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# City of Detroit Water and Sewerage Department

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**Financial Report  
with Supplemental Information  
June 30, 2018**

# City of Detroit Water and Sewerage Department

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## **Independent Auditor's Report**

To the Board of Water Commissioners, the Honorable  
Mayor, and Members of the City Council  
City of Detroit Water and Sewerage Department

### **Report on the Financial Statements**

We have audited the accompanying financial statements of the Water Fund and Sewage Disposal Fund of the City of Detroit, Michigan as of and for the year ended June 30, 2018 and the related notes to the financial statements, which collectively comprise the City of Detroit Water and Sewerage Department's (the "DWSD" or the "Department") basic financial statements, as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditor's Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. 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.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Water Fund and Sewage Disposal Fund of the City of Detroit, Michigan as of June 30, 2018 and the changes in their financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Emphasis of Matter***

As described in Note 9 to the financial statements, effective January 1, 2016, the City of Detroit, Michigan entered into lease agreements and related service agreements with the Great Lakes Water Authority (GLWA) under which GLWA will operate the regional water and sewage system for the term of 40 years. The final negotiations of the transaction during the year have resulted in the recognition of a special item (bifurcation gain) in the statement of revenue, expenses, and changes in net position. Our opinion is not modified with respect to this matter.

To the Board of Water Commissioners, the Honorable  
Mayor, and Members of the City Council  
City of Detroit Water and Sewerage Department

We draw attention to Note 1, which explains that these financial statements present only the Water Fund and Sewage Disposal Fund and do not purport to, and do not, present fairly the financial position of the City of Detroit, Michigan as of June 30, 2018 or the changes in its financial position and the changes in its cash flows, where applicable, for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

***Required Supplemental Information***

Accounting principles generally accepted in the United States of America require that the pension system schedules and other postemployment benefits schedules, as identified in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management has omitted the management's discussion and analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. Our opinion on the basic financial statements is not affected by this missing information.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated December 14, 2018 on our consideration of the City of Detroit, Michigan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City of Detroit, Michigan's internal control over financial reporting and compliance.

*Plante & Moran, PLLC*

December 14, 2018

# City of Detroit Water and Sewerage Department

## Statement of Net Position

June 30, 2018

|  | Water Fund    | Sewage Disposal<br>Fund | Total          |
|--|---------------|-------------------------|----------------|
| <b>Assets</b>  |               |                         |                |
| Current assets:  |               |                         |                |
| Cash   | \$ 67,327,736 | \$ 79,749,585           | \$ 147,077,321 |
| Receivables:   |               |                         |                |
| Customer receivables   | 11,369,572    | 54,325,524              | 65,695,096     |
| Unbilled accounts receivable   | 6,563,961     | 18,109,862              | 24,673,823     |
| Other receivables  | 950,843       | 1,001,793               | 1,952,636      |
| Receivable from Great Lakes Water Authority  | 21,596,509    | 21,779,001              | 43,375,510     |
| Due from city funds  | 77,886        | 1,039,789               | 1,117,675      |
| Due from other funds   | 1,530,464     | -                       | 1,530,464      |
| Inventory  | 3,380,693     | 848,085                 | 4,228,778      |
| Prepaid expenses and other assets  | 671,548       | 423,960                 | 1,095,508      |
| Total current assets   | 113,469,212   | 177,277,599             | 290,746,811    |
| Noncurrent assets:   |               |                         |                |
| Restricted cash and investments (Note 3)   | 45,800,589    | 6,674,626               | 52,475,215     |
| Capital assets: (Note 4)   |               |                         |                |
| Assets not subject to depreciation   | 19,984,840    | 20,196,675              | 40,181,515     |
| Assets subject to depreciation - Net   | 505,924,286   | 471,785,038             | 977,709,324    |
| Receivable from Great Lakes Water Authority  | 464,081,185   | 584,770,555             | 1,048,851,740  |
| Net OPEB asset   | 5,805         | 8,615                   | 14,420         |
| Total noncurrent assets  | 1,035,796,705 | 1,083,435,509           | 2,119,232,214  |
| Total assets   | 1,149,265,917 | 1,260,713,108           | 2,409,979,025  |
| <b>Deferred Outflows of Resources</b>  |               |                         |                |
| Deferred pension costs (Note 8)  | 8,802,741     | 6,373,569               | 15,176,310     |
| Deferred OPEB costs  | 6,471         | 9,598                   | 16,069         |
| Total deferred outflows of resources   | 8,809,212     | 6,383,167               | 15,192,379     |
| <b>Liabilities</b>   |               |                         |                |
| Current liabilities:   |               |                         |                |
| Accounts payable   | 5,887,061     | 7,853,448               | 13,740,509     |
| Due to Great Lakes Water Authority   | -             | 53,639,106              | 53,639,106     |
| Due to city funds  | 9,543,619     | 281,072                 | 9,824,691      |
| Due to other funds   | -             | 1,530,464               | 1,530,464      |
| Deposits   | 4,169,244     | -                       | 4,169,244      |
| Accrued liabilities and other  | 18,488,692    | 28,604,987              | 47,093,679     |
| Due to fiduciary funds of the City of Detroit, Michigan                                  | 2,098,267     | 3,777,094               | 5,875,361      |
| Unearned revenue   | 11,250,000    | 13,750,000              | 25,000,000     |
| Current portion of advance from the City of Detroit General Fund                         | 286,271       | 477,119                 | 763,390        |
| Accrued interest   | 1,941,491     | 3,169,374               | 5,110,865      |
| Current portion of compensated absences (Note 5)   | 929,079       | 1,393,619               | 2,322,698      |
| Accrued workers' compensation and claims and judgments (Note 7)                          | 910,000       | 276,000                 | 1,186,000      |
| Current portion of bonds payable and contractual obligations (Note 5)                    | 13,560,087    | 11,253,800              | 24,813,887     |
| Total current liabilities  | 69,063,811    | 126,006,083             | 195,069,894    |
| Noncurrent liabilities:  |               |                         |                |
| Advance from the City of Detroit General Fund  | 2,630,264     | 4,383,772               | 7,014,036      |
| Compensated absences - Net of current portion (Note 5)                                   | 746,446       | 1,119,669               | 1,866,115      |
| Accrued workers' compensation and claims and judgments - Net of current portion (Note 7) | 5,978,199     | 13,330,600              | 19,308,799     |
| Net pension liability (Note 8)   | 46,948,714    | 32,618,179              | 79,566,893     |
| Bonds payable and contractual obligations - Net of current portion (Note 5)              | 503,579,521   | 379,807,960             | 883,387,481    |
| Total noncurrent liabilities   | 559,883,144   | 431,260,180             | 991,143,324    |
| Total liabilities  | 628,946,955   | 557,266,263             | 1,186,213,218  |

# City of Detroit Water and Sewerage Department

## Statement of Net Position (Continued)

June 30, 2018

|   | Water Fund                   | Sewage Disposal<br>Fund      | Total                          |
|---|------------------------------|------------------------------|--------------------------------|
| <b>Deferred Inflows of Resources</b>      |                              |                              |                                |
| Deferred pension cost reductions (Note 8) | \$ 1,563,303                 | \$ 2,239,720                 | \$ 3,803,023                   |
| Deferred OPEB cost reductions             | 598                          | 886                          | 1,484                          |
| Total deferred inflows of resources       | <u>1,563,901</u>             | <u>2,240,606</u>             | <u>3,804,507</u>               |
| <b>Net Position</b>                       |                              |                              |                                |
| Net investment in capital assets          | 77,925,315                   | 146,328,039                  | 224,253,354                    |
| Restricted:                               |                              |                              |                                |
| Budget stabilization                      | 2,000,000                    | 5,500,000                    | 7,500,000                      |
| Water affordability                       | 1,184,871                    | -                            | 1,184,871                      |
| Unrestricted                              | 446,454,087                  | 555,761,367                  | 1,002,215,454                  |
| Total net position                        | <u><u>\$ 527,564,273</u></u> | <u><u>\$ 707,589,406</u></u> | <u><u>\$ 1,235,153,679</u></u> |

# City of Detroit Water and Sewerage Department

## Statement of Revenue, Expenses, and Changes in Net Position

Year Ended June 30, 2018

|   | Water Fund            | Sewage Disposal<br>Fund | Total                   |
|---|-----------------------|-------------------------|-------------------------|
| <b>Operating Revenue</b>  |                       |                         |                         |
| Water sales and sewage disposal charges                                 | \$ 93,733,202         | \$ 267,396,005          | \$ 361,129,207          |
| Nonretail shared services and other Great Lakes Water Authority revenue | 17,102,163            | 13,145,283              | 30,247,446              |
| Penalties and fees  | 3,441,349             | 5,089,230               | 8,530,579               |
| Miscellaneous   | 743,155               | 5,500,295               | 6,243,450               |
| Total operating revenue   | 115,019,869           | 291,130,813             | 406,150,682             |
| <b>Operating Expenses</b>   |                       |                         |                         |
| Salaries, wages, and benefits   | 44,955,963            | 39,953,349              | 84,909,312              |
| Contractual services  | 16,924,568            | 18,831,240              | 35,755,808              |
| Wholesale charges   | 15,130,600            | 178,969,200             | 194,099,800             |
| Operating   | 2,535,693             | 5,265,322               | 7,801,015               |
| Operating supplies  | 2,674,110             | 612,153                 | 3,286,263               |
| Repairs and maintenance   | 2,522,006             | 2,921,580               | 5,443,586               |
| Utilities   | 1,193,021             | 2,322,990               | 3,516,011               |
| Shared services   | 4,053,375             | 6,023,573               | 10,076,948              |
| Miscellaneous   | 59,717                | 2,721,151               | 2,780,868               |
| Claims and judgments  | 283,920               | 4,534,292               | 4,818,212               |
| Bad debt  | (1,939,835)           | 6,814,523               | 4,874,688               |
| Depreciation  | 17,811,923            | 13,353,850              | 31,165,773              |
| Total operating expenses  | 106,205,061           | 282,323,223             | 388,528,284             |
| <b>Operating Income</b>   | 8,814,808             | 8,807,590               | 17,622,398              |
| <b>Nonoperating Revenue (Expense)</b>                                   |                       |                         |                         |
| Investment income   | 325,700               | -                       | 325,700                 |
| Interest revenue on lease with Great Lakes Water Authority              | 16,887,599            | 20,639,995              | 37,527,594              |
| Principal forgiveness on state revolving fund loans                     | 2,534,779             | -                       | 2,534,779               |
| Miscellaneous   | 5,875,157             | 1,811,787               | 7,686,944               |
| Interest expense, net of capitalized interest                           | (23,918,360)          | (17,789,190)            | (41,707,550)            |
| Total nonoperating revenue  | 1,704,875             | 4,662,592               | 6,367,467               |
| <b>Special Item - Bifurcation (Note 9)</b>                              | 35,482,690            | 66,377,234              | 101,859,924             |
| <b>Change in Net Position</b>   | 46,002,373            | 79,847,416              | 125,849,789             |
| <b>Net Position - Beginning of year</b>                                 | 481,561,900           | 627,741,990             | 1,109,303,890           |
| <b>Net Position - End of year</b>                                       | <u>\$ 527,564,273</u> | <u>\$ 707,589,406</u>   | <u>\$ 1,235,153,679</u> |

