**MASSACHUSETTS CLEAN WATER TRUST**
(A Component Unit of the Commonwealth of Massachusetts)

Financial Statements and
Required Supplementary Information

June 30, 2019 and 2018

(With Independent Auditors' Report Thereon)

**MASSACHUSETTS CLEAN WATER TRUST**
(A Component Unit of the Commonwealth of Massachusetts)

**Table of Contents**

KPMG LLP
Two Financial Center
60 South Street
Boston, MA 02111

# Independent Auditors' Report

The Board of Trustees
Massachusetts Clean Water Trust:

*Report on the Financial Statements*

We have audited the accompanying basic financial statements of the Massachusetts Clean Water Trust (the Trust), a component unit of the Commonwealth of Massachusetts, which comprise the statements of net position as of and for the years ended June 30, 2019 and 2018, and the statements of revenues, expenses and changes in net position, and cash flows for the years then ended and the related notes to the financial statements.

*Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; 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 an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the 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 opinion.

*Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Massachusetts Clean Water Trust as of June 30, 2019 and 2018, and the changes in its financial position and its cash flows for the years then ended, in accordance with U.S. generally accepted accounting principles.

*Other Matters*

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board 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 October 11, 2019 on our consideration of the Trust'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 solely to describe the scope of our testing of our internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Trust's 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 Trust's internal control over financial reporting and compliance.

KPMG LLP

Boston, Massachusetts
October 11, 2019

## Introduction

The Massachusetts Clean Water Trust (the Trust) is a public instrumentality of the Commonwealth of Massachusetts (the Commonwealth). It was established in 1989 to administer the Massachusetts Water Pollution Abatement Revolving Fund pursuant to Title VI of the Federal Clean Water Act establishing the Clean Water State Revolving Fund (Clean Water SRF). Its enabling statute, Chapter 29C of the Massachusetts General Laws, was amended in 1998 to provide that the Trust would also administer the provisions of Title XIV of the Federal Safe Drinking Water Act, establishing the Drinking Water State Revolving Fund (Drinking Water SRF).

The Trust's Clean Water SRF and the Drinking Water SRF programs were established to accept federal grants and required Commonwealth matching funds in an amount equal to approximately 20% of the federal grants. The Trust's SRF programs utilize a "leveraged" financing model, under which federal grants and state matching grants, together with other monies available to the Trust are pledged as security for revenue bonds issued by the Trust. The proceeds of the bonds and other funds of the Trust are used to fund loans to local governmental units and other eligible borrowers for eligible project costs. In addition to loan repayments, earnings on these pledged assets are used to pay a portion of debt service on the related bonds, thereby reducing the borrowers' loan repayment obligation. As the bonds are paid, the pledged assets "revolve" and become available for new projects.

Since 2002, the Trust has provided loans to communities at a 2% interest rate; however, certain projects may receive a rate below 2% for specific programs approved by the Board of Trustees or directed by the legislature, such as those that address nutrient reduction. As the effective market interest rate on the Trust's bonds is higher than the 2% loan rate, the borrowers receive a subsidy equal to the difference between those rates. The Clean Water SRF and Drinking Water SRF programs are administered by the Trust in partnership with the Massachusetts Department of Environmental Protection (DEP). DEP manages project development and approval while the Trust manages the flow of funds to the communities. Subsidized financing has been an important incentive for many communities to undertake water and sewer infrastructure improvement projects. Since the enactment of Chapter 95 of the Acts of 1995 of the Commonwealth, the Trust has been the Commonwealth's primary program to finance such improvements.

The Clean Water SRF provides low cost financing to eligible borrowers for projects that reduce, eliminate, or prevent water pollution. Examples of Clean Water SRF projects include construction of new wastewater treatment facilities, upgrades to existing facilities, infiltration/inflow correction, wastewater collection systems, and nonpoint source pollution abatement projects such as landfill capping, community programs for upgrading septic systems (Title 5), brownfield remediation, pollution prevention, and storm water remediation.

The Drinking Water SRF provides low cost financing to publicly and privately-owned water systems for projects that provide safe, affordable drinking water. Examples of Drinking Water SRF projects include new and upgraded drinking water treatment facilities; replacement of contaminated sources, new water treatment or storage facilities; consolidation or restructuring of water systems; projects and system activities that provide treatment, or effective alternatives to treatment for compliance with regulated health standards such as the Surface Water Treatment Rule; and installation or replacement of transmission or distribution systems.



(Continued)

## Overview of Financial Statements

The financial section of this report consists of the following parts: management's discussion and analysis (this section), the basic financial statements, and the notes to the financial statements.

The Trust's financial statements are prepared in conformity with U.S. generally accepted accounting principles as applied to a special purpose entity engaged solely in business-type activities. Under this method of accounting, an economic resources measurement focus, and an accrual basis of accounting are used. Revenue is recorded when earned, and expenses are recorded when incurred. The basic financial statements include statements of net position, statements of revenues, expenses, and changes in net position, and statements of cash flows. This report also includes notes accompanying the financial statements to fully explain the activities reported in them.

The statements of net position present information on the total assets and deferred outflows of resources, and total liabilities and deferred inflows of resources of the Trust. The difference between the two totals is net position. Over time, increases and decreases in net position may be an indicator of the strength or deterioration of the financial health of the Trust.

The statements of revenues, expenses, and changes in net position report the operating revenues and expenses and the nonoperating revenues and expenses of the Trust for the fiscal year. The difference – increase or decrease in net position – then determines the net change in net position for the fiscal year. This change in net position added to last year's net position will reconcile to the total net position for this fiscal year.

The statements of cash flows report activity of cash and cash equivalents during the fiscal year resulting from operating activities, noncapital financing activities, and investing activities. The net result of these activities is reconciled to the cash and cash equivalent balances reported at the end of the fiscal year. These statements are prepared using the direct method of presentation, which allows the reader to easily discern the amount of cash received from grantors, borrowers, and financial institutions, and how much cash was disbursed to borrowers, vendors, and bondholders.



(Continued)

## Condensed Financial Information and Financial Analysis

**MASSACHUSETTS CLEAN WATER TRUST'S NET POSITION**
(In thousands)

| | June 30 | | | Percentage change | |
|---|---|---|---|---|---|
| | **2019** | **2018** | **2017** | **2019–2018** | **2018–2017** |
| Cash and cash equivalents | $ 489,850 | 478,627 | 586,633 | 2.3 % | (18.4)% |
| Investments | 759,702 | 838,269 | 916,697 | (9.4) | (8.6) |
| Project fund deposits | 38,988 | 26,704 | 66,573 | 46.0 | (59.9) |
| Grants receivable, EPA | 46,926 | 40,536 | 28,814 | 15.8 | 40.7 |
| Loans receivable | 4,055,490 | 3,990,591 | 4,105,419 | 1.6 | (2.8) |
| Accrued interest receivable and other assets | 50,603 | 52,323 | 56,135 | (3.3) | (6.8) |
| Total assets | 5,441,559 | 5,427,050 | 5,760,271 | 0.3 | (5.8) |
| Deferred outflows of resources | 60,883 | 68,556 | 88,654 | (11.2) | (22.7) |
| Total assets and deferred outflows of resources | $ 5,502,442 | 5,495,606 | 5,848,925 | 0.1 | (6.0) |
| Accrued expenses and interest payable | $ 50,132 | 53,549 | 58,268 | (6.4) | (8.1) |
| Unearned revenue | 35,963 | 25,982 | 27,270 | 38.4 | (4.7) |
| Loan commitments and project funds payable | 37,844 | 26,739 | 67,023 | 41.5 | (60.1) |
| Liability for derivative instruments | 3,516 | 1,841 | 3,604 | 91.0 | (48.9) |
| Long-term debt | 2,762,192 | 2,932,678 | 3,316,209 | (5.8) | (11.6) |
| Total liabilities | 2,889,647 | 3,040,789 | 3,472,374 | (5.0) | (12.4) |
| Deferred inflows of resources | 34,499 | 8,679 | — | 297.5 | 100.0 |
| Total liabilities and deferred inflows of resources | $ 2,924,146 | 3,049,468 | 3,472,374 | (4.1) | (12.2) |
| Net position: | | | | | |
| Restricted | $ 2,040,327 | 1,964,713 | 1,906,475 | 3.8 | 3.1 |
| Unrestricted | 537,969 | 481,425 | 470,076 | 11.7 | 2.4 |
| Total net position | $ 2,578,296 | 2,446,138 | 2,376,551 | 5.4 % | 2.9 % |

The Trust's net position at June 30, 2019 and 2018 increased $132,158, or 5.4%, to $2.58 billion from $2.45 billion, respectively. This increase was primarily attributable to a reduction in outstanding long-term debt of $170,486 caused by a $95,885 partial defeasance of outstanding bonds along with scheduled principal maturities in the amount of $230,280 significantly exceeding the $163,460 of new issuance of debt. This reflects the Trust's migration away from its use of its program funds to establish debt service reserve funds in 2012, to using its program funds to finance pledged loans, which resulted in significantly less loans being funded with bond proceeds. This also explains the steady reduction in the investment balances as the debt service reserve funds wind down. Offsetting the decrease in debt is a $25,820 increase in deferred inflows which represent funds received from the Commonwealth that will be used to provide future additional subsidies. These funds demonstrate the Commonwealth's support of this valuable infrastructure program and the communities it serves.

