

---

# City of Detroit Water and Sewerage Department

---

**Financial Report  
with Supplemental Information  
June 30, 2019**

<b>Independent Auditor's Report</b>	1-2
<b>Basic Financial Statements</b>	
Department Financial Statements:	
Statement of Net Position	3-4
Statement of Revenue, Expenses, and Changes in Net Position	5
Statement of Cash Flows	6-7
Notes to Financial Statements	8-30
<b>Required Supplemental Information</b>	31
Schedule of Changes in the Net Pension Liability and Related Ratios - Component II	32
Schedule of Changes in the Net Pension Liability and Related Ratios - Component I	33
Schedule of Pension Contributions - Component II	34
Schedule of Pension Contributions - Component I	35
Note to Required Supplemental Information	36

## **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, 2019 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, 2019 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***

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, 2019 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.

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

***Required Supplemental Information***

Accounting principles generally accepted in the United States of America require that the pension system 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, 2019 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, 2019

# City of Detroit Water and Sewerage Department

## Statement of Net Position

June 30, 2019

	Water Fund	Sewage Disposal Fund	Total
<b>Assets</b>			
Current assets:			
Cash and investments (Note 2)	\$ 72,739,306	\$ 58,748,162	\$ 131,487,468
Receivables:			
Customer receivables	12,524,247	57,960,348	70,484,595
Unbilled accounts receivable	6,404,058	19,632,093	26,036,151
Other receivables	977,898	817,258	1,795,156
Receivable from Great Lakes Water Authority (Note 4)	16,976,196	17,211,725	34,187,921
Due from city funds	124,499	-	124,499
Due from other funds	4,986,599	-	4,986,599
Inventory	3,895,401	842,877	4,738,278
Prepaid expenses and other assets	263,828	384,612	648,440
Total current assets	118,892,032	155,597,075	274,489,107
Noncurrent assets:			
Restricted cash and investments (Note 3)	24,109,517	101,716,015	125,825,532
Capital assets: (Note 5)			
Assets not subject to depreciation	40,436,292	57,604,307	98,040,599
Assets subject to depreciation - Net	509,807,929	460,788,399	970,596,328
Receivable from Great Lakes Water Authority (Note 4)	457,862,650	576,989,923	1,034,852,573
Net OPEB asset	382	639	1,021
Total noncurrent assets	1,032,216,770	1,197,099,283	2,229,316,053
Total assets	1,151,108,802	1,352,696,358	2,503,805,160
<b>Deferred Outflows of Resources</b>			
Deferred pension costs (Note 9)	8,485,888	6,254,276	14,740,164
Deferred OPEB costs	6,961	11,633	18,594
Total deferred outflows of resources	8,492,849	6,265,909	14,758,758
<b>Liabilities</b>			
Current liabilities:			
Accounts payable	7,917,783	5,594,439	13,512,222
Payable to Great Lakes Water Authority	11,513,460	19,382,453	30,895,913
Due to city funds	5,632,089	8,574,155	14,206,244
Due to other funds	-	4,986,599	4,986,599
Deposits	8,487,476	-	8,487,476
Accrued liabilities and other	11,657,148	15,569,662	27,226,810
Unearned revenue	11,250,000	13,750,000	25,000,000
Current portion of advances from the City of Detroit, Michigan General Fund (Note 1)	300,585	500,975	801,560
Accrued interest	1,983,427	3,169,374	5,152,801
Current portion of shortfall loan payable to Great Lakes Water Authority (Note 6)	-	17,542,669	17,542,669
Current portion of compensated absences (Note 6)	393,433	918,010	1,311,443
Accrued workers' compensation and claims and judgments (Note 8)	793,000	208,000	1,001,000
Current portion of bonds payable and contractual obligations (Note 6)	14,328,368	12,089,779	26,418,147
Total current liabilities	74,256,769	102,286,115	176,542,884

# City of Detroit Water and Sewerage Department

## Statement of Net Position (Continued)

June 30, 2019

	Water Fund	Sewage Disposal Fund	Total
<b>Liabilities (Continued)</b>			
Noncurrent liabilities:			
Advances from the City of Detroit, Michigan General Fund (Note 1)	\$ 10,624,352	\$ 17,707,244	\$ 28,331,596
Shortfall loan payable to Great Lakes Water Authority - Net of current portion (Note 6)	-	26,503,010	26,503,010
Compensated absences - Net of current portion (Note 6)	1,150,772	2,685,134	3,835,906
Accrued workers' compensation and claims and judgments - Net of current portion (Note 8)	7,716,000	6,114,000	13,830,000
Net pension liability (Note 9)	33,670,532	22,700,393	56,370,925
Bonds payable and contractual obligations - Net of current portion (Note 6)	486,727,125	445,175,966	931,903,091
Total noncurrent liabilities	<u>539,888,781</u>	<u>520,885,747</u>	<u>1,060,774,528</u>
Total liabilities	614,145,550	623,171,862	1,237,317,412
<b>Deferred Inflows of Resources</b> - Deferred pension cost reductions (Note 9)	<u>2,192,296</u>	<u>3,422,464</u>	<u>5,614,760</u>
<b>Net Position</b>			
Net investment in capital assets	83,037,253	183,750,907	266,788,160
Restricted:			
Budget stabilization	2,000,000	5,500,000	7,500,000
Water affordability	1,334,862	-	1,334,862
Unrestricted	456,891,690	543,117,034	1,000,008,724
Total net position	<u><u>\$ 543,263,805</u></u>	<u><u>\$ 732,367,941</u></u>	<u><u>\$ 1,275,631,746</u></u>

