OHIO WATER
DEVELOPMENT AUTHORITY

Financial Statements

December 31, 2018

(With Independent Auditors' Report Thereon)

OHIO AUDITOR OF STATE
KEITH FABER

Board of Directors
Ohio Water Development Authority
408 South High Street
Columbus, Ohio 43215

We have reviewed the *Independent Auditor's Report* of the Ohio Water Development Authority, Franklin County, prepared by Clark, Schaefer, Hackett & Co., for the audit period January 1, 2018 through December 31, 2018. Based upon this review, we have accepted these reports in lieu of the audit required by Section 117.11, Revised Code. The Auditor of State did not audit the accompanying financial statements and, accordingly, we are unable to express, and do not express an opinion on them.

Our review was made in reference to the applicable sections of legislative criteria, as reflected by the Ohio Constitution, and the Revised Code, policies, procedures and guidelines of the Auditor of State, regulations and grant requirements. The Ohio Water Development Authority is responsible for compliance with these laws and regulations.

Keith Faber
Auditor of State
Columbus, Ohio

April 16, 2019

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OHIO WATER DEVELOPMENT AUTHORITY

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INDEPENDENT AUDITORS' REPORT

Ohio Water Development Authority
408 South High Street
Columbus, Ohio 43215

Report on the Financial Statements
We have audited the accompanying financial statements of the business-type activities and each major fund of the Ohio Water Development Authority (the Authority) as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the Authority's 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.

Auditors' Responsibility
Our responsibility is to express opinions 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 of 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 auditors' 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 opinions.

Opinions
In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and each major fund of the Ohio Water Development Authority, as of December 31, 2018, and the respective changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Change in Accounting Principle
During the year ended December 31, 2018, the Authority adopted GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefit Plans Other than Pensions. As a result of the implementation of GASB Statement No. 75, the Authority restated net position at January 1, 2018 for the change in accounting principle (See Note 4). Our auditors' opinion was not modified with respect to this matter.

Other Matters

Required Supplementary Information
Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (pages 3 through 7), schedule of proportionate share of the net pension liability (page 61), schedule of pension contributions (page 62), schedule of proportionate share of net OPEB liability (page 63), and schedule of OPEB contributions (page 64) 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 who 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 supplementary 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.

Other Reporting Required by *Government Auditing Standards*
In accordance with *Government Auditing Standards*, we have also issued our report dated March 25, 2019, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and 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 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 Authority's internal control over financial reporting and compliance.

Clark, Schaefer, Hackett & Co.

Springfield, Ohio
March 25, 2019

OHIO WATER DEVELOPMENT AUTHORITY

Management's Discussion and Analysis

For the Year Ended December 31, 2018

As management of the Ohio Water Development Authority (the Authority), a related organization of the State of Ohio, we offer readers of the Authority's financial statements this unaudited narrative overview and analysis of the financial activities of the Authority for the year ended December 31, 2018. We encourage readers to consider the information presented here in conjunction with the Authority's audited financial statements, which begin on page 8 of this report.

Financial Highlights

- The Authority's cash, cash equivalents and investments decreased by $519,471,267 or 28.14%.
- The Authority's loan receivables increased by $511,347,134 or 7.91%.
- The Authority's bonds and notes payable decreased by $177,972,902 or 4.40%.
- The Authority's investment income increased by $14,775,283 or 118.47%.
- The Authority's interest on bonds and notes increased by $5,654,647 or 4.80%.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Authority's basic financial statements. The Authority's basic financial statements comprise two components: 1) combining financial statements and 2) notes to financial statements.

Combining financial statements. The Authority follows proprietary fund accounting, which means these statements are presented in a manner similar to a private-sector business. The *combining financial statements* are designed to provide readers with a broad overview of the Authority's finances by fund and in total. A *fund* is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The Authority, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. These statements offer short and long-term financial information about its activities.

The *combining statement of net position* presents information on all of the Authority's assets, deferred outflows of resources, liabilities and deferred inflows of resources, including information about the nature and amounts of investments in resources (assets and deferred outflows of resources), the obligations (liabilities and deferred inflows of resources) of the Authority and the Authority's net position as of December 31, 2018. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority is improving or deteriorating.

The *combining statement of revenues, expenses and changes in net position* presents information showing how the Authority's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e.g., depreciation and earned but unused vacation leave).

The *combining statement of cash flows* provides information about the Authority's cash receipts and cash payments during the reporting period. This statement summarizes the net changes in cash resulting from operating, investing and noncapital financing activities.

Each of the combining financial statements highlight programs of the Authority that are principally supported by loan and investment income, programs that are intended to recover all or a significant portion of their costs through program fees or investment earnings on contributed capital (*business-type activities*). The combining financial statements can be found on pages 8-13 of this report.

Notes to financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the combining financial statements. The notes to financial statements can be found on pages 14-60 of this report.

Financial Analysis of the Authority's Financial Position and Results of Operations

The tables below provide a summary of the Authority's financial position and operations for 2018 and 2017, respectively.

The following table summarizes changes in net position of the Authority between December 31, 2018 and December 31, 2017, as restated:

Condensed Statement of Net Position, as restated
(all amounts expressed in thousands of dollars)

	2018	2017	Dollar Change	Total Percent Change
Current assets	$70,968	$35,447	$35,521	100.21%
Noncurrent restricted assets	8,000,499	8,044,749	(44,250)	(0.55%)
Noncurrent unrestricted assets	228,307	227,858	449	0.20%
Capital assets	1,090	1,173	(83)	(7.08%)
Total assets	8,300,864	8,309,227	(8,363)	(0.10%)
Loss on refunding	36,578	47,251	(10,673)	(22.59%)
Advance of loan interest	72,219	73,888	(1,669)	(2.26%)
Pension and OPEB	448	755	(307)	(40.66%)
Total deferred outflows of resources	109,245	121,894	(12,649)	(10.38%)
Total assets and deferred outflows of resources	$8,410,109	$8,431,121	$(21,012)	(0.25%)
Current liabilities	393,147	$338,451	54,696	16.16%
Noncurrent revenue bonds and notes payable	3,648,456	3,841,644	(193,188)	(5.03%)
Other noncurrent liabilities	2,564	2,980	(416)	(13.96%)
Total liabilities	4,044,167	4,183,075	(138,908)	(3.32%)
Deferred inflows of resources:				
Pension and OPEB	424	83	341	410.84%
Net position:				
Net investment in capital assets	1,090	1,173	(83)	(7.08%)
Restricted	4,082,725	3,996,961	85,764	2.15%
Unrestricted	281,703	249,829	31,874	12.76%
Total net position	4,365,518	4,247,963	117,555	2.77%
Total liabilities, deferred inflows of resources and net position	$8,410,109	$8,431,121	$(21,012)	(0.25%)

As noted earlier, net position may serve as a useful indicator of a government's financial position. In the case of the Authority, assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by $4,365,518,302 as of December 31, 2018, $4,082,725,041 of which is restricted for debt and grant covenants.

By far, the largest portion of the Authority's net position is reflected in its loan receivables, cash, cash equivalents and investments less any related debt still outstanding used to fund these loans to local government agencies.

The following table summarizes the changes in revenues and expenses for the Authority between 2018 and 2017:

Condensed Statement of Revenues, Expenses and Changes in Net Position

(all amounts expressed in thousands of dollars)

	2018	2017	Dollar Change	Total Percent Change
Operating revenues:				
Loan income	$164,396	$164,026	$370	0.23%
Investment income	27,248	12,472	14,776	118.47%
Administrative fees from projects	5,884	4,736	1,148	24.24%
Total operating revenues	197,528	181,234	16,294	8.99%
Operating expenses:				
Payroll and benefits	2,202	2,325	(123)	(5.29%)
Interest on bonds and notes	123,347	117,692	5,655	4.80%
Bond and note issuance expense	6,129	8,954	(2,825)	(31.55%)
Loan principal forgiveness and grant expense	55,309	37,080	18,229	49.16%
State revolving fund administration	10,825	10,663	162	1.52%
Professional services	3,639	3,672	(33)	(0.90%)
Loan interest rate buy-down	12,096	13,709	(1,613)	(11.77%)
Other	375	425	(50)	(11.76%)
Total operating expenses	213,922	194,520	19,402	9.97%
Operating loss	(16,394)	(13,286)	(3,108)	(23.39%)
Nonoperating other revenues	12	5	7	140.00%
Contribution from U.S. EPA	123,570	99,427	24,143	24.28%
Federal subsidy income	10,367	10,331	36	0.35%
Change in net position	$117,555	$96,477	$21,078	21.85%

The two primary sources of operating revenue for the Authority are loan income and investment income, while the significant operating expense is interest on bonds and notes. For the year ending December 31, 2018, the Authority had an operating loss of $16,393,946 compared to an operating loss of $13,285,595 in 2017. This increase of $3,108,351 in operating loss was primarily attributed to a $5,654,647 increase in interest on bonds and notes and an $18,229,083 increase in loan principal forgiveness and grant expense, offset by a $14,775,283 increase in investment income.

During 2018, the Authority's net position increased by $117,554,966 or 2.77%. The majority of this increase was due to the following:

- $16,393,946 in operating loss as noted earlier.
- $123,569,735 in contribution from U.S. EPA which was used to make loans to local governments.
- $10,367,381 in Build America Bonds (BABs) subsidies (i.e., federal subsidy income) used to offset interest expense on bonds.

Financial Analysis of Net Position by Fund, as restated
(all amounts expressed in thousands of dollars)

	2018	2017	Dollar Change	Total Percent Change
Operating	$ 2,668	$ 2,482	$ 186	7.49%
Other Projects	278,719	246,505	32,214	13.07%
In Lieu Fee	1,408	952	456	47.90%
Community Assistance	125,244	126,611	(1,367)	(1.08%)
Fresh Water	627,112	640,296	(13,184)	(2.06%)
Water Pollution Control Loan	2,757,571	2,668,083	89,488	3.35%
Drinking Water Assistance	572,796	563,034	9,762	1.73%
Total Net Position	$ 4,365,518	$4,247,963	$117,555	2.77%

During 2018, net position by fund experienced the following significant changes:

- Operating Fund net position increased $186,637 or 7.49%. This increase was due primarily to administrative fees from projects due to high loan volume.
- Other Projects Fund net position increased $32,213,582 or 13.07%. This increase was caused by transfers into the Other Projects Fund from the Community Assistance and Fresh Water Funds in 2018.
- In-Lieu Fee Fund net position increased by $455,782 or 47.90%. This increase was primarily caused by the increase in investment income and administrative fees from projects due to higher activity.
- Water Pollution Control Loan Fund net position increased $89,487,881 or 3.35%. This increase was caused by the Contribution from U.S. EPA in 2018.

Debt Administration

As of December 31, 2018, the Authority had revenue bonds and notes principal outstanding of $3,868,624,124. The Authority's debt represents bonds and notes secured solely by loan repayments of pledged loans. The table below summarizes the amount of debt outstanding for 2018 and 2017.

Outstanding Debt at December 31, 2018 and December 31, 2017
(net of premiums)

(all amounts expressed in thousands of dollars)

	2018	2017
Revenue Bonds	$ 3,526,724	3,579,697
Revenue Notes	341,900	466,900
Total	$ 3,868,624	4,046,597

During 2018, the Authority issued the following bonds and notes for the purpose of providing loan funding to local governments under its various loan programs:

- Fresh Water Revenue Bonds—Fresh Water Series 2018
- Drinking Water Assistance Fund Revenue Notes—DWAF State Match Series 2018

The Authority continues to maintain strong ratings from Moody's and Standard & Poor's. Although the Drinking Water Assistance Fund Note was a private placement note and therefore not rated, we included the Drinking Water Assistance Fund long-term program ratings in the table below. The table below summarizes the ratings from Moody's and Standard & Poor's for the 2018 bond and note issuances of the Authority.

Bond or Note Series	Moody's	Standard & Poor's
FW 2018 Bonds	Aaa	AAA
DWAF 2018 Notes	Aaa	AAA

Additional information on the Authority's long-term debt can be found in the Notes to Financial Statements, pages 30-43 of this report.

Contacting the Authority's Financial Management

This financial report is designed to provide a general overview of the Authority's finances for all those with an interest. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the Chief Financial Officer, Ohio Water Development Authority, 480 S. High Street, Columbus, Ohio 43215, or call (614) 466-5822 or toll-free (877) OWDA-123, or visit the Authority's website at www.owda.org.

OHIO WATER DEVELOPMENT AUTHORITY

Combining Statement of Net Position

December 31, 2018

		Custodied Funds			Trusted Funds
Assets		Operating Fund	Other Projects Fund	In Lieu Fee Fund	Community Assistance Fund (Note 5)
Current assets:					
Cash and cash equivalents -- Note 2	$	300,677	5,052,466	6,131,300	-
Investments -- Note 2		1,452,033	47,561,269	3,997,150	-
Receivables:					
Loan and fee receivables		491,282	5,959,345	-	-
Other		21,557	-	-	-
Total current assets		2,265,549	58,573,080	10,128,450	-
Noncurrent assets:					
Restricted grant, bond and note covenant assets:					
Cash and cash equivalents -- Note 2		-	-	-	2,192,110
Investments -- Note 2		-	-	-	24,912,206
Loan and fee receivables		-	-	-	152,874,150
Total noncurrent restricted assets		-	-	-	179,978,466
Investments -- Note 2		1,802,684	123,373,735	2,983,558	-
Loan receivables		-	98,937,305	-	-
Other receivables		-	-	-	46,222
Due from other funds -- Note 3		325,894	15,000	-	-
Capital assets, at depreciated cost		1,090,370	-	-	-
Total noncurrent unrestricted assets		3,218,948	222,326,040	2,983,558	46,222
Total assets		5,484,497	280,899,120	13,112,008	180,024,688
Deferred Outflows of Resources					
Loss on refunding		-	-	-	1,435,704
Advance of loan interest		-	-	-	-
Pension and other postemployment benefits (OPEB)		448,135	-	-	-
Total deferred outflows of resources		448,135	-	-	1,435,704
Total assets and deferred outflows of resources	$	5,932,632	280,899,120	13,112,008	181,460,392
Liabilities					
Current liabilities:					
Accounts payable	$	261,060	2,179,960	11,703,932	-
Current liabilities payable from restricted assets:					
Due to other funds -- Note 3		15,000	-	-	-
Accounts payable		-	-	-	13,208
Accrued interest		-	-	-	226,563
Revenue bonds payable, net of premiums		-	-	-	4,214,003
Total current liabilities payable from restricted assets		15,000	-	-	4,453,774
Noncurrent liabilities:					
Compensated absences		228,218	-	-	-
Net pension and OPEB liability		2,336,170	-	-	-
Revenue bonds and notes payable, net of premiums		-	-	-	51,762,804
Total noncurrent liabilities		2,564,388	-	-	51,762,804
Total liabilities		2,840,448	2,179,960	11,703,932	56,216,578
Deferred Inflows of Resources					
Pension and OPEB		423,733	-	-	-
Net Position					
Net investment in capital assets		1,090,370	-	-	-
Restricted for debt and grant covenants		-	-	1,408,076	125,243,814
Unrestricted		1,578,081	278,719,160	-	-
Total net position		2,668,451	278,719,160	1,408,076	125,243,814
Total liabilities, deferred inflows of resources and net position	$	5,932,632	280,899,120	13,112,008	181,460,392

See accompanying notes to financial statements.