The Trust's net position at June 30, 2018 and 2017 increased $69,587, or 2.9%, to $2.45 billion from $2.38 billion, respectively. This increase was primarily attributable to a reduction in outstanding long-term debt of $383,531 caused by a $117,570 partial defeasance of outstanding bonds along with scheduled principal maturities in the amount of $231,485 with no offsetting new debt issuance during the fiscal year. This reflects the Trust's migration away from its use of its program equity funds to establish debt service reserve funds in 2012, to using its program equity funds to finance pledged loans, which resulted in significantly less loans being funded with bond proceeds. Offsetting the reduction in debt was a significant decrease in cash and cash equivalents of $108,006 related to the partial defeasance of debt. Additionally, loans receivable decreased $114,828 as borrower payments made during the fiscal year. Typically, there is a new bond issuance during the fiscal year which would provide an offset of new financed loans; however, the annual bond issuance occurred in September 2018. The Trust's debt service reserve fund investments continue to decrease as scheduled maturities of investments revolve back into program equity (cash and cash equivalent).

*Long-term Debt/Bonds Payable*

The following is a summary of bonds payable at June 30, 2019, 2018 and 2017 (in thousands). More detailed information can be found in note 8 to the financial statements.

| | | Summary of Bonds Payable at June 30, | | |
|---|---|---|---|---|
| | | 2019 | 2018 | 2017 |
| Water Pollution Abatement Revenue Bonds: | | | | |
| Master Trust Agreement | $ | 737,635 | 597,670 | 620,750 |
| Pool Loan Program | | 668,690 | 836,630 | 892,585 |
| Single Obligor Bonds – MWRA | | 6,430 | 7,280 | 8,170 |
| Subtotal revenue bonds | | 1,412,755 | 1,441,580 | 1,521,505 |
| Subordinated Revenue Refunding Bonds: | | | | |
| Master Trust Agreement | | 96,280 | 96,280 | 96,280 |
| Pool Loan Program | | 927,760 | 1,044,890 | 1,296,575 |
| Single Obligor Bonds – MWRA | | 19,845 | 36,595 | 54,040 |
| Subtotal revenue refunding bonds | | 1,043,885 | 1,177,765 | 1,446,895 |
| Total bonds | | 2,456,640 | 2,619,345 | 2,968,400 |
| Add unamortized bond premium | | 305,552 | 313,333 | 347,809 |
| Total bonds payable, net | $ | 2,762,192 | 2,932,678 | 3,316,209 |

The Trust issues revenue bonds (SRF Bonds) in order to fund communities' construction projects under the Clean Water and Drinking Water programs. The SRF Bonds are secured by Trust's assets that are pledged as a source of payment and security. Trust's pledged assets consist of either reserve funds or loans to borrowers, or a combination thereof, both of which are funded by the SRF program funds. The balance of the Trust's pledged assets as of June 30, 2019 is $548,027 at fair market value in reserve funds and $544,117 in loans to borrowers. The SRF Bonds are payable from borrower loan repayments, reserve fund earnings and payments made by the Commonwealth to the Trust on behalf of the borrowers.

The Trust issues its bonds under and secured by the Master Trust Agreement (MTA) dated as of January 1, 2015. The Trust entered into the MTA to replace the Program Resolution and to create a simpler security framework for the Trust's SRF Bonds. The Trust has been issuing its bonds under the MTA beginning with its Series 18 Bonds. The Trust's prior bonds were issued pursuant to the Program Resolution to finance or refinance loans to several Borrowers concurrently (Pool Loan Program Bonds) or to finance or refinance loans to a single Borrower (Prior Single Obligor Bonds). The Prior Single Obligor Bonds were issued to provide loans to the following three obligors: (1) the Massachusetts Water Resources Authority (MWRA); (2) the South Essex Sewerage District (SESD); and (3) the City of New Bedford. As of June 30, 2019, and 2018, there are no longer Single Obligor Bonds outstanding for SESD or the City of New Bedford. The City of New Bedford, MWRA and SESD are also borrowers under the Trust's Pool Loan Program Bonds and the MTA Bonds.

A summary of the Trust's statements of revenues, expenses, and changes in net position is as follows:

**Summary of Changes in Net Position**
(In thousands)

| | June 30 | | | | Percentage change | |
|---|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | | 2019–2018 | 2018–2017 |
| Loan servicing fees | $ 5,479 | 5,615 | 5,608 | | (2.4)% | 0.1 % |
| Loan origination fees | 1,542 | — | 1,821 | | 100.0 | (100.0) |
| Interest income | 119,554 | 114,850 | 102,510 | (a) | 4.1 | 12.0 |
| Unrealized gain (loss) on investments | 14,994 | (6,822) | (11,937) | | 319.8 | (42.8) |
| Contract assistance | 24,401 | 26,003 | 26,572 | | (6.2) | (2.1) |
| Total operating revenues | 165,970 | 139,646 | 124,574 | | 18.9 | 12.1 |
| DEP programmatic support costs | 8,731 | 7,583 | 8,545 | | 15.1 | (11.3) |
| Principal forgiveness | 7,698 | 7,372 | 5,672 | | 4.4 | 30.0 |
| General and administrative | 2,693 | 2,331 | 5,210 | | 15.5 | (55.3) |
| Arbitrage rebate payments | 1,468 | — | 12,328 | | 100.0 | (100.0) |
| Interest expense | 104,561 | 125,293 (b) | 126,551 | | (16.5) | (1.0) |
| Total operating expenses | 125,151 | 142,579 | 158,306 | | (12.2) | (9.9) |
| Operating income (loss) | 40,819 | (2,933) | (33,732) | | 1,491.7 | (91.3) |
| EPA capitalization grants | 75,285 | 60,453 | 61,534 | | 24.5 | (1.8) |
| State matching grants | 16,054 | 12,067 | 12,163 | | 33.0 | (0.8) |
| Total nonoperating revenues | 91,339 | 72,520 | 73,697 | | 26.0 | (1.6) |
| Increase in net position | 132,158 | 69,587 | 39,965 | | 89.9 | 74.1 |
| Net position, beginning of year | 2,446,138 | 2,376,551 | 2,336,586 | | 2.9 | 1.7 |
| Net position, end of year | $ 2,578,296 | 2,446,138 | 2,376,551 | | 5.4 % | 2.9 % |

(a) Includes a reduction to reflect the $10,000 payment of refunding savings to the Commonwealth.

(b) Includes $11,337 related to the accelerated amortization of excess of reacquisition price over carrying value of defeased bonds related to the cash defeasance of certain series of refunding bonds.

A summary of the Trust's interest income is as follows:

**Summary of Interest Income**
(In thousands)

| | June 30 | | | Percentage change | |
|---|---|---|---|---|---|
| | 2019 | 2018 | 2017 | 2019–2018 | 2018–2017 |
| Loan interest income | $ 68,078 | 68,349 | 67,596 | (0.4)% | 1.1 % |
| Investment income | 47,106 | 42,215 | 40,770 | 11.6 | 3.5 |
| BAB subsidy income | 4,304 | 4,286 | 4,144 | 0.4 | 3.4 |
| Other income | 66 | — | — | 100.0 | — |
| Refunding savings paid to the Commonwealth | — | — | (10,000) | — | (100.0) |
| Total interest income | $ 119,554 | 114,850 | 102,510 | 4.1 % | 12.0 % |

### Results of Operations

For fiscal year 2019, the Trust recorded operating income of $40,819 as compared to an operating loss of $2,933 in fiscal year 2018. Excluding the unrealized gain (loss) on investments, fiscal year 2019 recorded operating income of $25,825 and fiscal year 2018 recorded an operating income of $3,889. This $21,936 change in the Trust's operating income in fiscal year 2019 was primarily attributed to the $20,732 reduction in interest expense resulting from the steady decrease in outstanding debt driven by cash defeasances and the previously discussed reduction in the size of new debt issuances. Nonoperating revenues comprised of EPA federal grants and state matching grants of $91,339 reflect an $18,819 increase over fiscal year 2018. This 26.0% increase reflects the increase in the federal appropriation levels for both the Clean Water and Drinking Water SRF grants as well as a significant increase in the state's drinking water allotment percentage. Refer to footnote 6 for additional information.