# City of Detroit Water and Sewerage Department

## Statement of Cash Flows

Year Ended June 30, 2018

|  | Water Fund            | Sewage<br>Disposal Fund | Total                 |
|--|-----------------------|-------------------------|-----------------------|
| <b>Cash Flows from Operating Activities</b>                                    |                       |                         |                       |
| Receipts from customers  | \$ 118,827,769        | \$ 282,925,517          | \$ 401,753,286        |
| Receipts from (payments to) interfund services and reimbursements              | 7,620,597             | (7,620,597)             | -                     |
| Receipts from (payments to) city funds   | 21,488,791            | (6,887,090)             | 14,601,701            |
| Payments to suppliers  | (64,019,897)          | (197,082,681)           | (261,102,578)         |
| Payments to employees and fringes  | (42,117,501)          | (35,420,519)            | (77,538,020)          |
| Claims paid  | (1,541,757)           | (163,739)               | (1,705,496)           |
| Other receipts   | 1,515,790             | -                       | 1,515,790             |
| Payments from GLWA   | 7,824,471             | 10,798,002              | 18,622,473            |
| Net cash and cash equivalents provided by operating activities                 | 49,598,263            | 46,548,893              | 96,147,156            |
| <b>Cash Flows from Noncapital Financing Activities</b>                         |                       |                         |                       |
| Loans received from other funds  | 2,916,535             | 4,860,891               | 7,777,426             |
| Receipts from GLWA for financial recovery bonds                                | 963,936               | 2,167,972               | 3,131,908             |
| Principal and interest paid on operating debt                                  | (4,559,508)           | (7,599,176)             | (12,158,684)          |
| Receipts on GLWA contract receivable   | 22,500,000            | 27,500,000              | 50,000,000            |
| Net cash and cash equivalents provided by noncapital financing activities      | 21,820,963            | 26,929,687              | 48,750,650            |
| <b>Cash Flows from Capital and Related Financing Activities</b>                |                       |                         |                       |
| Issuance of bonds  | 9,529,927             | -                       | 9,529,927             |
| Purchase of capital assets   | (28,717,653)          | (19,322,459)            | (48,040,112)          |
| Principal and interest paid on capital debt                                    | (34,583,213)          | (26,767,600)            | (61,350,813)          |
| Payments from GLWA   | 5,077,804             | 15,174,200              | 20,252,004            |
| Net cash and cash equivalents used in capital and related financing activities | (48,693,135)          | (30,915,859)            | (79,608,994)          |
| <b>Cash Flows from Investing Activities</b>                                    |                       |                         |                       |
| Interest received on investments   | 325,700               | -                       | 325,700               |
| Receipts from renting activities   | 7,684                 | 17,642                  | 25,326                |
| Net cash and cash equivalents provided by investing activities                 | 333,384               | 17,642                  | 351,026               |
| <b>Net Increase in Cash and Cash Equivalents</b>                               | 23,059,475            | 42,580,363              | 65,639,838            |
| <b>Cash and Cash Equivalents - Beginning of year</b>                           | 90,068,850            | 43,843,848              | 133,912,698           |
| <b>Cash and Cash Equivalents - End of year</b>                                 | <b>\$ 113,128,325</b> | <b>\$ 86,424,211</b>    | <b>\$ 199,552,536</b> |
| <b>Classification of Cash and Cash Equivalents</b>                             |                       |                         |                       |
| Cash and investments   | \$ 67,327,736         | \$ 79,749,585           | \$ 147,077,321        |
| Restricted cash  | 45,800,589            | 6,674,626               | 52,475,215            |
| Total cash and cash equivalents  | <b>\$ 113,128,325</b> | <b>\$ 86,424,211</b>    | <b>\$ 199,552,536</b> |



# City of Detroit Water and Sewerage Department

## Statement of Cash Flows (Continued)

Year Ended June 30, 2018

|  | Water Fund                  | Sewage<br>Disposal Fund     | Total                       |
|--|-----------------------------|-----------------------------|-----------------------------|
| <b>Reconciliation of Operating Income to Net Cash and Cash<br/>Equivalents from Operating Activities</b> |                             |                             |                             |
| Operating income   | \$ 8,814,808                | \$ 8,807,590                | \$ 17,622,398               |
| Adjustments to reconcile operating income to net cash and<br>cash equivalents from operating activities: |                             |                             |                             |
| Depreciation and amortization  | 17,811,923                  | 13,353,850                  | 31,165,773                  |
| Changes in assets and liabilities:   |                             |                             |                             |
| Receivables  | (7,284,533)                 | (1,775,498)                 | (9,060,031)                 |
| Due to and from other funds  | 7,620,597                   | (7,620,597)                 | -                           |
| Due to and from city funds   | 21,488,791                  | (6,887,090)                 | 14,601,701                  |
| Inventories  | 790,732                     | 205,801                     | 996,533                     |
| Prepaid and other assets   | (392,015)                   | (254,232)                   | (646,247)                   |
| Accrued liabilities and other  | 15,483,336                  | 26,422,184                  | 41,905,520                  |
| Accounts payable   | (18,527,285)                | 27,687,555                  | 9,160,270                   |
| Estimated claims liability   | 2,929,390                   | (13,600,783)                | (10,671,393)                |
| Pension and OPEB, including related deferred inflows<br>and outflows                                     | (653,271)                   | 210,113                     | (443,158)                   |
| Deposits   | 1,515,790                   | -                           | 1,515,790                   |
| Total adjustments  | <u>40,783,455</u>           | <u>37,741,303</u>           | <u>78,524,758</u>           |
| Net cash and cash equivalents provided by<br>operating activities  | <u><b>\$ 49,598,263</b></u> | <u><b>\$ 46,548,893</b></u> | <u><b>\$ 96,147,156</b></u> |

**Note 1 - Nature of Business and Significant Accounting Policies**

***Reporting Entity***

The City of Detroit, Michigan (the "City") Charter established the Detroit Water and Sewerage Department (the "DWSD" or the "Department") in 1836 to supply water, drainage, and sewage services within and outside the City. The Department is governed by a seven-member Board of Water Commissioners (the "Board") that is appointed by the mayor of the City of Detroit, Michigan. In accordance with government accounting principles, there are no separate legal entities to be reported within these financial statements. The financial statements of the Department have been included in the City's Comprehensive Annual Financial Report and reported as enterprise funds. These financial statements represent the financial condition and the results of operations of the Department only and do not purport to, and do not, present fairly the financial position of the City. Copies of these reports, along with other financial information, can be obtained at the Department's administrative office located at 735 Randolph, Detroit, MI 48226 and on its website at [www.detroitmi.gov/dwsd](http://www.detroitmi.gov/dwsd).

The Board's governance structure, authority, and level of operational autonomy is established by five standing federal court orders dated September 9, 2011 (Creation of the Root Cause Committee); November 4, 2011 (Adoption of the Root Cause Committee Plan of Action); October 5, 2012 (Clarification of the November 4, 2011 Order); December 14, 2012 (Adoption of Root Cause Committee's Plan of Action Clarification); and December 15, 2015 (Opinion & Order on Joint Motion for Relief of Judgment). These court orders resulted largely from federal court oversight of the DWSD for most of the period from May 6, 1977 through March 27, 2013 related to alleged violations of the Clean Water Act and its National Pollutant Discharge Elimination System (NPDES) permit. The final court order reiterated that the court retains limited jurisdiction for the purpose of enforcement of its orders issued on September 9, 2011, November 4, 2011, October 5, 2012, December 14, 2012, and December 15, 2015.

Authority granted by the federal court to the DWSD includes operational independence in the areas of law, finance, human resources, and procurement. Specifically, while they restored some provisions in the Charter relating to the appointment and removal of members of the Board, these orders enjoined the City from applying any existing or future charter provisions, ordinances, resolutions, executive orders, city policies, regulations, procedures, or similar rules or practices that are inconsistent with the express terms of the court's orders. Furthermore, the orders granted the DWSD the authority to: purchase its own information technology systems; establish its own subunits and programs within its finance division, including debt management, accounts payable, accounts receivable, accounting, budget, and to establish new rates and charges; treasury and cash management, asset management, and deferred compensation; independence from city finance policies; be exempt from the application of city ordinances, the City's human resources policies and regulations, Civil Service Commission Rules, and city resolutions and orders, pertaining to payroll, employee benefits, and employee and labor relations; establish bank accounts in its own name; and establish its own self-insurance fund.

Effective January 1, 2016, the City of Detroit, Michigan entered into lease agreements and related service agreements with the Great Lakes Water Authority (GLWA) under which GLWA will operate the regional water and sewage system for the term of 40 years (with automatic extension to coincide with any debt still outstanding that was issued to finance system improvements). The agreements transfer all then-outstanding bonded indebtedness to GLWA, along with a leasehold interest in certain capital assets, cash, investments, and receivables in exchange for an annual lease payment of \$50 million.

The GLWA bonds are supported by a pledge of the revenue of both the regional system and local system revenue. Its master bond ordinance requires collections of the Department's water and sewer receipts to be deposited into trust accounts controlled by the master bond ordinance (through GLWA), which will be used to fund wholesale operation and maintenance costs, debt principal and interest, pension obligations, the Water Residential Assistance Program, and the budget stabilization fund, after distributing cash sufficient to cover the local operation and maintenance costs to the Department; any remaining monies are transferred to an improvement and extension fund.

**Note 1 - Nature of Business and Significant Accounting Policies (Continued)**

***Accounting and Reporting Principles***

The City of Detroit Water and Sewerage Department follows accounting principles generally accepted in the United States of America (GAAP), as applicable to governmental units. Accounting and financial reporting pronouncements are promulgated by the Governmental Accounting Standards Board. The following is a summary of the significant accounting policies used by the Department:

***Fund Accounting***

The Department accounts for its activities in two different funds - the Water Fund and Sewage Disposal Fund - in order to demonstrate accountability for how it has spent its resources.

***Proprietary Funds***

Proprietary funds include enterprise funds (which provide goods or services to users in exchange for charges or fees). The Department reports the following two funds:

- The Water Fund accounts for the operations of the water distribution system. The fund provides services to retail customers located in the City of Detroit, Michigan.
- The Sewage Disposal Fund accounts for the operations of the sewers, including sanitary and combined sewers. The fund provides services to retail customers located in the City of Detroit, Michigan.

