Presence/Absence 100 mL/sample)

City of Royal Oak (WSSN #5830)

Subway	1411 11 Mile Rd.	RO-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Fire Station 6 th & Troy	216 6 th St.	RO-2	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
McPeeks Citgo	1702 Crooks Rd.	RO-3	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Fire Station Wood/13	31000 Woodward Ave.	RO-4	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
Midas Muffler	32700 Woodward Ave.	RO-5	0.70	A	0.70	A	0.50	A	0.70	A	0.70	A
Brakes & More	2400 14 Mile Rd.	RO-6	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
McDonald's	3300 Rochester Rd.	RO-7	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Howie Glass	940 Campbell Rd.	RO-8	0.70	A	0.70	A	0.00	A	0.70	A	0.70	A
Shell Gas	30875 Woodward Ave.	RO-9	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Dunkin Donuts	1700 14 Mile Rd.	RO-10	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Sunoco	4738 Rochester Rd.	RO-11	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Burger King	1711 Main St.	RO-12	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
RO DPS	1600 Campbell Rd.	RO-13	0.50	A	0.50	A	0.60	A	0.60	A	0.50	A
Belle Tire	200 Stephenson Hwy	RO-14	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Shell Gas	110 Washington	RO-15	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
			0.68		0.68		0.63		0.69		0.68	0.67

City of Southfield (WSSN #6160)

Dunkin Donuts	22111 Greenfield Rd.	SO-1	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Marathon Gas	20020 8 Mile Rd.	SO-2	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
JAX Car Wash	27000 8 Mile Rd.	SO-3	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
Midas Muffler	24945 Telegraph Rd.	SO-4	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Kirby's Coney Island	25050 Northwestern Hwy.	SO-5	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A

Community			Date:	06/01/23	Date:	06/08/23	Date:	06/15/23	Date:	06/22/23	Date:	06/29/23
(Sample Location)		Sta.	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A
Walgreens	28901 Greenfield Rd.	SO-6	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Midas Muffler	26969 Greenfield Rd.	SO-7	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
OCRC Garage	27900 Clara Ln.	SO-8	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
JAX Car Wash	28845 Telegraph Rd.	SO-9	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Ted Lindsey Center	30503 Greenfield Rd.	SO-10	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Mobil Gas 9 Mile	18300 9 Mile Rd.	SO-11	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Stop & Go	20041 12 Mile Rd.	SO-12	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
BP Gas	19995 9 Mile Rd.	SO-13	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
Stacker-Z	23145 Lahser Rd.	SO-14	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Marriott	27027 Northwestern	SO-15	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Subway	22514 Telegraph Rd.	SO-16	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
7-Eleven	26355 Telegraph Rd.	SO-17	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Burger King	26211 12 Mile Rd.	SO-18	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
Mobil Gas 13 Mile	30915 Southfield Rd.	SO-19	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
McDonalds	30161 Southfield Rd.	SO-20	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
			0.69		0.69		0.69		0.69		0.69	0.69

Community			Date:	06/01/23	Date:	06/08/23	Date:	06/15/23	Date:	06/22/23	Date:	06/29/23
(Sample Location)		Sta.	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A	Cl ₂	P/A
SOCWA Entry Points (WSSN #6150)												
Livernois Pump Station	224 Livernois Rd.	WA-1	0.60	A	0.70	A	0.60	A	0.50	A	0.70	A
Lamb Pump Station	21101 Greenfield Rd.	WA-2	0.20	A	0.20	A	0.20	A	0.20	A	0.20	A
Webster Pump Station	3910 W. Webster Rd.	WA-3	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
**from Webster 10 MG	3910 W. Webster Rd.	WA-4	0.60	A	0.50	A	0.50	A	0.50	A	0.70	A
**from Webster 7.5 MG	3910 W. Webster Rd.	WA-5	0.80	A	0.80	A	0.80	A	0.70	A	0.70	A
Gare Pump Station	24570 W. 12 Mile Rd.	WA-6	0.80	A	0.80	A	0.80	A	0.80	A	0.80	A
**from Gare 4.5 MG	24570 W. 12 Mile Rd.	WA-7	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
14 Mile Pump Station	16111 W. 14 Mile Rd.	WA-8	0.80	A	0.80	A	0.80	A	0.80	A	0.80	A
**from 14 Mile 5.0 MG	16111 W. 14 Mile Rd.	WA-9	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
Samoset Elevated Tank	2721 Samoset Rd.	WA-10	0.80	A	0.80	A	0.80	A	0.80	A	0.80	A
Oliver Pump Station	2443 Oliver Rd.	WA-11	0.80	A	0.80	A	0.80	A	0.80	A	0.80	A
Buchanan Pump Station	24250 W. 8 Mile Rd.	WA-12	0.30	A	0.40	A	0.40	A	0.30	A	0.40	A
**from Buchanan 2.5 MG	24250 W. 8 Mile Rd.	WA-13	OOS	OOS	OOS	OOS	OOS	OOS	OOS	OOS	OOS	OOS
			0.63		0.64		0.63		0.61		0.65	0.63
Metered Connections												
Detroit Zoo	8450 W. Ten Mile Rd.	MC-1	0.60	A	0.60	A	0.60	A	0.60	A	0.60	A
Beaumont Hospital	1301 13 Mile Rd.	MC-2	0.70	A	0.70	A	0.70	A	0.70	A	0.70	A
			0.65		0.65		0.65		0.65		0.65	0.65
Total: Routine Municipal Samples				76		76		76		76		76
Total: Water Main Construction & Misc.				3		1		0		14		2
Total: Samples for Month:	400			79		77		76		90		78

Method of Analysis: Analyzed per "STANDARD METHODS-for the Examination of Water and Wastewater"

Part No. 9223 B. Enzyme Substrate Test.