For fiscal year 2018, the Trust recorded operating loss of $2,933 as compared to an operating loss of $33,732 in fiscal year 2017. Excluding the unrealized gain (loss) on investments fiscal year 2018 recorded operating income of $3,889 and fiscal year 2017 recorded an operating loss of $21,795. The fiscal year 2017 operating loss included two items that negatively impacted results that did not recur in fiscal year 2018. These items were a $10,000 payment of refunding savings to the Commonwealth and $12,328 in arbitrage rebate payments to the United States Treasury. Without these two items and excluding the change in fair market value of investments, fiscal year 2017 would have recorded $533 in operating income. General and administrative expenses for fiscal year 2017 included $1,613 in costs of issuance related to the Series 20 and 2017 Refunding bond issuances and $1,360 of funding for a testing for lead in public schools' program.

The Trust's operating income is negatively impacted by the inclusion of expenses such as DEP programmatic support costs of $8,731, $7,583, and $8,545 for fiscal years 2019, 2018 and 2017, respectively, and principal forgiveness, which are funded by the capitalization grant revenue that is classified as nonoperating revenue.

## Future Economic Factors

In August 2018, the Commonwealth enacted *An Act Promoting Climate Change Adaptation, Environmental and Natural Resource Protection, and Investment in Recreational Assets and Opportunity,* which provided for $60,333 million in matching capitalization funds to the Clean Water SRF and Drinking Water SRF programs. This amount combined with the $23,065 balance remaining as of June 30, 2019, the Trust estimates will be sufficient to meet its clean water and drinking water matching needs through FY 2022, assuming current federal funding levels are maintained.

## Requests for Information

This financial report is intended to provide an overview of the financial picture of the Massachusetts Clean Water Trust. Any further questions regarding any of the information contained within this report may be addressed via email to Sue Perez, Executive Director, sperez@tre.state.ma.us or Sally Peacock, Controller, speacock@tre.state.ma.us or mail to Massachusetts Clean Water Trust, 1 Center Plaza, Suite 430, Boston, MA 02108.

**MASSACHUSETTS CLEAN WATER TRUST**
(A Component Unit of the Commonwealth of Massachusetts)

Statements of Net Position

June 30, 2019 and 2018

(In thousands)

| | | 2019 | 2018 |
|---|---|---|---|
| Assets and deferred outflows: | | | |
| Current assets: | | | |
| Cash and cash equivalents (note 3) | $ | 489,850 | 478,627 |
| Short-term investments (note 5) | | 204,741 | 223,467 |
| Project fund deposits (note 4) | | 38,988 | 26,704 |
| Grants receivable: | | | |
| U.S. Environmental Protection Agency (note 6) | | 46,926 | 40,536 |
| Loans receivable, net (note 7) | | 621,568 | 561,902 |
| Accrued interest receivable | | 50,603 | 52,323 |
| Total current assets | | 1,452,676 | 1,383,559 |
| Noncurrent assets: | | | |
| Loans receivable, long-term (note 7) | | 3,433,922 | 3,428,689 |
| Long-term investments (note 5) | | 554,961 | 614,802 |
| Total noncurrent assets | | 3,988,883 | 4,043,491 |
| Total assets | | 5,441,559 | 5,427,050 |
| Deferred outflows of resources (note 12) | | 60,883 | 68,556 |
| Total assets and deferred outflows of resources | | 5,502,442 | 5,495,606 |
| Liabilities and deferred inflows: | | | |
| Current liabilities: | | | |
| Accrued expenses and interest payable | | 50,132 | 53,549 |
| Unearned revenue | | 35,963 | 25,982 |
| Loan commitments and project funds payable | | 37,844 | 26,739 |
| Long-term debt (note 8) | | 232,395 | 230,280 |
| Total current liabilities | | 356,334 | 336,550 |
| Noncurrent liabilities: | | | |
| Liability for derivative instruments (note 11) | | 3,516 | 1,841 |
| Long-term debt, net (note 8) | | 2,529,797 | 2,702,398 |
| Total noncurrent liabilities | | 2,533,313 | 2,704,239 |
| Total liabilities | | 2,889,647 | 3,040,789 |
| Deferred inflows of resources (note 2) | | 34,499 | 8,679 |
| Total liabilities and deferred inflows of resources | | 2,924,146 | 3,049,468 |
| Net position: | | | |
| Restricted for program purposes (note 9) | | 2,040,327 | 1,964,713 |
| Unrestricted (note 9) | | 537,969 | 481,425 |
| Commitments (note 10) | | | |
| Total net position | $ | 2,578,296 | 2,446,138 |

See accompanying notes to financial statements.

**MASSACHUSETTS CLEAN WATER TRUST**
(A Component Unit of the Commonwealth of Massachusetts)

Statements of Revenues, Expenses, and Changes in Net Position

Years ended June 30, 2019 and 2018

(In thousands)

| | 2019 | 2018 |
|---|---|---|
| Operating revenues: | | |
| Loan servicing fees | $ 5,479 | 5,615 |
| Loan origination fees | 1,542 | — |
| Interest income | 119,554 | 114,850 |
| Unrealized gain (loss) on investments | 14,994 | (6,822) |
| Contract assistance from Commonwealth of Massachusetts | 24,401 | 26,003 |
| Total operating revenues | 165,970 | 139,646 |
| Operating expenses: | | |
| Commonwealth of Massachusetts: | | |
| Department of Environmental Protection – programmatic support costs | 8,731 | 7,583 |
| Principal forgiveness | 7,698 | 7,372 |
| General and administrative | 2,693 | 2,331 |
| Arbitrage rebate payments | 1,468 | — |
| Interest expense | 104,561 | 125,293 |
| Total operating expenses | 125,151 | 142,579 |
| Operating income (loss) | 40,819 | (2,933) |
| Nonoperating revenue: | | |
| Capitalization grant revenue: | | |
| U.S. Environmental Protection Agency capitalization grants (note 6) | 75,285 | 60,453 |
| Commonwealth of Massachusetts matching grants (note 6) | 16,054 | 12,067 |
| Total nonoperating revenue | 91,339 | 72,520 |
| Increase in net position | 132,158 | 69,587 |
| Net position – beginning of year | 2,446,138 | 2,376,551 |
| Net position – end of year | $ 2,578,296 | 2,446,138 |

See accompanying notes to financial statements.

**MASSACHUSETTS CLEAN WATER TRUST**
(A Component Unit of the Commonwealth of Massachusetts)

Statements of Cash Flows

Years ended June 30, 2019 and 2018

(In thousands)

| | | 2019 | 2018 |
|---|---|---|---|
| Cash flows from operating activities: | | | |
| Other cash received from borrowers | $ | 7,020 | 7,436 |
| Cash paid to vendors | | (12,888) | (10,067) |
| Net cash used in operating activities | | (5,868) | (2,631) |
| Cash flows from noncapital financing activities: | | | |
| Bond proceeds | | 189,523 | — |
| Cash used in debt refunding | | (98,235) | (122,736) |
| Repayment of bonds | | (230,280) | (231,485) |
| Interest paid | | (126,609) | (137,460) |
| Proceeds from U.S. Environmental Protection Agency capitalization grants | | 73,879 | 48,611 |
| Proceeds from Commonwealth matching capitalization grants | | 21,051 | 10,899 |
| Net cash used in noncapital financing activities | | (170,671) | (432,171) |
| Cash flows from investing activities: | | | |
| Loans disbursed to recipients | | (353,380) | (168,918) |
| Cash received from borrowers | | 255,814 | 252,632 |
| Contract assistance received – principal | | 47,475 | 20,385 |
| Interest received | | 113,345 | 122,925 |
| Contract assistance received – interest | | 25,908 | 26,388 |
| Purchases of investments | | (4,482) | (4,864) |
| Cash received from termination of guaranteed investment contracts | | 24,093 | — |
| Sales/maturities of investments, net | | 78,989 | 78,248 |
| Net cash provided by investing activities | | 187,762 | 326,796 |
| Net increase (decrease) in cash and cash equivalents | | 11,223 | (108,006) |
| Cash and cash equivalents, beginning of year | | 478,627 | 586,633 |
| Cash and cash equivalents, end of year | $ | 489,850 | 478,627 |
| Reconciliation of operating income (loss) to net cash used in operating activities: | | | |
| Operating income (loss) | $ | 40,819 | (2,933) |
| Adjustments to reconcile operating income to net cash used in operating activities: | | | |
| Reclassification of: | | | |
| Interest income | | (119,554) | (114,850) |
| Unrealized gain (loss) on investments | | (14,994) | 6,822 |
| Contract assistance | | (24,401) | (26,003) |
| Interest expense | | 104,561 | 125,293 |
| Principal forgiveness | | 7,698 | 7,372 |
| Changes in operating assets and liabilities: | | | |
| Other assets and liabilities, net | | 3 | 1,668 |
| Net cash used in operating activities | $ | (5,868) | (2,631) |

See accompanying notes to financial statements.