***Report Presentation***

This report includes the fund-based statements of the Department. In accordance with government accounting principles, a government-wide presentation with program and general revenue is not applicable to special purpose governments engaged only in business-type activities.

***Basis of Accounting***

The Water Fund and Sewage Disposal Fund use the economic resources measurement focus and the full accrual basis of accounting. Revenue is recorded when earned, and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. Nonexchange revenue (grants and contributions) are recognized when all eligibility requirements have been satisfied (generally based on reimbursements of amounts spent).

***Specific Balances and Transactions***

***Cash and Cash Equivalents***

Cash and cash equivalents include cash on hand, demand deposits, and short-term investments with a maturity of three months or less when acquired.

***Investments***

Investments are reported at fair value or estimated fair value based on quoted market prices.

***Receivables***

All customer receivables are shown net of allowance for uncollectible amounts of \$21,014,086 and \$62,315,426 in the Water Fund and Sewage Disposal Fund, respectively.

***Inventories and Prepaid Items***

Inventories consist of operating and maintenance and repair parts for water and sewer assets and are valued at the lower of cost or market, with cost being determined on an average cost method. Inventory is recorded as expenditures when consumed rather than when purchased. Certain payments to vendors reflect costs applicable to future fiscal years and are recorded as prepaid items.

**Note 1 - Nature of Business and Significant Accounting Policies (Continued)**

**Capital Assets**

Capital assets are recorded at historical cost, together with interest capitalized during construction. Capital assets are defined by the Department as assets with an initial individual cost of more than \$5,000 and an estimated useful life in excess of one year. All acquisitions of land and land improvements are capitalized, regardless of cost. Donated capital assets are recorded at estimated acquisition value at the date of donation.

Infrastructure, buildings, equipment, and vehicles are depreciated using the straight-line method over the following useful lives:

|                                    | Depreciable Life -<br>Years |
|------------------------------------|-----------------------------|
| Land improvements                  | 67                          |
| Buildings and structures           | 40                          |
| Distribution mains                 | 67                          |
| Services and meters                | 20-67                       |
| Sewers                             | 67-100                      |
| Machinery, equipment, and fixtures | 3-20                        |

The Department capitalizes qualifying net interest costs of the system on bonds issued for capital construction in accordance with GASB Statement No. 62, *Capitalization of Interest Cost*, as amended. Accordingly, capitalized interest for the year ended June 30, 2018 was \$803,195 for the Water Fund. There was no capitalized interest recognized in the Sewage Disposal Fund for the year ended June 30, 2018.

Construction in progress is related to buildings, improvements, or infrastructure that has not yet been placed in service for the intended use. These costs include contract costs (materials, labor, and overhead), as well as professional fees and interest, incurred during the construction period. Upon completion, construction in progress costs are transferred to the appropriate capital asset classification. A periodic review of projects included in construction in progress identified projects that were suspended or canceled during the period. These identified projects were removed from construction in progress and recorded as operations and maintenance costs.

**Taxes and City Services**

The Department pays no direct federal, state, or local taxes, except local taxes on excess property and federal Social Security taxes. The Department reimburses the City for most of the direct services furnished by other city departments, including general staff services. Charges are billed for all water and sewerage services provided to city departments.

**Shared Costs**

Costs related to shared facilities and personnel are allocated to the Department on a basis that relates costs incurred to the fund benefited.

**Unearned Revenue**

The Department received a lease prepayment from GLWA in the amount of \$25,000,000 on January 1, 2016. Of the \$25,000,000, \$11,250,000 is allocated to the Water Fund and \$13,750,000 is allocated to the Sewage Disposal Fund. The lease prepayment will be applied against the lease receivable from GLWA in the period from July 1, 2055 through December 31, 2055.

June 30, 2018

**Note 1 - Nature of Business and Significant Accounting Policies (Continued)**

**Advance from the City of Detroit General Fund**

In 2018, the governing body of the City of Detroit, Michigan authorized the use of general funds for the full redemption of the General Obligation Bonds, 2014 Series C, including the amount allocated to the Department. The 2014 Series C debt was fully redeemed on April 13, 2018. The Department will repay the City of Detroit General Fund under the terms of the original amortization schedule for the General Obligation Bonds, 2014 Series C, including an interest rate of 5 percent per year, with principal and interest due on June 30 each year, and a final maturity date of June 30, 2027. The total amount advanced to the Department was \$7,777,426, of which \$2,916,535 is recorded in the Water Fund and \$4,860,891 is recorded in the Sewage Disposal Fund. Of the total amounts, \$286,271 and \$477,119 are classified as current liabilities in the Water Fund and Sewage Disposal Fund, respectively.

**Compensated Absences**

The liability for compensated absences reported in the basic financial statements consists of unpaid accumulated vacation and sick leave balances. The liability has been calculated using the vesting method, in which leave amounts for both employees who are currently eligible to receive termination payments and other employees who are expected to become eligible in the future to receive such payments upon termination are included. Vacation leave is accrued as benefits are earned by employees, and it is probable that the City will compensate the employees for the benefits through paid time off or other means, such as cash payments at termination or retirement. The liability has been calculated based on employees' current salary level and includes salary-related costs (e.g., Social Security and Medicare tax). The current year accruals are based on estimates, and payments are based on actuals.

**Bond Premiums, Discounts, and Deferred Amounts on Refunding**

Bond premiums and discounts are amortized using the effective interest method, and deferred amounts on refunding are amortized using the straight-line method over the life of the bonds. Bonds payable are reported net of the applicable bond premium and discounts. Deferred amounts on refunding are reported as deferred outflows and deferred inflows of resources.

**Long-term Obligations**

In accordance with contractual agreements with GLWA, the Department continues to be responsible for funding its share of the GLWA bonds that are estimated to have been used to improve the local DWSD system. The Department has been assigned a portion of the City of Detroit, Michigan's financial recovery bonds, which had been used to fund prebankruptcy operating obligations. There are also outstanding revenue bonds and state revolving fund loans at year end. All of these amounts are reported as long-term obligations in the statement of revenue, expenses, and changes in net position.

**Other Postemployment Benefits**

The City of Detroit provides death benefits through a prefunded single-employer defined benefit plan administered by the Employee Benefit Board of Trustees. Beginning in fiscal year 2018, GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions*, requires governments providing defined benefit postemployment benefits (other than pensions) to recognize the net OPEB asset or liability on their financial statements. The OPEB asset or liability is the difference between the total OPEB liability and the plan's fiduciary net position. At June 30, 2018, the City of Detroit allocated a net OPEB asset to the Water Fund and Sewage Disposal Fund in the amount of \$5,805 and \$8,615, respectively.

**Deferred Outflows/Inflows of Resources**

In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense) until then.

**Note 1 - Nature of Business and Significant Accounting Policies (Continued)**

In addition to liabilities, the statement of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time.

The Department reports the following deferred outflows of resources and deferred inflows of resources:

|   | Outflows | Inflows |
|---|----------|---------|
| Deferred pension costs (or cost reductions) | ✓        | ✓       |
| Deferred OPEB costs (or cost reductions)    | ✓        | ✓       |

**Net Position**

The Department's net position is categorized as follows:

***Net Investment in Capital Assets***

This consists of capital assets, net of accumulated depreciation and capital-related debt.

***Restricted***

The net position has been legally restricted by outside parties or by law through constitutional provisions or enabling legislation.

***Unrestricted***

This consists of assets that do not meet the definition of “restricted” or “net investment in capital assets.”

**Net Position Flow Assumption**

Sometimes, the Department will fund outlays for a particular purpose from both restricted (e.g., restricted bond or grant proceeds) and unrestricted resources. In order to calculate the amounts to report as restricted net position and unrestricted net position in the Department's financial statements, a flow assumption must be made about the order in which the resources are considered to be applied. It is the Department's policy to consider restricted net position to have been depleted before unrestricted net position is applied.

**Unbilled Revenue**

The Department records unbilled revenue for services provided by the DWSD prior to year end by accruing actual revenue billed in the subsequent month.

**Interest Expense**

Interest expense in the statement of revenue, expenses, and changes in net position includes amounts related to the portion of rates and charges collected by the DWSD that relate to the accretion of obligations payable to the Great Lakes Water Authority in respect to the interest payable on GLWA's bonds and interest paid and accrued on outstanding financial recovery bonds, revenue bonds, and state revolving fund loans.

**Classification of Revenue and Expenses**

The Department classifies its revenue and expenses as either operating or nonoperating.

Operating revenue includes activities that have the characteristics of exchange transactions, such as revenue from charges for water service and sewerage services.

Nonoperating revenue includes activities that have the characteristics of nonexchange transactions, such as contributions and investment income.



**Note 1 - Nature of Business and Significant Accounting Policies (Continued)**

Operating expenses include the costs of operating the water and sewer utility systems, administrative expenses, and depreciation on capital assets. All expenses not meeting this definition, including interest expense, are reported as nonoperating expenses.

***Use of Estimates***

The preparation of basic financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the basic financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates

***Upcoming Accounting Pronouncements***

In November 2016, the Governmental Accounting Standards Board issued GASB Statement No. 83, *Certain Asset Retirement Obligations*, which establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. The Department is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Department's financial statements for the 2019 fiscal year.

In June 2017, the Governmental Accounting Standards Board issued GASB Statement No. 87, *Leases*, which improves accounting and financial reporting for leases by governments. This statement requires recognition of certain lease assets and liabilities for leases that were previously classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. The Department is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Department's financial statements for the year ending June 30, 2021.

In March 2018, the GASB issued Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*. This statement establishes criteria to improve the information that is disclosed in the notes to the government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. The Department is currently evaluating the impact this standard will have on the financial statements when adopted. The provisions of this statement are effective for the Department's financial statements for the year ending June 30, 2019.

In June 2018, the GASB issued Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*, which simplifies accounting for interest cost incurred before the end of construction and requires those costs to be expensed in the period incurred. As a result, interest cost incurred before the end of a construction period will not be capitalized and included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. This statement also reiterates that, in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles. The requirements of the standard will be applied prospectively and result in increased interest expense during periods of construction. The provisions of this statement are effective for the Department's financial statements for the June 30, 2021 fiscal year.