# City of Detroit Water and Sewerage Department

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

Year Ended June 30, 2019

	Water Fund	Sewage Disposal Fund	Total
<b>Operating Revenue</b>			
Water sales and sewage disposal charges	\$ 95,280,432	\$ 287,846,840	\$ 383,127,272
Nonretail shared services billings	4,925,926	5,446,739	10,372,665
Great Lakes Water Authority's share of collective pension recovery (Note 9)	(9,948,883)	(6,651,220)	(16,600,103)
Penalties and fees	6,422,456	4,346,645	10,769,101
Miscellaneous	4,843,327	7,358,256	12,201,583
Total operating revenue	101,523,258	298,347,260	399,870,518
<b>Operating Expenses</b>			
Salaries, wages, and benefits	11,707,856	22,406,860	34,114,716
Contractual services	18,399,868	15,959,822	34,359,690
Wholesale charges	20,181,400	182,990,286	203,171,686
Operating	3,342,165	3,714,801	7,056,966
Operating supplies	2,277,905	312,601	2,590,506
Repairs and maintenance	1,124,972	1,278,414	2,403,386
Utilities	1,102,335	2,994,975	4,097,310
Shared services	5,528,945	11,174,745	16,703,690
Miscellaneous	139,328	661,487	800,815
Claims and judgments (recovery)	3,034,057	(6,243,185)	(3,209,128)
Bad debt	11,744,447	38,610,629	50,355,076
Depreciation	16,972,456	11,980,373	28,952,829
Pension recovery	(13,402,247)	(10,073,713)	(23,475,960)
Total operating expenses	82,153,487	275,768,095	357,921,582
<b>Operating Income</b>	19,369,771	22,579,165	41,948,936
<b>Nonoperating Revenue (Expense)</b>			
Investment income	1,183,711	2,154,513	3,338,224
Interest revenue on lease with Great Lakes Water Authority	17,384,812	21,975,773	39,360,585
Miscellaneous	86,308	(643,855)	(557,547)
Interest expense - Net of capitalized interest	(22,325,070)	(21,287,061)	(43,612,131)
Total nonoperating (expense) revenue	(3,670,239)	2,199,370	(1,470,869)
<b>Change in Net Position</b>	15,699,532	24,778,535	40,478,067
<b>Net Position - Beginning of year</b>	527,564,273	707,589,406	1,235,153,679
<b>Net Position - End of year</b>	<b>\$ 543,263,805</b>	<b>\$ 732,367,941</b>	<b>\$ 1,275,631,746</b>

# City of Detroit Water and Sewerage Department

## Statement of Cash Flows

Year Ended June 30, 2019

	Water Fund	Sewage Disposal Fund	Total
<b>Cash Flows from Operating Activities</b>			
Receipts from customers	\$ 91,007,401	\$ 256,926,071	\$ 347,933,472
(Payments to) receipts from interfund services and reimbursements	(3,456,135)	3,456,135	-
(Payments to) receipts from City funds	(6,056,410)	5,555,778	(500,632)
Payments to suppliers	(48,409,756)	(217,507,644)	(265,917,400)
Payments to employees and fringes	(21,897,168)	(30,505,626)	(52,402,794)
Claims paid	(81,256)	(446,415)	(527,671)
Other receipts	4,318,232	-	4,318,232
Net receipts from GLWA, including shared services	15,758,600	18,282,755	34,041,355
Net cash and cash equivalents provided by operating activities	31,183,508	35,761,054	66,944,562
<b>Cash Flows from Noncapital Financing Activities</b>			
Receipts from GLWA for financial recovery bonds	875,508	1,969,296	2,844,804
Principal and interest paid on operating debt	(1,493,701)	(12,961,099)	(14,454,800)
Receipts on GLWA contract receivable	22,500,000	27,500,000	50,000,000
Net cash and cash equivalents provided by noncapital financing activities	21,881,807	16,508,197	38,390,004
<b>Cash Flows from Capital and Related Financing Activities</b>			
Issuance of bonds	5,855,865	91,531,771	97,387,636
Receipt of capital grants	753,571	-	753,571
Purchase of capital assets	(42,424,889)	(42,241,794)	(84,666,683)
Principal and interest paid on capital debt	(34,721,011)	(29,673,775)	(64,394,786)
Net cash and cash equivalents (used in) provided by capital and related financing activities	(70,536,464)	19,616,202	(50,920,262)
<b>Cash Flows from Investing Activities</b>			
Interest received on investments	1,183,711	2,154,513	3,338,224
Receipts from renting activities	7,936	-	7,936
Net cash and cash equivalents provided by investing activities	1,191,647	2,154,513	3,346,160
<b>Net (Decrease) Increase in Cash and Cash Equivalents</b>	(16,279,502)	74,039,966	57,760,464
<b>Cash and Cash Equivalents - Beginning of year</b>	113,128,325	86,424,211	199,552,536
<b>Cash and Cash Equivalents - End of year</b>	<b>\$ 96,848,823</b>	<b>\$ 160,464,177</b>	<b>\$ 257,313,000</b>
<b>Classification of Cash and Cash Equivalents</b>			
Cash and investments	\$ 72,739,306	\$ 58,748,162	\$ 131,487,468
Restricted cash	24,109,517	101,716,015	125,825,532
<b>Total cash and cash equivalents</b>	<b>\$ 96,848,823</b>	<b>\$ 160,464,177</b>	<b>\$ 257,313,000</b>