Trusteed Funds			
Fresh Water Fund (Note 6)	Water Pollution Control Loan Fund (Notes 7 & 8)	Drinking Water Assistance Fund (Notes 9 & 10)	Total Combining 2018
-	-	-	11,484,443
-	-	-	53,010,452
-	-	-	6,450,627
-	-	-	21,557
-	-	-	70,967,079
21,300,373	116,588,985	28,093,722	168,175,190
161,858,910	658,262,579	120,774,690	965,808,385
1,470,895,499	4,510,896,441	731,849,723	6,866,515,813
1,654,054,782	5,285,748,005	880,718,135	8,000,499,388
-	-	-	128,159,977
-	-	-	98,937,305
190,936	564,116	67,566	868,840
-	-	-	340,894
-	-	-	1,090,370
190,936	564,116	67,566	229,397,386
1,654,245,718	5,286,312,121	880,785,701	8,300,863,853
9,434,718	20,223,845	5,484,112	36,578,379
-	72,218,639	-	72,218,639
-	-	-	448,135
9,434,718	92,442,484	5,484,112	109,245,153
1,663,680,436	5,378,754,605	886,269,813	8,410,109,006
-	-	-	14,144,952
1,097	-	324,797	340,894
17,086,226	111,445,629	15,885,267	144,430,330
3,769,830	8,981,473	1,084,417	14,062,283
42,710,000	148,129,343	25,115,000	220,168,346
63,567,153	268,556,445	42,409,481	379,001,853
-	-	-	228,218
-	-	-	2,336,170
973,001,608	2,352,627,577	271,063,789	3,648,455,778
973,001,608	2,352,627,577	271,063,789	3,651,020,166
1,036,568,761	2,621,184,022	313,473,270	4,044,166,971
-	-	-	423,733
-	-	-	1,090,370
625,706,025	2,757,570,583	572,796,543	4,082,725,041
1,405,650	-	-	281,702,891
627,111,675	2,757,570,583	572,796,543	4,365,518,302
1,663,680,436	5,378,754,605	886,269,813	8,410,109,006

OHIO WATER DEVELOPMENT AUTHORITY

Combining Statement of Revenues, Expenses and Changes in Net Position

Year ended December 31, 2018

	Custodied Funds			Trusted Funds
	Operating Fund	Other Projects Fund	In Lieu Fee Fund	Community Assistance Fund (Note 5)
Operating revenues:				
Loan income	$ -	2,112,005	-	2,516,467
Investment income	64,414	3,130,603	215,403	436,730
Administrative fees from projects	3,256,796	-	490,746	-
Total operating revenues	3,321,210	5,242,608	706,149	2,953,197
Operating expenses:				
Payroll and benefits	2,202,434	-	-	-
Interest on bonds and notes	-	-	-	2,655,917
Bond and note issuance expense	-	-	-	2,514
Loan principal forgiveness and grant expense	-	5,757,133	-	-
State revolving fund administration	-	-	-	-
Professional services	556,810	911,980	250,367	-
Loan interest rate buy-down	-	-	-	-
Other	375,329	-	-	-
Total operating expenses	3,134,573	6,669,113	250,367	2,658,431
Operating income (loss)	186,637	(1,426,505)	455,782	294,766
Nonoperating other revenues	-	11,796	-	-
Income (loss) before contributions, federal subsidy income and transfers	186,637	(1,414,709)	455,782	294,766
Contribution from U.S. EPA	-	-	-	-
Federal subsidy income	-	-	-	556,361
Transfers in (out), net -- Note 16	-	33,628,291	-	(2,217,921)
Change in net position	186,637	32,213,582	455,782	(1,366,794)
Net position at beginning of year, as restated -- Note 4	2,481,814	246,505,578	952,294	126,610,608
Net position at end of year	$ 2,668,451	278,719,160	1,408,076	125,243,814

See accompanying notes to financial statements.

Fresh Water Fund (Note 6)	Trusteed Funds: Water Pollution Control Loan Fund (Notes 7 & 8)	Trusteed Funds: Drinking Water Assistance Fund (Notes 9 & 10)	Total Combining 2018
49,880,489	95,133,825	14,753,778	164,396,564
3,439,744	17,054,764	2,905,867	27,247,525
-	-	2,136,055	5,883,597
53,320,233	112,188,589	19,795,700	197,527,686
-	-	-	2,202,434
32,059,169	78,533,093	10,098,565	123,346,744
1,808,451	3,749,345	568,181	6,128,491
3,250	26,268,073	23,280,481	55,308,937
-	7,027,483	3,797,328	10,824,811
356,361	842,699	720,845	3,639,062
3,154,501	7,852,314	1,089,009	12,095,824
-	-	-	375,329
37,381,732	124,273,007	39,554,409	213,921,632
15,938,501	(12,084,418)	(19,758,709)	(16,393,946)
-	-	-	11,796
15,938,501	(12,084,418)	(19,758,709)	(16,382,150)
-	94,857,795	28,711,940	123,569,735
2,287,162	6,714,504	809,354	10,367,381
(31,410,370)	-	-	-
(13,184,707)	89,487,881	9,762,585	117,554,966
640,296,382	2,668,082,702	563,033,958	4,247,963,336
627,111,675	2,757,570,583	572,796,543	4,365,518,302

OHIO WATER DEVELOPMENT AUTHORITY

Combining Statement of Cash Flows

Year ended December 31, 2018

	Custodied Funds			Trusteed Funds
	Operating Fund	Other Projects Fund	In Lieu Fee Fund	Community Assistance Fund (Note 5)
Operating activities:				
Administrative fees from projects	$ 2,148,432	-	490,746	-
Payroll and benefits	(2,043,857)	-	-	-
Grant expense	-	(1,985,889)	-	-
State revolving fund administration	-	-	-	-
Professional services	(496,602)	(902,092)	(447,000)	-
Other	(241,875)	-	-	-
Net cash provided (used) by operating activities	(633,902)	(2,887,981)	43,746	-
Investing activities:				
Proceeds from maturity or sale of investments	2,700,000	80,967,136	4,000,000	20,308,486
Purchase of investments	(3,231,740)	(98,423,813)	(6,931,392)	(25,488,301)
Interest received on investments, net of purchased interest	39,086	2,921,491	138,513	360,197
Interest received on projects	-	1,983,271	-	2,533,740
Principal collected on projects	-	7,191,849	-	10,415,754
Payment for construction of projects	-	(28,936,352)	-	-
Net cash provided (used) by investing activities	(492,654)	(34,296,418)	(2,792,879)	8,129,876
Noncapital financing activities:				
Interest paid on bonds and notes, net of purchased interest	-	-	-	(2,861,903)
Proceeds of bonds and notes	-	-	-	-
Bond and note issuance expense	-	-	-	(25,000)
Redemption of bonds and notes	-	-	-	(4,175,000)
Contribution from U.S. EPA	-	-	-	-
Other	800,539	(3,204)	2,020,202	556,473
Transfers (to) from other funds	-	33,628,291	-	(2,217,921)
Net cash provided (used) by noncapital financing activities	800,539	33,625,087	2,020,202	(8,723,351)
Net increase (decrease) in cash and cash equivalents	(326,017)	(3,559,312)	(728,931)	(593,475)
Cash and cash equivalents at beginning of year	626,694	8,595,509	6,834,738	2,779,551
Cash and cash equivalents at end of year -- Note 2	$ 300,677	5,036,197	6,105,807	2,186,076
Reconciliation of operating income (loss) to net cash provided (used) by operating activities:				
Operating income (loss)	$ 186,637	(1,426,505)	455,782	294,766
Adjustments:				
Investment income	(64,414)	(3,130,603)	(215,403)	(436,730)
Principal forgiveness and other	324,038	3,771,244	-	-
Interest on bonds and notes	-	-	-	2,655,917
Loan and loan fee income	(1,108,364)	(2,112,005)	-	(2,516,467)
Bond and note issuance expense	-	-	-	2,514
Net change in other assets and other liabilities	28,201	9,888	(196,633)	-
Net cash provided (used) by operating activities	$ (633,902)	(2,887,981)	43,746	-

See accompanying notes to financial statements.

Trusteed Funds			
Fresh Water Fund (Note 6)	Water Pollution Control Loan Fund (Notes 7 & 8)	Drinking Water Assistance Fund (Notes 9 & 10)	Total Combining 2018
-	-	2,197,542	4,836,720
-	-	-	(2,043,857)
(3,250)	-	(255,652)	(2,244,791)
-	(7,027,483)	(3,797,328)	(10,824,811)
(362,698)	(926,683)	(729,913)	(3,864,988)
-	-	-	(241,875)
(365,948)	(7,954,166)	(2,585,351)	(14,383,602)
433,153,371	1,388,967,728	225,979,371	2,156,076,092
(384,972,888)	(898,166,808)	(190,063,369)	(1,607,278,311)
2,824,930	11,878,169	2,034,696	20,197,082
41,590,682	79,378,391	13,749,160	139,235,244
69,251,816	272,083,285	50,975,500	409,918,204
(132,062,819)	(672,136,906)	(89,507,766)	(922,643,843)
29,785,092	182,003,859	13,167,592	195,504,468
(41,581,963)	(102,320,372)	(13,923,965)	(160,688,203)
200,118,386	-	5,000,000	205,118,386
(1,655,683)	(3,921,969)	(455,806)	(6,058,458)
(155,180,000)	(145,700,000)	(29,600,000)	(334,655,000)
-	94,857,795	28,711,941	123,569,736
2,288,102	7,218,668	987,750	13,868,530
(31,410,370)	-	-	-
(27,421,528)	(149,865,878)	(9,280,080)	(158,845,009)
1,997,616	24,183,815	1,302,161	22,275,857
19,271,702	92,298,972	26,762,496	157,169,662
21,269,318	116,482,787	28,064,657	179,445,519
15,938,501	(12,084,418)	(19,758,709)	(16,393,946)
(3,439,744)	(17,054,764)	(2,905,867)	(27,247,525)
3,154,501	34,120,387	24,113,838	65,484,008
32,059,169	78,533,093	10,098,565	123,346,744
(49,880,489)	(95,133,825)	(14,753,778)	(165,504,928)
1,808,451	3,749,345	568,181	6,128,491
(6,337)	(83,984)	52,419	(196,446)
(365,948)	(7,954,166)	(2,585,351)	(14,383,602)

(1) AUTHORIZING LEGISLATION, REPORTING ENTITY, PROGRAM DESCRIPTIONS, FUND ACCOUNTING AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Authorizing Legislation

The Ohio Water Development Authority (Authority) is a body corporate and politic in the State of Ohio created by an Act of the General Assembly of the State of Ohio effective March 7, 1968. It is authorized and empowered to acquire, construct, maintain, repair and operate water development projects and solid waste projects, to issue water development and solid waste revenue bonds and notes and to collect rentals and other charges to pay such bonds and notes and the interest thereon. The Authority was given jurisdiction over financing solid waste control by an Act of the General Assembly of the State of Ohio during 1970. Under provisions of the Act, such revenue bonds and notes shall not be deemed to constitute a debt or a pledge of faith and credit of the State nor any political subdivision thereof.

Reporting Entity

The accompanying financial statements comply with the provisions of Governmental Accounting Standards Board (GASB) Statement No. 14, *The Financial Reporting Entity,* as amended by GASB Statement No. 39, *Determining Whether Certain Organizations are Component Units* and GASB Statement No. 61, *The Financial Reporting Entity: Omnibus*, which defines financial accountability. The criteria for determining financial accountability include the following circumstances:

- Appointment of a voting majority of an organization's governing authority and the ability of the primary government to either impose its will on that organization or the potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government, or
- An organization is fiscally dependent on the primary government and there is a potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the primary government.

Officials of the State's primary government appoint a voting majority of the Authority's governing board. However, the primary government's accountability for the Authority does not extend beyond making those appointments. As such, the Authority is deemed a related organization of the State of Ohio. The Authority does not have any component units or related organizations of its own.

Programs

The Authority has established the following programs:

Local Communities

The Authority has established financing programs to provide loans to local communities in the State of Ohio for the construction of sewage and related water treatment facilities. These programs are accounted for in various funds, which are described in the following paragraphs.

These loans provide for the financing of project construction costs. Revenue from the underlying project is pledged toward repayment of the loan.

The Authority's initial funding of the program came from a $100,000,000 appropriation, all of which has been designated for use, from the State of Ohio. Subsequent funding of its programs has come from the issuance by the Authority of bonds and notes as well as federal capitalization grants.

Industrial

The Authority has established financing programs to assist private industry and certain municipalities participating in a manner similar to private industry, all located in the State of Ohio, in controlling water pollution and solid waste by constructing appropriate facilities. These programs are accounted for in various funds, which are described in Note 12. The Authority issues revenue bonds and notes to finance these programs. The Authority and the industrial companies and municipalities enter into agreements whereby the industrial companies and municipalities are required to make payments, as they become due, sufficient to pay the interest and principal on the bonds and notes issued to finance the projects.

These bonds and notes are principally secured by either revenues from the services, lease purchase agreements, mortgages, letters of credit or a combination thereof and are not secured by assets of the Authority.

Basis of Presentation—Fund Accounting

The accounts of the Authority are organized on the basis of funds, each of which is considered to be an independent fiscal and accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, deferred outflows of resources, liabilities, deferred inflows of resources, net position, revenues and expenses; and are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with laws, regulations or other restrictions. The following is a description of the funds adopted by the Authority.

(a) Operating Fund

The Operating Fund was established to account for the administrative activities and transactions of the Authority, which are required to carry out the provisions of the aforementioned authorizing legislation.

Revenues for Authority operations are principally provided by an administrative fee charged as a percentage of the total cost of each project which the Authority assists by providing financing. Fee income is recognized at the time that the financing agreements are finalized since substantially all of the costs associated with the agreements have been incurred by that time. Operating expenses, which are primarily salaries, employee fringe benefits and legal and professional fees include administrative expenses of the Authority and other expenses incurred in connection with the financing of projects.

(b) Other Projects Fund

The Other Projects Fund was established to account for its programs and commitments that are funded with funds other than proceeds of bonds or notes or other funds required by law or contract to be held in a fund separate and segregated from other funds of the Authority. The Other Projects Fund consists of the following programs and commitments:

- ***Other Projects Fund – Endowment Grant***

  The purpose of this program is to provide grants to local government agencies (LGAs) in Ohio to develop innovative projects in the areas of drinking water, wastewater and solid waste management.

- ***Other Projects Fund – Solid Waste***

  The purpose of this program is to provide financing to local governments in Ohio for the construction of solid waste facilities including recycling projects, composting, waste-to-energy projects and landfills. The balance of the construction costs are to be repaid by the solid waste facilities under terms of installment contracts over periods of 10 to 20 years with interest rates of 3.43% to 5.65%.

- ***Other Projects Fund – Local Economic Development***

  The purpose of this program is to provide financing to local governments in Ohio to construct projects which will provide economic development benefits. The interest rate for each loan is negotiated by the local government and the Ohio Development Services Agency. The loans are to be repaid under terms of installment contracts over periods of 10 to 30 years with interest rates of 0.98% to 3.00%.

- ***Other Projects Fund – Brownfield***

  The purpose of this program is to provide financing for the clean-up of contaminated brownfield sites under the state's voluntary action program. The loans are to be repaid under terms of installment contracts over periods of 5 to 15 years with interest rates of 2.00% to 3.00%.

- ***Other Projects Fund – Village Capital Improvements***

  The purpose of this program is to provide interest-free planning and design loans to qualifying villages in Ohio for water and wastewater facilities. These loans are to be repaid at a term not to exceed 10 years.

- ***Other Projects Fund – Emergency Relief***

  The purpose of this program is to provide financial assistance to Ohio communities or households that have sustained damage to their water or wastewater facilities as the result of a natural disaster or a mine subsidence event. To be eligible, communities or households must have an outstanding loan from the Authority and be in a federal or state designated disaster area, or be in an area of mine subsidence as declared by the state. The program can provide a community with up to two semi-annual loan payments to the Authority in an amount equivalent to the damage sustained by the water or wastewater systems during the disaster, or up to $25,000 per household for mine subsidence relocation costs.

- ***Other Projects Fund – Dam Safety***

  The purpose of this program is to help eligible Ohio dam owners receive below market interest rate loans to finance dam repairs and improvements that have been so ordered by the Ohio Department of Natural Resources. These loans are available through the Dam Safety Linked Deposit Program. In the program, Dam Safety funds are invested in local participating banks at below-market rates. The banks, in return, issue low interest rate loans to qualified participants. The amount invested in this program as of December 31, 2018 was $701,963.

- ***Other Projects Fund – Lake Erie Soil Erosion***

  The purpose of this program is to provide financing to the eight counties with Lake Erie shorelines containing coastal erosion areas. Any county receiving financing from the program will then provide financial assistance to property owners for the construction of erosion control structures in areas defined by statute as coastal erosion areas.

  The loans to the counties are to be repaid under terms of installment contracts over 15 years with interest rates of 4.67%.

- ***Other Projects Fund – Security Assistance***

  The purpose of this program is to provide financing to local governments in Ohio to protect the communities' water and wastewater systems. Eligible items under the program include lighting, fencing, cameras, motion detectors, gating and security systems and terrorism preparedness plans.

  The loans to the local government agencies are to be repaid under terms of installment contracts over periods of 20 to 30 years with interest rates of 2.00%.