**Note 2 - Deposits and Investments**

Deposits and investments are reported in the financial statements as follows:

|                            | Water Fund            | Sewage Disposal Fund | Total                 |
|----------------------------|-----------------------|----------------------|-----------------------|
| Cash - Unrestricted        | \$ 67,327,736         | \$ 79,749,585        | \$ 147,077,321        |
| Restricted cash            | 45,800,589            | 6,674,626            | 52,475,215            |
| Total cash and investments | <u>\$ 113,128,325</u> | <u>\$ 86,424,211</u> | <u>\$ 199,552,536</u> |

Michigan Compiled Laws Section 129.91 (Public Act 20 of 1943, as amended) authorizes local governmental units to make deposits and invest in the accounts of federally insured banks, credit unions, and savings and loan associations that have offices in Michigan. The law also allows investments outside the state of Michigan when fully insured. The local unit is allowed to invest in bonds, securities, and other direct obligations of the United States or any agency or instrumentality of the United States; repurchase agreements; bankers' acceptances of United States banks; commercial paper rated within the two highest classifications, which matures not more than 270 days after the date of purchase; obligations of the State of Michigan or its political subdivisions, which are rated as investment grade; and mutual funds composed of investment vehicles that are legal for direct investment by local units of government in Michigan.

There are no limitations or restrictions on participant withdrawals for the investment pools that are recorded at amortized cost.

The Department's cash and investments are subject to several types of risk, which are examined in more detail below:

***Custodial Credit Risk of Bank Deposits***

Custodial credit risk is the risk that, in the event of a bank failure, the Department's deposits may not be returned to it. The Department does not have a deposit policy for custodial credit risk. At year end, the Department had \$122,731,811 of bank deposits (certificates of deposit and checking and savings accounts) that were uninsured and uncollateralized. The Department believes that, due to the dollar amounts of cash deposits and the limits of FDIC insurance, it is impractical to insure all deposits. As a result, the Department evaluates each financial institution with which it deposits funds and assesses the level of risk of each institution; only those institutions with an acceptable estimated risk level are used as depositories.

***Custodial Credit Risk of Investments***

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Department will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The Department does not have a policy for custodial credit risk. As of June 30, 2018, the Department had no investments subject to custodial credit risk.

***Interest Rate Risk***

Interest rate risk is the risk that the value of investments will decrease as a result of a rise in interest rates. The Department's investment policy does not restrict investment maturities other than commercial paper, which can only be purchased with a 270-day maturity. At year end, the Department had no investments subject to interest rate risk.



June 30, 2018

**Note 2 - Deposits and Investments (Continued)**

**Credit Risk**

State law limits investments in commercial paper to the top two ratings issued by nationally recognized statistical rating organizations. The Department has no investment policy that would further limit its investment choices. As of year end, the Department had no investments subject to credit risk.

**Note 3 - Restricted Assets**

Restricted assets, principally cash and investments, are primarily available to provide funds for construction. The budget stabilization fund monies are also restricted in accordance with GLWA's master bond ordinance.

At June 30, 2018, the restricted assets are as follows:

| Description  | 2018                 |                      | Total                |
|--|----------------------|----------------------|----------------------|
|  | Water Fund           | Sewage Disposal Fund |                      |
| Budget stabilization fund - Held in trust in accordance with the master bond ordinance | \$ 2,000,000         | \$ 5,500,000         | \$ 7,500,000         |
| Donations, restricted for specified purposes   | 1,184,871            | -                    | 1,184,871            |
| Unspent bond proceeds  | 42,615,718           | 1,174,626            | 43,790,344           |
| Total  | <u>\$ 45,800,589</u> | <u>\$ 6,674,626</u>  | <u>\$ 52,475,215</u> |

# City of Detroit Water and Sewerage Department

## Notes to Financial Statements

June 30, 2018

### Note 4 - Capital Assets

Capital asset activity of the Department for the year ended June 30, 2018 was as follows:

|                                       | Balance<br>July 1, 2017 | Reclassifications<br>and Adjustments | Additions    | Disposals   | Balance<br>June 30, 2018 |
|---------------------------------------|-------------------------|--------------------------------------|--------------|-------------|--------------------------|
| <b>Water Fund</b>                     |                         |                                      |              |             |                          |
| Capital assets not being depreciated: |                         |                                      |              |             |                          |
| Land and land rights                  | \$ 1,327,637            | \$ -                                 | \$ -         | \$ -        | \$ 1,327,637             |
| Construction in progress              | 9,433,741               | (19,492,301)                         | 28,717,653   | (1,890)     | 18,657,203               |
| Subtotal                              | 10,761,378              | (19,492,301)                         | 28,717,653   | (1,890)     | 19,984,840               |
| Capital assets being depreciated:     |                         |                                      |              |             |                          |
| Mains                                 | 505,785,367             | 12,250,437                           | -            | -           | 518,035,804              |
| Buildings and structures              | 55,426,096              | 99,362                               | -            | -           | 55,525,458               |
| Machinery, equipment, and fixtures    | 83,198,366              | 5,456,246                            | -            | (1,371,960) | 87,282,652               |
| Land improvements                     | 4,791,365               | -                                    | -            | -           | 4,791,365                |
| Services                              | 48,981,409              | -                                    | -            | -           | 48,981,409               |
| Meters                                | 126,143,066             | 1,686,256                            | -            | -           | 127,829,322              |
| Subtotal                              | 824,325,669             | 19,492,301                           | -            | (1,371,960) | 842,446,010              |
| Accumulated depreciation:             |                         |                                      |              |             |                          |
| Mains                                 | 133,167,217             | -                                    | 7,513,884    | -           | 140,681,101              |
| Buildings and structures              | 41,943,281              | -                                    | 795,514      | -           | 42,738,795               |
| Machinery, equipment, and fixtures    | 44,488,763              | -                                    | 3,578,397    | (1,358,477) | 46,708,683               |
| Land improvements                     | 1,084,337               | -                                    | 83,533       | -           | 1,167,870                |
| Services                              | 30,095,408              | -                                    | 598,924      | -           | 30,694,332               |
| Meters                                | 69,289,272              | -                                    | 5,241,671    | -           | 74,530,943               |
| Subtotal                              | 320,068,278             | -                                    | 17,811,923   | (1,358,477) | 336,521,724              |
| Net capital assets being depreciated  | 504,257,391             | 19,492,301                           | (17,811,923) | (13,483)    | 505,924,286              |
| Net water fund capital assets         | 515,018,769             | -                                    | 10,905,730   | (15,373)    | 525,909,126              |

June 30, 2018

**Note 4 - Capital Assets (Continued)**

|   | Balance<br>July 1, 2017 | Reclassifications<br>and Adjustments | Additions            | Disposals          | Balance<br>June 30, 2018 |
|---|-------------------------|--------------------------------------|----------------------|--------------------|--------------------------|
| <b>Sewage Disposal Fund</b>             |                         |                                      |                      |                    |                          |
| Capital assets not being depreciated:   |                         |                                      |                      |                    |                          |
| Land and land rights                    | \$ 72,326               | \$ -                                 | \$ -                 | \$ -               | \$ 72,326                |
| Construction in progress                | 10,169,656              | (9,367,766)                          | 19,322,459           | -                  | 20,124,349               |
| Subtotal                                | 10,241,982              | (9,367,766)                          | 19,322,459           | -                  | 20,196,675               |
| Capital assets being depreciated:       |                         |                                      |                      |                    |                          |
| Sewer lines and laterals                | 393,546,502             | 6,982,517                            | -                    | -                  | 400,529,019              |
| Buildings and structures                | 108,243,866             | 143,251                              | -                    | -                  | 108,387,117              |
| Machinery, equipment, and fixtures      | 108,768,926             | 152,994                              | -                    | (1,651,695)        | 107,270,225              |
| Land improvements                       | 6,891,883               | 2,089,004                            | -                    | -                  | 8,980,887                |
| Subtotal                                | 617,451,177             | 9,367,766                            | -                    | (1,651,695)        | 625,167,248              |
| Accumulated depreciation:               |                         |                                      |                      |                    |                          |
| Sewer lines and laterals                | 41,211,177              | -                                    | 4,152,321            | -                  | 45,363,498               |
| Buildings and structures                | 47,183,217              | -                                    | 3,522,471            | -                  | 50,705,688               |
| Machinery, equipment, and fixtures      | 51,995,596              | -                                    | 5,562,907            | (1,639,283)        | 55,919,220               |
| Land improvements                       | 1,277,653               | -                                    | 116,151              | -                  | 1,393,804                |
| Subtotal                                | 141,667,643             | -                                    | 13,353,850           | (1,639,283)        | 153,382,210              |
| Net capital assets being depreciated    | 475,783,534             | 9,367,766                            | (13,353,850)         | (12,412)           | 471,785,038              |
| Net sewage disposal fund capital assets | 486,025,516             | -                                    | 5,968,609            | (12,412)           | 491,981,713              |
| Net department capital assets           | <u>\$ 1,001,044,285</u> | <u>\$ -</u>                          | <u>\$ 16,874,339</u> | <u>\$ (27,785)</u> | <u>\$ 1,017,890,839</u>  |

Construction in progress and water main additions in the Water Fund include \$803,195 of interest costs that have been capitalized as part of the cost of assets.

**Construction Commitments**

The Department is engaged in numerous projects that are part of its five-year capital improvement program, including water main replacements, fire hydrant replacements, sewer system rehabilitation, vehicle and equipment purchases, and information technology upgrades. The program is being financed primarily from revenue of the funds and proceeds from the issuance of revenue bonds by the Great Lakes Water Authority. The total amount of construction contract commitments outstanding at June 30, 2018 was approximately \$133 million and \$80 million for the Water Fund and Sewage Disposal Fund, respectively.