## (1) General

### *(a) Organization*

The Massachusetts Clean Water Trust (the Trust), is a component unit of the Commonwealth of Massachusetts (the Commonwealth). The Trust was created by Chapter 275 of the Acts of 1989 and is governed by Chapter 29C of the Massachusetts General Laws. Pursuant to an Operating Agreement between the United States Environmental Protection Agency (EPA), the Massachusetts Department of Environmental Protection (DEP), and the Trust, executed in 1993 and subsequently amended, the Trust administers the Commonwealth's Clean Water State Revolving Fund (Clean Water SRF) and Drinking Water State Revolving Fund (Drinking Water SRF) programs.

Financial and management activities of the Trust are administered by employees of the Trust who fall under the Office of the State Treasurer. Project evaluation, selection, and oversight are provided by DEP employees.

The Trust is governed by a three-member Board of Trustees chaired by the State Treasurer and composed of the Secretary for the Executive Office for Administration and Finance and the Commissioner of DEP.

### *(b) Description of Business*

The SRF programs, which were authorized by federal legislation – the Water Quality Act of 1987 for the Clean Water SRF and the Safe Drinking Water Act of 1996 for the Drinking Water SRF to provide low-cost financing to cities, towns, and other eligible borrowers primarily for the construction and improvement of drinking water and wastewater infrastructure. The Trust's SRF program's primary activities include providing low-cost interim financing for its borrowers, the investment of program funds, the management and coordination of the programs, and the issuance of debt in the capital markets.

SRF program capitalization grants are issued from the EPA to the Trust, for which the Commonwealth is required to provide 20% in matching funds. The Trust pledges such grants, state matching funds and other monies available to the Trust to secure its bonds which are issued to fund such water infrastructure projects. The Trust applies investment earnings on such pledged assets to pay a portion of the debt service on the related bonds thereby reducing financing costs to the communities.

The SRF programs are called the State Revolving Fund programs because as borrowers pay down the principal balances of their loans and as the Trust pays principal on its SRF bonds, proportional amounts are released from the pledged assets securing the related SRF bonds. These funds come back to the Trust and "revolve" or are available to be pledged as a source of payment and security, for new SRF bonds or for other eligible purposes.

Total project grant funds received, both federal and state, less the amounts provided as principal forgiveness, are required to remain in the SRF program in perpetuity in support of the state revolving fund per the Clean Water Act and Safe Drinking Water Act. As a result, these funds are classified as restricted on the statements of net position. The remaining funds are classified as unrestricted on the statements of net position, however, the use of these funds are governed by laws and regulations of the EPA and the Commonwealth.

## (2) Summary of Significant Accounting Policies

The accounting policies of the Trust conform to U.S. generally accepted accounting principles (GAAP) as applicable to government enterprises. The following is a summary of the Trust's significant accounting policies:

### *(a) Basis of Presentation*

The Trust's financial statements are prepared using the economic resources measurement focus and the accrual basis of accounting as specified by the Governmental Accounting Standards Board's (GASB) requirements for a special purpose entity engaged solely in business-type activities. The more significant account policies are described below.

### *(b) Revenue Recognition*

Operating revenues, including interest income, are generated through the issuance of loans to local government units within the Commonwealth. Operating expenses include interest expense related to the Trust's outstanding debt as well as programmatic and administrative expenses.

Funding from federal capitalization grants and state matching grants are recorded as nonoperating revenue. Federal capitalization revenue is recognized in accordance with funding availability schedules contained within the individual grant agreements. Revenue recognition associated with these grants is based on the standard principles of eligibility, including timing requirements.

The Trust's recent federal capitalization grants require a portion of the grant funds be provided as additional subsidization in the form of principal forgiveness, grants, or negative interest loans. The Trust provides the additional subsidization in the form of principal forgiveness, which has been recorded as an operating expense.

### *(c) Cash and Cash Equivalents*

The Trust's policy is to treat all highly liquid investments with original maturities of three months or less as cash and cash equivalents.

### *(d) Investments*

The Trust's investment guidelines permit investment of funds in obligations of, or guaranteed by, the United States of America or the short-term external investment pool, the Massachusetts Municipal Depository Trust (MMDT), managed by the Commonwealth, as well as in time deposits, Guaranteed Investment Contracts (GICs), repurchase agreements, and other permitted investments such as qualified municipal obligations.

The Trust categorizes its fair value investments within the fair value hierarchy established by generally accepted accounting principles. GASB 72, *Fair Value Measurement and Application* defines a certain hierarchy of inputs to valuation techniques used to measure fair value. All of the Trust's investments in U.S. Treasuries and Agencies are categorized as Level 2.

Inputs within Level 2 of the fair value hierarchy include inputs that are directly observable, these inputs are derived principally from or corroborated by observable market data through correlation or by other means. Investments in debt securities classified as Level 2 of the fair value hierarchy are valued using matrix pricing techniques, in accordance with market quotations or valuation methodologies from reliable financial industry services.

Under existing standards, several types of investments are not required to be reported at fair value. The investment in MMDT is valued at the share value of $1.00 and carried at fair value. The Short Term Bond Portfolio investments are carried at fair value. For purposes of risk categorization, MMDT shares are not categorized. The GICs are considered nonparticipating investment contracts and are also excluded from the Statement on fair value measurement. These investment values will continue to be measured in accordance with existing accounting standards and are recorded at contract value.

***(e) Allowance for Uncollectible Amounts and Principal Forgiveness***

The allowance for uncollectible accounts receivables is determined principally on the basis of past collection experience as well as consideration of current economic conditions. Receivables are reported at the gross amount and an allowance for doubtful accounts would be recognized for that portion of receivables that is deemed uncollectible, based upon a review of outstanding receivables, historical collection information, and existing economic conditions and trends. Because of the absence of any delinquent loans, there is no provision for uncollectible amounts.

Loans are reported net of principal forgiveness expected to be provided upon project completion. The amount of principal forgiveness is determined by the Trust's board and is recorded on a first-in, first-out basis as disbursements are processed, up to the total amount of the principal forgiveness awarded to the individual loans.

***(f) Loan Origination Fees and Costs of Issuance***

The Trust requires payment of loan origination fees at the time of the first debt service payment. This origination fee revenue is recorded at the time of the bond closing which is when these fees are earned. Cost of issuance related to the bonds is recorded to general and administrative expenses when incurred.

***(g) Risk Financing***

The Trust is not insured for casualty, theft, tort claims, or other losses. No amounts have been accrued for such losses as they are not considered material. As discussed in note 1, all financial, management, and project oversight activities are provided by employees of the State Treasurer's Office, DEP, and the Executive Office for Administration and Finance. These employees are covered under the Commonwealth's existing employee benefit programs. The cost of these programs is allocated to the Trust, through a fringe benefit allocation. Costs in excess of this amount are borne by the

(Dollars in thousands, unless noted)

Commonwealth. As a result, no liabilities for employee-related activities have been recorded by the Trust.

***(h) Bond Premium***

Bond premium, included in long-term debt, is amortized on a straight-line basis, which approximates the effective interest basis, over the life of the associated bond issue.

***(i) Deferred Inflows and Outflows of Resources***

The Trust accounts for certain transactions that result in the consumption or acquisition in one period that are applicable to future periods as deferred outflows and deferred inflows of resources, respectively, to distinguish them from assets and liabilities. For fiscal year 2019, the Trust has reported deferred inflows of resources that represent the funds received from the Commonwealth in the amount of $34,499 that will be used to provide future additional subsidies. For fiscal years 2019 and 2018, the Trust has reported deferred outflows of resources pertaining to its hedging derivative instruments and to the accounting losses on its debt refunding transactions. Refer to note 8 and note 11.

***(j) Use of Estimates***

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

***(k) Reclassifications***

Certain reclassifications have been made to the FY 2018 balances to conform to the presentation used in FY 2019.