# City of Detroit Water and Sewerage Department

## Statement of Cash Flows (Continued)

Year Ended June 30, 2019

	Water Fund	Sewage Disposal Fund	Total
<b>Reconciliation of Operating Income to Net Cash and Cash Equivalents from Operating Activities</b>			
Operating income	\$ 19,369,771	\$ 22,579,165	\$ 41,948,936
Adjustments to reconcile operating income to net cash and cash equivalents from operating activities:			
Depreciation and amortization	16,972,456	11,980,373	28,952,829
Changes in assets and liabilities:			
Receivables	(1,021,827)	(4,972,520)	(5,994,347)
Due to and from other funds	(3,456,135)	3,456,135	-
Due to and from city funds	(6,056,410)	9,332,872	3,276,462
Inventory	(514,708)	5,208	(509,500)
Prepaid and other assets	407,720	39,348	447,068
Accrued liabilities and other	(8,294,864)	(12,540,469)	(20,835,333)
Accounts payable	2,030,722	(2,259,009)	(228,287)
Estimated claims liability	2,952,801	(6,689,600)	(3,736,799)
Pension and OPEB, including related deferred inflows and outflows	(12,328,001)	(8,610,695)	(20,938,696)
Deposits	4,318,232	-	4,318,232
Changes to assets and liabilities with GLWA	16,361,619	24,010,760	40,372,379
Other	442,132	(570,514)	(128,382)
Total adjustments	<u>11,813,737</u>	<u>13,181,889</u>	<u>24,995,626</u>
Net cash and cash equivalents provided by operating activities	<u><b>\$ 31,183,508</b></u>	<u><b>\$ 35,761,054</b></u>	<u><b>\$ 66,944,562</b></u>
<b>Significant Noncash Transactions</b>			
Conversion of payable to shortfall loan from GLWA (Note 6)	\$ -	\$ 53,413,034	\$ 53,413,034
Recharacterization of debt to Advance from the City of Detroit, Michigan General Fund (Note 6)	8,294,673	13,824,447	22,119,120

June 30, 2019

### 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/departments/water-and-sewerage-department](http://www.detroitmi.gov/departments/water-and-sewerage-department).

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, and budget, and to establish new rates and charges; determine its treasury and cash management, asset management, and deferred compensation; be independent 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 and maintain 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 operations 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. In the event there are any remaining monies, a reconciliation is performed, and, upon finalization of the reconciliation, a transfer of funds occurs to the improvement and extension funds.

**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) applicable to governmental units. Accounting and financial reporting pronouncements are promulgated by the Governmental Accounting Standards Board (GASB). 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 \$24,465,150 and \$82,990,697 in the Water Fund and Sewage Disposal Fund, respectively.

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

**Lease Receivable from Great Lakes Water Authority**

On 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 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 \$22,500,000 to the Water Fund and \$27,500,000 to the Sewage Disposal Fund. Interest is charged on the lease payments at an annual rate of 3.70 percent. The lease receivable is recorded as the present value of all future lease payments.

The current portion of the lease receivable represents the 12 monthly payments required from July 1, 2019 through June 30, 2020.

**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.

**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 or total purchase 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:

	<u>Depreciable Life - Years</u>
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, 2019 was \$1,834,417 and \$41,958 for the Water Fund and Sewage Disposal Fund, respectively.

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.

June 30, 2019

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

#### 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.

#### Advances from the City of Detroit, Michigan General Fund

In 2018, the governing body of the City authorized the use of general funds for the full redemption of the Financial Recovery 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 Financial Recovery 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. At June 30, 2019, the outstanding amount advanced to the Department is \$7,014,036, of which \$2,630,264 is recorded in the Water Fund and \$4,383,772 is recorded in the Sewage Disposal Fund. Of the total amounts, \$300,585 and \$500,975 are classified as current liabilities in the Water Fund and Sewage Disposal Fund, respectively.

In 2019, the governing body of the City authorized the use of general funds for the partial redemption of the Financial Recovery Bonds, 2014 Series B(1) and B(2), including the proportionate amount allocated to the Department. The 2014 Series B(1) and B(2) debt was partially redeemed on April 15, 2019. The Department will repay the City of Detroit General Fund under the terms of the original amortization schedule for the Financial Recovery Bonds, 2014 Series B(1) and B(2), including an interest rate of 4 percent per year, with principal and interest due on June 30 each year and a final maturity date of June 30, 2033. The total amount advanced to the Department was \$22,119,120, of which \$8,294,673 is recorded in the Water Fund and \$13,824,447 is recorded in the Sewage Disposal Fund as noncurrent liabilities.

#### 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.

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

**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, such as pension and retiree healthcare 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 net position.

**Other Postemployment Benefits**

The City of Detroit, Michigan 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, 2019, the City of Detroit, Michigan allocated a net OPEB asset to the Water Fund and Sewage Disposal Fund in the amount of \$382 and \$639, respectively. The plan covers those retirees who retired on or before December 31, 2014.

**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.

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:

	<u>Outflows</u>	<u>Inflows</u>
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.

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

*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.

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 January 2017, the GASB issued Statement No. 84, *Fiduciary Activities*. This statement establishes criteria for identifying fiduciary activities of all state and local governments. An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. 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, 2020.

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

In June 2017, the GASB issued 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 previously were 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 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**

Cash and investments are reported on one line in the financial statements. The breakdown between deposits and investments is as follows:

	Water Fund	Sewage Disposal Fund	Total
Cash and cash equivalents - Unrestricted (deposits)	\$ 20,214,744	\$ 11,364,125	\$ 31,578,869
Investments - Unrestricted	52,524,562	47,384,037	99,908,599
Restricted cash and cash equivalents (deposits)	24,109,517	101,716,015	125,825,532
Total deposits and investments	<u>\$ 96,848,823</u>	<u>\$ 160,464,177</u>	<u>\$ 257,313,000</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 that matures not more than 270 days after the date of purchase; obligations of the State of Michigan or its political subdivisions that 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.