- ***Other Projects Fund – Interest Rate Buy-Down***

  The purpose of this program is to provide a subsidy to the local governments in Ohio that obtained financing under the Authority's Fresh Water, Refunding and Safe Water Refunding (which were consolidated into the Fresh Water Fund in 2007), and Pure Water Refunding (which was also consolidated into the Fresh Water Fund in 2010) Programs whose loan interest rates exceed 4.00%.

- ***Other Projects Fund – Unsewered Area Planning Loan Program***

  The purpose of this program is to provide interest-free planning loans to unsewered areas where the LGA is considering the construction of a system of sewer facilities. These loans are to be repaid at a term not to exceed 10 years.

- ***Other Projects Fund – Unsewered Area Assistance Program***

  The purpose of this program is to provide principal forgiveness construction loans to unsewered areas for the purpose of construction of a system of sewer facilities.

- ***Other Projects Fund – Alternative Stormwater Infrastructure Loan Program***

  The purpose of this program is to provide loans to reduce stormwater run-off and mitigate flooding. The loans to the LGAs are to be repaid under terms of installment contracts over periods of 10 to 20 years with interest rates of 1.00% to 2.55%.

- ***Other Projects Fund – Rural Utilities Program***

  The purpose of this program is to provide interim loans to local governments in Ohio to finance water development projects pending their receipt of loan or grant money from the United States of America, acting through Rural Utility Services. The loans to the LGAs are to be repaid under terms of cooperative agreements over 3 years with interest rates of 2.45% to 2.50%.

- ***Other Projects Fund – Unallocated Reserve***

  This reserve was established for potential collectability or cash flow problems that may arise in the future on any Authority project. The target balance of the reserve is 1% of the outstanding loan balance of the Other Projects, Community Assistance and Fresh Water loan programs.

(c) In-Lieu Fee Fund

The In-Lieu Fee (ILF) Mitigation Fund was established during 2014 by a resolution of the Authority. OWDA is responsible for fund management in support of the Nature Conservancy's administration of the program.

The purpose of the ILF Mitigation Fund is to provide an option for public and private entities that are impacting Ohio's wetlands or streams where direct mitigation of those impacts is not feasible. These entities pay into the ILF Mitigation Fund providing a source of funds that is then used to implement comparable projects elsewhere in the state that compensate for the originally impacted wetlands by public and private entities or carry out comparable projects to negate any negative impact on wetlands or streams.

(d) Community Assistance Fund

The Community Assistance Fund (formerly known as the Hardship Fund) was established during 1983 by a resolution of the Authority and is administered by a Trustee. The purpose of the fund is to provide a financing program for local governments in Ohio that are unable to meet debt service requirements at normal market interest rates without undue hardship to users.

The balance of the construction costs is paid by the LGA under terms of installment contracts over periods of 10 to 30 years with interest rates of 1.00% to 3.11%. LGA payments of construction costs may be used for providing additional funding for qualifying projects.

Initial funding for the Community Assistance Fund was provided by a $15,000,000 transfer from the Pure Water Refunding Fund. Additional funding has been provided by monetary transfers from the Fresh Water Fund, Refunding Fund, Safe Water Refunding Fund, Pure Water Refunding Fund and the issuance of the Water Development Revenue Bonds—Community Assistance Series 1997, Series 2003, Series 2007, Series 2010A and Series 2010B. The Water Development Revenue Refunding Bonds—Community Assistance Series 2005 Bonds were issued for the purpose of refunding portions of outstanding Community Assistance Series 1997 Bonds. The Water Development Revenue Refunding Bond Anticipation Notes, Series 2008A and Series 2008B, were issued to refund the Community Assistance Series 2007 Bonds. The Water Development Revenue Refunding Bonds—Community Assistance Series 2009 Bonds were issued to refund the Community Assistance Series 2008B Bond Anticipation Notes. The Water

Development Revenue Refunding Bonds—Community Assistance Series 2011 Bonds were issued for the purpose of refunding portions of outstanding Community Assistance Series 2003 Bonds. The Water Development Revenue Refunding Bonds—Community Assistance Series 2013 Bonds were issued to refund the Community Assistance Series 2005 Bonds. The Water Development Revenue Refunding Bonds—Community Assistance Series 2017 Bonds were issued for the purpose of refunding portions of outstanding Community Assistance Series 2009 Bonds. All loan repayments for this fund are pledged on a parity basis against all debt outstanding within this fund.

(e) Fresh Water Fund

The Fresh Water Fund, which consists of various accounts, was established in 1992 by a resolution providing for the issuance of the Water Development Revenue Refunding Bonds—Pure Water Refunding and Improvement Series, and is administered by a Trustee. Initial funding was provided by a portion of the proceeds from these bonds and a transfer from the Pure Water Refunding Fund. The Water Development Revenue Bonds—Fresh Water Series 1995, Series 1998, Series 2001A, Series 2002, Series 2004, Series 2010A-1, Series 2010A-2, Series 2013, Series 2016A, Series 2016B, Series 2018 and Water Development Revenue Notes—Fresh Water Commercial Paper Series 2007A, Series 2008D, Series 2008E, Series 2010A, Series 2010B, Series 2014 Notes, Series 2015 Notes, Series 2016 Notes, Series 2017A Notes and Series 2017B Notes were later issued to provide additional funds necessary for making loans to LGAs as part of the Authority's Fresh Water Program. The Water Development Refunding Revenue—Fresh Water Series 2001B, Series 2005, Series 2006A, Series 2009A and Series 2009B Bonds were issued for the purpose of refunding portions of Fresh Water Series 1995, Series 1998, Series 2001A, Series 2002 and Series 2004 Bonds. A portion of the Fresh Water Series 2009A Bonds were used to retire outstanding commercial paper issued in 2007 and 2008. A portion of the Fresh Water Series 2010A-1 and Series 2010A-2 Bonds were used to retire outstanding commercial paper issued in 2010. A portion of the Fresh Water Series 2016A, Series 2016B and Series 2018 Bonds were issued to retire outstanding notes issued in 2014, 2015 and 2017. All Fresh Water loan repayments for this fund are pledged on a parity basis against all debt outstanding within this fund.

The purpose of these funds is to provide moneys necessary to finance the LGA portion of costs for planning, designing, acquiring or constructing wastewater treatment, sewage collection, and water supply and distribution facilities in Ohio, and to finance other projects approved by the Authority.

The balance of Fresh Water construction costs is repaid by LGAs under terms of installment contracts over periods of 5 to 30 years with interest rates of 0.00% to 7.38%.

On December 1, 2010, the Pure Water Refunding Fund was closed and the outstanding loan receivables balances were transferred to the Fresh Water Fund. The loan repayments from this fund are deposited into the Cross-Collateralization account in the Fresh Water Fund and are not pledged toward outstanding Fresh Water debt. The balance of these loans is repaid by LGAs under terms of installment contracts over periods of 5 to 30 years with interest rates of 0.00% to 7.21%.

(f) Water Pollution Control Loan Fund

The Water Pollution Control Loan Fund (WPCLF) consists of various accounts, which were established by an Act of the General Assembly of the State of Ohio in 1989 and are administered by a Trustee. The purpose of this fund is to provide financial assistance for the construction of publicly owned wastewater treatment works in Ohio.

Construction costs are paid by LGAs under terms of installment contracts over periods of 4.5 to 45 years with interest rates of 0.00% to 4.66%. LGA repayments of project costs are restricted for the purpose of providing additional moneys for projects or for debt service.

In 2015, the Authority created the WPCLF Interest Rate Buy-Down Program. The purpose of this program is to provide a subsidy to the local governments in Ohio that obtained financing under the Authority's WPCLF Program whose loan interest rates exceed 3.00%.

The WPCLF was initially funded in 1989 by a U.S. Environmental Protection Agency capitalization grant, which required a 20% matching contribution from the Ohio Environmental Protection Agency (Ohio EPA). Grant funding has been awarded as detailed in the following table:

Year Awarded		Capitalization Grant	State Match
1989-1993	$	455,345,287	91,069,057
1994-1998		388,415,860	77,683,172
1999-2003		380,759,602	76,155,487
2004-2008		245,871,555	49,174,311
2009-2013*		649,794,893	85,834,359
2014		78,932,000	15,786,400
2015		78,528,000	15,705,600
2016		75,217,000	15,043,400
2017		74,638,000	14,927,600
2018		90,357,000	18,071,400
Total	$	**2,517,859,197**	**459,450,786**

* The 2009 capitalization grant funding award included $220,623,100 in moneys from The American Recovery and Reinvestment Act (ARRA) with no state match required, and $76,616,793 in capitalization grant moneys requiring a 20% state match.

The WPCLF received additional funding from the proceeds of Water Pollution Control Loan Fund Revenue Bonds and Notes—State Match Series 1991, Series 1993, Series 1995, Series 2000, Series 2008, Series 2010, Series 2013 and Series 2015; Water Quality Series 1995, Series 1997, Series 2001, Series 2002, Series 2004, Series 2005B, Series 2010A, Series 2010B-1 and Series 2010B-2; Floating Rate Notes Series 2012A and Series 2013A; WPCLF Bonds Series 2014, Series 2015A, Series 2016, Series 2017A, Series 2017B, Series 2017-2020B Notes and Series 2017-2020C Notes. The Water Pollution Control Loan Fund Revenue Refunding Bonds—State Match Series 2001 and Series 2005 and Water Quality Series 2003, Series 2004, Series 2005, Series 2009, Series 2010C, Series 2011A, Series 2011B-1, Series 2011B-2, Series 2012A and WPCLF Bonds Series 2014B and Series 2015B were issued to refund portions of the State Match and Water Quality Series Bonds. The WPCLF Water Quality, State Match and WPCLF Bonds and Notes were established by resolutions providing for the issuance of these bonds and notes and are administered by Trustees.

The WPCLF Bonds and Notes are special obligations of the Authority, issued to fund the State Match, Water Quality and WPCLF Bond accounts for use in making loans to LGAs provided by the Ohio EPA and the Authority. All interest earned on moneys and/or investments in the WPCLF remain within the fund. All loan repayments of principal and interest on loans made prior to May 1, 2014 are primarily pledged on a parity basis to all WPCLF Water Quality Bonds outstanding and subordinately pledged on a parity basis to all WPCLF Bonds outstanding. All loan repayments of interest for loans made after May 1, 2014 are pledged first to all WPCLF State Match Bonds outstanding, second to WPCLF Water Quality Bonds and third to WPCLF Bonds. As of December 31, 2018, all WPCLF State Match Bonds are retired. Any future WPCLF State Match issuances will be governed by the WPCLF Bonds Trust Indenture.

In 1994, the Authority established the Linked Deposit Program. This program is aimed at helping Ohio farmers receive low-interest loans to reduce non-point source pollution from agricultural run-off. In the program, WPCLF funds are invested in local participating banks at below-market rates. The banks, in return, issue low-interest rate loans to qualified participants. The amount invested in this program as of December 31, 2018 was $1,030,335.

(g) Drinking Water Assistance Fund

The Drinking Water Assistance Fund (DWAF) was established by legislation enacted by the General Assembly of the State of Ohio in 1997 and is administered by a Trustee. The purpose of this fund is to assist public water systems to finance the costs of infrastructure needed to achieve or maintain compliance with the Safe Drinking Water Act requirements and to protect public health.

Construction costs are paid under terms of installment contracts over periods of 5 to 30 years with interest rates of 0.00% to 4.66%. Repayments of project costs are restricted for the purpose of providing additional moneys for projects.

In 2015, the Authority created the DWAF Interest Rate Buy-Down Program. The purpose of this program is to provide a subsidy to the local governments in Ohio that obtained financing under the Authority's DWAF Program whose loan interest rates exceed 3.00%.

The DWAF was initially funded in 1998 by a U.S. Environmental Protection Agency capitalization grant, with a required 20% state match contribution from the Ohio EPA. Grant funding has been awarded as detailed in the following table:

Year Awarded	Capitalization Grant	State Match
1998-2002	$ 164,117,000	32,823,400
2003-2007	124,311,400	24,862,280
2008-2012*	211,030,000	30,514,000
2013	27,058,000	5,411,600
2014	24,586,000	4,917,200
2015	24,425,000	4,885,000
2016	23,107,000	4,621,400
2017	22,909,000	4,581,800
2018	27,935,000	5,587,000
Total	**$ 649,478,400**	**118,203,680**

* The 2009 capitalization grant funding award included $58,460,000 in moneys from ARRA with no state match required, and $24,421,000 in capitalization grant moneys requiring a 20% state match.

The DWAF received additional funding from the proceeds of the Drinking Water Assistance Fund Revenue Bond Anticipation Notes—State Match Series 2001 and the Drinking Water Assistance Fund Revenue Bonds and Notes—State Match Series 2002, Series 2004, Series 2010A and Series 2014; Leverage Series 2002, Series 2004, Series 2005B, Series 2006, Series 2010A and Series 2010B and DWAF Bonds Series 2016. Drinking Water Assistance Fund Refunding Revenue Bonds—Leverage Series 2005 were issued to refund a portion of the Leverage Series 2002 Bonds; Leverage Series 2008 were issued to refund the Leverage Series 2006 Notes; State Match Series 2010B were issued to refund a portion of State Match Series 2002 and Series 2004 Bonds; Leverage Series 2010C were issued to refund a portion of the Leverage Series 2002, Series 2004, Series 2005B and Series 2008 Bonds; and Leverage Series 2014 were issued to refund a portion of the Series 2005B and Series 2008 Bonds.

The DWAF Bonds and Notes are special obligations of the Authority, issued to fund the State Match, Leverage and DWAF Bond accounts for use in making loans to LGAs provided by the Ohio EPA and the Authority. All interest earned on moneys and/or investments in the DWAF remain within the fund. All loan repayments of principal and interest on loans made prior to August 3, 2016 are primarily pledged on a parity basis to all DWAF Leverage Bonds outstanding and subordinately pledged on a parity basis to all DWAF Bonds outstanding. All loan repayments of interest for loans made after August 3, 2016 are pledged first to all DWAF State Match Bonds outstanding, second to DWAF Leverage Bonds and third to DWAF Bonds. As of December 31, 2018, all DWAF State Match Bonds are retired. Any future DWAF State Match issuances will be governed by the DWAF Bonds Trust Indenture.

Summary of Significant Accounting Policies

(a) Basis of Accounting

The basis of accounting determines when transactions and economic events are reflected in financial statements. The Authority has prepared the financial statements on the full accrual basis of accounting. Accordingly, revenues are recognized as earned and expenses are recognized as incurred, including interest expense on bonds and notes outstanding.

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities and deferred inflows of resources at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. Actual results could differ from those estimates.

(b) Cash and Cash Equivalents

Cash and cash equivalents include amounts on deposit with Trustees and petty cash, as defined in GASB Statement No. 9 for the purpose of the statement of cash flows, in addition to money market investments and holdings in the State Treasury Asset Reserve of Ohio (STAR Ohio) investment pool. STAR Ohio is an investment pool managed by the State Treasurer's Office, which allows governments within the State to pool their funds for investment purposes. STAR Ohio is not registered with the Securities and Exchange Commission as an investment company, but has adopted GASB Statement No. 79 for the purpose of measuring the value of shares in STAR Ohio. The Authority measures their investment in STAR Ohio at the net asset value (NAV) per share provided by STAR Ohio. The NAV per share is calculated on an amortized cost basis that provides a NAV per share that approximates fair value.

For 2018, there were no limitations or restrictions on any participant withdrawals. However, notice must be given 24 hours in advance for all deposits or withdrawals exceeding $25 million. STAR Ohio reserves the right to limit the transaction to $100 million, requiring the excess amount to be transacted the following business day(s), but only to the $100 million limit. All accounts of the participants will be combined for these purposes.

For the purpose of the statement of cash flows, the Authority considers cash deposits with a maturity of three months or less when purchased to be cash equivalents. Additionally, the Authority does not consider its loans to be program loans, and as a result, reports its loan cash flows within the investing activities section of the statement of cash flows.

(c) Investments

With the exception of nonnegotiable certificates of deposit, investments are carried at fair value, which includes accrued interest receivable. Accordingly, the Authority reports participating nonnegotiable certificates of deposit at amortized cost plus accrued interest receivable.