**(3) Cash and Cash Equivalents**

Cash and cash equivalents for the years ended June 30, 2019 and 2018 are as follows:

| | 2019 | 2018 |
|---|---|---|
| Program equity funds | $ 336,272 | 360,789 |
| Revenue funds | 29,512 | 29,014 |
| Administrative funds | 31,711 | 28,542 |
| State match funds | 16,791 | 11,594 |
| Rebate funds | 9,578 | 10,602 |
| Additional subsidy funds | 63,812 | 36,603 |
| Other cash funds | 2,174 | 1,483 |
| Total cash and cash equivalents | $ 489,850 | 478,627 |

The Trust's cash and cash equivalents primarily consist of the SRF program equity funds. Use of these funds are governed by the Clean Water Act and Safe Drinking Water Act and are required to be kept in perpetuity in support of the State Revolving Fund. These funds are derived from: (1) funds drawn by the Trust from federal capitalization grants and Commonwealth matching funds; (2) other amounts paid to the Trust representing financial assistance provided pursuant to the Act for purposes of deposit in the SRF programs; (3) other amounts appropriated to the Trust by the Commonwealth for purposes of the SRF programs; (4) borrower loan repayments; (5) interest earnings on investments or deposits of amounts held in the program equity accounts; (6) proportional amounts released from the pledged assets available as a result of loan repayments in accordance with the provisions specified in the applicable bond resolutions; and (7) other amounts derived from financing activities of the Trust.

Revenue fund balances primarily represent proceeds collected from the Trust's specific revenue sources: borrower repayments, pledged assets earnings and contract assistance that are restricted or committed for specific purposes including debt service. Administrative funds are primarily funded with the annual loan servicing fee equal to 0.15% of outstanding loan principal charged pursuant to financing agreements, all origination fees payable to any loan, and any other amount received by the Trust for such purposes and applied to the payment of reimbursement of administrative costs of the Trust. Rebate funds represent amounts set aside to pay arbitrage rebate liabilities to the United States Treasury when due. State match funds represents the net balance of the Commonwealth matching grant and related interest earnings. Additional subsidy funds consist of additional contract assistance funds set aside by the Commonwealth to provide future subsidies, the amount and timing of which will be determined by the Board. During fiscal year 2019, the Board of Trustees approved an additional subsidy pursuant to Chapter 259 of the Acts of 2014 in the amount of $25,820.

Cash and cash equivalents include investments in Massachusetts Municipal Depository Trust (MMDT). The Office of the Treasurer and Receiver-General (Treasury) manages MMDT, the Commonwealth's short-term external mixed investment pool. MMDT is comprised of two portfolios, a Cash Portfolio and a Short-term Bond Portfolio. The Cash Portfolio is a money market like investment pool; its investments are carried at amortized cost, which approximates fair value. The investment in MMDT is valued at the share value of $1.00 and carried at fair value.

Investors in MMDT are not allowed to overdraw their shares. For a complete copy of MMDT's separately issued financial statements, please contact the Office of the State Treasurer's Cash Management Department, at (617) 367-9333 or download the statements from the Cash Management Section of the Office of the State Treasurer's Web site at www.mass.gov/treasury. For purposes of risk categorization, MMDT shares are not categorized.

*Custodial Credit Risk* – Custodial credit risk is the risk that, in the event of a bank failure, the Trust's deposits may not be returned to it. Cash balances represent amounts held in bank depository accounts that may be subject to custodial credit risk. The Trust had no significant amount of cash on deposit with banks at June 30, 2019 and 2018.

(Dollars in thousands, unless noted)

## (4) Project Fund Deposits

The project fund deposits are held by the Trustee and disbursed in accordance with executed loan agreements. Project fund deposits are disbursed to borrowers for eligible project costs as needed. These funds are restricted and are to be disbursed solely for the applicable project costs associated with the applicable loan financing agreement. When all costs have been paid, any amounts remaining unexpended in the project fund deposits will normally be applied to the repayment of the applicable borrower's principal. Project fund deposits are invested as part of the MMDT Cash Portfolio. As of June 30, 2019, and 2018, the Trust had $38,988 and $26,704, respectively, held in project fund deposits related to executed loan agreements for State Revolving Fund Bonds.

## (5) Investments

Investments primarily consist of debt service reserve accounts that were established as security for certain series of bonds issued by the Trust. The amount deposited in each debt service reserve account was determined at the time of the issuance of the bonds and varied from 33% to 50% of the par amount of the bonds issued. In most cases, debt service reserve funds were funded from the SRF program equity accounts. Interest earnings on the debt service reserve accounts are used for debt service payments. The Trust's debt service reserve accounts are invested in either GICs or U.S. Treasuries and Agencies.

Since 2012, the Trust has been pledging direct loans as security for its bonds rather than establishing debt service reserve funds. As a result, the debt service reserve fund investment balance continues to decline as scheduled maturities occur. The table below provides details of the Trust's debt service reserve funds as of June 30, 2019 and 2018.

**Debt Service Reserve Funds**

| Provider * | Bond Series | | 2019 | 2018 |
|---|---|---|---|---|
| GICs: | | | | |
| Mass Mutual Financial Group | Series 9, 1999A Ref | $ | 119,329 | 123,061 |
| FSA Capital Management Services, LLC. | Series 6, 11, 2004A Ref, 2014 Ref | | 108,905 | 138,565 |
| Natixis Funding Corporation | Series 6, 7, 8, 2002A Ref | | 98,210 | 114,938 |
| Citigroup Global Markets Inc. | Series 12, 2006 Ref | | 68,498 | 76,063 |
| | Total GICs | | 394,942 | 452,627 |
| U.S. Treasuries and Agencies | Series 12, 14, 15 | | 153,085 | 263,757 |
| Total Debt Service Reserve Fund Investments | | $ | 548,027 | 716,384 |

**GIC Provider names abbreviated as follows:*

*Mass Mutual Financial Group, aka Mass Mutual Financial Group/Trinity Funding Company, LLC.*
*FSA Capital Management Services, LLC., aka Dexia Credit Local/FSA Capital Management Services, LLC.*
*Natixis Funding Corporation, aka Natixis Funding Corporation f/k/a IXIS Funding, CDC Funding Corporation*
*Citigroup Global Markets, Inc., aka Citigroup Global Markets Incorporated*

(Dollars in thousands, unless noted)

GICs are recorded at contract value and U.S. Treasuries and Agencies are reported at fair market value. Reductions in GIC balances year over year reflect the scheduled maturities that correspond to debt service principal payments. As the Trust pays principal on its debt, proportional amounts are released from the pledged assets securing the related debt. In fiscal year 2019, Series 14 bonds were partially defeased by the Trust. There was a debt service reserve fund pledged to the Series 14 bonds that was invested in U.S. Treasuries and Agencies. As this debt service reserve fund was no longer required to secure the bonds, these investments were transferred to the program equity fund.

*Concentration of Credit Risk* – Concentration of credit risk is the risk of loss attributed to the magnitude of an entity's investment in a single issuer. The following list sets forth the GIC providers with which the Trust's investments exceed 5% of the Trust's total investment balance.

| Provider | 2019 | | 2018 | |
|---|---|---|---|---|
| Mass Mutual Financial Group | $ 119,329 | 18 % | 123,061 | 17 % |
| FSA Capital Management Services, LLC. | 108,905 | 16 | 138,593 | 19 |
| Natixis Funding Corp. | 98,210 | 15 | 114,938 | 15 |
| Citigroup Global Markets Inc. | 69,107 | 10 | 76,731 | 10 |

*Custodial Credit Risk* – Custodial credit risk for investments is the risk that, in the event of a failure of the counterparty, the Trust will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. The Trust requires that all investment agreements be collateralized either upon execution of such agreement or upon the happening of certain events, and at all times thereafter, by securities or other obligations issued or guaranteed by the United States, by certain federal agencies or corporations or, in some cases, by corporate or municipal issuers rated "AAA" by S&P Global Ratings and "Aaa" by Moody's, having a market value of not less than 102% of the amount currently on deposit or in accordance with their respective agreement.

*Credit Risk* – The majority of the Trust's investments are in GICs or in U.S. Treasuries and Agencies. The U.S. Treasuries and Agencies are all backed by the federal government. The GICs either have collateral requirements in place upon execution of the investment agreement, or have triggered collateral requirements under which, upon a rating downgrade below a specified level, the counterparty is typically required to take one of three actions: 1) post collateral to a level sufficient to maintain an AA rating, 2) assign the investment contract to a new counterparty that has at least an AA rating, or 3) provide credit enhancement to maintain a rating on the investment contract of at least AA. MMDT and the GICs are not rated.