# City of Detroit Water and Sewerage Department

## Notes to Financial Statements

June 30, 2018

### Note 5 - Long-term Debt

Long-term debt activity of the Department for the year ended June 30, 2018 is summarized as follows:

|   | Interest<br>Rate<br>Ranges | Principal<br>Maturity<br>Ranges | Balance<br>June 30, 2017 | Additions           | Reductions            | Balance<br>June 30,<br>2018 | Due within<br>One Year |
|---|----------------------------|---------------------------------|--------------------------|---------------------|-----------------------|-----------------------------|------------------------|
| Water fund obligations payable and long-term debt:                    |                            |                                 |                          |                     |                       |                             |                        |
| Obligation payable to GLWA  | 4.76%                      | \$13,192,900 - 31,918,900       | \$464,029,779            | \$ -                | \$38,696,279          | \$25,333,500                | \$13,192,900           |
| Financial recovery bonds  | 4-6%                       | \$1,327,004                     | 29,729,253               | -                   | (3,189,174)           | 26,540,079                  | -                      |
| Revenue bonds   | 5%                         | \$3,205,000 - 7,260,000         | 50,740,000               | -                   | -                     | 50,740,000                  | -                      |
| State revolving loans   | 2.5%                       | \$95,000 - 279,000              | 1,268,474                | 9,529,928           | (2,534,779)           | 8,263,623                   | 231,400                |
| Total principal outstanding on obligations payable and long-term debt |                            |                                 | 545,767,506              | 9,529,928           | (44,420,232)          | 10,877,202                  | 13,424,300             |
| Unamortized bond premiums on revenue bonds                            |                            |                                 | 6,392,648                | -                   | (130,242)             | 6,262,406                   | 135,787                |
| Total water fund obligations payable and long-term debt               |                            |                                 | 552,160,154              | 9,529,928           | (44,550,474)          | 17,139,608                  | 13,560,087             |
| Compensated absences  |                            |                                 | 1,455,747                | 1,089,154           | (869,376)             | 1,675,525                   | 929,079                |
| Workers' compensation and general claims                              |                            |                                 | 3,664,610                | 4,765,346           | (1,541,757)           | 6,888,199                   | 910,000                |
| Total water fund long-term obligations                                |                            |                                 | <u>\$557,280,511</u>     | <u>\$15,384,428</u> | <u>\$(46,961,607)</u> | <u>\$25,703,332</u>         | <u>\$15,399,166</u>    |

June 30, 2018

**Note 5 - Long-term Debt (Continued)**

|   | Interest<br>Rate<br>Ranges | Principal<br>Maturity<br>Ranges | Balance<br>June 30, 2017 | Additions           | Reductions          | Balance<br>June 30,<br>2018 | Due within<br>One Year |
|---|----------------------------|---------------------------------|--------------------------|---------------------|---------------------|-----------------------------|------------------------|
| Sewage disposal fund obligations payable and long-term debt:          |                            |                                 |                          |                     |                     |                             |                        |
| Obligation payable to GLWA  | 4.33                       | \$11,253,800                    | \$367,042,828            | \$ -                | \$20,214,528        | \$46,828,300                | \$1,253,800            |
| Financial recovery bonds  | 4-6%                       | \$2,211,673                     | 49,548,750               | -                   | (5,315,290)         | 44,233,460                  | -                      |
| Total principal outstanding on obligations payable and long-term debt |                            |                                 | 416,591,578              | -                   | (25,529,818)        | \$1,061,760                 | 11,253,800             |
| Compensated absences  |                            |                                 | 2,183,621                | 1,633,732           | (1,304,065)         | 2,513,288                   | 1,393,619              |
| Workers' compensation and general claims                              |                            |                                 | 15,789,783               | 4,781,103           | (6,964,286)         | 13,606,600                  | 276,000                |
| Total sewage disposal fund long-term obligations                      |                            |                                 | <u>\$434,564,982</u>     | <u>\$ 6,414,835</u> | <u>\$33,798,169</u> | <u>\$1,077,368,368</u>      | <u>\$1,923,419</u>     |

**Obligation Payable to GLWA**

As part of the lease transaction in which the City leased the regional water and sewer system of the DWSD to GLWA, all DWSD revenue bonds outstanding as of December 31, 2015, including those purchased by the Michigan Finance Authority under its state revolving loan program, were assumed by GLWA with the consent of bondholders.

Per the Water and Sewer Services agreement between the DWSD and GLWA dated June 12, 2015 and the master bond ordinances dated October 7, 2015, as amended, the Detroit retail class continues to pay its common-to-all share of debt service revenue requirements and its allocated share of debt service revenue requirements associated with improvements to the local water and sewer systems. Payments on the debt service incurred by GLWA on the outstanding revenue bonds assumed as of December 31, 2015 are to be allocated using an agreed-upon percentage of total debt service associated with bond financed local improvements over the life of such bonds, though the bonds themselves continue to be secured by the net revenue of GLWA, which includes all revenue payable by the Detroit retail class. During 2018, the parties reached an agreement on the debt allocation, resulting in reductions of \$26,749,580 and \$8,952,228 to the debt allocated to the Water Fund and Sewage Disposal Fund, respectively. The reductions to the debt allocation for the Water Fund and Sewage Disposal Fund are included in the special item discussed in Note 9 to the financial statements.

**Financial Recovery Bonds**

On December 10, 2014, the City issued approximately \$1.3 billion of debt. The Financial Recovery Bonds, Series 2014-B(1) and Series 2014-B(2) total \$616,560,047 and \$15,404,098, respectively. They are federally taxable. The bonds' interest rate is 4.0 percent per annum from December 10, 2014 through and including March 31, 2034 and 6.0 percent per annum thereafter until the maturity date of April 1, 2044. The bonds were delivered to classes of creditors in satisfaction of (1) Class 12 OPEB claims (the bonds were distributed to the new Voluntary Employee Beneficiary Associations (VEBA) for the general retirees and police and fire retirees), (2) Class 9 Pension Obligation Certificate (POC) claims, and (3) other unsecured bankruptcy claims.

**Note 5 - Long-term Debt (Continued)**

The Financial Recovery Bonds, Series 2014-C total \$88,430,021. The 2014-C Bonds were issued as part of the Syncora Settlement and FGIC/POC Settlement in the plan and on the effective date. As part of the Plan of Adjustment, GLWA remains responsible to pay a portion of the debt; however, the entire debt remains in the City’s name. The Department was allocated 11.21 percent and 11.55 percent of the Series 2014-B and Series 2014-C debt, respectively, of which GLWA’s portion of that allocation is 71.42 percent, and the DWSD’s portion of that allocation is 28.58 percent.

In 2018, the governing body of the City of Detroit, Michigan authorized the use of general funds for the full redemption of the General Obligation Bonds, 2014 Series C, including the amount allocated to the Department. The 2014 Series C debt was fully redeemed on April 13, 2018. As discussed in Note 1 to the financial statements, the Department will repay the City of Detroit General Fund under the terms of the original amortization schedule for the General Obligation Bonds, 2014 Series C, including an interest rate of 5 percent per year, with principal and interest due on June 30 each year, and a final maturity date of June 30, 2027. The Department has recorded an advance from the City of Detroit General Fund for the entire balance of the allocated debt and has also recorded a receivable from GLWA for the debt allocated to GLWA that will be reimbursed to the Department.

**Revenue Bonds**

Proceeds from the revenue bonds provided financing for improvements to the local water system. The bonds are secured by the net revenue of GLWA and the DWSD. GLWA’s master bond ordinance requires collections of DWSD receipts to be deposited into trust accounts controlled by the master bond ordinance (through GLWA), which will be used, among other things, to fund debt principal and interest. Principal payments on the revenue bonds will commence on July 1, 2042.

**State Revolving Fund Loans**

The Department (Water Fund) received loans from the State of Michigan Revolving Loan Fund totaling \$9,529,928 during the year ended June 30, 2018. The proceeds of the loans were used to pay the costs of making certain repairs and improvements to the water system and are reported as a long-term liability on the statement of net position. The Department (Water Fund) also recorded nonoperating revenue in the amount of \$2,534,779 related to principal forgiveness on state revolving loans.

**Debt Service Requirements to Maturity**

Annual debt service requirements to maturity for the above obligations and debt, excluding premiums on revenue bonds, are as follows:

| Years Ending<br>June 30 | Water Fund            |                       |                       | Sewage Disposal Fund  |                       |                       |
|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                         | Principal             | Interest              | Total                 | Principal             | Interest              | Total                 |
| 2019                    | \$ 13,424,300         | \$ 23,976,449         | \$ 37,400,749         | \$ 11,253,800         | \$ 16,787,038         | \$ 28,040,838         |
| 2020                    | 14,055,400            | 23,342,664            | 37,398,064            | 11,741,100            | 16,299,738            | 28,040,838            |
| 2021                    | 14,721,400            | 22,678,901            | 37,400,301            | 12,249,500            | 15,791,338            | 28,040,838            |
| 2022                    | 15,418,700            | 21,983,636            | 37,402,336            | 12,779,900            | 15,260,938            | 28,040,838            |
| 2023                    | 16,143,800            | 21,255,369            | 37,399,169            | 13,333,300            | 14,707,538            | 28,040,838            |
| 2024-2028               | 98,228,716            | 93,767,637            | 191,996,353           | 84,689,592            | 63,830,490            | 148,520,082           |
| 2029-2033               | 123,690,120           | 68,351,093            | 192,041,213           | 104,806,065           | 43,802,484            | 148,608,549           |
| 2034-2038               | 154,129,920           | 37,487,761            | 191,617,681           | 126,938,465           | 20,962,949            | 147,901,414           |
| 2039-2043               | 17,803,720            | 13,872,914            | 31,676,634            | 11,058,365            | 2,654,007             | 13,712,372            |
| 2044-2048               | 43,261,126            | 3,926,084             | 47,187,210            | 2,211,673             | 132,700               | 2,344,373             |
| <b>Total</b>            | <b>\$ 510,877,202</b> | <b>\$ 330,642,508</b> | <b>\$ 841,519,710</b> | <b>\$ 391,061,760</b> | <b>\$ 210,229,220</b> | <b>\$ 601,290,980</b> |

**Note 6 - Contingent Liabilities**

The Department is subject to various governmental environmental laws and regulations. GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*, established accounting and financial reporting standards for pollution (including contamination) remediation obligations, which are obligations to address the current or potential detrimental effects of existing pollution by participating in pollution remediation activities, such as site assessments and cleanups. The standard excludes pollution prevention or control obligations with respect to current operations and future pollution remediation activities that are required upon retirement of an asset, such as landfill closure and postclosure care. The Department determined that there were no estimated pollution remediation obligations to be recorded at June 30, 2018.

The Department is also a defendant in numerous alleged claims, lawsuits, billing disputes, and other stated and pending demands. The Department's and the City's legal department have estimated a reserve, which is included in the accompanying basic financial statements, for the potential outcome of such claims or the amount of potential damages in the event of an unfavorable outcome for each of the above contingencies. The Department's management and the City's legal department believe that any differences in reserved amounts and final settlement, after consideration of claims covered by insurance, resulting from such litigation will not materially impact the Department's financial position or results of operations.

The City holds various commercial insurance policies to cover other potential loss exposures.

**Note 7 - Risk Management**

The Department is exposed to various risks of loss related to property loss, torts, errors and omissions, and employee injuries (workers' compensation), as well as medical benefits provided to employees. The Department is self-insured for losses, such as workers' compensation, legal, disability benefits, and vehicular liabilities. There is also a risk of loss associated with providing health, dental, and life insurance benefits to employees and retirees.

The Department, through the City, provides health and dental insurance benefits to employees and certain retirees through self-insured health plans that are administered by third-party administrators. The Department does not purchase excess or stop-loss insurance for its self-insured health plans.

The Department purchases public official liability insurance and assumes a \$250,000 self-insured retention for any one loss or occurrence under its self-insured public official liability program. The Department is fully self-insured for property liabilities, general liabilities for accidents that occur on department properties, and environmental-related liabilities and does not purchase excess insurance for these liabilities. Settled claims relating to the commercial insurance have not exceeded the amount of insurance coverage in any of the past three fiscal years.