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

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's deposit policy for custodial credit risk minimizes the risk by using only financial institutions meeting pre-established criteria. At year end, the Department had \$98,892,207 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's policy for custodial credit risk minimizes the risk by using only financial institutions and brokers meeting pre-established criteria and holding all securities in the Department's name. As of June 30, 2019, 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.

***Credit Risk***

State law limits investments in commercial paper to the top two ratings issued by nationally recognized statistical rating organizations. The Department's investment policy minimizes the risk by limiting investments to the safest types of securities, prequalifying the financial institutions, broker/deals, and intermediaries with which the Department will do business, and diversifying the portfolio so that the potential losses on individual securities will be minimized. As of year end, the credit quality ratings of debt securities are as follows:

Investment	Carrying Value	Rating	Rating Organization
Bank investment pool - Comerica J Fund*	\$ 96,772,385	Not rated	
Bank investment pool - First American Government Obligation Fund*	3,136,214	AAAm	S&P
Total	<u>\$ 99,908,599</u>		

\*Investments are valued at amortized cost rather than fair value.

**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, 2019, restricted assets are as follows:

Description	Water Fund	Sewage Disposal Fund	Total
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	1,334,862	-	1,334,862
Unspent bond proceeds	20,774,655	96,216,015	116,990,670
Total	<u>\$ 24,109,517</u>	<u>\$ 101,716,015</u>	<u>\$ 125,825,532</u>

**Note 4 - Receivable from Great Lakes Water Authority**

The following is the detail of the receivable from Great Lakes Water Authority:

	Water Fund	Sewage Disposal Fund
Accounts receivable	\$ 8,077,335	\$ 8,801,224
Cash held with Great Lakes Water Authority	2,679,355	627,926
Lease receivable (Note 1)	446,984,447	546,314,323
Receivable for financial recovery bonds (Notes 1 and 6)	17,097,709	38,458,175
Less current portion of receivable from Great Lakes Water Authority	<u>(16,976,196)</u>	<u>(17,211,725)</u>
Noncurrent receivable from Great Lakes Water Authority	<u>\$ 457,862,650</u>	<u>\$ 576,989,923</u>

# City of Detroit Water and Sewerage Department

## Notes to Financial Statements

June 30, 2019

### Note 5 - Capital Assets

Capital asset activity of the Department for the year ended June 30, 2019 was as follows:

	Balance July 1, 2018	Reclassifications and Adjustments	Additions	Disposals	Balance June 30, 2019
<b>Water Fund</b>					
Capital assets not being depreciated:					
Land and land rights	\$ 1,327,637	\$ -	\$ -	\$ -	\$ 1,327,637
Construction in progress	18,657,203	(21,973,437)	42,424,889	-	39,108,655
Subtotal	19,984,840	(21,973,437)	42,424,889	-	40,436,292
Capital assets being depreciated:					
Mains	518,035,804	16,280,541	-	-	534,316,345
Buildings and structures	55,525,458	282	-	-	55,525,740
Machinery, equipment, and fixtures	87,282,652	4,301,552	-	(8,284,650)	83,299,554
Land improvements	4,791,365	51,834	-	-	4,843,199
Services	48,981,409	1,864,397	-	-	50,845,806
Meters	127,829,322	823,320	-	-	128,652,642
Subtotal	842,446,010	23,321,926	-	(8,284,650)	857,483,286
Accumulated depreciation:					
Mains	140,681,101	-	7,344,153	-	148,025,254
Buildings and structures	42,738,795	-	604,392	-	43,343,187
Machinery, equipment, and fixtures	46,708,683	1,136,567	3,666,569	(6,955,390)	44,556,429
Land improvements	1,167,870	-	63,922	-	1,231,792
Services	30,694,332	-	517,916	-	31,212,248
Meters	74,530,943	-	4,775,504	-	79,306,447
Subtotal	336,521,724	1,136,567	16,972,456	(6,955,390)	347,675,357
Net capital assets being depreciated	505,924,286	22,185,359	(16,972,456)	(1,329,260)	509,807,929
Net Water Fund capital assets	525,909,126	211,922	25,452,433	(1,329,260)	550,244,221

June 30, 2019

**Note 5 - Capital Assets (Continued)**

	Balance July 1, 2018	Reclassifications and Adjustments	Additions	Disposals	Balance June 30, 2019
<b>Sewage Disposal Fund</b>					
Capital assets not being depreciated:					
Land and land rights	\$ 72,326	\$ -	\$ -	\$ -	\$ 72,326
Construction in progress	20,124,349	(4,834,162)	42,241,794	-	57,531,981
Subtotal	20,196,675	(4,834,162)	42,241,794	-	57,604,307
Capital assets being depreciated:					
Sewer lines and laterals	400,529,019	(1,132,902)	-	-	399,396,117
Buildings and structures	108,387,117	138	-	-	108,387,255
Machinery, equipment, and fixtures	107,270,225	261,066	-	(5,151,601)	102,379,690
Land improvements	8,980,887	1,486,357	-	-	10,467,244
Subtotal	625,167,248	614,659	-	(5,151,601)	620,630,306
Accumulated depreciation:					
Sewer lines and laterals	45,363,498	-	3,936,134	-	49,299,632
Buildings and structures	50,705,688	-	3,132,895	-	53,838,583
Machinery, equipment, and fixtures	55,919,220	(1,136,565)	4,807,966	(4,384,111)	55,206,510
Land improvements	1,393,804	-	103,378	-	1,497,182
Subtotal	153,382,210	(1,136,565)	11,980,373	(4,384,111)	159,841,907
Net capital assets being depreciated	471,785,038	1,751,224	(11,980,373)	(767,490)	460,788,399
Net Sewage Disposal Fund capital assets	491,981,713	(3,082,938)	30,261,421	(767,490)	518,392,706
Net department capital assets	<u>\$ 1,017,890,839</u>	<u>\$ (2,871,016)</u>	<u>\$ 55,713,854</u>	<u>\$ (2,096,750)</u>	<u>\$ 1,068,636,927</u>

**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 lease payments from the Great Lakes Water Authority 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, 2019 was approximately \$103 million and \$51 million for the Water Fund and Sewage Disposal Fund, respectively.