*Interest Rate Risk* – Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the Trust's investments. The Trust limits its exposure to interest rate risk by entering into guaranteed investment contracts and federally guaranteed fixed income securities for all of its long-term investments upon which the Trust relies to meet its obligations. The Trust's U.S. Treasuries and Agencies investment portfolio was structured in its principal and interest return to support debt service on the related bonds.

(Dollars in thousands, unless noted)

For the years ended June 30, 2019 and 2018 the investments mature as follows:

| | June 30, 2019 | | | |
|---|---|---|---|---|
| | GICs | U.S. Treasuries and Agencies | MMDT short-term bond portfolio | Total investments |
| Less than 1 year | $ 88,364 | 18,192 | 98,185 | 204,741 |
| One to five years | 210,803 | 83,619 | — | 294,422 |
| Six to ten years | 68,786 | 99,863 | — | 168,649 |
| More than ten years | 27,598 | 64,292 | — | 91,890 |
| | $ 395,551 | 265,966 | 98,185 | 759,702 |

In fiscal year 2019, the Trust terminated its investment with the GIC provider, Portigon, in exchange for cash proceeds in the amount of $24,093.

| | June 30, 2018 | | | |
|---|---|---|---|---|
| | GICs | U.S. Treasuries and Agencies | MMDT short-term bond portfolio | Total investments |
| Less than 1 year | $ 113,313 | 14,047 | 96,107 | 223,467 |
| One to five years | 196,572 | 74,635 | — | 271,207 |
| Six to ten years | 120,919 | 66,589 | — | 187,508 |
| More than ten years | 46,298 | 109,789 | — | 156,087 |
| | $ 477,102 | 265,060 | 96,107 | 838,269 |

### (6) Capitalization Grants

The Trust is awarded clean water and drinking water grants from the EPA. These grants require that the Trust enter into binding commitments with local government units within one year of the receipt of each federal grant award to provide assistance in an amount equal to 120% (including 20% state matching grants) of each grant award. Each federal capitalization grant contains federally mandated set-asides, including a 4% administrative allowance, as well as certain required principal forgiveness.

The periodic grant draws by the Trust on its federal and state grants are based on the amount of incurred costs for certain eligible projects or activities. State matching grant revenue is recognized the year it is drawn from the Commonwealth. Federal grant revenue is recognized in accordance with the funding schedules contained within the individual grant agreements. The federal grant agreements begin October 1 and end September 30 in conformity with the federal fiscal year. Federal grant funds are made available in equal quarterly installments based on the federal fiscal year.



(Continued)

(Dollars in thousands, unless noted)

The federal fiscal year 2018 Clean Water SRF grant increased to $54,495 from $45,014. This 21.1% increase reflects the increase in the federal appropriation level from $1.37 billion in federal fiscal year 2017 to $1.66 billion in 2018. The federal fiscal year 2018 Drinking Water SRF grant increased to $25,774 from $15,319. This 68.2% increase reflects not only the increase in the federal appropriation level from $0.85 billion in federal fiscal year 2017 to $1.14 billion in 2018, but also an increase in the state's allotment percentage from 1.86% in 2017 to 2.32% in 2018.

The following table depicts the Trust's grant receivable by program:

| | Clean Water Program | | Drinking Water Program | | Total Program | |
|---|---|---|---|---|---|---|
| | **Federal** | **State** | **Federal** | **State** | **Federal** | **State** |
| Grants receivable at June 30, 2018 | $ 38,780 | — | 1,756 | — | 40,536 | — |
| Project Grant Award/Match – FFY 2018 | 52,315 | 10,899 | 20,361 | 5,155 | 72,676 | 16,054 |
| Admin/Set Asides Grant – FFY 2018 | 2,180 | — | 5,413 | — | 7,593 | — |
| Total Grant Award/Match | 54,495 | 10,899 | 25,774 | 5,155 | 80,269 | 16,054 |
| Grant Funds Drawn | (49,521) | (10,899) | (24,358) | (5,155) | (73,879) | (16,054) |
| Grants receivable at June 30, 2019 | $ 43,754 | — | 3,172 | — | 46,926 | — |

| | Clean Water Program | | Drinking Water Program | | Total Program | |
|---|---|---|---|---|---|---|
| | **Federal** | **State** | **Federal** | **State** | **Federal** | **State** |
| Grants receivable at June 30, 2017 | $ 27,092 | — | 1,722 | — | 28,814 | — |
| Project Grant Award/Match – FFY 2017 | 42,853 | 9,003 | 10,570 | 3,064 | 53,423 | 12,067 |
| Admin/Set Asides Grant – FFY 2017 | 2,161 | — | 4,749 | — | 6,910 | — |
| Total Grant Award/Match | 45,014 | 9,003 | 15,319 | 3,064 | 60,333 | 12,067 |
| Grant Funds Drawn | (33,326) | (9,003) | (15,285) | (3,064) | (48,611) | (12,067) |
| Grants receivable at June 30, 2018 | $ 38,780 | — | 1,756 | — | 40,536 | — |

(Dollars in thousands, unless noted)

The following table depicts the Trust's capitalization grant revenue by grant:

| | | Clean Water Program | | Drinking Water Program | | Total Programs | |
|---|---|---|---|---|---|---|---|
| | | 2019 | 2018 | 2019 | 2018 | 2019 | 2018 |
| Federal FY 2018 grant | $ | 40,871 | — | 19,331 | — | 60,202 | — |
| Federal FY 2017 grant | | 11,253 | 33,760 | 3,830 | 11,489 | 15,083 | 45,249 |
| Federal FY 2016 grant | | — | 11,341 | — | 3,863 | — | 15,204 |
| Total grant revenue – EPA | $ | 52,124 | 45,101 | 23,161 | 15,352 | 75,285 | 60,453 |
| State match – FY 2018 grant | $ | 10,899 | — | 5,155 | — | 16,054 | — |
| State match – FY 2017 grant | | — | 9,003 | — | 3,064 | — | 12,067 |
| Total grant revenue – State Match | $ | 10,899 | 9,003 | 5,155 | 3,064 | 16,054 | 12,067 |

Federal capitalization revenue is recognized in accordance with funding availability schedules contained within the individual grant agreements. The periodic cash draws by the Trust on the federal grants are based on the amount of incurred costs for certain eligible projects or activities.

## (7) Loans Receivable and Bonds Purchased

The Trust provides low-cost financing to cities, towns, and other eligible borrowers primarily for the construction and improvement of drinking water and wastewater infrastructure. These loans are provided under the Trust's Clean Water SRF, Drinking Water SRF, and Community Septic Management Programs.

A summary of loan receivables as of June 30, 2019 and 2018 is as follows:

| | | 2019 | 2018 |
|---|---|---|---|
| Leveraged loans | $ | 3,174,838 | 3,251,964 |
| Direct loans pledged for bond debt service | | 536,978 | 448,814 |
| Other direct loans pledged for bond debt service | | 7,139 | 7,774 |
| Total permanently financed loans receivable | | 3,718,955 | 3,708,552 |
| Interim loans | | 371,833 | 337,370 |
| Principal forgiveness | | (35,298) | (55,331) |
| Total loans receivable | | 4,055,490 | 3,990,591 |
| Less current portion loans receivable | | 621,568 | 561,902 |
| Long-term portion – loans receivable | $ | 3,433,922 | 3,428,689 |

Each loan to a borrower is in the form of either a loan or a bond purchase agreement and is pursuant to a financing agreement between the Trust and the borrower. Pursuant to an agreement made with the EPA, projects financed for greater than 20 years are financed through a bond purchase agreement. Pursuant to the financing agreements, each borrower delivers its own general or special obligation bond to the Trust referred to as a "local bond," in order to secure its loan repayment obligations. The Trust may provide loans under its Clean Water SRF and Drinking Water SRF programs with terms up to 30 years, but in no event does the Trust make a loan longer than the expected useful life of the project financed or refinanced by such loan. The Trust's loans to borrowers are funded either through SRF bond proceeds (leveraged loans) or funded with SRF program equity funds (direct loans).

The Trust recognizes the need for construction funds to be available to communities throughout the year, not simply at the time of an annual Trust bond issue. This need is addressed by making funds available to eligible projects through the interim loan program. Interim loans are temporary loans provided by the Trust to eligible borrowers in accordance with a financing agreement for all or any part of the costs of a project in anticipation of a leveraged or direct loan. This interim construction financing is offered to communities as a zero percent interest rate. The interim loan receivable balances were $371,833 and $337,370 as of June 30, 2019 and 2018, respectively.