(d) Due to and Due from Other Funds

Interfund receivables and payables, otherwise referred to as due to and due from other funds, arise from interfund transactions and are recorded by all funds affected in the period in which transactions are executed. All interfund balances at December 31, 2018 resulted from the time lag between the dates that transactions are recorded in the accounting system and the dates that payments between funds are made. The Authority expects that all interfund balances will be repaid within one year.

(e) Loan Income as Defined by the Contracts

Loan income consists primarily of interest charged to LGAs, as defined by the contracts with LGAs, on the amounts estimated to be paid under the loan agreements. Interest charged during the construction period is capitalized by the Authority and is reflected as part of loan receivables.

(f) Amortization of Premium and Discount of Bonds and Notes

Premium and discount are amortized over the life of the bonds and notes, following the effective interest method.

(g) Interfund Transfers/Net Position

The Authority reports interfund transactions when incurred, as follows:

- Transfers in (out), net: Transfers to a receiving fund from a disbursing fund required to meet routine operating requirements, such as debt service repayments and loan disbursements, in addition to transfers between funds for initial and/or additional funding needs.

Interfund transfers have not been eliminated in the combining column of the financial statements.

Net position in excess of those amounts required by the various trust agreements may, upon Board authorization, be used for any lawful purpose.

(h) Capital Assets and Facilities

Capital assets of the Authority include an office building with attached garage, two parking lots, office furniture and equipment. Capital assets are defined by the Authority as assets with an initial, individual cost of $1,000 or more and an estimated useful life in excess of two years. Such assets are recorded at historical cost. Depreciation is computed on the building, capital improvements and other capital assets only, using the straight-line method with no salvage value. Current year depreciation expense is detailed below as 'additions' to accumulated depreciation.

Capital asset activity for the year ended December 31, 2018 was as follows:

		Beginning Balance	Additions	Deletions	Ending Balance
Land (non-depreciable)	$	538,676	–	–	538,676
Building (useful life: 20-45 years)		887,524	–	–	887,524
Capital Improvements (useful life: 20 years)		628,314	–	–	628,314
Other (useful life: 3-10 years)		1,488,880	23,161	(12,116)	1,499,925
Total capital assets	$	3,543,394	23,161	(12,116)	3,554,439
Less: Accumulated Depreciation-Building		(560,355)	(36,978)	–	(597,333)
Less: Accumulated Depreciation-Cap Impr		(431,616)	(31,416)	–	(463,032)
Less: Accumulated Depreciation-Other		(1,378,215)	(37,605)	12,116	(1,403,704)
Capital Assets, at Depreciated Cost	$	1,173,208	(82,838)	–	1,090,370

(Continued)

(i) Statement of Net Position Classifications

The Authority is required to classify its statement of net position, detailing current and noncurrent assets, deferred outflows of resources, current and noncurrent liabilities, deferred inflows of resources, and restricted and unrestricted net position, as follows:

- Current: Due within one year from December 31, 2018
- Noncurrent: Due after December 31, 2019
- Restricted: Restricted for usage by bond and note covenants and grant restrictions
- Unrestricted: Not restricted for usage

Within the Fresh Water Fund, there exist both restricted and unrestricted net positions. Restricted net position would be used to cover eligible expenses before unrestricted net position would be used. The unrestricted net position may, upon Board authorization, be used by the Authority for any lawful purpose.

(j) Revenue and Expense Classifications

The Authority's policy for revenue and expense classification is as follows:

- Operating revenues consist of loan income, investment income and administrative fees from projects
- Operating expenses consist of payroll and benefits, interest on bonds and notes, bond and note issuance expense, loan principal forgiveness and grant expense, state revolving fund administration, professional services, loan interest rate buy-down and other operating expenses
- Nonoperating other revenues
- Contribution from U.S. EPA
- Federal subsidy income

(k) Risk Management

It is the policy of the Authority to eliminate or transfer risk. The Authority does not self-insure any risk resulting from acts of God, injury to employees or breach of contract.

The Authority carries commercial property insurance on property and equipment in the aggregate sum of approximately $2,250,000. The Authority carries commercial liability insurance coverage in the amount of approximately $56,385,000. The Authority also carries premium-based medical, dental and vision coverage for all employees.

During 2018, there were no claims by the Authority that exceed the insurance coverage, nor has there been a reduction in insurance coverage in the past three years.

(l) Pensions/Other Postemployment Benefits (OPEB)

For purposes of measuring the net pension/OPEB liability, information about the fiduciary net position of the pension/OPEB plans and additions to/deductions from their fiduciary net position have been determined on the same basis as they are reported by the pension/OPEB plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. The pension/OPEB plans report investments at fair value.

(2) CASH AND INVESTMENTS

As of December 31, 2018, the Authority's carrying amount of deposits was $48,280,454 and bank balance of deposits was $42,286,144. Of this amount, $250,004 was covered by federal depository insurance, and $48,036,140 was collateralized with securities held by the bank's agent but not in the Authority's name. The Authority's carrying amount of long-term nonnegotiable certificates of deposit as of December 31, 2018 was $1,735,050. These deposits were collateralized with securities held by the Treasurer of State (OPCS) but not in the Authority's name.

The Authority's investment policy and relevant trust indentures, which are in compliance with the Ohio Revised Code, authorizes investments in obligations of the U.S. Treasury, U.S. Agencies, obligations of the State of Ohio or any political subdivision, obligations of any State of the United States, repurchase agreements from financial institutions with a Moody's or Standard & Poor's rating of "A", investment agreements from financial institutions rated in the highest short-term categories or one of the top three long-term categories by Moody's and/or Standard & Poor's, money market mutual funds whose portfolio consists of authorized investments, the State Treasurer's investment pool and any debt or fixed income security, the issuer of which is rated in the highest short-term or in the top three long-term categories. All investments must mature within five years of settlement unless the investment is matched to a specific obligation or debt of the Authority. Securities are purchased with the expectation that they may be held to maturity.

As of December 31, 2018, the Authority had the following investments and maturities:

		Investment Maturity (in Years)		
Fund - Investment Type	Fair Value	Less than 1	1 - 5	6 - 10
Operating:				
U.S. Agencies	$3,254,717	1,452,033	1,802,684	-
Other Projects:				
U.S. Treasuries	65,028,695	23,049,227	41,979,468	-
U.S. Agencies	93,408,583	19,310,481	74,098,102	-
Municipal Bonds	11,793,793	5,199,591	6,594,202	-
Money Market	4,391,184	4,391,184	-	-
	174,622,255	51,950,483	122,671,772	-
In Lieu Fee:				
U.S. Treasuries	6,980,708	3,997,150	2,983,558	-
STAR Ohio	5,874,093	5,874,093	-	-
Money Market	257,207	257,207	-	-
	13,112,008	10,128,450	2,983,558	-

		Investment Maturity (in Years)		
Fund - Investment Type	Fair Value	Less than 1	1 - 5	6 - 10
Community Assistance:				
U.S. Treasuries	$19,100,661	13,717,893	5,382,768	-
U.S. Agencies	5,811,545	1,022,561	4,788,984	-
Money Market	882,750	882,750	-	-
	25,794,956	15,623,204	10,171,752	-
Fresh Water:				
U.S. Treasuries	133,447,615	66,965,957	66,177,893	303,765
U.S. Agencies	28,411,295	28,411,295	-	-
STAR Ohio	993,885	993,885	-	-
Money Market	10,429,679	10,429,679	-	-
	173,282,474	106,800,816	66,177,893	303,765
Water Pollution Control Loan:				
U.S. Treasuries	494,071,998	57,950,412	436,121,586	-
U.S. Agencies	148,017,260	56,279,352	91,737,908	-
Municipal Bonds	15,142,205	7,844,522	7,297,683	-
STAR Ohio	27,364,169	27,364,169	-	-
Money Market	57,042,347	57,042,347	-	-
	741,637,979	206,480,802	535,157,177	-
Drinking Water Assistance:				
U.S. Treasuries	94,339,414	37,493,104	56,846,310	-
U.S. Agencies	26,435,276	20,771,012	5,664,264	-
STAR Ohio	10,453,097	10,453,097	-	-
Money Market	13,690,767	13,690,767	-	-
	144,918,554	82,407,980	62,510,574	-

The Authority's U.S. treasuries, U.S. agencies and municipal bonds are uninsured and unregistered investments for which the securities are held by the Authority’s agent but not in the Authority’s name. As of December 31, 2018, the Authority’s investments in U.S. treasuries were backed by the full faith and credit of the U.S. Government. The investments in U.S. agencies were rated AA+ by Standard & Poor’s and Aaa by Moody’s. The Authority’s investments in municipal bonds were rated within the top three long-term categories by Moody’s and/or Standard & Poor’s. The Authority’s investments in STAR Ohio (a statewide external investment pool created pursuant to Ohio statutes and administered by the Treasurer of the State of Ohio) were rated AAAm by Standard & Poor’s. The Authority’s money market investments were rated AAAm by Standard & Poor’s and Aaa-mf by Moody’s. As of December 31, 2018, 98.23% of the Authority’s rated investments were rated in the highest short-term or long-term rating category by Moody’s.

As of December 31, 2018, the Authority had investment balances with the following issuers, which are greater than or equal to 5% of the respective fund's investment balance:

Fund	Issuer	Percent of Fund's Investments
Operating	Federal Home Loan Bank	53.0%
	Federal National Mortgage Association	32.0%
	Federal Farm Credit Bank	15.0%
Other Projects	Federal National Mortgage Association	34.0%
	Federal Home Loan Mortgage Corporation	16.0%
Community Assistance	Federal Home Loan Bank	12.0%
Fresh Water	Federal Home Loan Bank	16.0%
Water Pollution Control Loan	Federal National Mortgage Association	11.0%
	Federal Home Loan Bank	6.0%
Drinking Water Assistance	Federal National Mortgage Association	12.0%
	Federal Home Loan Bank	5.0%

The Authority manages its concentration risk by limiting investments to U.S. treasuries, U.S. agencies or to issuers with the highest short-term ratings from Moody's or Standard & Poor's or one of the three highest long-term ratings from Moody's or Standard & Poor's.

As of December 31, 2018, the Authority categorizes fair value measurements of its negotiable investments within the fair value hierarchy as follows:

Investment Type	Level 1*	Level 2*	Level 3*
U.S. Treasuries	$811,149,495	644,285	-
U.S. Agencies	-	305,338,676	-
Municipal Bonds	-	26,935,998	-

* Fair value hierarchy is based on valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets. Level 2 inputs are significant other observable inputs such as quoted prices for similar assets in active markets. The Authority obtains prices for our Level 1 and Level 2 publicly traded assets from our trustees who use various pricing services. Level 3 inputs are significant unobservable inputs.

As of December 31, 2018, the Authority had cash and cash equivalents balances of $179,659,633, which includes accrued interest receivables on money market balances. Below is a reconciliation of the statement of net position and the statement of cash flows cash and cash equivalents balances:

Fund		Statement of Net Position Cash and Cash Equivalents Balance	Cash and Cash Equivalents Accrued Interest Receivable	Statement of Cash Flows Cash and Cash Equivalents Balance
Operating	$	300,677	-	300,677
Other Projects		5,052,466	(16,269)	5,036,197
In Lieu Fee		6,131,300	(25,493)	6,105,807
Community Assistance		2,192,110	(6,034)	2,186,076
Fresh Water		21,300,373	(31,055)	21,269,318
Water Pollution Control Loan		116,588,985	(106,198)	116,482,787
Drinking Water Assistance		28,093,722	(29,065)	28,064,657
	$	179,659,633	(214,114)	179,445,519

(3) INTERFUND RECEIVABLES AND PAYABLES

On December 31, 2018, interfund balances consisted of:

1) $324,797 owed to the Operating Fund by the Drinking Water Assistance Fund caused by the timing of pending loan fee repayment allocations.
2) $1,097 owed to the Operating Fund by the Fresh Water Fund for the reimbursement of a professional service expense.
3) $15,000 owed to the Other Projects Fund by the Operating Fund for the reimbursement of a legal expense.

(4) CHANGE IN ACCOUNTING PRINCIPLES

For 2018, the Authority implemented the provisions of Governmental Accounting Standards Board (GASB) Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions,* which became effective for all state and local governmental employers who provide employees other postemployment benefits (OPEB). Statement No. 75 improves accounting and financial reporting of the Authority by establishing standards for measuring liabilities, deferred outflows of resources, deferred inflows of resources and a more comprehensive measure of OPEB expense. The implementation of this Statement had a significant effect on the Operating Fund within the financial statements of the Authority as of January 1, 2018. Beginning net position in 2018 decreased $842,136 from December 31, 2017 net position for the Operating Fund as well as the total net position of the Authority.

For 2018, the Authority implemented the provisions of Governmental Accounting Standards Board (GASB) Statement No. 85, *Omnibus 2017.* The objective of Statement No. 85 is to address practice issues that have been identified during implementation and application of certain GASB Statements. Specifically, the topics from this statement that apply to the Authority deal with postemployment benefits from pensions and OPEB. These applicable topics will be implemented in conjunction with Statement No. 75 implementation.

(Continued)

(5) WATER DEVELOPMENT REVENUE AND REFUNDING BONDS—COMMUNITY ASSISTANCE SERIES

As of December 31, 2018, there was $53,910,000 of Community Assistance Water Development Revenue and Refunding Bonds outstanding, broken down by series as follows:

Series	Type	Interest Rate	Maturity		Current	Long-Term	Total
2009	Serial	3.00%	2019	$	1,095,000	-	1,095,000
2010B	Serial	4.65% to 4.85%	2019-2020		270,000	305,000	575,000
	Term	5.42% to 6.15%	2021-2038		-	27,380,000	27,380,000
2011	Serial	4.00% to 5.00%	2019-2022		2,840,000	7,355,000	10,195,000
2017	Serial	1.50% to 4.00%	2019-2030		10,000	14,655,000	14,665,000
Community Assistance Series Totals					4,215,000	49,695,000	53,910,000
		Add: unamortized premiums (net)			(997)	2,067,804	2,066,807
				$	4,214,003	51,762,804	55,976,807

The Community Assistance Series debt service requirements to maturity are as follows:

		Principal	Interest *	Total
2019	$	4,215,000	2,671,070	6,886,070
2020		4,285,000	2,502,927	6,787,927
2021		4,380,000	2,342,051	6,722,051
2022		3,120,000	2,163,900	5,283,900
2023		1,660,000	2,056,795	3,716,795
2024-2028		9,105,000	9,117,735	18,222,735
2029-2033		14,410,000	6,554,016	20,964,016
2034-2038		12,735,000	1,809,023	14,544,023
	$	53,910,000	29,217,517	83,127,517

* In 2010, OWDA sold Federally Taxable Build America Bonds (BABs), which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83 % of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy, over the remaining life of the bonds will be $20,946,525.

The Community Assistance Series bonds are subject to mandatory and optional redemption, by series, as follows:

a) Community Assistance Refunding Series 2009 – The Series 2009 Bonds are not subject to redemption prior to their stated maturity.
b) Community Assistance BABs Series 2010B – 1) The BABs are subject to mandatory redemption beginning June 1, 2021. 2) Both the serial and term bonds maturing on or after December 1, 2020 are callable for redemption prior to maturity at the option of the Authority, either in whole or in part, on or after June 1, 2020, at par plus accrued interest. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to which the Authority's 35% cash subsidy payment from the United States Treasury is reduced or eliminated. 4) Due to The Tax Increase Prevention and Reconciliation Act of 2005 (TIPRA), the BABs are subject to extraordinary mandatory redemption at any time during the ninety-day period following July 13, 2013, in whole or in part, at a redemption price equal to 102% of the principal amount of each maturity selected, plus accrued and unpaid interest to the redemption.
c) Community Assistance Series 2011 – The Series 2011 Bonds maturing on or after December 1, 2021 are subject to optional redemption, in whole or in part, on or after June 1, 2021, at par plus accrued interest.
d) Community Assistance Refunding Series 2017 – The Series 2017 Bonds are not subject to redemption prior to their stated maturity.

LGA reimbursements of Community Assistance project costs, including interest, are pledged as security for the bonds. In the event that LGA reimbursements of Community Assistance project costs are insufficient to cover Community Assistance debt service requirements, unencumbered assets of the Community Assistance Fund Debt Service Reserve, Surplus and Construction accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of Community Assistance project costs was $12,949,494, compared to the required bond debt service payments of $7,036,903.