The Department estimates the liability for claims that have been incurred through the end of the fiscal year, including claims that have been reported and those that have not yet been reported. Changes in the estimated liability for the past two fiscal years were as follows:

|   | Water Fund          |                     | Sewage Disposal Fund |                      |
|---|---------------------|---------------------|----------------------|----------------------|
|   | 2018                | 2017                | 2018                 | 2017                 |
| Estimated liability - Beginning of year                   | \$ 3,664,610        | \$ 489,624          | \$ 15,789,783        | \$ 1,043,797         |
| Estimated claims incurred, including changes in estimates | 4,765,346           | 4,290,170           | (2,019,444)          | 14,927,576           |
| Claim payments  | (1,541,757)         | (1,115,184)         | (163,739)            | (181,590)            |
| Estimated liability - End of year                         | <u>\$ 6,888,199</u> | <u>\$ 3,664,610</u> | <u>\$ 13,606,600</u> | <u>\$ 15,789,783</u> |

**Note 8 - Pension Plans**

*Plan Description*

The Department participates in the City of Detroit General Retirement System (the "System"). The System is a single-employer plan composed of a defined benefit plan component and a defined contribution annuity plan component. The plan provides retirement, disability, and survivor benefits to plan members and beneficiaries. The plan is administered by its own board of trustees. Plan members include active employees, retirees, and beneficiaries from various departments within the City. Benefit terms have been established by contractual agreements between the City and the employees' collective bargaining units; amendments are subject to the same process.

The System issues publicly available financial reports that include financial statements and the required supplemental information. The reports can be obtained from City of Detroit Retirement Systems, One Detroit Center, 500 Woodward Ave., Suite 3000, Detroit, MI 48226, or obtained from the System's website ([www.rscd.org](http://www.rscd.org)). Detailed information about the pension plan's fiduciary net position is available in the separately issued financial report. The pension plan's fiduciary net position has been determined on the same basis of accounting used by the pension plan. The Plan uses the economic resources measurement focus and the full accrual basis of accounting. Investments are stated at fair value or estimated fair value. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions to the plan are recognized when due pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

The City filed for bankruptcy in June 2013 and subsequently exited bankruptcy on December 10, 2014. This resulted in the adoption of the Eighth Amended Plan for Adjustment of Debts of the City of Detroit (the "POA"). Under the provisions of the POA, effective July 1, 2014, the Combined Plan for General Employees Retirement System of the City of Detroit (the "Combined Plan") was introduced.

As a result of negotiations between the City and the public employee unions, the existing plan benefit formulas were frozen and no employees were allowed to earn further benefits under the existing plans after June 30, 2014. The emergency manager issued Order #30 (General Employees Retirement System of the City of Detroit) on June 30, 2014, which put these changes into effect. This plan in existence as of June 30, 2014 is known as the "legacy plan" or "Component II."

As of July 1, 2014, all eligible employees began participating in the new hybrid pension plan, or Component I. Eligible city employees will receive the benefits they have earned under the legacy Component II plan for services performed through June 30, 2014, plus an additional benefit under the new hybrid plan formula for services after June 30, 2014.

With respect to Component II benefit adjustments resulting from the POA, the pension settlement (for which benefit levels were and are contingent on other factors, including receipt of outside contributions) provided for: a loss of cost of living adjustments, or "escalators" (COLAs), paid after July 1, 2014; a 4.5 percent reduction to the remaining accrued pension benefit after the COLA loss; and plan members who participated in the Annuity Savings Fund (ASF) plan between 2003 and 2013, subject to certain caps, recoupment of certain amounts of interest deemed by the City to be in "excess" of that which should have been credited to the individual ASF accounts, referred to as "ASF Recoupment." ASF Recoupment, like other provisions of the pension settlement, was not optional. Most members will pay their ASF Recoupment by a monthly deduction from their future pension benefits for a set term of months, including interest calculated at 6.75 percent. All members were offered a lump-sum cash option, which was limited in the aggregate to \$30 million in member recoupment. The POA also included the possibility of restoration of certain benefit reductions, based on a program for the most financially vulnerable pensioners and beneficiaries through the State of Michigan Treasury Department, as well as a new feature of Component II allowing restoration of benefits depending on the plan funding level over time.



June 30, 2018

### Note 8 - Pension Plans (Continued)

Nonemployer contributing entity within Component II - On September 9, 2014, a memorandum of understanding (MOU) was entered into by the emergency manager and mayor of the City of Detroit, Michigan, a county executive of each of the charter counties of Wayne and Macomb, Michigan, the County of Oakland, Michigan, and the governor of the State of Michigan. The purpose of the MOU was to establish a framework for the creation of a regional authority (known as Great Lakes Water Authority or GLWA) pursuant to Act 233 of 1955 to operate, control, and improve the regional assets of the water supply system and the sewage disposal system owned by the City.

Pursuant to the MOU, the City of Detroit, Michigan and GLWA entered into two lease agreements: the Regional Water Supply System Lease dated June 12, 2015 and the Regional Sewage Supply System Lease dated June 12, 2015. Under the provisions of the lease agreements, GLWA leases the regional assets of the City for a period of at least 40 years.

Pursuant to the lease agreements, on December 1, 2015, a tri-party agreement between the City of Detroit, Michigan, General Retirement System of the City of Detroit (GRS), and GLWA was signed. Per the POA and Section 4.3 of the lease agreements, GLWA is required to pay a portion of the pension obligation that will be allocable to the City of Detroit Water and Sewerage Department. The purpose of the pension reporting agreement is to set forth in determining the funding status for the DWSD pension pool, and for GRS to agree to provide GLWA with certain actuarial and other reports to enable GLWA to properly manage and pay its portion of the pension obligation that is allocable to the DWSD.

Effective January 1, 2016, GLWA was established. Accordingly, the prior DWSD division was split into two: one representing the ongoing DWSD department, now referenced as DWSD Retail (DWSD-R), and another to represent the Great Lakes Water Authority. In accordance with the pension reporting agreement, the net position and liabilities of the DWSD were allocated to DWSD-R and GLWA in accordance with written directions received from DWSD-R and GLWA. Per written directions, GLWA is to be allocated 70.3 percent of the net position and liabilities of the DWSD. Because GLWA has no employees or retirees in the Combined Plan, GLWA is considered a nonemployer contributing entity in accordance with GASB Statement No. 67. As this arrangement also meets the definition of a special funding situation per GASB Statement No. 68, GLWA's allocated pension expense of \$25,100,439 is recognized by the Department as revenue and an expense.

#### **Benefits Provided**

*Component II* - Component II is the legacy plan, the original defined benefit plan, which includes a defined benefit component and a defined contribution component. Component II generally applies to benefits accrued by members prior to July 1, 2014. The plan provides retirement, disability, and survivor benefits to plan members and beneficiaries. Except as specifically provided in the Combined Plan, benefits provided under Component II are frozen effective June 30, 2014. Component II also includes the Income Stabilization Fund. The fund, a part of Component II and established as a provision of the POA, was established for the sole purpose of paying the Income Stabilization Benefits and Income Stabilization Benefits Plus to eligible pensioners.

The Income Stabilization Fund is outlined in Section G-3 of the POA. The annual supplemental pension income stabilization benefit is equal to the lesser of either (i) the amount needed to restore an eligible retiree's reduced annual pension benefit to 100 percent of the amount of the annual pension benefit that the eligible retiree was receiving from the System in 2013 or (ii) the amount needed to bring the total annual 2013 household income of the eligible retiree up to 130 percent of the federal poverty level for 2013. The Income Stabilization Fund did not have an impact on total pension liability for the systems or the City as of the measurement date of June 30, 2017 because the assets held by the Income Stabilization Fund are not considered to be available to fund the normal retirement benefit provisions under the pension plan, but instead are restricted to pay Income Stabilization Benefits and Income Stabilization Benefits Plus. No liability currently exists for these benefits.

**Note 8 - Pension Plans (Continued)**

Postbankruptcy GRS Component II plan members, upon retirement, will receive an annuity that shall be the actuarial equivalent of the member's accumulated contributions in the 1973 Defined Contribution Annuity Savings Fund at the time of retirement. In addition, each member will receive a basic service and a membership service pension. The basic service pension will consist of \$12.00 per annum multiplied by the number of years and fractions of years of credited service, not to exceed 10 years. The membership service pension will be calculated as follows:

- For members who retire on or before June 30, 1992, a membership service pension of 1.5 percent of average final compensation for the first 10 years of service and 1.63 percent for service in excess of 10 years
- For members who retire on or after July 1, 1992 but prior to July 1, 1998, a membership service pension of 1.5 percent of average final compensation for each year of service for the first 10 years, plus 1.7 percent of average final compensation for each year of service in excess of 10 years up to 20 years of service, plus 1.9 percent of average final compensation for each year of service in excess of 20 years. In no event shall benefits paid by the System exceed 90 percent of average final compensation.
- For members who retire on or after July 1, 1998, a membership service pension for service rendered prior to July 1, 2012 of 1.6 percent of average final compensation for each year of service for the first 10 years, plus 1.8 percent of average final compensation for each year of service in excess of 10 years, up to 20 years of service, plus 2 percent of average final compensation for each year of service in excess of 20 years up to 25 years, plus 2.2 percent of average final compensation for each year of service in excess of 25 years; plus, for service rendered after July 1 2012 and prior to July 1, 2014, 1.5 percent of average final compensation for each year of service; plus \$12 for each year of city service not to exceed \$120. Notwithstanding the foregoing, for members of the Michigan Council 25 of the American Federation of State, County and Municipal Employees, AFL-CIO Local 2920 and the Detroit Senior Water Systems Chemists Association bargaining units, the effective date of the 1.5 percent multiplier was April 1, 2013 for all years of service rendered after that date. In no case shall benefits paid by the System exceed 90 percent of average final compensation.

In the event the eligible retiree's estimated adjusted annual household income in any calendar year after the first year that the eligible retiree receives a benefit from the Income Stabilization Fund is less than 105 percent of the federal poverty level in that year, the eligible retiree will receive an additional Income Stabilization Benefit Plus benefit commencing as of the following July 1.

*Component I* - Component I is considered a "hybrid" plan because it includes a defined benefit component and a defined contribution component. Component I of the plan document applies to benefits accrued by members of the GRS on and after July 1, 2014. The Component I plan provides retirement, disability, and survivor benefits to plan members and beneficiaries.

**Contributions**

Article 9, Section 24 of the State of Michigan constitution requires that financial benefits arising on account of employee service rendered in each year be funded during that year. Accordingly, in the past, the System retained an independent actuary to determine the annual contribution. Until 2024, contributions are based on specific provisions of the Plan of Adjustment. After 2024, contributions will be actuarially determined based on a 30-year level principal closed amortization.