# City of Detroit Water and Sewerage Department

## Notes to Financial Statements

June 30, 2019

### Note 6 - Long-term Debt

Long-term debt activity of the Department for the year ended June 30, 2019 is summarized as follows:

#### Water Fund

	Interest Rate Ranges	Principal Maturity Ranges	Balance June 30, 2018	Additions	Reductions	Balance June 30, 2019	Due within One Year
Obligations payable and long-term debt:							
Direct borrowings and direct placements:							
State revolving loans	2.5%	\$95,000 - 384,000	\$ 8,263,623	\$ 5,855,865	\$ (316,620)	\$ 13,802,868	\$ 365,900
Revenue bonds	5%	\$3,205,000 - 7,260,000	50,740,000	-	-	50,740,000	-
Advances from the City of Detroit, Michigan General Fund	4-5%	\$300,585 - 1,237,600	2,916,535	8,294,673	(286,271)	10,924,937	300,585
Obligation payable to GLWA	4.76%	\$13,820,900 - 31,918,900	425,333,500	-	(13,192,900)	412,140,600	13,820,900
Total principal outstanding on direct borrowings and direct placements			487,253,658	14,150,538	(13,795,791)	487,608,405	14,487,385
Other debt - Financial recovery bonds	4-6%	\$1,327,004	26,540,079	-	(8,294,673)	18,245,406	-
Total principal outstanding on obligations payable and long-term debt			513,793,737	14,150,538	(22,090,464)	505,853,811	14,487,385
Unamortized bond premiums on revenue bonds			6,262,406	-	(135,787)	6,126,619	141,568
Total obligations payable and long-term debt			520,056,143	14,150,538	(22,226,251)	511,980,430	14,628,953
Compensated absences			1,675,525	797,759	(929,079)	1,544,205	393,433
Workers' compensation and general claims			6,888,199	2,504,291	(883,490)	8,509,000	793,000
Total long-term obligations			<u>\$ 528,619,867</u>	<u>\$ 17,452,588</u>	<u>\$ (24,038,820)</u>	<u>\$ 522,033,635</u>	<u>\$ 15,815,386</u>

June 30, 2019

**Note 6 - Long-term Debt (Continued)**

***Sewage Disposal Fund***

	Interest Rate Ranges	Principal Maturity Ranges	Balance June 30, 2018	Additions	Reductions	Balance June 30, 2019	Due within One Year
Obligations payable and long-term debt:							
Direct borrowings and direct placements:							
Revenue bonds	3-5%	\$1,370,000 - 5,125,000	\$ -	\$ 81,595,000	\$ -	\$ 81,595,000	\$ -
Advances from the City of Detroit, Michigan General Fund	4-5%	\$500,975 - 2,062,700	4,860,891	13,824,447	(477,119)	18,208,219	500,975
Obligation payable to GLWA	4.33%	\$11,741,100 - 25,181,700	346,828,300	-	(11,253,800)	335,574,500	11,741,100
Shortfall payable to GLWA	3.2-4.1%	\$1,570,143	-	53,413,034	(9,367,355)	44,045,679	17,542,669
Total principal outstanding on direct borrowings and direct placements			351,689,191	148,832,481	(21,098,274)	479,423,398	29,784,744
Other debt - Financial recovery bonds	4-6%	\$2,211,673	44,233,460	-	(13,824,447)	30,409,013	-
Total principal outstanding on obligations payable and long-term debt			395,922,651	148,832,481	(34,922,721)	509,832,411	29,784,744
Unamortized bond premiums			-	9,936,771	(249,539)	9,687,232	348,679
Total obligations payable and long-term debt			395,922,651	158,769,252	(35,172,260)	519,519,643	30,133,423
Compensated absences			2,513,288	2,483,475	(1,393,619)	3,603,144	918,010
Workers' compensation and general claims			13,606,600	5,190,000	(12,474,600)	6,322,000	208,000
Total long-term obligations			<u>\$ 412,042,539</u>	<u>\$ 166,442,727</u>	<u>\$ (49,040,479)</u>	<u>\$ 529,444,787</u>	<u>\$ 31,259,433</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 (WSSA) 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.

**Note 6 - Long-term Debt (Continued)**

***Shortfall Payable to GLWA***

On June 27, 2018, DWSD and GLWA executed a Memorandum of Understanding (MOU), which outlined the requirements for the reconciliation committee (originally defined by the WSSA) to meet quarterly to "expand the level of communication between the two entities related to financial, operational, legal, capital planning, and other matters and opportunities for improved management and coordination of both entities and foster a positive relationship in the water services sector." The MOU further describes a specific function of the Reconciliation Committee to address any "cumulative negative variance of more than two percent of the total budget for either GLWA or DWSD.