The bond resolution provides for six separate accounts designated as the Community Assistance Fund Construction account, Revenue account, Debt Service account, Debt Service Reserve account, Surplus account and Rebate account. As of December 1, 2018, there is no accrued rebate liability for these bonds.

Amounts received from the LGAs as reimbursements of project or construction costs, including capitalized interest, are deposited in the Revenue account. The trustee then allocates or pays out moneys in the Revenue account as follows:

a) To the trustee for the payment of its fees on the first day of each May and November.

b) To the Debt Service account on the first day of each May and November, commencing on the first May or November preceding the first bond maturity date (1) a sum which, when added to any available balance then on deposit in the Debt Service account, will be equal to the interest due on that day on all bonds outstanding; (2) a sum which will be equal to the next ensuing mandatory redemption for term bonds; and (3) a sum which will be equal to the next ensuing principal maturity on all outstanding bonds.

c) To the Debt Service Reserve account on the first day of each May and November, a sum as necessary to maintain in the Debt Service Reserve account investments or cash having an aggregate value at least equal to the maximum annual bond service charges required to be paid in that year or any succeeding year.

d) To the Surplus account, on the first day of June and December of each year, remaining moneys (after making up any deficiencies) in the Revenue account (excluding amounts received for the next ensuing LGA repayment date).

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the first day of November of each year, prior to making allocations or payments of moneys on hand in the Revenue account.

Any deficiency in the amounts required to be deposited in the Debt Service account or the Debt Service Reserve account is to be made up by moneys available in the Surplus account.

(6) WATER DEVELOPMENT REVENUE AND REFUNDING BONDS AND NOTES—FRESH WATER SERIES

As of December 31, 2018, there was $902,735,000 of Fresh Water Development Revenue and Refunding Bonds and Notes outstanding, broken down by series as follows:

Series	Type	Interest Rate	Maturity	Current	Long-Term	Total
2001B	Serial	4.75% to 5.50%	2019-2021	$ 5,330,000	6,085,000	11,415,000
2005	Serial	5.50%	2019-2025	10,800,000	36,480,000	47,280,000
2006	Term	5.25%	2022-2034	-	51,100,000	51,100,000
2009B	Serial	3.00% to 5.00%	2019-2022	5,705,000	3,515,000	9,220,000
	Term	3.125% to 5.250%	2020-2027	-	27,010,000	27,010,000
2010A-2	Term	3.593% to 4.917%	2020-2042	-	149,290,000	149,290,000
2013	Serial	5.00%	2019-2023	20,875,000	79,190,000	100,065,000
2016A	Serial	4.00% to 5.00%	2028-2036	-	49,050,000	49,050,000
	Term	5.00%	2030-2035	-	120,000,000	120,000,000
2016B	Serial	5.00%	2023-2037	-	105,500,000	105,500,000
	Term	5.00%	2030-2036	-	44,500,000	44,500,000
2017A	Notes	Variable	2020	-	21,900,000	21,900,000
2018	Serial	5.00%	2021-2028	-	166,405,000	166,405,000
Fresh Water Series Totals				42,710,000	860,025,000	902,735,000
		Add: unamortized premiums		-	112,976,608	112,976,608
				$ 42,710,000	973,001,608	1,015,711,608

The Fresh Water Series debt service requirements to maturity are as follows:

		Principal	Interest*	Total
2019	$	42,710,000	44,019,714	86,729,714
2020		66,275,000	41,428,152	107,703,152
2021		47,915,000	38,788,937	86,703,937
2022		47,195,000	36,390,608	83,585,608
2023		46,220,000	34,038,210	80,258,210
2024-2028		347,080,000	134,408,926	481,488,926
2029-2033		188,380,000	53,811,548	242,191,548
2034-2038		105,045,000	12,742,902	117,787,902
2039-2042		11,915,000	966,313	12,881,313
	$	902,735,000	396,595,310	1,299,330,310

The Fresh Water Series 2017A Notes are taxable and have an adjustable rate that is reset monthly at a rate of 1-month LIBOR plus 0.75%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 3.12%.

* In 2010, OWDA sold Federally Taxable BABs, which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83% of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy, over the remaining life of the bonds will be $367,702,665.

The Fresh Water Series Bonds and Notes are subject to mandatory and optional redemption, by series, as follows:

a) Fresh Water Series 2001B – The Series 2001B Bonds are not subject to redemption prior to maturity.
b) Fresh Water Refunding Series 2005 – The Series 2005 Bonds are not subject to redemption prior to maturity.
c) Fresh Water Refunding Series 2006 – 1) The Series 2006 Bonds are not subject to optional redemption prior to their stated maturity. 2) The term bonds are subject to mandatory redemption beginning December 1, 2022.
d) Fresh Water Refunding Series 2009B – The Series 2009B Bonds are not subject to optional redemption prior to their stated maturity. The term bonds are subject to mandatory redemption beginning December 1, 2020.
e) Fresh Water BABs Series 2010A-2 – 1) The BABs are subject to mandatory redemption beginning June 1, 2020. 2) The BABs shall be subject to an optional redemption prior to maturity, at the option of the Authority, in whole or in part, on any business day, at the make-whole redemption price. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to which the Authority’s 35% cash subsidy payment from the United States Treasury is reduced or eliminated.
f) Fresh Water Series 2013 – The Series 2013 Bonds are not subject to redemption prior to maturity.
g) Fresh Water Series 2016A – The Series 2016A Bonds are subject to prior redemption at the sole option of the Authority, in whole or in part, on or after June 1, 2026, at par plus accrued interest.

(Continued)

h) Fresh Water Series 2016B – The Series 2016B Bonds are subject to prior redemption at the sole option of the Authority, in whole or in part, on or after December 1, 2026, at par plus accrued interest.
i) Fresh Water 2017A Notes – These notes are subject to optional redemption, in whole or in part, 30 days after the date of issuance, at par plus accrued interest.
j) Fresh Water Series 2018 – The Series 2018 Bonds are subject to prior redemption at the sole option of the Authority, in whole or in part, on or after March 1, 2028, at par plus accrued interest to the redemption date.

LGA reimbursements of Fresh Water project costs, including interest, are pledged as security for the bonds and notes. In the event that LGA reimbursements of Fresh Water project costs are insufficient to cover Fresh Water debt service payments, unencumbered assets of the Fresh Water Fund Debt Service Reserve, Surplus and Construction accounts are also pledged as security for the bonds and notes. For 2018, the amount received from reimbursements of Fresh Water project costs was $110,842,498 compared to the required bond and note debt service payments of $71,761,963.

The bond and note resolutions provide for six separate accounts designated as the Fresh Water Construction account, Revenue account, Debt Service account, Debt Service Reserve account, Surplus account and Rebate account. As of December 1, 2018, there is no accrued rebate liability for these bonds and notes.

Amounts received from the LGAs as reimbursements of project or construction costs, including capitalized interest, are deposited in the Revenue account. The trustee then allocates or pays out moneys in the Revenue account as follows:

a) To the trustee for the payment of its fees on the first day of each May and November.

b) To the Debt Service account on the first day of each May and November (1) a sum which, when added to any available balance then on deposit in the Debt Service account, will be equal to the interest due on that day on all bonds and notes outstanding; (2) a sum which will be equal to the next ensuing mandatory redemption for term bonds; and (3) a sum which will be equal to the next ensuing principal maturity on all outstanding bonds and notes.

c) To the Debt Service Reserve account, a semiannual sum as necessary to maintain in the Debt Service Reserve account investments or cash having an aggregate value at least equal to 50% of the maximum annual bond and note service charges required to be paid in that year or any succeeding year.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the first day of November of each year, prior to making allocations or payments of moneys on hand in the Revenue account.

On the first day of June and December of each year, all remaining moneys (after making up any deficiencies) in the Revenue account (excluding amounts received for the next ensuing LGA repayment date) are allocated to the Surplus account.

Any deficiency in the amounts required to be deposited in the Debt Service account or the Debt Service Reserve account is to be made up by moneys available in the Surplus account.

(7) WATER POLLUTION CONTROL LOAN FUND REVENUE AND REFUNDING BONDS—WATER QUALITY SERIES

As of December 31, 2018, there was $626,015,000 of Water Pollution Control Loan Fund (WPCLF) Revenue and Refunding Bonds—Water Quality Series outstanding, broken down by series as follows:

Series	Type	Interest Rate	Maturity		Current	Long-Term	Total
2005	Serial	5.25% to 5.50%	2019-2023	$	27,945,000	63,950,000	91,895,000
2009	Serial	3.00% to 5.00%	2019		19,885,000	-	19,885,000
2010A	Serial	3.25% to 5.00%	2019		12,000,000	-	12,000,000
2010B-2	Serial	4.192%	2024		-	11,390,000	11,390,000
	Term	3.492% to 4.879%	2019-2034		7,715,000	410,020,000	417,735,000
2010C	Serial	3.00% to 5.00%	2019-2022		22,965,000	39,055,000	62,020,000
2011A	Serial	5.00%	2019		11,090,000	-	11,090,000
WPCLF Water Quality Series Totals					101,600,000	524,415,000	626,015,000
		Add: unamortized premiums			619,343	4,602,604	5,221,947
				$	102,219,343	529,017,604	631,236,947

The WPCLF – Water Quality Series debt service requirements to maturity are as follows:

		Principal	Interest *	Total
2019	$	101,600,000	29,342,303	130,942,303
2020		56,765,000	24,888,972	81,653,972
2021		42,635,000	22,149,833	64,784,833
2022		18,165,000	20,467,128	38,632,128
2023		8,985,000	19,653,145	28,638,145
2024-2028		266,135,000	65,931,420	332,066,420
2029-2033		118,635,000	17,689,668	136,324,668
2034		13,095,000	482,411	13,577,411
	$	626,015,000	200,604,880	826,619,880

* In 2010, OWDA sold Federally Taxable BABs which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83% of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy over the remaining life of the bonds, will be $138,722,104.

Prior redemption of WPCLF—Water Quality Series Bonds, by series, is as follows:

a) Water Quality Refunding Series 2005 – These bonds are not subject to redemption prior to stated maturity.
b) Water Quality Refunding Series 2009 – These bonds are not subject to redemption prior to stated maturity.
c) Water Quality Series 2010A – These bonds are not subject to redemption prior to stated maturity.
d) Water Quality Series 2010B-2 – 1) The BABs are subject to mandatory redemption beginning June 1, 2019. 2) The BABs shall be subject to an optional redemption prior to maturity, at the option of the Authority, in whole or in part, on any business day, at the make-whole redemption price. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to

which the Authority's 35% cash subsidy payment from the United States Treasury is reduced or eliminated. 4) Due to TIPRA, the BABs are subject to extraordinary mandatory redemption at any time during the ninety-day period following August 24, 2013, in whole or in part, at a redemption price equal to 102% of the principal amount of each maturity selected, plus accrued and unpaid interest to the redemption date.

e) Water Quality Refunding Series 2010C – These bonds are not subject to redemption prior to their stated maturity.
f) Water Quality Refunding Series 2011A – These bonds are not subject to redemption prior to their stated maturity.

LGA reimbursements of WPCLF project costs of principal and interest (from loans made prior to May 1, 2014), pursuant to the WPCLF loan agreements, are primarily pledged as security for the WPCLF Water Quality Bonds, next to the WPCLF Water Quality Debt Service Reserve (DSR) for any shortages from the required DSR balance, and subordinately pledged as security for the WPCLF Bonds. LGA reimbursements of WPCLF project costs of interest from loans made after May 1, 2014, pursuant to WPCLF loan agreements are pledged first to any WPCLF State Match Bonds outstanding, second to WPCLF Water Quality Bonds, and third to WPCLF Bonds outstanding. In the event that LGA reimbursements of WPCLF principal and interest project costs are insufficient to cover WPCLF Water Quality debt service payments, unencumbered assets of the WPCLF Water Quality Debt Service Reserve, Surplus and Other Projects accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of WPCLF principal and interest project costs were $351,461,676, compared to the required bond debt service payments of $152,598,928.

The bond resolution provides for five separate accounts designated as Net Bond Proceeds account, Debt Service account, Debt Service Reserve account, Cost of Issuance account and Rebate account. As of December 31, 2018, there is no accrued rebate liability for these bonds.

Amounts received as principal and the interest (from loans made prior to May 1, 2014) from the LGAs as reimbursement of project or construction costs are deposited in the Repayment account. The trustee then allocates or pays out moneys in the Repayment account as follows:

a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding WPCLF Water Quality Bonds due on the next interest payment date, (b) the principal of all outstanding WPCLF Water Quality Bonds due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding WPCLF Water Quality Bonds due on the next interest payment date and (2) on the last day of May and November, the amount contained in a direction from the Authority to be used to purchase WPCLF Water Quality Bonds received by the trustee pursuant to any invitation to the holders to tender such WPCLF Water Quality Bonds in accordance with the provisions of the applicable Series resolution.

b) To the trustee for the payment of its fees on the last day of each May and November.

c) To the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the lesser of 50% of the maximum annual bond service charges required to be paid on all Water Quality Bonds outstanding.

d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.

e) To the WPCLF Bonds to cover principal and interest due on the next payment date.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

(8) WATER POLLUTION CONTROL LOAN FUND REVENUE AND REFUNDING BONDS AND NOTES SERIES

As of December 31, 2018, there was $1,707,975,000 of Water Pollution Control Loan Fund Revenue and Refunding Bonds and Notes Series outstanding, broken down by series as follows:

Series	Type	Interest Rate	Maturity	Current	Long-Term	Total
2014	Serial	2.00% to 5.00%	2019-2024	$ 27,955,000	294,965,000	322,920,000
2014B	Serial	2.00% to 5.00%	2019-2022	17,955,000	102,230,000	120,185,000
2015A	Serial	5.00%	2020-2026	-	240,000,000	240,000,000
2015B	Serial	5.00%	2025-2030	-	92,300,000	92,300,000
	Term	5.00%	2029	-	12,570,000	12,570,000
2016	Serial	Variable	2031-2036	-	200,000,000	200,000,000
2017A	Serial	5.00%	2026-2030	-	330,000,000	330,000,000
	Term	5.00%	2031	-	70,000,000	70,000,000
2017B	Notes	Variable	2020	-	250,000,000	250,000,000
2017-20B	Notes	Variable	2020	-	20,000,000	20,000,000
2017-20C	Notes	Variable	2020	-	50,000,000	50,000,000
WPCLF Bonds and Notes Series Totals				45,910,000	1,662,065,000	1,707,975,000
		Add: unamortized premiums		-	161,544,973	161,544,973
				$ 45,910,000	1,823,609,973	1,869,519,973

The WPCLF Bonds and Notes Series debt service requirements to maturity are as follows:

	Principal	Interest	Total
2019	$ 45,910,000	67,182,026	113,092,026
2020	412,185,000	63,668,642	475,853,642
2021	105,945,000	53,203,025	159,148,025
2022	134,365,000	47,548,375	181,913,375
2023	129,350,000	40,894,250	170,244,250
2024-2028	421,950,000	132,481,875	554,431,875
2029-2033	363,270,000	30,237,375	393,507,375
2034-2036	95,000,000	1,515,000	96,515,000
	$ 1,707,975,000	436,730,568	2,144,705,568

The WPCLF 2016 Bonds have a variable rate that is reset weekly by a remarketing agent. The bonds interest payments to maturity are based on the weighted average interest rate of 1.01% for these bonds from issuance date of May 4, 2016 to December 31, 2018.

The WPCLF 2017B Notes have an adjustable rate that is reset weekly at a rate of SIFMA plus 0.22%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 1.93%.

The WPCLF 2017-20B Notes have an adjustable rate that is reset monthly at a rate of 1-month LIBOR multiplied by applicable factor of 0.70 plus 0.48%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 2.58%.

The WPCLF 2017-20C Notes have an adjustable rate that is reset monthly at a rate of 1-month LIBOR multiplied by applicable factor of 0.70 plus 0.675%. The notes interest payments to maturity are based on the rate for these notes at December 31, 2018, which was 2.82%.