**Note 8 - Pension Plans (Continued)**

**Employer Contributions**

**Component II**

The Department made contributions of \$12,741,300 to the System for the fiscal year ended June 30, 2018.

**Component I**

Per Section 9.3 of the Combined Plan, commencing on July 1, 2015 and ending on June 30, 2023, the Department is required to contribute 5 percent of compensation of active members. During the fiscal year ended June 30, 2018, the Department contributed \$1,328,993 to the Component I plan.

**Employee Contributions**

Contribution requirements of plan members are established and may be amended by the board of trustees in accordance with the City Charter, union contracts, and plan provisions. For the year ended June 30, 2018, there were no employee contributions into Component II, as the plan was frozen as of June 30, 2014. Effectively, employee contributions were allowed only until August 1, 2014. Contributions into Component I began with the members' first payroll date occurring in August 2014. With respect to GRS Component I, the Department's employees who are members of GRS are now required to make mandatory contributions of 4 percent of pay toward their defined benefit. Additionally, employees can make voluntary contributions of 3, 5, or 7 percent of annual pay. During the fiscal year ended June 30, 2018, the Department's employees contributed \$1,681,415 in mandatory and voluntary contributions.

**Net Pension Liability**

As permitted by GASB Statement No. 68, the Department has chosen to use June 30, 2017 as its measurement date for the net pension liability (NPL). The net pension liability was calculated using the total pension liability and the System's fiduciary net position as of June 30, 2017. The June 30, 2017 total pension liability was determined by an actuarial valuation performed as of June 30, 2016, which used updated procedures to roll forward the estimated liability to June 30, 2017. At June 30, 2018, the Department reported a liability for its net pension liability as follows:

|  | <u>Component II</u> | <u>Component I</u>           |
|--|---------------------|------------------------------|
| Measurement date used for the Department's NPL     | June 30, 2017       | June 30, 2017                |
| Based on a comprehensive actuarial valuation as of | June 30, 2016       | June 30, 2016                |
|  |                     | <u>Net Pension Liability</u> |
| Component II                                       |                     | \$ 75,606,951                |
| Component I  |                     | <u>3,959,942</u>             |
| Total  |                     | <u>\$ 79,566,893</u>         |

**Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions**

For the year ended June 30, 2018, the Department recognized a pension expense of \$35,704,749 for Component II and \$3,732,700 for Component I.

June 30, 2018

**Note 8 - Pension Plans (Continued)**

At June 30, 2018, the Department reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

|  | Water Fund                     |                               | Sewage Disposal Fund           |                               |
|--|--------------------------------|-------------------------------|--------------------------------|-------------------------------|
|  | Deferred Outflows of Resources | Deferred Inflows of Resources | Deferred Outflows of Resources | Deferred Inflows of Resources |
| Difference between expected and actual experience                                | \$ -                           | \$ (1,468,778)                | \$ -                           | \$ (2,087,584)                |
| Changes in assumptions   | 343,591                        | (94,525)                      | 488,350                        | (134,352)                     |
| Net difference between projected and actual earnings on pension plan investments | 274,076                        | -                             | -                              | (17,784)                      |
| Employer contributions to the plan subsequent to the measurement date            | 8,185,074                      | -                             | 5,885,219                      | -                             |
| <b>Total</b>   | <b>\$ 8,802,741</b>            | <b>\$ (1,563,303)</b>         | <b>\$ 6,373,569</b>            | <b>\$ (2,239,720)</b>         |

From the above table, the Plans reported \$14,070,293 for both Components II and I as deferred outflows of resources resulting from employer contributions subsequent to the measurement date, which will be recognized as a reduction of the net pension liability in the year ending June 30, 2019.

The deferred outflows of resources and deferred inflows of resources related to the change in actuarial assumptions, the net differences between projected and actual earnings on pension plan investments, and the differences between expected and actual experiences will be amortized and recognized as an addition to or a reduction of pension expense as follows:

| Years Ending June 30 | Water Fund          | Sewage Disposal Fund  |
|----------------------|---------------------|-----------------------|
| 2019                 | \$ (1,332,616)      | \$ (1,166,872)        |
| 2020                 | 986,249             | 383,381               |
| 2021                 | 477,902             | 34,363                |
| 2022                 | (960,555)           | (836,493)             |
| 2023                 | (74,715)            | (106,192)             |
| Thereafter           | (41,901)            | (59,557)              |
| <b>Total</b>         | <b>\$ (945,636)</b> | <b>\$ (1,751,370)</b> |

**Actuarial Assumptions**

The total pension liability in each actuarial valuation was determined using the following actuarial assumptions applied to all periods included in the measurement:

|  | Component II | Component I |
|--|--------------|-------------|
| Inflation  | N/A          | N/A         |
| Salary increases                                       | N/A          | 2-3%        |
| Investment rate of return (net of investment expenses) | 6.91%        | 6.91%       |

Based on an experience study from 2008-2013 issued in February 2015, the mortality table assumption was based on the RP-2014 Blue Collar Annuitant Table for males and females. The tables are projected to be fully generational, based on the two-dimensional sex distinct mortality scale MP-2014.

The actuarial assumptions other than mortality and the investment rate of return, used in the June 30, 2016 valuation to calculate the total pension liability as of June 30, 2017, were based on the results of an actuarial experience study for the period from 2002 to 2007.

**Note 8 - Pension Plans (Continued)**

**Discount Rate**

The discount rate used to measure the total pension liability as of June 30, 2017 was 6.91 percent for both Components I and II; however, the single discount rate used at the beginning of the year was 7.23 percent for both plans. For the Component II plan, the projection of cash flows used to determine the discount rates assumed that employee contributions will cease as of June 30, 2014 and that city contributions, including contributions sourced from the proceeds of the sale of artwork from the State of Michigan and the Foundation for Detroit’s Future, will be made at rates equal to those set by the final Plan of Adjustment through June 30, 2023 and a 30-year closed level dollar amortization thereafter. For the Component I plan, the projection of cash flows used to determine the discount rates assumed that employee contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the employee rate. Based on those assumptions, the pension plans’ fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Investment Rate of Return**

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return as of June 30, 2017 for each major asset class, including pension plan target asset allocation, as disclosed in the investment footnote, are summarized in the following table:

**Component I and Component II**

| Asset Class                                     | Target Allocation | Long-term<br>Expected Real<br>Rate of Return |
|---|-------------------|--|
| Global equity                                   | 43.00 %           | 5.30 %                                       |
| Global fixed income                             | 16.00             | 3.10   |
| Real estate                                     | 10.00             | 3.50   |
| Private equity                                  | 8.00              | 7.20   |
| Hedge funds                                     | 5.00              | 4.20   |
| Global asset allocation/risk parity/real assets | 17.00             | 4.10   |
| Cash  | 1.00              | 0.30   |

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate**

The following presents the net pension liability of the Department, calculated using the discount rate of 6.91 percent, as well as what the Department’s net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher than the current rate:

|  | 1 Percent<br>Decrease<br>(5.91%) | Current Discount<br>Rate (6.91%) | 1 Percent<br>Increase (7.91%) |
|--|----------------------------------|----------------------------------|-------------------------------|
| Net pension liability - Water Fund           | \$ 60,605,964                    | \$ 46,948,714                    | \$ 35,299,014                 |
| Net pension liability - Sewage Disposal Fund | 42,128,536                       | 32,618,179                       | 24,537,119                    |
| Total  | <u>\$ 102,734,500</u>            | <u>\$ 79,566,893</u>             | <u>\$ 59,836,133</u>          |

**Note 9 - Special Item - Bifurcation**

On January 1, 2016, the City of Detroit, Michigan effectuated a lease agreement with the Great Lakes Water Authority for the regional water system for a term of 40 years, to be extended automatically to coincide with the final maturity of any bonds issued to finance improvements to the regional or local water systems. The service agreement and a corresponding lease of the regional water and sewer system collectively provide for an annual lease payment of \$50 million (of which \$22,500,000 is allocated to the Water Fund and \$27,500,000 is allocated to the Sewage Disposal Fund) in exchange for a leasehold interest in the Water and Sewer System’s water treatment plants, wastewater treatment plant, certain public sewers, wastewater interceptors, transmission lines, and certain other assets, including cash and investments held by the Department as of December 31, 2015, assignment of all revenue of the regional and local water systems, and the assumption of all the DWSD bonded debt and certain liabilities.

The Department has continued to negotiate some of the final issues concerning the bifurcation, and a final agreement was executed during 2018. Certain estimates from prior years were adjusted as a result of the final agreement, including pre-effective date liabilities and related cash balances and the portion of the debt assumed by GLWA that was utilized for local system improvements, whose debt will continue to be funded by the Department. As a result of the negotiations, the Department has recognized gains (losses) from the bifurcation in the current year and prior two years as follows:

|                                      | Water Fund            | Sewage<br>Disposal Fund | Total                   |
|--------------------------------------|-----------------------|-------------------------|-------------------------|
| June 30, 2016                        | \$ 776,532,736        | \$ 808,913,176          | \$ 1,585,445,912        |
| June 30, 2017                        | (85,895,242)          | (72,059,278)            | (157,954,520)           |
| June 30, 2018                        | 35,482,690            | 66,377,234              | 101,859,924             |
| Cumulative total gain on bifurcation | <u>\$ 726,120,184</u> | <u>\$ 803,231,132</u>   | <u>\$ 1,529,351,316</u> |

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## Required Supplemental Information

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# City of Detroit Water and Sewerage Department