The Trust offers principal forgiveness to borrowers, based on eligibility criteria defined by the Trust's board. Principal forgiveness can assist borrowers in their efforts to comply with water quality standards by making projects even more affordable. Loans funded by principal forgiveness grants are advanced to local agencies on a cost reimbursement basis up to the amount of the awarded principal forgiveness. The amount of interim loan balances for which a subsidy was provided in the form of principal forgiveness was $35,298 and $55,331, at June 30, 2019 and 2018, respectively. The subsidized interim loan amounts will be legally forgiven as the applicable projects are completed. Loan agreements require repayment of the forgiven loan if all program requirements are not met.

Interim loans totaling $185,386 were permanently financed as part of the Trust's Series 21 bond issuance in September 2018. In connection with the issuance of the Series 21 bonds, the Trust pledged $113,618 of its loans to borrowers funded with SRF program equity funds. The interest collected on these loans will be applied to pay a portion of the debt service on the Series 21 bonds, thereby supplementing the loan repayment obligations of the local borrowers while the principal payments collected on the direct loans are pledged as further security for the Trust's bonds. The Series 21 bonds are the fifth Series of Trust SRF Bonds to use this approach. As of June 30, 2019, the Trust has $544,117 in direct loans pledged for the purpose of paying debt service on Trust bonds.

(Dollars in thousands, unless noted)

Aggregate principal maturities on loans receivable or bonds purchased are as follows:

| | | Leveraged loans | Direct loans used for bond debt service | Other direct loans used for bond debt service | Total permanently financed loans |
|---|---|---|---|---|---|
| Years ending June 30: | | | | | |
| 2020 | $ | 260,385 | 24,029 | 620 | 285,034 |
| 2021 | | 254,916 | 24,521 | 628 | 280,065 |
| 2022 | | 241,601 | 24,957 | 629 | 267,187 |
| 2023 | | 247,303 | 25,477 | 629 | 273,409 |
| 2024 | | 235,425 | 26,009 | 629 | 262,063 |
| 2025–2029 | | 953,887 | 131,643 | 3,140 | 1,088,670 |
| 2030–2034 | | 614,840 | 130,143 | 864 | 745,847 |
| 2035–2039 | | 291,740 | 69,417 | — | 361,157 |
| 2040–2044 | | 61,396 | 49,978 | — | 111,374 |
| 2045–2049 | | 13,345 | 30,804 | — | 44,149 |
| | $ | 3,174,838 | 536,978 | 7,139 | 3,718,955 |

The Trust's loans to its borrowers are subsidized by interest earnings on its pledged assets which include debt service reserve funds, direct loans and contract assistance provided to the Trust by the Commonwealth. Although borrowers are obligated to the Trust to make scheduled payments, these subsidies are expected to be available for the duration of the loan financing agreements. The Commonwealth has committed to provide contract assistance in the amount of $241,531 over 30 years. This obligation of the Commonwealth to the Trust is a general obligation of the Commonwealth, for which its full faith and credit are pledged. Annual appropriations are made each year by the Commonwealth to fund the current year's obligation.

## (8) Bonds Payable

The Trust issues special obligation bonds under its SRF programs to provide low cost financing to cities, towns and other eligible borrowers primarily for the construction and improvement of drinking water and wastewater infrastructure. Coupons on the bonds range from approximately 2.0% to 5.3% and each series is payable semiannually with the latest maturity occurring in FY 2047. The financial assistance is provided pursuant to leveraged loans and bond purchase agreements between the Trust and each borrower as described in note 7.

The Trust issues its bonds under and secured by the Master Trust Agreement (MTA) dated as of January 1, 2015. The Trust entered into the MTA to replace the Program Resolution and to create a simpler security framework for the Trust's SRF Bonds. The Trust has been issuing bonds under the MTA beginning with its Series 18 Bonds and expects to continue to conduct its SRF program through the Master Trust Agreement. The Trust's prior bonds were issued pursuant to the Program Resolution to finance or refinance loans to several Borrowers concurrently (Pool Loan Program Bonds) or to finance or refinance loans to a single Borrower (Prior Single Obligor Bonds). The Prior Single Obligor Bonds were issued to provide loans to the following three obligors: (1) the Massachusetts Water Resources Authority (MWRA); (2) the South Essex Sewerage District (SESD); and (3) the City of New Bedford. As of June 30, 2019, and 2018, there are no longer Single Obligor Bonds outstanding for SESD or the City of New Bedford. The City of New Bedford, MWRA and SESD also are borrowers under the Trust's Pool Loan Program Bonds and the MTA Bonds.

The Series 21 Bonds, issued on September 12, 2018, was the fifth Series of the Trust's bonds to be issued under and secured by the Master Trust Agreement (MTA). MTA Bonds are payable solely from the funds pledged to the MTA which include repayments on all loans financed through the MTA Program, together with contract assistance payments, and earnings on certain funds held under the MTA. All other Series of Trust bonds are payable from amounts pledged pursuant to the individual Water Pollution Abatement and Drinking Water Project Bond Resolutions, which include payments by local governmental units of principal and interest on the loans, contract assistance, and earnings on amounts on deposit in the Debt Service Reserve Funds or interest received on certain direct loans made by the Trust.

Pursuant to the Commonwealth Assistance Contract (the Contract), the Commonwealth has agreed to provide contract assistance payments to the Trust to reduce the payments by local government units. The Contract is pledged as security for the bonds; and contract assistance payments, when received by the Trust are pledged as security for the bonds.

(Dollars in thousands, unless noted)

The following is a summary of bonds payable at June 30, 2019 and 2018:

| Bond issue | Program | Issue date | Final maturity | Balance June 30, 2018 | Additions | Reductions | Balance June 30, 2019 | Due within one year |
|---|---|---|---|---|---|---|---|---|
| **Senior revenue bonds:** | | | | | | | | |
| Series 6 | Pool Loan | 11/8/2000 | 8/1/2023 | $ 3,165 | — | — | 3,165 | 260 |
| Series 7 | Pool Loan | 7/26/2001 | 2/1/2023 | 1,530 | — | 245 | 1,285 | 245 |
| Series 2002A | MWRA | 10/31/2002 | 8/1/2032 | 7,280 | — | 850 | 6,430 | 805 |
| Series 8 | Pool Loan | 11/26/2002 | 8/1/2026 | 7,280 | — | 1,255 | 6,025 | 1,045 |
| Series 9 | Pool Loan | 11/6/2003 | 8/1/2027 | 12,415 | — | 3,620 | 8,795 | 1,295 |
| Series 11 | Pool Loan | 11/16/2005 | 8/1/2025 | 41,490 | — | 12,425 | 29,065 | 11,915 |
| Series 12 | Pool Loan | 12/14/2006 | 8/1/2026 | 22,830 | — | — | 22,830 | — |
| Series 14 | Pool Loan | 3/18/2009 | 8/1/2019 | 129,415 | — | 113,450 | 15,965 | 15,965 |
| Series 15 | Pool Loan | 6/8/2010 | 8/1/2040 | 311,690 | — | 18,900 | 292,790 | 19,685 |
| Series 16 A and B | Pool Loan | 6/13/2012 | 8/1/2042 | 142,500 | — | 10,070 | 132,430 | 10,440 |
| Series 17 A and B | Pool Loan | 5/22/2013 | 2/1/2043 | 164,315 | — | 7,975 | 156,340 | 8,280 |
| Series 18 | MTA | 1/7/2015 | 2/1/2045 | 205,150 | — | 8,205 | 196,945 | 8,440 |
| Series 19 | MTA | 2/11/2016 | 2/1/2046 | 192,210 | — | 8,320 | 183,890 | 8,640 |
| Series 20 | MTA | 4/13/2017 | 2/1/2047 | 200,310 | — | 6,970 | 193,340 | 7,075 |
| Series 21 | MTA | 9/12/2018 | 8/1/2038 | — | 163,460 | — | 163,460 | 6,100 |
| **Subordinated revenue refunding bonds:** | | | | | | | | |
| Series 1999A | MWRA | 11/3/1999 | 8/1/2029 | 36,595 | — | 16,750 | 19,845 | 16,000 |
| Series 2004A | Pool Loan | 9/9/2004 | 8/1/2027 | 161,320 | — | 41,430 | 119,890 | 42,870 |
| Series 2006 | Pool Loan | 12/14/2006 | 8/1/2034 | 362,235 | — | 22,880 | 339,355 | 26,335 |
| Series 2009A | Pool Loan | 8/11/2009 | 8/1/2019 | 34,770 | — | 16,495 | 18,275 | 18,275 |
| Series 2010A | Pool Loan | 6/8/2010 | 2/1/2020 | 4,915 | — | 2,395 | 2,520 | 2,520 |
| Series 2012A | Pool Loan | 6/13/2012 | 8/1/2032 | 46,340 | — | 2,485 | 43,855 | — |
| Series 2014 | Pool Loan | 6/12/2014 | 8/1/2028 | 435,310 | — | 31,445 | 403,865 | 26,205 |
| Series 2017 | MTA | 4/13/2017 | 8/1/2029 | 96,280 | — | — | 96,280 | — |
| Subtotal | | | | 2,619,345 | 163,460 | 326,165 | 2,456,640 | 232,395 |
| Add unamortized bond premiums | | | | 313,333 | 26,063 | 33,844 | 305,552 | — |
| Total bonds payable | | | | $ 2,932,678 | 189,523 | 360,009 | 2,762,192 | 232,395 |