Prior redemption of WPCLF Bonds and Notes, by series, is as follows:

a) WPCLF Series 2014 – These bonds are not subject to redemption prior to their stated maturity.
b) WPCLF Refunding Series 2014B – These bonds are not subject to redemption prior to their stated maturity.
c) WPCLF Series 2015A – These bonds are not subject to redemption prior to their stated maturity.
d) WPCLF Refunding Series 2015B – The bonds maturing on or after June 1, 2026 are callable for redemption prior to maturity at the option of the Authority, in whole or in part, on or after December 1, 2025, at par plus accrued interest.
e) WPCLF Series 2016 – These bonds are subject to redemption to maturity on the first business day of any month, at the option and direction of the Authority, in whole or in part, at a redemption price of par plus accrued interest.
f) WPCLF 2017A – The bonds maturing on or after June 1, 2027 are callable for redemption prior to maturity at the option of the Authority, in whole or in part, on or after June 1, 2027, at par plus accrued interest.
g) WPCLF 2017B – These notes are subject to redemption prior to maturity at the option of the Authority on or after September 1, 2018, in whole or in part, at par plus accrued interest.
h) WPCLF 2017-20B – These notes are subject to optional redemption, in whole or in part, 30 days after the date of issuance, at par plus accrued interest.
i) WPCLF 2017-20C – These notes are subject to optional redemption prior to maturity at the option of the Authority, in whole or in part, at par plus accrued interest, provided at least three business days' prior written notice to the Bank and Trustee.

LGA reimbursements of WPCLF project costs of principal and interest (from loans made prior to May 1, 2014), pursuant to WPCLF loan agreements, are pledged as security for the WPCLF Bonds and Notes on a subordinate basis to the WPCLF Water Quality Bonds. LGA reimbursements of WPCLF project costs of interest from loans made after May 1, 2014, pursuant to WPCLF loan agreements are pledged first to any WPCLF State Match Bonds outstanding, second to WPCLF Water Quality Bonds, and third to WPCLF Bonds and Notes outstanding. WPCLF Bond and Note debt service is funded after all WPCLF Water Quality debt service due on the next debt service payment date is funded and, if necessary, any shortages of the WPCLF Water Quality DSR required balance is funded. In the event that LGA reimbursements of WPCLF project costs of principal and interest are insufficient to cover WPCLF Water Quality and/or WPCLF Bond and Note debt service payments, any unencumbered assets of the WPCLF Water Quality Debt Service Reserve, Surplus and Other Projects accounts are also pledged as security for the bonds and notes. For 2018, the amount received from reimbursements of WPCLF principal and interest project costs after funding of WPCLF Water Quality Debt Service was $198,862,748, compared to the required bond and note debt service payments of $95,421,444.

The bond and note resolutions provide for five separate accounts designated as Net Bond Proceeds account, Debt Service account, Debt Service Reserve account, Cost of Issuance account and Rebate account. As of December 31, 2018, there is no accrued rebate liability for these bonds and notes.

Amounts received as principal and interest from the LGAs as reimbursement of project or construction costs are deposited in the Repayment account. After all WPCLF Water Quality debt service and DSR funding needs are met, the trustee then allocates or pays out moneys in the Repayment account to WPCLF Bonds and Notes as follows:

a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding WPCLF Bonds and Notes due on the next interest payment date, (b) the principal of all outstanding WPCLF Bonds and Notes due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding WPCLF Bonds and Notes due on the next interest payment date and (2) on the last day of May and November, the amount contained in a direction from the Authority to be used to purchase WPCLF Bonds and Notes received by the trustee pursuant to any invitation to the holders to tender such WPCLF Bonds and Notes in accordance with the provisions of the applicable Series resolution.

b) To the trustee for the payment of its fees on the last day of each May and November.

c) If applicable, to the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the required reserve fund balance.

d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

(9) DRINKING WATER ASSISTANCE FUND REVENUE AND REFUNDING BONDS—LEVERAGE SERIES

As of December 31, 2018, there was $131,660,000 of Drinking Water Assistance Fund (DWAF) Revenue and Refunding Bonds—Leverage Series outstanding, broken down by series as follows:

Series	Type	Interest Rate	Maturity	Current	Long-Term	Total
2005	Serial	5.25%	2023	$ -	750,000	750,000
	Term	5.25%	2019-2022	5,775,000	12,085,000	17,860,000
2010B	Term	5.276% to 5.742%	2022-2030	-	44,530,000	44,530,000
2010C	Serial	4.00% to 5.00%	2019-2021	12,050,000	27,045,000	39,095,000
2014	Serial	4.00% to 5.00%	2019-2024	7,290,000	22,135,000	29,425,000
DWAF Leverage Series Totals				25,115,000	106,545,000	131,660,000
		Add: unamortized premiums		-	3,677,637	3,677,637
				$ 25,115,000	110,222,637	135,337,637

The DWAF Leverage Series debt service requirements to maturity are as follows:

		Principal	Interest*	Total
2019	$	25,115,000	6,337,265	31,452,265
2020		27,145,000	5,116,783	32,261,783
2021		22,715,000	3,888,083	26,603,083
2022		14,460,000	2,901,485	17,361,485
2023		6,045,000	2,257,265	8,302,265
2024-2028		26,245,000	6,956,307	33,201,307
2029-2030		9,935,000	666,503	10,601,503
	$	131,660,000	28,123,691	159,783,691

* In 2010, OWDA sold Federally Taxable BABs which receive a cash subsidy payment from the United States Treasury equaling 35% of interest paid. In 2018, the subsidy was cut 6.2%, resulting in an effective subsidy equaling 32.83% of interest paid. The interest reported in this table is the gross interest due on the bonds. The total interest due, net of the BABs subsidy over the remaining life of the bonds, will be $21,545,096.

Prior redemption of DWAF—Leverage Series Bonds, by series, is as follows:

a) Leverage Refunding Series 2005 – The term bonds are subject to mandatory redemption beginning June 1, 2019, at par plus accrued interest. Neither the term or serial bonds are subject to optional redemption prior to their stated maturity.
b) Leverage Series 2010B – 1) The BABs are subject to mandatory redemption beginning June 1, 2022. 2) The BABs are subject to optional redemption by and at the sole option of the Authority, in whole multiples of $5,000, either in whole or part on any date on or after June 1, 2020, at a redemption price equal to 100% of the principal amount redeemed, plus accrued interest to the redemption date. 3) The BABs are subject to extraordinary optional redemption if Section 54AA or 6431 of The Internal Revenue Code of 1986 is modified, amended, or interpreted in a manner pursuant to which the Authority's 35% cash subsidy payments from the United States Treasury is reduced or eliminated.
c) Leverage Refunding Series 2010C – The refunding bonds maturing on or after June 1, 2021 are subject to prior redemption by and at the sole option of the Authority in whole multiples of $5,000, either in whole or in part on any date on or after December 1, 2020, at a redemption price equal to 100% of the principal amount redeemed, plus accrued interest to the redemption date.
d) Leverage Refunding Series 2014 – These bonds are not subject to redemption prior to their stated maturity.

LGA reimbursements of DWAF project costs of principal and interest (from loans made prior to August 3, 2016), pursuant to DWAF loan agreements, are primarily pledged as security for the DWAF Leverage bonds, next to the DWAF Leverage DSR for any shortages from the required DSR balance, and subordinately as security for DWAF Bonds. LGA reimbursements of DWAF project costs of interest from loans made after August 3, 2016, pursuant to DWAF loan agreements, are pledged first to any DWAF State Match Bonds outstanding, second to DWAF Leverage Bonds, and third to DWAF Bonds outstanding. In the event that LGA reimbursements of DWAF principal project costs are insufficient to cover DWAF Leverage debt service payments, unencumbered assets of the DWAF Leverage Debt Service Reserve and Other Projects accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of DWAF principal and interest project costs were $64,724,660, compared to the required bond debt service payments of $32,163,965.

The bond resolution provides for five separate accounts designated as Net Bond Proceeds account, Debt Service account, Debt Service Reserve account, Cost of Issuance account and Rebate account. As of December 31, 2018, there is no accrued rebate liability for these bonds.

Amounts received as principal and interest from the LGAs as reimbursement of project or construction costs are deposited in the Principal and Additional Pledged Loan Interest Repayment accounts. The trustee then allocates or pays out moneys in the Principal Repayment account first and Additional Pledged Loan Interest Repayment account (after all moneys of the Principal Repayment account are used for debt service) as follows:

a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding DWAF Leverage Bonds due on the next interest payment date, (b) the principal of all outstanding DWAF Leverage Bonds due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding DWAF Leverage Bonds due on the next interest payment date and (2) on the last day of May, the amount contained in a direction from the Authority to be used to purchase DWAF Leverage Bonds received by the trustee pursuant to any invitation to the holders to tender such DWAF Leverage Bonds in accordance with the provisions of the applicable Series resolution.

b) To the trustee for the payment of its fees on the last day of each May and November.

c) To the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the lesser of 50% of the maximum annual bond service charges required to be paid on all DWAF Leverage Bonds issued and outstanding, or 10% of the principal amount of DWAF Leverage Bonds issued and outstanding computed in accordance with the Trust Agreement.

d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

(10) DRINKING WATER ASSISTANCE FUND REVENUE BONDS SERIES

As of December 31, 2018, there was $135,000,000 of Drinking Water Assistance Fund Revenue Bonds outstanding, broken down by series as follows:

Series	Type	Interest Rate	Maturity		Long-Term
2016	Serial	3.00% to 5.00%	2020-2029	$	87,000,000
2016	Term	4.00% to 5.00%	2030-2037		48,000,000
DWAF Bonds Series Totals					135,000,000
		Add: unamortized premiums			25,841,152
				$	160,841,152

The DWAF Bonds Series debt service requirements to maturity are as follows:

		Principal	Interest	Total
2019	$	-	6,360,000	6,360,000
2020		500,000	6,360,000	6,860,000
2021		4,000,000	6,317,500	10,317,500
2022		8,000,000	6,070,000	14,070,000
2023		13,000,000	5,607,500	18,607,500
2024-2028		55,500,000	18,725,000	74,225,000
2029-2033		33,000,000	8,745,000	41,745,000
2034-2037		21,000,000	2,180,000	23,180,000
	$	135,000,000	60,365,000	195,365,000

Prior redemption of DWAF Series 2016 – The bonds maturing on or after June 1, 2027 are subject to prior redemption by and at the sole option of the Authority in whole multiples of $5,000, either in whole or in part on any date on or after December 1, 2026, at a redemption price of par plus accrued interest.

LGA reimbursements of DWAF project costs of principal and interest (from loans made prior to August 3, 2016), pursuant to DWAF loan agreements, are pledged as security for the DWAF Bonds on a subordinate basis to the DWAF Leverage Bonds. LGA reimbursements of DWAF project costs of interest from loans made after August 3, 2016, pursuant to DWAF loan agreements are pledged first to any DWAF State Match Bonds outstanding, then to DWAF Leverage Bonds, and third to DWAF Bonds outstanding. DWAF Bond debt service is funded after all DWAF Leverage debt service due on the next debt service payment date is funded and, if necessary, any shortages of the DWAF Leverage DSR required balance is funded. In the event that LGA reimbursements of DWAF project costs of principal and interest are insufficient to cover DWAF Leverage and/or DWAF Bond debt service payments, any unencumbered assets of the DWAF Leverage Debt Service Reserve, Surplus and Other Projects accounts are also pledged as security for the bonds. For 2018, the amount received from reimbursements of DWAF principal and interest project costs after funding of DWAF Leverage debt service was $32,560,695, compared to the required bond debt service payments of $6,360,000.

Amounts received as principal and interest from the LGAs as reimbursement of project or construction costs are deposited in the Principal and Additional Pledged Loan Interest Repayment accounts. After all DWAF Leverage debt service and DSR funding needs are met, the trustee then allocates or pays out moneys in the Principal Repayment account first and Additional Pledged Loan Interest Repayment account (after all moneys of the Principal Repayment account are used for debt service) as follows:

(Continued)

a) To the Debt Service account, (1) all revenues as soon as received until the balance in the Debt Service account equals an amount which, when added to any balance then on deposit in the Debt Service account and available for such purpose, will be equal to the sum of (a) the interest on all outstanding DWAF Bonds due on the next interest payment date, (b) the principal of all outstanding DWAF Bonds due on the next interest payment date, and (c) the mandatory sinking fund requirement for all outstanding DWAF Bonds due on the next interest payment date and (2) on the last day of May and November, the amount contained in a direction from the Authority to be used to purchase DWAF Bonds received by the trustee pursuant to any invitation to the holders to tender such DWAF Bonds in accordance with the provisions of the applicable Series resolution.

b) To the trustee for the payment of its fees on the last day of each May and November.

c) If applicable, to the Debt Service Reserve account, a semiannual sum on June 1 and December 1 as may be necessary to maintain in the Debt Service Reserve account investments or cash having a value at least equal to the required reserve fund balance.

d) To the Rebate Fund, as necessary to make any payment required under section 148(f) of the Internal Revenue Code.

After the Debt Service Reserve account has reached the required reserve fund balance, interest earned on that balance will be transferred to the Debt Service account on the last day of May or November of each year.

(11) OUTSTANDING DEFEASED BONDS

For accounting purposes, the assets and liabilities for defeased bonds are not reflected in the Authority's financial statements. Below is a listing of Authority bonds remaining outstanding as of December 31, 2018, which have been defeased:

Series	Year Defeased	Balance Outstanding
Community Assistance 2009	2017	$ 15,545,000
WPCLF State Match 2005	2014	2,035,000
WPCLF Water Quality 2010A	2014	139,360,000
WPCLF Water Quality 2010A	2015	114,050,000
		$ 270,990,000

(12) WATER DEVELOPMENT REVENUE BONDS AND NOTES—INDUSTRIAL SERIES

The Authority established the industrial program to assist private industry and certain municipalities in financing the construction of water and solid waste pollution control facilities. Under the financing agreements, industrial companies and municipalities are required to make payments for a period of up to 35 years, sufficient to pay, as they become due, interest and principal on the bonds and notes issued to finance the projects. The Authority has no liability for repayment of these bonds and notes. As of December 31, 2018, outstanding bonds and notes under this program total $1,803,665,000.

(13) Defined Benefit Pension Plan

The net pension liability reported on the statement of net position represents a liability to employees for pensions. Pensions are a component of exchange transactions–between an employer and its employees–of salaries and benefits for employee services. Pensions are provided to an employee–on a deferred-payment basis–as part of a total compensation package offered by an employer for employee services each financial period. The obligation to sacrifice resources for pensions is a present obligation because it was created as a result of employment exchanges that already have occurred.

The net pension liability represents the Authority's proportionate share of the Ohio Public Employees Retirement System (OPERS) Pension Plan's collective actuarial present value of projected benefit payments attributable to past periods of service, net of its fiduciary net position. The net pension liability calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost-of-living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting this estimate annually.

The Ohio Revised Code (ORC) limits the Authority's obligation for this liability to annually required payments. The Authority cannot control benefit terms or the manner in which pensions are financed; however, the Authority does receive the benefit of employees' services in exchange for compensation including pension.

GASB Statement No. 68 assumes the liability is solely the obligation of the employer, because (1) they benefit from the employee services; and (2) State statute requires all funding to come from these employers. All contributions to-date have come solely from these employers (which also includes costs paid in the form of withholdings from employees). State statute requires the OPERS to amortize unfunded liabilities within 30 years. If the amortization period exceeds 30 years, the OPERS Board of Trustees (OPERS Board) must propose corrective action to the State legislature. Any resulting legislation change to benefits or funding could significantly affect the net pension liability. Resulting adjustments to the net pension liability would be effective when the changes are legally enforceable.

Plan Description

Organization – OPERS is a cost-sharing, multiple-employer public employee retirement system comprised of three separate pension plans: The Traditional Pension Plan, a defined benefit plan; the Combined Plan, a combination defined benefit/contribution plan; and the Member-Directed Plan, a defined contribution plan. All state and local governmental employees in Ohio, except those covered by one of the other state or local retirement systems in Ohio, are members of OPERS. New public employees (those who establish membership in OPERS on or after January 1, 2003) have 180 days from the commencement of employment to select membership in one of the three pension plans. Contributions to OPERS are effective with the first day of the member's employment. Contributions made prior to the member's plan selection are maintained in the Traditional Pension Plan and later transferred to the plan elected by the member, as appropriate.

All state and local governmental employees, except those covered by another state retirement system in Ohio or the Cincinnati Retirement System, are required to become contributing members of OPERS when they begin public employment unless they are exempted or excluded as defined by the ORC. For actuarial purposes, employees who have earned sufficient service credit (60 contributing months) are entitled to a future benefit from OPERS. Employer, employee and retiree data as of December 31, 2017 can be found in the OPERS 2017 Comprehensive Annual Financial Report (CAFR).