For the years ended June 30, 2018 and 2017, GLWA reported a negative variance (receipts less than costs, as described in Note 1) for DWSD's Sewage Disposal Fund, which exceeded the 2 percent variance threshold. Based on the terms outlined in the MOU, a budget shortfall not cured by the end of the fiscal year (following the year in which they arise) shall be repaid in full, in installments over a period not to exceed three fiscal years, with a surcharge based on the three-year U.S. Treasury note rate plus 150 basis points. DWSD recorded a shortfall loan payable of \$53,413,034 for the cumulative 2018 and 2017 negative variance reported by GLWA as a result of this agreement.

***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.

In 2019, the governing body of the City of Detroit, Michigan authorized the use of general funds for the partial redemption of the Financial Recovery Bonds, 2014 Series B(1) and B(2), including the proportionate amount allocated to the Department. The 2014 Series B(1) and B(2) debt was partially redeemed on April 15, 2019. As discussed in Note 1 to the financial statements, the Department will repay the City of Detroit, Michigan General Fund under the terms of the original amortization schedule for the Financial Recovery Bonds, 2014 Series B(1) and B(2), including an interest rate of 4 percent per year, with principal and interest due on June 30 each year and a final maturity date of June 30, 2033. The Department has recorded an advance from the City of Detroit, Michigan General Fund for the remaining 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.

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 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.

**Note 6 - Long-term Debt (Continued)**

In 2018, the governing body of the City of Detroit, Michigan authorized the use of general funds for the full redemption of the Financial Recovery 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, Michigan General Fund under the terms of the original amortization schedule for the Financial Recovery 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, Michigan General Fund for the remaining 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**

In 2019, DWSD received \$91,531,771 in proceeds from the issuance of the Sewage Disposal System Revenue Senior Lien Bonds, Series 2018A by GLWA on behalf of DWSD. Proceeds from revenue bonds provide financing for improvements to the local water and sewer systems. All bonds are secured by the net revenue of GLWA and 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 outstanding revenue bonds will commence on July 1, 2021.

Water Fund 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 Water Fund revenue bonds will commence on July 1, 2042. Interest-only payments are made semiannually until July 1, 2042, at which time principal payments will commence.

**State Revolving Fund Loans**

The Department (Water Fund) received loans from the State of Michigan Revolving Loan Fund totaling \$5,855,865 during the year ended June 30, 2019. 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.

**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 June 30	Water Fund (Direct Borrowings and Placements)			Water Fund (Other Debt)		
	Principal	Interest	Total	Principal	Interest	Total
2020	\$ 14,487,385	\$ 22,953,199	\$ 37,440,584	\$ -	\$ -	\$ -
2021	15,170,314	22,280,794	37,451,108	-	-	-
2022	15,888,395	21,566,478	37,454,873	-	-	-
2023	16,635,065	20,818,246	37,453,311	-	-	-
2024	17,416,863	20,034,683	37,451,546	-	-	-
2025-2029	105,249,426	86,609,574	191,859,000	-	-	-
2030-2034	125,593,089	60,116,005	185,709,094	4,975,367	2,654,008	7,629,375
2035-2039	122,042,300	27,968,596	150,010,896	6,635,020	3,184,809	9,819,829
2040-2044	21,967,743	12,153,048	34,120,791	6,635,019	1,194,303	7,829,322
2045-2049	33,157,825	2,515,648	35,673,473	-	-	-
Total	\$ 487,608,405	\$ 297,016,271	\$ 784,624,676	\$ 18,245,406	\$ 7,033,120	\$ 25,278,526

June 30, 2019

**Note 6 - Long-term Debt (Continued)**

Years Ending June 30	Sewage Disposal Fund (Direct Borrowings and Placements)			Sewage Disposal Fund (Other Debt)		
	Principal	Interest	Total	Principal	Interest	Total
2020	\$ 29,784,744	\$ 21,589,658	\$ 51,374,402	\$ -	\$ -	\$ -
2021	32,351,955	19,392,102	51,744,057	-	-	-
2022	23,043,803	18,296,185	41,339,988	-	-	-
2023	15,378,241	17,512,650	32,890,891	-	-	-
2024	16,049,538	16,846,453	32,895,991	-	-	-
2025-2029	99,830,932	72,219,049	172,049,981	-	-	-
2030-2034	112,522,984	49,212,620	161,735,604	8,292,283	3,538,677	11,830,960
2035-2039	108,921,200	22,702,025	131,623,225	11,058,365	5,308,015	16,366,380
2040-2044	18,250,000	8,192,500	26,442,500	11,058,365	1,990,505	13,048,870
2045-2049	23,290,001	3,025,000	26,315,001	-	-	-
<b>Total</b>	<b>\$ 479,423,398</b>	<b>\$ 248,988,242</b>	<b>\$ 728,411,640</b>	<b>\$ 30,409,013</b>	<b>\$ 10,837,197</b>	<b>\$ 41,246,210</b>

**Note 7 - 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, 2019.

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 8 - 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 and life insurance benefits provided to employees. The Department is self-insured for losses, such as health, dental, workers' compensation, legal, disability benefits, and vehicular liabilities.

The Department, through the City, provides health and dental insurance benefits to employees 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.

**Note 8 - Risk Management (Continued)**

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 public official liability 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	
	2019	2018	2019	2018
Estimated liability - Beginning of year	\$ 6,888,199	\$ 3,664,610	\$ 13,606,600	\$ 15,789,783
Estimated claims incurred, including changes in estimates	2,504,291	4,765,346	(6,988,400)	(2,019,444)
Claim payments, including changes in estimates	(883,490)	(1,541,757)	(296,200)	(163,739)
Estimated liability - End of year	<u>\$ 8,509,000</u>	<u>\$ 6,888,199</u>	<u>\$ 6,322,000</u>	<u>\$ 13,606,600</u>

**Note 9 - 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, Ally 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 is known as the "legacy plan" or "Component II."