## Required Supplemental Information Schedule of Changes in the Net Pension Liability and Related Ratios - Component II

|   | <b>Last Four Fiscal Years (Based on Measurement Date)</b> |                              |                              |                                |
|---|---|------------------------------|------------------------------|--------------------------------|
|   | <u>2017</u>   | <u>2016*</u>                 | <u>2015</u>                  | <u>2014</u>                    |
| <b>Total Pension Liability</b>  |   |                              |                              |                                |
| Service cost  | \$ -  | \$ -                         | \$ -                         | \$ 9,746,003                   |
| Interest  | 15,981,838  | 17,060,232                   | 73,105,847                   | 66,690,581                     |
| Changes in benefit terms  | -   | -                            | (216,739,841)                | (27,617,959)                   |
| Differences between expected and actual experience                            | 1,000,921   | (2,139,381)                  | (607,587)                    | -                              |
| Changes in assumptions  | 6,401,809   | 7,447,135                    | (28,150,723)                 | (74,737,651)                   |
| Benefit payments, including refunds   | <u>(21,580,612)</u>                                       | <u>(29,420,988)</u>          | <u>(77,231,357)</u>          | <u>(98,853,724)</u>            |
| <b>Net Change in Total Pension Liability</b>                                  | 1,803,956   | (7,053,002)                  | (249,623,661)                | (124,772,750)                  |
| <b>Total Pension Liability - Beginning of year</b>                            | <u>231,839,248</u>  | <u>238,892,250</u>           | <u>1,053,974,670</u>         | <u>1,178,747,420</u>           |
| <b>Total Pension Liability - End of year</b>                                  | <b><u>\$ 233,643,204</u></b>                              | <b><u>\$ 231,839,248</u></b> | <b><u>\$ 804,351,009</u></b> | <b><u>\$ 1,053,974,670</u></b> |
| <b>Plan Fiduciary Net Position</b>  |   |                              |                              |                                |
| Contributions - Employer  | \$ 12,741,300   | \$ 12,741,300                | \$ 42,888,889                | \$ 21,491,022                  |
| Contributions - Member  | -   | -                            | 186,274                      | 3,335,706                      |
| Net investment income (loss)  | 16,397,207  | (917,059)                    | 24,580,775                   | 102,177,233                    |
| Administrative expenses   | -   | -                            | (30,290)                     | (3,416,015)                    |
| Benefit payments, including refunds   | (21,580,612)  | (29,420,988)                 | (77,231,357)                 | (98,853,724)                   |
| Other   | <u>631,198</u>  | <u>469,357</u>               | <u>39,485,858</u>            | <u>-</u>                       |
| <b>Net Change in Plan Fiduciary Net Position</b>                              | 8,189,093   | (17,127,390)                 | 29,880,149                   | 24,734,222                     |
| <b>Plan Fiduciary Net Position - Beginning of year</b>                        | <u>149,847,160</u>  | <u>166,974,550</u>           | <u>532,323,722</u>           | <u>507,589,500</u>             |
| <b>Plan Fiduciary Net Position - End of year</b>                              | <b><u>\$ 158,036,253</u></b>                              | <b><u>\$ 149,847,160</u></b> | <b><u>\$ 562,203,871</u></b> | <b><u>\$ 532,323,722</u></b>   |
| <b>Department's Net Pension Liability - Ending</b>                            | <b><u>\$ 75,606,951</u></b>                               | <b><u>\$ 81,992,088</u></b>  | <b><u>\$ 242,147,138</u></b> | <b><u>\$ 521,650,948</u></b>   |
| <b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b> | 67.64 %   | 64.63 %                      | 69.90 %                      | 50.51 %                        |
| <b>Covered Payroll</b>  | \$ 22,864,010   | \$ 57,607,917                | \$ 60,782,192                | \$ 64,835,429                  |
| <b>Department's Net Pension Liability as a Percentage of Covered Payroll</b>  | 330.68 %  | 142.33 %                     | 398.39 %                     | 804.58 %                       |

\* As described in Note 8, the Great Lakes Water Authority (GLWA) was established on January 1, 2016. On this date, GLWA assumed a portion of the net position and liabilities of the Department. The 2016 amounts have been adjusted to reflect only the portion allocated to the Department.

GASB Statement No. 67 was implemented for FY 2014 and does not require retroactive implementation. Data will be added as information is available until 10 years of such information is available.



## City of Detroit Water and Sewerage Department

### Required Supplemental Information Schedule of Changes in the Net Pension Liability and Related Ratios - Component I

#### Last Three Fiscal Years (Based on Measurement Date)

|   | 2017                        | 2016                        | 2015                       |
|---|-----------------------------|-----------------------------|----------------------------|
| <b>Total Pension Liability</b>  |                             |                             |                            |
| Service cost  | \$ 4,535,838                | \$ 5,556,742                | \$ 5,853,312               |
| Interest  | 986,953                     | 704,400                     | 210,719                    |
| Differences between expected and actual experience                            | (3,118,495)                 | (1,577,654)                 | -                          |
| Changes in assumptions  | 583,770                     | 521,263                     | (352,686)                  |
| Benefit payments, including refunds   | (375,730)                   | (1,827,192)                 | -                          |
| Voluntary member contributions  | 585,787                     | 1,085,989                   | 1,662,483                  |
| <b>Net Change in Total Pension Liability</b>                                  | 3,198,123                   | 4,463,548                   | 7,373,828                  |
| <b>Total Pension Liability - Beginning of year</b>                            | 11,837,376                  | 7,373,828                   | -                          |
| <b>Total Pension Liability - End of year</b>                                  | <b><u>\$ 15,035,499</u></b> | <b><u>\$ 11,837,376</u></b> | <b><u>\$ 7,373,828</u></b> |
| <b>Plan Fiduciary Net Position</b>  |                             |                             |                            |
| Contributions - Employer  | \$ 1,012,219                | \$ 1,884,087                | \$ 2,596,022               |
| Contributions - Member  | 838,418                     | 1,529,722                   | 2,103,576                  |
| Net investment income (loss)  | 1,903,831                   | (33,400)                    | 6,011                      |
| Administrative expenses   | (375,730)                   | (912,491)                   | (436,927)                  |
| Benefit payments, including refunds   | (557,335)                   | (1,827,192)                 | -                          |
| Voluntary member contributions  | 585,787                     | 1,085,989                   | 1,662,483                  |
| Other   | 13,057                      | (2,570)                     | -                          |
| <b>Net Change in Plan Fiduciary Net Position</b>                              | 3,420,247                   | 1,724,145                   | 5,931,165                  |
| <b>Plan Fiduciary Net Position - Beginning of year</b>                        | 7,655,310                   | 5,931,165                   | -                          |
| <b>Plan Fiduciary Net Position - End of year</b>                              | <b><u>\$ 11,075,557</u></b> | <b><u>\$ 7,655,310</u></b>  | <b><u>\$ 5,931,165</u></b> |
| <b>Department's Net Pension Liability - Ending</b>                            | <b><u>\$ 3,959,942</u></b>  | <b><u>\$ 4,182,066</u></b>  | <b><u>\$ 1,442,663</u></b> |
| <b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b> | 73.66 %                     | 64.67 %                     | 80.44 %                    |
| <b>Covered Payroll</b>  | \$ 22,864,010               | \$ 57,607,917               | \$ 60,782,192              |
| <b>Department's Net Pension Liability as a Percentage of Covered Payroll</b>  | 17.32 %                     | 7.26 %                      | 2.37 %                     |

GASB Statement No. 67 was implemented for FY 2014 and does not require retroactive implementation. Data will be added as information is available until 10 years of such information is available.

## City of Detroit Water and Sewerage Department

### Required Supplemental Information Schedule of Pension Contributions Component II

**Last Ten Fiscal Years  
Years Ended June 30**

|   | 2018*                | 2017*                | 2016*                | 2015                 | 2014                  | 2013                  | 2012                 | 2011                 | 2010                  | 2009                  |
|---|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|-----------------------|-----------------------|
| Actuarially required contribution                                     | \$ 12,741,300        | \$ 12,741,300        | \$ 42,888,889        | \$ 21,491,022        | \$ 24,868,234         | \$ 24,865,090         | \$ 13,026,588        | \$ 21,791,527        | \$ 9,386,138          | \$ 8,434,151          |
| Contributions in relation to the<br>actuarially required contribution | 12,741,300           | 12,741,300           | 42,888,889           | 21,491,022           | 27,301,090            | 26,450,595            | 10,861,181           | 19,715,512           | 11,400,588            | 11,587,039            |
| <b>Contribution (Excess)<br/>Deficiency</b>                           | <b>\$ -</b>          | <b>\$ -</b>          | <b>\$ -</b>          | <b>\$ -</b>          | <b>\$ (2,432,856)</b> | <b>\$ (1,585,505)</b> | <b>\$ 2,165,407</b>  | <b>\$ 2,076,015</b>  | <b>\$ (2,014,450)</b> | <b>\$ (3,152,888)</b> |
| <b>Department's Covered Payroll</b>                                   | <b>\$ 22,864,010</b> | <b>\$ 41,216,957</b> | <b>\$ 57,607,917</b> | <b>\$ 60,782,192</b> | <b>\$ 64,835,429</b>  | <b>\$ 64,836,192</b>  | <b>\$ 78,425,725</b> | <b>\$ 80,880,585</b> | <b>\$ 88,124,257</b>  | <b>\$ 88,882,438</b>  |
| <b>Contributions as a Percentage<br/>of Covered Payroll</b>           | <b>55.73 %</b>       | <b>30.91 %</b>       | <b>74.45 %</b>       | <b>35.36 %</b>       | <b>42.11 %</b>        | <b>40.80 %</b>        | <b>13.85 %</b>       | <b>24.38 %</b>       | <b>12.94 %</b>        | <b>13.04 %</b>        |

\* Contributions beginning with fiscal year 2015 were determined by the provisions of the Plan of Adjustment and were not actuarially determined.

**City of Detroit Water and Sewerage Department**

Required Supplemental Information  
Schedule of Pension Contributions - Component I

|  | <b>Last Four Fiscal Years</b> |                    |                    |                    |
|--|-------------------------------|--------------------|--------------------|--------------------|
|  | <b>Years Ended June 30</b>    |                    |                    |                    |
|  | <u>2018</u>                   | <u>2017</u>        | <u>2016</u>        | <u>2015</u>        |
| Contractually determined contribution                                  | \$ 1,328,993                  | \$ 1,012,219       | \$ 1,884,087       | \$ 2,596,022       |
| Contributions in relation to the contractually determined contribution | <u>1,328,993</u>              | <u>1,012,219</u>   | <u>1,884,087</u>   | <u>2,596,022</u>   |
| <b>Contribution Deficiency</b>   | <b><u>\$ -</u></b>            | <b><u>\$ -</u></b> | <b><u>\$ -</u></b> | <b><u>\$ -</u></b> |
| <b>Covered Payroll</b>   | \$ 22,864,010                 | \$ 41,216,957      | \$ 57,607,917      | \$ 60,782,192      |
| <b>Contributions as a Percentage of Covered Payroll</b>                | 5.81 %                        | 2.46 %             | 3.27 %             | 4.27 %             |

Contributions are made in accordance with the Plan of Adjustment, which is 5 percent of compensation of active members.

***Pension Information***

***Benefit Changes***

***Component II***

In 2014, the pension plan was frozen. No new employees are allowed to participate in the plan. All benefits for actives were frozen as of June 30, 2014 based on service and average final compensation accrued as of that date.

In 2015, benefits were reduced by 4.5 percent, and the cost of living adjustments were eliminated.

***Changes in Assumptions***

***Component II***

In 2014, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 5.88 percent to 7.2 percent, updating the mortality tables from RP-2000 Combined Table to RP-2014 Blue Collar Mortality Table, and adjustments for longevity and unused sick leave were eliminated.

***Component II and I***

In 2015, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.2 percent to 7.61 percent.

In 2016, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.61 percent to 7.23 percent.

In 2017, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 7.23 percent to 6.91 percent.