Pension Benefits – All benefits of the System, and any benefit increases, are established by the legislature pursuant to ORC Chapter 145.

Age-and-Service Defined Benefits – Effective January 7, 2013, Senate Bill (SB) 343 modified components of the Traditional Pension and Combined Plans. Members were impacted by the changes to varying degrees based on their transition group. Three transition groups (A, B and C) were designed to ease the transition of key components of the pension plan changes. Members who were eligible to retire under law in effect prior to SB 343 or will be eligible to retire no later than five years after January 7, 2013, comprise transition Group A. Members who have 20 years of service credit prior to January 7, 2013, or will be eligible to retire no later than 10 years after January 7, 2013, are included in transition Group B. Group C included those members who are not in either of the other groups and members who were hired on or after January 7, 2013. Please see the Plan Statement in the OPERS 2017 CAFR for additional details.

Benefits in the Traditional Pension Plan for state and local members are calculated on the basis of age, final average salary (FAS) and service credit. State and local members in transition Groups A and B are eligible for retirement benefits at age 60 with 60 contributing months of service credit or at age 55 with 25 or more years of service credit. Group C for state and local members is eligible for retirement at age 57 with 25 years of service or at age 62 with 5 years of service. For Groups A and B, the annual benefit is based on 2.2% of FAS multiplied by the actual years of service for the first 30 years of service credit and 2.5% for years of service in excess of 30 years. For Group C, the annual benefit applies a factor of 2.2% for the first 35 years and a factor of 2.5% for the years of service in excess of 35. FAS represents the average of the three highest years of earnings over a member's career for Groups A and B. Group C is based on the average of the five highest years of earnings over a member's career. Refer to the age-and-service tables located in the OPERS 2017 CAFR Plan Statement for additional information regarding the requirements for reduced and unreduced benefits. Members who retire before meeting the age and years of service credit requirement for unreduced benefit receive a percentage reduction in the benefit amount. The base amount of a member's pension benefit is locked in upon receipt of the initial benefit payment for calculation of annual cost-of-living adjustment.

Prior to 2000, payments to OPERS benefit recipients were limited under Section 415(b) of the Internal Revenue Code (IRC). OPERS entered into a Qualified Excess Benefit Arrangement (QEBA) with the Internal Revenue Service (IRS) for all OPERS benefit recipients to receive their full statutory benefit even when the benefits exceeds IRC 415(b) limitations. Monthly QEBA payments start when the total amount of benefits received by the recipients exceeds the IRC limit each year. The portion of the benefit in excess of the IRC 415(b) limit is paid out of the QEBA and taxed as employee payroll in accordance with IRS regulations.

Benefits in the Combined Plan consist of both an age-and-service formula benefit (defined benefit) and a defined contribution element. The defined benefit element is calculated on the basis of age, FAS and years of service. Eligibility regarding age and years of service in the Combined Plan is the same as the Traditional Pension Plan. The benefit formula for the defined benefit component of the plan for state and local members in transition Groups A and B applies a factor of 1.0% to the member's FAS for the first 30 years of service. A factor of 1.25% is applied to years of service in excess of 30. The benefit formula for transition Group C applies a factor of 1.0% to the member's FAS for the first 35 years of service and a factor of 1.25% is applied to years in excess of 35. Persons retiring before age 65 with

(Continued)

less than 30 years of service credit receive a percentage reduction in benefit. The defined contribution portion of the benefit is based on accumulated member contributions plus or minus any investment gains or losses on those contributions.

Defined Contribution Benefits – Defined contribution plan benefits are established in the plan documents, which may be amended by the OPERS Board. Member-Directed Plan and Combined Plan members who have met the retirement eligibility requirements may apply for retirement benefits. The amount available for defined contribution benefits in the Combined Plan consists of the member's contributions plus or minus the investment gains or losses resulting from the member's investment selections. Combined Plan members wishing to receive benefits must meet the requirements for both the defined benefit and contribution plans. Member-Directed Plan participants must have attained the age of 55, have money on deposit in the defined contribution plan and have terminated public service to apply for retirement benefits.

The amount available for defined contribution benefits in the Member-Directed Plan consists of the member's contributions, vested employer contributions and investment gains or losses resulting from the member's investment selections. Employer contributions and associated investment earnings vest over a five-year period, at a rate of 20% each year. At retirement, members may select one of several distribution options for payment of the vested balance of their individual OPERS accounts. Options include the purchase of a monthly defined benefit annuity from OPERS (which includes joint and survivor options), partial lump-sum payments (subject to limitations), a rollover of the vested account balance to another financial institution, receipt of the entire account balance, net of taxes withheld, or a combination of these options.

Disability Benefits – OPERS administers two disability plans for participants in either the Traditional Pension Plan or Combined Plan. Members in the plan as of July 29, 1992, could elect, by April 7, 1993, coverage under either the original plan or the revised plan. All members who entered OPERS after July 29, 1992 are automatically covered under the revised plan. Under the original plan, a member who becomes disabled before age 60 and has completed 60 contributing months is eligible for a disability benefit. Benefits are funded by the employee and employer contributions and terminate if the member is able to return to work. The revised plan differs in that a member who becomes disabled at any age with 60 contributing months will be eligible for disability benefits until a determined age. The benefit is funded by reserves accumulated from employer contributions. After the disability benefit ends, the member may apply for a service retirement benefit or a refund of contributions, which are not reduced by the amount of disability benefits received. Members participating in the Member-Directed Plan are not eligible for disability benefits.

Survivor Benefits – Dependents of deceased members who participated in either the Traditional Pension Plan or the Combined Plan may qualify for survivor benefits if the deceased employee had at least one and a half years of service credit with the plan, and at least one quarter year of credit within the two and one-half years prior to the date of death. ORC Chapter 145, recently updated by HB 520, specifies the dependents and the conditions under which they qualify for survivor benefits.

Other Benefits – Once a benefit recipient retiring under the Traditional Pension Plan has received benefits for 12 months, an annual cost-of-living adjustment is provided on the member's base benefit. Members retiring under the Combined Plan receive a cost-of-living adjustment on the defined benefit portion of their benefit. The cost-of-living increase varies somewhat but is generally defined as Consumer Price Index (CPI) not to exceed 3%. A death benefit of \$500-\$2,500, determined by the number of years of service credit of the retiree, is paid to the beneficiary of a deceased retiree or disability benefit recipient under the Traditional Pension Plan and Combined Plan. Death benefits are not available to beneficiaries of Member-Directed Plan participants.

Money Purchase Annuity – Age-and-service retirees who become re-employed in an OPERS-covered position must contribute the regular contribution rates, which are applied towards a money purchase annuity. The money purchase annuity calculation is based on the accumulated contributions of the retiree for the period of re-employment, and an amount of the employer contributions determined by the OPERS Board. Upon termination of service, members over the age of 65 can elect to receive a lump-sum payout or a monthly annuity. Members under age 65 may leave the funds on deposit with OPERS to receive an annuity benefit at age 65, or may elect to receive a refund of their employee contributions made during the period of re-employment, plus interest.

Refunds – Members who have terminated service in OPERS-covered employment may file an application for refund of their account. The ORC requires a two-month waiting period after service termination before the refund may be paid. The acceptance of a refund payment cancels the individual's rights and benefits in OPERS.

Refunds processed for the Traditional Pension Plan members include the member's accumulated contributions, interest and any qualifying employer funds. A Combined Plan member's refund may consist of member contributions for the purchase of service plus interest, qualifying employer funds, and the value of their account in the defined contribution plan consisting of member contributions adjusted by the gains or losses incurred based on their investment selections. Refunds paid to members in the Member-Directed Plan include member contributions and vested employer contributions adjusted by the gains or losses incurred based on their investment selections.

Contributions – The OPERS funding policy provides for periodic employee and employer contributions to all three plans (Traditional Pension, Combined and Member-Directed) at rates established by the OPERS Board, subject to limits set in statute. The rates established for member and employer contributions were approved based upon the recommendations of the OPERS external actuary. All contribution rates were within the limits authorized by the ORC.

Member and employer contribution rates, as a percent of covered payroll, were the same for each covered group across all three plans for the year ended December 31, 2017. Within the Traditional Pension Plan and Combined Plan, member and employer contributions (employer contributions only for the Combined Plan) and an actuarially determined rate of return are adequate to accumulate sufficient assets to pay defined benefits when due. Employee contributions within the Combined Plan are not used to fund the defined benefit retirement allowance. Employer contribution rates as a level percent of payroll dollars are determined using the entry age actuarial funding method. This formula determines the amount of contributions necessary to fund: (1) the current service cost, representing the estimated amount necessary to pay for defined benefits earned by the employees during the current service year; and (2) the prior service cost for service earned prior to the current year and subsequent benefit increases. These contributions represent the amount necessary to fund accrued liabilities for retirement allowances and survivor benefits over a period of time.

The employee and employer contribution rates for the state and local divisions are currently set at the maximums authorized by the ORC of 10% and 14%, respectively. With the assistance of the OPERS actuary, a portion of each employer's contributions to OPERS is set aside for the funding of post-employment health care coverage. The portion of Traditional Pension Plan employer contributions allocated to health care was 1.0% for 2017. The employer contribution as a percent of covered payroll deposited for Retiree Medical Accounts (RMAs) participants in the Member-Directed Plan for 2017 was 4.0%. The amount of contributions to OPERS from the Authority during 2017 and 2018 was $161,052 and $150,591, respectively, which represents 100% of the Authority's required contribution. In 2018, the Authority did not make any contributions to the Combined Plan and contributions to the Member-Directed Plan were immaterial.

The ORC Chapter 145 assigns authority to the OPERS Board to amend the funding policy. As of December 31, 2017, the OPERS Board adopted the contribution rates that were recommended by the actuary. The contribution rates were included in a new funding policy adopted by the OPERS Board in October 2013, and are certified biennially by the OPERS Board as required by the ORC.

As of December 31, 2017, the date of the last actuarial study, the funding period for all defined benefits of OPERS was 18 years.

Net Pension Liability

The net pension liability was measured as of December 31, 2017, and the total pension liabilities were determined by an actuarial valuation as of that date. The Authority's proportion of the net pension liability was based on both member and employer contributions to OPERS relative to the projected contributions of all participating entities. Following is information related to the Authority's proportionate share and pension expense:

Proportionate Share of the Net Pension Liability	$1,372,392
CY Proportionate Share	0.008748%
PY Proportionate Share	0.008506%
Change in Proportionate Share	0.000242%
Pension Expense	$ 249,100

Actuarial Methods and Assumptions

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of the occurrence of events far into the future. Examples include assumptions about future employment, mortality and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (i.e., the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation. The total pension liability was determined by an actuarial valuation as of December 31, 2017, using the following actuarial assumptions and methods applied to all prior periods included in the measurement in accordance with the requirements of GASB 67. Key methods and assumptions used in the latest actuarial valuation, reflecting experience study results, are presented below:

Actuarial Information	**Traditional Pension Plan**
Valuation Date	December 31, 2017
Experience Study	5 Year period ending December 31, 2015
Actuarial Cost Method	Individual entry age
Actuarial Assumptions:	
Investment Rate of Return	7.50 percent
Wage Inflation	3.25 percent
Projected Salary Increases	3.25 percent - 10.75 percent (including wage inflation at 3.25 percent)
Cost-of-living Adjustments	Pre 1/7/2013 Retirees: 3.00 percent simple Post 1/7/2013 Retirees: 3.00 percent simple through 2018, then 2.15 percent simple

Pre-retirement mortality rates are from the RP-2014 Healthy Annuitant Mortality table. For males, Healthy Annuitant Mortality tables were used, adjusted for mortality improvement back to the observation period base of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates used in evaluating disability allowances were based on the RP-2014 Disabled Mortality table for males and females, adjusted for mortality improvement back to the observation base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 Mortality Improvement Scale to all of the above described tables.

(Continued)

The discount rate used to measure the total pension liability was 7.5% for the Traditional Pension Plan, Combined Plan and Member-Directed Plan. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments for the Traditional Pension Plan, Combined Plan and Member-Directed Plan was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of Net Pension Liability to Changes in the Discount Rate - The following table presents the net pension liability or asset calculated using the discount rate of 7.5%, and expected net pension liability or asset if it were calculated using a discount rate that is 1.0% lower or higher than the current rate.

Employers Net Pension Liability/(Asset)		**1% Decrease 6.5%**	**Current Discount Rate 7.5%**	**1% Increase 8.5%**
Traditional Pension Plan	$	2,437,028	1,372,392	484,816

The allocation of investment assets within the Defined Benefit portfolio is approved by the OPERS Board as outlined in the annual investment plan. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit pension plans. The following table displays the OPERS Board-approved asset allocation policy for 2017 and the long-term expected real rates of return.

Asset Class	**Target Allocation for 2017**	**Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)**
Fixed Income	23.00%	2.20%
Domestic Equities	19.00	6.37
Real Estate	10.00	5.26
Private Equity	10.00	8.97
International Equities	20.00	7.88
Other Investments	18.00	5.26
Total	100.00%	5.66

The long-term expected rate of return on defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return 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, adjusted for inflation.

During 2017, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio and the Defined Contribution portfolio. The Defined Benefit portfolio contains the investment assets of the Traditional Pension Plan, the defined benefit component of the Combined Plan and the annuitized accounts of the Member-Directed Plan. Within The Defined Benefit portfolio, contributions into the plans are all recorded at the same time, and benefit payments all occur on the first of the month. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Defined Benefit portfolio was 16.82% for 2017.

Average Remaining Service Life

GASB 68 requires that changes arising from differences between expected and actual experience or from changes in actuarial assumptions be recognized in pension expense over the average remaining service life of all employees provided with benefits through the pension plan (active and inactive). This is to consider these differences on a pooled basis, rather than an individual basis, to reflect the expected remaining service life of the entire pool of employees with the understanding that inactive employees have no remaining service period. As of December 31, 2017, the average of the expected remaining service lives of all employees calculated by our external actuaries for the Traditional Pension Plan was 2.9546 years; for the Combined Plan was 9.3216 years; and for the Member-Directed Plan was 10.1908 years.

Deferred Inflows and Deferred Outflows

At December 31, 2018, the Authority reported deferred inflows of resources and deferred outflows of resources related to pensions from the following sources:

Deferred Inflows of Resources:		
Differences between expected and actual experience	$	27,045
Net difference between projected and actual earnings on pension plan investments		294,635
Change in Authority's proportionate share		30,257
Total	$	351,937

Deferred Outflows of Resources:		
Differences between expected and actual experience	$	1,402
Change in assumptions		164,010
Change in Authority's proportionate share		35,039
Authority's contributions subsequent to the measurement date		150,591
Total	$	351,042

The $150,591 reported as deferred outflows related to pensions resulting from employer contributions subsequent to the measurement date are recognized as a reduction of the net pension liability in the Authority's financial statements. Other amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in pension expense as disclosed in the table below:

Year Ending December 31	Traditional Pension Plan Net Deferred Outflows / (Inflows) of Resources
2019	$ 112,773
2020	(13,448)
2021	(129,741)
2022	(121,070)
Total	$ (151,486)

(14) DEFINED BENEFIT OPEB PLANS

Net OPEB Liability

For 2018, Governmental Accounting Standards Board (GASB) Statement No. 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions" was effective. This GASB pronouncement had a significant effect on beginning net position as reported January 1, 2018 (See Note 4). The net OPEB liability has been disclosed below.

OPEB is a component of exchange transactions-–between an employer and its employees—of salaries and benefits for employee services. OPEB are provided to an employee—on a deferred-payment basis—as part of the total compensation package offered by an employer for employee services each financial period.

The net OPEB liability represents the Authority's proportionate share of each OPEB plan's collective actuarial present value of projected benefit payments attributable to past periods of service, net of each OPEB plan's fiduciary net position. The net OPEB liability calculation is dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost of living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting these estimates annually.

Ohio Revised Code limits the Authority's obligation for this liability to annually required payments. The Authority cannot control benefit terms or the manner in which OPEB are financed; however, the Authority does receive the benefit of employees' services in exchange for compensation including OPEB.

GASB 75 assumes the liability is solely the obligation of the employer, because they benefit from employee services. OPEB contributions come from these employers and health care plan enrollees which pay a portion of the health care costs in the form of a monthly premium. The Ohio revised Code permits, but does not require the retirement systems to provide healthcare to eligible benefit recipients. Any change to benefits or funding could significantly affect the net OPEB liability. Resulting adjustments to the net OPEB liability would be effective when the changes are legally enforceable.