June 30, 2019

### Note 9 - Pension Plans (Continued)

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 for 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.

*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; 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 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 triparty agreement between the City, 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 was to determine 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 representing 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 as of June 30, 2014 and does not have any obligation for a share of DWSD service costs after that time. 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 recovery of \$16,600,103 is recognized by the Department as a contra revenue.

**Note 9 - Pension Plans (Continued)**

***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 System or the City as of the measurement date of June 30, 2018 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.

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.

**Note 9 - Pension Plans (Continued)**

- 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.

**Employer Contributions**

*Component II*

The Department made contributions of \$12,741,300 to the System for the fiscal year ended June 30, 2019.

*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, 2019, the Department contributed \$1,329,961 to the Component I plan.

**Note 9 - Pension Plans (Continued)**

**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, 2019, 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, 2019, the Department's employees contributed \$1,762,867 in mandatory and voluntary contributions.

**Net Pension Liability**

As permitted by GASB Statement No. 68, the Department has chosen to use June 30, 2018 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, 2018. The June 30, 2018 total pension liability was determined by an actuarial valuation performed as of June 30, 2017, which used updated procedures to roll forward the estimated liability to June 30, 2018. At June 30, 2019, 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 net pension liability	June 30, 2018	June 30, 2018
Based on a comprehensive actuarial valuation as of	June 30, 2017	June 30, 2017
		<u>Net Pension Liability</u>
Component II		\$ 55,758,757
Component I		<u>612,168</u>
Total		<u>\$ 56,370,925</u>

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

For the year ended June 30, 2019, the Department recognized a pension recovery of \$23,612,266 for Component II and pension expense of \$136,306 for Component I.

At June 30, 2019, the Department reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Water Fund</u>		<u>Sewage Disposal Fund</u>	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ -	\$ (1,856,359)	\$ -	\$ (2,638,458)
Changes in assumptions	259,261	(335,937)	368,489	(477,469)
Net difference between projected and actual earnings on pension plan investments	41,153	-	-	(306,537)
Employer contributions to the plan subsequent to the measurement date	<u>8,185,474</u>	<u>-</u>	<u>5,885,787</u>	<u>-</u>
Total	<u>\$ 8,485,888</u>	<u>\$ (2,192,296)</u>	<u>\$ 6,254,276</u>	<u>\$ (3,422,464)</u>

**Note 9 - Pension Plans (Continued)**

From the above table, the Department reported \$14,071,261 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, 2020.

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
2020	\$ 296,310	\$ (404,863)
2021	(212,037)	(753,881)
2022	(1,547,483)	(1,478,326)
2023	(386,769)	(357,346)
2024	(41,903)	(59,559)
Total	<u>\$ (1,891,882)</u>	<u>\$ (3,053,975)</u>

**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
Salary increases (including inflation)	N/A	2.0-3.0%
Investment rate of return (net of investment expenses)	7.38%	7.38%

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, 2017 valuation to calculate the total pension liability as of June 30, 2018, were based on the results of an actuarial experience study for the period from 2002 to 2007.

**Discount Rate**

The discount rate used to measure the total pension liability as of June 30, 2018 was 7.38 percent for both Components I and II; however, the single discount rate used at the beginning of the year was 6.91 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.

**Note 9 - Pension Plans (Continued)**

**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 of 2.50 percent) 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, 2018 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 Expected Real Rate of Return
Global equity	43.00 %	5.23 %
Global fixed income	19.00	3.04
Real estate	10.00	4.46
Private equity	8.00	7.18
Hedge funds	5.00	4.09
Global asset allocation/risk parity/real assets	14.00	4.30
Cash	1.00	0.25

**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 7.38 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 Decrease (6.38%)	Current Discount Rate (7.38%)	1 Percent Increase (8.38%)
Net pension liability - Water Fund	\$ 44,118,313	\$ 33,670,532	\$ 24,802,197
Net pension liability - Sewage Disposal Fund	29,703,419	22,700,393	16,698,509
Total	<u>\$ 73,821,732</u>	<u>\$ 56,370,925</u>	<u>\$ 41,500,706</u>