Examined by: Laurence Westmore

Date:

SOUTHEASTERN OAKLAND COUNTY WATER AUTHORITY													
PRECIPITATION - INCHES (WEBSTER PUMPING STATION)													
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1985	3.90	3.70	4.60	0.95	3.66	1.68	4.37	4.02	1.45	3.30	5.10	1.13	37.86
1986	1.68	2.73	1.74	1.91	2.10	4.62	2.79	3.10	5.48	2.48	0.95	1.95	31.53
1987	1.55	0.58	1.90	2.03	1.61	3.18	4.30	5.31	2.30	2.00	2.80	2.80	30.36
1988	0.60	1.53	0.40	1.40	1.00	0.55	2.80	2.05	3.25	3.43	2.61	0.80	20.42
1989	0.71	0.35	1.30	1.25	2.22	3.85	2.15	1.39	5.53	1.45	2.80	0.50	23.50
1990	1.52	4.18	1.40	1.95	3.00	2.25	2.03	4.30	3.90	3.70	2.35	3.40	33.98
1991	0.90	0.45	1.37	1.65	5.46	1.79	1.92	3.36	0.72	3.64	2.65	2.05	25.96
1992	1.35	1.24	2.98	2.75	0.85	2.05	6.40	2.30	3.10	1.95	4.20	1.80	30.97
1993	3.64	0.82	1.15	2.80	1.20	4.91	2.05	2.85	5.85	1.75	1.50	0.45	28.97
1994	2.15	0.55	2.20	2.70	0.70	5.21	1.30	2.77	1.20	2.33	3.02	2.20	26.33
1995	1.32	0.85	1.15	2.05	2.80	2.25	4.45	4.15	1.00	3.25	3.05	0.95	27.27
1996	1.45	1.30	1.00	3.75	3.30	4.20	1.85	0.40	4.45	2.20	2.15	1.30	27.35
1997	1.45	2.75	3.15	0.85	4.55	1.55	2.20	1.90	3.45	2.15	0.50	1.30	25.80
1998	2.80	2.85	4.60	2.86	1.65	1.75	2.80	6.85	1.00	2.05	1.00	1.45	31.66
1999	3.75	1.30	0.55	3.85	2.80	4.55	2.65	1.40	2.60	0.60	1.45	2.70	28.20
2000	1.30	0.50	1.05	3.20	4.25	5.00	4.10	2.55	4.35	2.00	1.05	2.70	32.05
2001	0.12	2.70	0.30	2.98	4.50	2.30	2.10	1.65	4.00	6.65	1.70	1.55	30.55
2002	1.55	1.45	1.10	0.65	1.90	1.05	4.35	0.70	2.85	0.96	2.00	0.90	19.46
2003	0.25	0.20	1.25	2.05	4.70	4.65	0.50	2.40	3.20	2.10	3.60	2.30	27.20
2004	2.60	0.40	2.40	0.05	6.80	2.30	2.70	3.70	0.80	1.65	2.45	3.00	28.85
2005	2.50	3.10	0.55	1.70	0.70	1.50	3.20	0.65	2.95	0.30	3.95	1.60	22.70
2006	2.50	0.95	2.95	2.05	5.20	3.30	1.60	1.90	2.56	2.90	3.00	3.40	32.31
2007	3.30	0.65	4.90	2.25	2.60	2.75	1.00	4.55	1.20	2.35	1.90	4.75	32.20
2008	2.40	3.90	1.90	0.40	1.95	3.85	3.05	0.27	6.55	1.80	3.15	4.05	33.27
2009	2.85	1.95	6.31	6.85	3.35	3.20	1.55	4.00	1.56	2.85	0.20	2.80	37.47
2010	0.80	1.65	0.67	1.80	4.30	3.40	4.95	0.25	2.70	2.20	4.30	0.70	27.72
2011	2.20	5.75	3.20	5.20	5.40	2.40	3.40	3.30	7.80	3.20	5.60	3.10	50.55
2012	2.60	0.40	2.10	0.50	1.10	0.90	3.80	4.30	2.00	1.70	0.72	0.00	20.12
2013	1.90	2.10	1.00	5.10	2.10	4.60	3.00	3.30	2.00	3.10	2.40	3.60	34.20
2014	1.30	0.70	0.80	2.60	2.40	3.10	2.70	7.20	2.20	1.70	2.40	1.20	28.30
2015	2.60	1.20	0.40	0.70	3.00	3.40	1.30	2.10	1.30	1.80	1.30	1.50	20.60
2016	0.93	0.70	2.54	0.98	1.59	0.50	2.85	2.80	4.49	1.80	1.35	1.70	29.57
2017	2.30	2.00	2.80	2.40	2.90	0.70	1.10	2.30	0.70	5.70	4.30	1.50	28.70
2018	1.43	3.25	2.01	2.20	5.25	1.14	1.08	1.36	4.34	5.37	2.71	1.60	31.74
2019	1.52	2.03	1.96	3.73	3.59	4.11	7.15	3.04	4.84	4.97	1.52	2.60	41.06
2020	4.21	1.21	3.41	1.44	3.25	2.22	2.46	7.31	2.72	3.27	2.49	5.30	39.29
2021	0.89	0.42	2.34	1.18	3.63	8.06	7.15	5.64	6.00	6.20	2.39	4.30	48.20
2022	2.43	1.69	2.52	2.66	3.69	2.71	3.06	4.93	1.89	0.53	1.28	2.60	29.99
AVG.	1.93	1.69	2.05	2.25	3.03	2.94	2.95	3.06	3.11	2.67	2.42	2.15	30.43
2023	1.48	1.76	1.63	3.92	1.07	4.77							14.63