The retirement systems may allocate a portion of the employer contributions to provide for these OPEB benefits.

Plan Description

Plan Description - The Ohio Public Employees Retirement System (OPERS) administers three separate pension plans: the traditional pension plan, a cost-sharing, multiple-employer defined benefit pension plan; the member-directed plan, a defined contribution plan; and the combined plan, a cost-sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and defined contribution plan.

OPERS maintains a cost-sharing, multiple-employer defined benefit post-employment health care trust, which funds multiple health care plans including medical coverage, prescription drug coverage and deposits to a Health Reimbursement Arrangement to qualifying benefit recipients of both the traditional pension and the combined plans. This trust is also used to fund health care for member-directed plan participants, in the form of a Retiree Medical Account (RMA). At retirement or refund, member-directed plan participants may be eligible for reimbursement of qualified medical expenses from their vested RMA balance.

In order to qualify for postemployment health care coverage, age and service retirees under the traditional pension and combined plans must have twenty or more years of qualifying Ohio service credit. Health care coverage for disability benefit recipients and qualified survivor benefit recipients is available. The health care coverage provided by OPERS meets the definition of an Other Post Employment Benefit (OPEB) as described in GASB Statement 75. See OPERS' CAFR referenced below for additional information.

The Ohio Revised Code permits, but does not require OPERS to provide health care to its eligible benefit recipients. Authority to establish and amend health care coverage is provided to the Board in Chapter 145 of the Ohio Revised Code.

Disclosures for the health care plan are presented separately in the OPERS financial report. Interested parties may obtain a copy by visiting https://www.opers.org/financial/reports.shtml, by writing to OPERS, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling (614) 222-5601 or 800-222-7377.

Funding Policy - The Ohio Revised Code provides the statutory authority requiring public employers to fund postemployment health care through their contributions to OPERS. When funding is approved by OPERS' Board of Trustees, a portion of each employer's contribution to OPERS is set aside to fund OPERS health care plans. Beginning in 2018, health care is not being funded.

Employer contribution rates are expressed as a percentage of the earnable salary of active members. In 2018, state and local employers contributed at a rate of 14.0 percent of earnable. This is the maximum employer contribution rates permitted by the Ohio Revised Code. Active member contributions do not fund health care.

Each year, the OPERS Board determines the portion of the employer contribution rate that will be set aside to fund health care plans. The portion of employer contributions allocated to health care for members in the Traditional Pension Plan and Combined Plan was 1.0 percent during calendar year 2017. As recommended by OPERS' actuary, the portion of employer contributions allocated to health care beginning January 1, 2018 decreased to 0 percent for both plans. The OPERS Board is also authorized to establish rules for the retiree or their surviving beneficiaries to pay a portion of the health care provided. Payment amounts vary depending on the number of covered dependents and the coverage selected. The employer contribution as a percentage of covered payroll deposited into the RMA for participants in the Member-Directed Plan for 2017 was 4.0 percent.

Employer contribution rates are actuarially determined and are expressed as a percentage of covered payroll. The Authority's contractually required contribution was $11,307 for 2017 and $0 for 2018.

Net OPEB Liability & OPEB Expense

The net OPEB liability and total OPEB liability for OPERS were determined by an actuarial valuation as of December 31, 2016, rolled forward to the measurement date of December 31, 2017, by incorporating the expected value of health care cost accruals, the actual health care payment, and interest accruals during the year. The Authority's proportion of the net OPEB liability was based on the Authority's share of contributions to the retirement plan relative to the contributions of all participating entities. Following is information related to the proportionate share:

	OPERS
Proportion of the Net OPEB Liability:	
Current Measurement Date	0.0088752%
Prior Measurement Date	0.0085056%
Change in Proportionate Share	0.0003696%
Proportionate Share of the Net OPEB Liability	$ 963,778
OPEB Expense	$ 107,652

Actuarial Assumptions - OPERS

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan and include the types of coverage provided at the time of each valuation and the historical pattern of sharing of costs between OPERS and plan members. The total OPEB liability was determined by an actuarial valuation as of December 31, 2016, rolled forward to the measurement date of December 31, 2017.

The actuarial valuation used the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB 74:

Wage Inflation	3.25 percent
Projected Salary Increases, including inflation	3.25 to 10.75 percent, including wage inflation
Single Discount Rate:	
Current measurement date	3.85 percent
Prior Measurement date	4.25 percent
Investment Rate of Return	6.50 percent
Municipal Bond Rate	3.31 percent
Health Care Cost Trend Rate	7.5 percent, initial 3.25 percent, ultimate in 2028
Actuarial Cost Method	Individual Entry Age

Pre-retirement mortality rates are based on the RP-2014 Employees Mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant Mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled Mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 Mortality Improvement Scale to all of the above described tables.

The most recent experience study was completed for the five year period ended December 31, 2015.

The long-term expected rate of return on health care investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2017, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio and the Defined Contribution portfolio. The Health Care portfolio includes the assets for health care expenses for the Traditional Pension Plan, Combined Plan and Member-Directed Plan eligible members. Within the Health Care portfolio, contributions into the plans are assumed to be received continuously throughout the year based on the actual payroll payable at the time contributions are made, and health care-related payments are assumed to occur mid-year. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Health Care portfolio is 15.2 percent for 2017.

(Continued)

The allocation of investment assets with the Health Care portfolio is approved by the Board of Trustees as outlined in the annual investment plan. Assets are managed on a total return basis with a long-term objective of continuing to offer a sustainable health care program for current and future retirees. OPERS' primary goal is to achieve and maintain a fully funded status for the benefits provided through the defined pension plans. Health care is a discretionary benefit. The table below displays the Board-approved asset allocation policy for 2017 and the long-term expected real rates of return:

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	34.00%	1.88%
Domestic Equities	21.00	6.37
Real Estate Investment Trust	6.00	5.91
International Equities	22.00	7.88
Other Investments	17.00	5.39
Total	100.00%	4.98%

Discount Rate

A single discount rate of 3.85 percent was used to measure the OPEB liability on the measurement date of December 31, 2017. A single discount rate of 4.23 percent was used to measure the OPEB liability on the measurement date of December 31, 2016. Projected benefit payments are required to be discounted to their actuarial present value using a single discount rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the health care fiduciary net position is projected to be sufficient to pay benefits), and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate are not met). This single discount rate was based on an expected rate of return on the health care investment portfolio of 6.50 percent and a municipal bond rate of 3.31 percent. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the health care fiduciary net position and future contributions were sufficient to finance health care costs through 2034. As a result, the long-term expected rate of return on health care investments was applied to projected costs through the year 2034, and the municipal bond rate was applied to all health care costs after that date.

Sensitivity of the Authority's Proportionate Share of the Net OPEB Liability to Changes in the Discount Rate

The following table presents the Authority's proportionate share of the net OPEB liability calculated using the single discount rate of 3.85 percent, as well as what the Authority's proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is one-percentage-point lower (2.85 percent) or one-percentage-point higher (4.85 percent) than the current rate:

		1% Decrease (2.85%)	Current Discount Rate (3.85%)	1% Increase (4.85%)
Authority's proportionate share of the net OPEB liability	$	1,280,452	963,778	707,634

Sensitivity of the Authority's Proportionate Share of the Net OPEB Liability to Changes in the Health Care Cost Trend Rate

Changes in the health care cost trend rate may also have a significant impact on the net OPEB liability. The following table presents the net OPEB liability calculated using the assumed trend rates, and the expected net OPEB liability if it were calculated using a health care cost trend rate that is 1.0 percent lower or 1.0 percent higher than the current rate.

Retiree health care valuations use a health care cost-trend assumption that changes over several years built into the assumption. The near-term rates reflect increases in the current cost of health care; the trend starting in 2018 is 7.50 percent. If this trend continues for future years, the projection indicates that years from now virtually all expenditures will be for health care. A more reasonable alternative is that in the not-too-distant future, the health plan cost trend will decrease to a level at, or near, wage inflation. On this basis, the actuaries project premium rate increases will continue to exceed wage inflation for approximately the next decade, but by less each year, until leveling off at an ultimate rate, assumed to be 3.25 percent in the most recent valuation.

		1% Decrease	Current Health Care Cost Trend Rate Assumption	1% Increase
Authority's proportionate share of the net OPEB liability	$	922,152	963,778	1,006,824

Deferred Inflows and Outflows

At December 31, 2018, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

Deferred Inflows of Resources:		
Net difference between projected and actual Earnings on OPEB plan investments	$	71,796
Deferred Outflows of Resources:		
Differences between expected and actual experience	$	751
Change in assumptions		70,173
Change in Authority's proportionate share And difference in employer contributions		26,169
Total	$	97,093

Amounts reported as deferred outflows and inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ending December 31		Traditional Pension Plan Net Deferred Outflows / (Inflows) of Resources
2019	$	28,472
2020		28,472
2021		(13,698)
2022		(17,949)
Total	$	25,297

(Continued)

(15) Commitments

As of December 31, 2018, the Authority has loan commitments to finance LGA construction projects in the following amounts:

Fund		Amount
Other Projects	$	61,629,366
In Lieu Fee		102,243
Fresh Water		110,773,589
Water Pollution Control Loan		1,245,182,367
Drinking Water Assistance		246,701,921
	$	1,664,389,486

Loan commitments consist of loan awards that have been encumbered by the Authority but not yet disbursed to the LGAs. The Authority intends to meet these LGA commitments with currently available funds and grant commitments from the U.S. EPA.

(16) Transfers

Interfund transfers for the year ended December 31, 2018 consisted of the following:

Transfers to Other Projects from:		
Community Assistance	$	1,164,106
Fresh Water		32,464,185
	$	33,628,291
Transfers from Community Assistance to:		
Other Projects		(1,164,106)
Fresh Water		(1,053,815)
	$	(2,217,921)
Transfers, net, to (from) Fresh Water from (to):		
Other Projects		(32,464,185)
Community Assistance		1,053,815
	$	(31,410,370)
Total Transfers, net	$	–

Transfers are used to meet the requirements of certain debt covenants or to fund additional program activities as authorized by the Authority's Board. In the year ended December 31, 2018, the Authority made the following non-routine transfers:

a) $32,464,185 transferred from the Fresh Water Fund and $1,164,106 from the Community Assistance Fund to the Other Projects Fund for additional funding for Other Projects Fund loans and grants.

b) $1,053,815 transferred from the Community Assistance Fund to the Fresh Water Fund for additional funding for Fresh Water loans.

(17) CHANGES IN LONG-TERM LIABILITIES

As of December 31, 2018, the Authority has long-term liabilities in the following amounts:

Long-Term Liability	12/31/2017 Balance, as restated	Additions	Reductions	12/31/2018 Balance	Due Within One Year	Due in More Than One Year
Compensated Absences	$ 261,626	184,068	217,476	$ 228,218	-	228,218
Net Pension Liability	1,931,568	-	559,176	1,372,392	-	1,372,392
Net OPEB Liability	853,443	110,335	-	963,778	-	963,778
Revenue Bonds and Notes Payable	4,046,597,026	204,193,631	382,166,533	3,868,624,124	220,168,346	3,648,455,778
Total Long-Term Liabilities	$ 4,049,643,663	204,488,034	382,943,185	$3,871,188,512	220,168,346	3,651,020,166

(18) CHANGES IN SHORT-TERM LIABILITIES

As of December 31, 2018, the Authority has the following short-term liability:

Short-Term Liability	12/31/2017 Balance	Additions	Reductions	12/31/2018 Balance
Short-Term Revenue Notes Payable	$ -	5,000,000	5,000,000	-

(19) SUBSEQUENT EVENT

Since December 31, 2018, the Authority has issued additional debt. The Authority issued $450,000,000 in Water Pollution Control Loan Fund Revenue Bonds – Series 2019A on March 14, 2019. As these bonds were not issued until 2019, they are not included in the long-term debt of the Authority as of December 31, 2018.

OHIO WATER DEVELOPMENT AUTHORITY

Schedule of Proportionate Share of Net Pension Liability
Ohio Public Employees Retirement System

Last Four Calendar Years*
Unaudited

		2015	2016	2017	2018
Proportion of the net pension liability		0.0095310%	0.0091080%	0.0085060%	0.008748%
Proportionate share of the net pension liability	$	1,149,545	1,577,618	1,931,568	1,372,392
Covered payroll	$	1,200,805	1,207,158	1,247,362	1,340,687
Proportionate share of the net pension liability as a percentage of covered payroll		95.73%	130.69%	154.85%	102.36%
Plan fiduciary net position as a percentage of the total pension liability		86.45%	81.08%	77.25%	84.66%

* - Table will begin to cover ten years of data starting with 2015. Amounts presented represent pension amounts as of measurement period, which is one year prior to the date of the financial statements.

Notes to Schedule:

Change in assumptions. In 2017, changes in assumptions were made based upon an updated experience study that was completed for the five-year period ended December 31, 2015. Significant changes included a reduction of the discount rate from 8.0% to 7.5%, a reduction in the wage inflation rate from 3.75% to 3.25%, and transition from the RP-2000 mortality tables to the RP-2014 mortality tables.

OHIO WATER DEVELOPMENT AUTHORITY

Schedule of Pension Contributions
Ohio Public Employees Retirement System

Last Five Calendar Years*

Unaudited

		2014	2015	2016	2017	2018
Contractually required contributions	$	140,729	142,358	139,196	146,994	150,591
Contributions in relation to the contractually required contributions	$	140,729	142,358	139,196	146,994	150,591
Contribution deficiency (excess)		-	-	-	-	-
Covered payroll	$	1,200,805	1,207,158	1,247,362	1,340,687	1,272,812
Contributions as a percentage of covered payroll		11.72%	11.79%	11.16%	10.96%	11.83%

* - Table will begin to cover ten years of data starting with 2014.

OHIO WATER DEVELOPMENT AUTHORITY

Schedule of Proportionate Share of Net OPEB Liability
Ohio Public Employees Retirement System

Last Two Calendar Years
Unaudited

		2017	2018
Proportion of the net OPEB liability		0.008506%	0.008875%
Proportionate share of the net OPEB liability	$	853,443	963,778
Covered payroll	$	1,247,362	1,340,687
Proportionate share of the net OPEB liability as a percentage of covered payroll		68.42%	71.89%
Plan fiduciary net position as a percentage of the total OPEB liability		54.05%	54.14%

* - Table will begin to cover ten years of data starting with 2017. Amount presented represents OPEB amounts as of measurement period, which is one year prior to the date of the financial statements.

Notes to Schedule:

Change in assumptions. For 2018, the single discount rate changed from 4.23% to 3.85%.

OHIO WATER DEVELOPMENT AUTHORITY

Schedule of OPEB Contributions

Ohio Public Employees Retirement System

Last Three Calendar Years

Unaudited

		2016	2017	2018
Contractually required contributions	$	23,189	11,307	-
Contributions in relation to the contractually required contributions	$	23,189	11,307	-
Contribution deficiency (excess)		-	-	-
Covered payroll	$	1,247,362	1,340,687	1,272,812
Contributions as a percentage of covered payroll		1.86%	0.84%	0.00%

* - Table will begin to cover ten years of data starting with 2016.

CLARK SCHAEFER HACKETT
CPAs & Advisors

14 East Main Street, Suite 500, Springfield, Ohio 45502
P. 937.399.2000 | F. 937.399.5433 | cshco.com

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Ohio Water Development Authority
480 South High Street
Columbus, Ohio 43215

We have audited, in accordance with the 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, the financial statements of the business-type activities and each major fund of the Ohio Water Development Authority (the Authority) as of and for the year ended December 31, 2018, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements, and have issued our report thereon dated March 25, 2019, wherein we noted the Authority adopted the provisions of GASB Statement No. 75 for the year ended December 31, 2018.

Internal Control Over Financial Reporting
In planning and performing our audit of the financial statements, we considered the Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of the Authority's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters
As part of obtaining reasonable assurance about whether the Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Clark, Schaefer, Hackett & Co.

Springfield, Ohio
March 25, 2019

OHIO AUDITOR OF STATE
KEITH FABER

OHIO WATER DEVELOPMENT AUTHORITY

FRANKLIN COUNTY

CLERK'S CERTIFICATION

This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbitt

CLERK OF THE BUREAU

CERTIFIED
MAY 9, 2019