---

## Required Supplemental Information

---

# City of Detroit Water and Sewerage Department

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

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

	2018	2017	2016*	2015	2014
<b>Total Pension Liability</b>					
Service cost	\$ -	\$ -	\$ -	\$ -	\$ 9,746,003
Interest	15,452,925	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	(135,450)	1,000,921	(2,139,381)	(607,587)	-
Changes in assumptions	(9,017,883)	6,401,809	7,447,135	(28,150,723)	(74,737,651)
Benefit payments, including refunds	(20,023,732)	(21,580,612)	(29,420,988)	(77,231,357)	(98,853,724)
<b>Net Change in Total Pension Liability</b>	(13,724,140)	1,803,956	(7,053,002)	(249,623,661)	(124,772,750)
<b>Total Pension Liability - Beginning of year</b>	233,643,204	231,839,248	238,892,250	1,053,974,670	1,178,747,420
<b>Total Pension Liability - End of year</b>	<b>\$ 219,919,064</b>	<b>\$ 233,643,204</b>	<b>\$ 231,839,248</b>	<b>\$ 804,351,009</b>	<b>\$ 1,053,974,670</b>
<b>Plan Fiduciary Net Position</b>					
Contributions - Employer	\$ 12,741,300	\$ 12,741,300	\$ 12,741,300	\$ 42,888,889	\$ 21,491,022
Contributions - Member	-	-	-	186,274	3,335,706
Net investment income (loss)	12,820,925	16,397,207	(917,059)	24,580,775	102,177,233
Administrative expenses	-	-	-	(30,290)	(3,416,015)
Benefit payments, including refunds	(20,023,732)	(21,580,612)	(29,420,988)	(77,231,357)	(98,853,724)
Other	585,561	631,198	469,357	39,485,858	-
<b>Net Change in Plan Fiduciary Net Position</b>	6,124,054	8,189,093	(17,127,390)	29,880,149	24,734,222
<b>Plan Fiduciary Net Position - Beginning of year</b>	158,036,253	149,847,160	166,974,550	532,323,722	507,589,500
<b>Plan Fiduciary Net Position - End of year</b>	<b>\$ 164,160,307</b>	<b>\$ 158,036,253</b>	<b>\$ 149,847,160</b>	<b>\$ 562,203,871</b>	<b>\$ 532,323,722</b>
<b>Department's Net Pension Liability - Ending</b>	<b>\$ 55,758,757</b>	<b>\$ 75,606,951</b>	<b>\$ 81,992,088</b>	<b>\$ 242,147,138</b>	<b>\$ 521,650,948</b>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	74.65 %	67.64 %	64.63 %	69.90 %	50.51 %
<b>Covered Payroll</b>	\$ 22,726,143	\$ 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>	245.35 %	330.68 %	142.33 %	398.39 %	804.58 %

\*As described in Note 9, 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 fiscal year 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 Four Fiscal Years (Based on Measurement Date)			
	2018	2017	2016	2015
<b>Total Pension Liability</b>				
Service cost	\$ 2,438,165	\$ 4,535,838	\$ 5,556,742	\$ 5,853,312
Interest	1,089,198	986,953	704,400	210,719
Differences between expected and actual experience	(2,555,229)	(3,118,495)	(1,577,654)	-
Changes in assumptions	(855,251)	583,770	521,263	(352,686)
Benefit payments, including refunds	(463,955)	(375,730)	(1,827,192)	-
Voluntary member contributions	689,984	585,787	1,085,989	1,662,483
<b>Net Change in Total Pension Liability</b>	342,912	3,198,123	4,463,548	7,373,828
<b>Total Pension Liability - Beginning of year</b>	15,035,499	11,837,376	7,373,828	-
<b>Total Pension Liability - End of year</b>	<b>\$ 15,378,411</b>	<b>\$ 15,035,499</b>	<b>\$ 11,837,376</b>	<b>\$ 7,373,828</b>
<b>Plan Fiduciary Net Position</b>				
Contributions - Employer	\$ 1,328,993	\$ 1,012,219	\$ 1,884,087	\$ 2,596,022
Contributions - Member	993,710	838,418	1,529,722	2,103,576
Net investment income (loss)	1,524,214	1,903,831	(33,400)	6,011
Administrative expenses	(382,260)	(375,730)	(912,491)	(436,927)
Benefit payments, including refunds	(463,955)	(557,335)	(1,827,192)	-
Voluntary member contributions	689,984	585,787	1,085,989	1,662,483
Other	-	13,057	(2,570)	-
<b>Net Change in Plan Fiduciary Net Position</b>	3,690,686	3,420,247	1,724,145	5,931,165
<b>Plan Fiduciary Net Position - Beginning of year</b>	11,075,557	7,655,310	5,931,165	-
<b>Plan Fiduciary Net Position - End of year</b>	<b>\$ 14,766,243</b>	<b>\$ 11,075,557</b>	<b>\$ 7,655,310</b>	<b>\$ 5,931,165</b>
<b>Department's Net Pension Liability - Ending</b>	<b>\$ 612,168</b>	<b>\$ 3,959,942</b>	<b>\$ 4,182,066</b>	<b>\$ 1,442,663</b>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	96.02 %	73.66 %	64.67 %	80.44 %
<b>Covered Payroll</b>	\$ 22,726,143	\$ 22,864,010	\$ 57,607,917	\$ 60,782,192
<b>Department's Net Pension Liability as a Percentage of Covered Payroll</b>	2.69 %	17.32 %	7.26 %	2.37 %

GASB Statement No. 67 was implemented for fiscal year 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**

	2019*	2018*	2017*	2016*	2015	2014	2013	2012	2011	2010
Actuarially required contribution	\$ 12,741,300	\$ 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
Contributions in relation to the actuarially required contribution	12,741,300	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
<b>Contribution (Excess) Deficiency</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>Department's Covered Payroll</b>	<b>\$ 22,726,143</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>Contributions as a Percentage of Covered Payroll</b>	<b>56.06 %</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>

\*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 Five Fiscal Years Years Ended June 30</b>				
	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Contractually determined contribution	\$ 1,329,961	\$ 1,328,993	\$ 1,012,219	\$ 1,884,087	\$ 2,596,022
Contributions in relation to the contractually determined contribution	<u>1,329,961</u>	<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><u>\$ -</u></b>
<b>Covered Payroll</b>	\$ 22,726,143	\$ 22,864,010	\$ 41,216,957	\$ 57,607,917	\$ 60,782,192
<b>Contributions as a Percentage of Covered Payroll</b>	5.85 %	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 to 7.2 percent, updating the mortality tables from the RP-2000 Combined Table to RP-2014 Blue Collar Mortality Table, and adjustments for longevity and unused sick leave were eliminated.

*Components II and I*

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

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

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

In 2018, amounts reported as changes of assumptions resulted from adjustment of the discount rate from 6.91 to 7.38 percent.