On September 12, 2018, the Trust issued State Revolving Fund Bonds Series 21 (Green Bonds) in the amount of $163,460 with a premium of $26,063. The Trust has designated the Series 21 bonds as “Green Bonds” based on the intended use of the bond proceeds for the financing of projects that adhere to the federal Clean Water Act and Safe Drinking Water Act, as determined by the EPA. Series 21 Bond proceeds were applied to fund $189,513 in loans for clean water and drinking water projects under the SRF. The Trust anticipates expending all the proceeds within three years. In connection with the issuance of the Series 21 bonds, the Trust pledged $113,618 of its loans to borrowers funded with SRF program equity funds. The interest collected on these loans will be applied to pay a portion of the debt service on the Series 21 bonds, thereby supplementing the loan repayment obligations of the local borrowers while the principal payments collected on the direct loans are pledged as further security for the Trust’s bonds.

(Dollars in thousands, unless noted)

On June 13, 2019, the Trust used $98,235 of its program equity to defease a portion of the State Revolving Bonds, Series 14. These proceeds were deposited with an escrow agent to provide resources for all future debt service payments on the refunded bonds. As a result, the refunded bonds are considered to be defeased and the liability has been removed from the financial statements. The total debt defeased through this new issue was $95,885, resulting in a cash flow savings of $62,379.

The following is a summary of bonds payable at June 30, 2018 and 2017:

| Bond issue | Program | Issue date | Final maturity | Balance June 30, 2017 | Additions | Reductions | Balance June 30, 2018 | Due within one year |
|---|---|---|---|---|---|---|---|---|
| **Senior revenue bonds:** | | | | | | | | |
| Series 6 | Pool Loan | 11/8/2000 | 8/1/2023 | $ 3,165 | — | — | 3,165 | — |
| Series 7 | Pool Loan | 7/26/2001 | 2/1/2023 | 1,530 | — | — | 1,530 | 245 |
| Series 2002A | MWRA | 10/31/2002 | 8/1/2032 | 8,170 | — | 890 | 7,280 | 850 |
| Series 8 | Pool Loan | 11/26/2002 | 8/1/2026 | 8,730 | — | 1,450 | 7,280 | 1,255 |
| Series 9 | Pool Loan | 11/6/2003 | 8/1/2027 | 13,950 | — | 1,535 | 12,415 | 3,620 |
| Series 11 | Pool Loan | 11/16/2005 | 8/1/2025 | 41,725 | — | 235 | 41,490 | 12,425 |
| Series 12 | Pool Loan | 12/14/2006 | 8/1/2026 | 22,830 | — | — | 22,830 | — |
| Series 14 | Pool Loan | 3/18/2009 | 8/1/2038 | 146,495 | — | 17,080 | 129,415 | 17,565 |
| Series 15 | Pool Loan | 6/8/2010 | 8/1/2040 | 329,905 | — | 18,215 | 311,690 | 18,900 |
| Series 16 A and B | Pool Loan | 6/13/2012 | 8/1/2042 | 152,260 | — | 9,760 | 142,500 | 10,070 |
| Series 17 A and B | Pool Loan | 5/22/2013 | 2/1/2043 | 171,995 | — | 7,680 | 164,315 | 7,975 |
| Series 18 | MTA | 1/7/2015 | 2/1/2045 | 213,140 | — | 7,990 | 205,150 | 8,205 |
| Series 19 | MTA | 2/11/2016 | 2/1/2046 | 200,260 | — | 8,050 | 192,210 | 8,320 |
| Series 20 | MTA | 4/13/2017 | 2/1/2047 | 207,350 | — | 7,040 | 200,310 | 6,970 |
| **Subordinated revenue refunding bonds:** | | | | | | | | |
| Series 1999A | MWRA | 11/3/1999 | 8/1/2029 | 54,040 | — | 17,445 | 36,595 | 16,750 |
| Series 2004A | Pool Loan | 9/9/2004 | 8/1/2027 | 210,120 | — | 48,800 | 161,320 | 41,430 |
| Series 2006 | Pool Loan | 12/14/2006 | 8/1/2034 | 397,530 | — | 35,295 | 362,235 | 22,880 |
| Series 2009A | Pool Loan | 8/11/2009 | 8/1/2019 | 135,025 | — | 100,255 | 34,770 | 16,495 |
| Series 2010A | Pool Loan | 6/8/2010 | 2/1/2020 | 25,075 | — | 20,160 | 4,915 | 2,395 |
| Series 2012A | Pool Loan | 6/13/2012 | 8/1/2032 | 46,840 | — | 500 | 46,340 | 2,485 |
| Series 2014 | Pool Loan | 6/12/2014 | 8/1/2028 | 481,985 | — | 46,675 | 435,310 | 31,445 |
| Series 2017 | MTA | 4/13/2017 | 8/1/2029 | 96,280 | — | — | 96,280 | — |
| Subtotal | | | | 2,968,400 | — | 349,055 | 2,619,345 | 230,280 |
| Add unamortized bond premiums | | | | 347,809 | — | 34,476 | 313,333 | — |
| Total bonds payable | | | | $ 3,316,209 | — | 383,531 | 2,932,678 | 230,280 |

(Dollars in thousands, unless noted)

At June 30, 2019, debt service requirements to maturity for principal and interest are as follows:

| | | Total debt service | Principal | Interest |
|---|---|---|---|---|
| Year ending June 30: | | | | |
| 2020 | $ | 347,705 | 232,395 | 115,310 |
| 2021 | | 310,452 | 206,235 | 104,217 |
| 2022 | | 285,797 | 191,720 | 94,077 |
| 2023 | | 285,625 | 201,235 | 84,390 |
| 2024 | | 260,547 | 185,305 | 75,242 |
| 2025–2029 | | 995,038 | 739,310 | 255,728 |
| 2030–2034 | | 555,540 | 439,635 | 115,905 |
| 2035–2039 | | 224,693 | 186,425 | 38,268 |
| 2040–2044 | | 70,832 | 60,450 | 10,382 |
| 2045–2049 | | 15,046 | 13,930 | 1,116 |
| Total debt service requirements | $ | 3,351,275 | 2,456,640 | 894,635 |

In the current year and in prior years, the Trust has deposited bond proceeds from refunding bonds with an escrow agent to provide resources for all future debt service payments on the refunded bonds. As a result, the bonds are considered to be defeased and the liability has been removed from the financial statements. The balances of bonds defeased “in substance” in the current year or prior years, and still outstanding as of June 30, 2019 are as follows:

| Description | Redemption date | Final escrow payment date | | Outstanding principal amount 2019 | 2018 |
|---|---|---|---|---|---|
| MWRA Series 1998A | 11/03/1999 | 08/01/2018 | $ | — | 8,415 |
| Series 13 | 06/12/2014 | 08/01/2018 | | — | 13,950 |
| Series 14 | 06/12/2014 | 08/01/2019 | | 137,595 | 137,595 |
| Series 15 | 04/13/2017 | 08/01/2020 | | 18,320 | 18,320 |
| Series 16 | 04/13/2017 | 08/01/2020 | | 54,285 | 54,285 |
| Series 2012 | 04/13/2017 | 08/01/2022 | | 29,660 | 29,660 |
| Series 2009A | 06/13/2018 | 08/01/2019 | | 99,695 | 99,695 |
| Series 2010A | 06/13/2018 | 02/01/2020 | | 17,875 | 17,875 |
| Series 14 | 06/06/2019 | 08/01/2019 | | 95,885 | — |

When the Trust refunds or advance refunds its bonds, it calculates the difference between the reacquisition price and the net carrying amount of the old debt. The resulting accounting gain or loss is then amortized generally over the life of the refunding bonds. The net unamortized excess of acquisition price and the net carrying value of the defeased bonds are recorded as deferred outflows of resources on the Statement of

(Dollars in thousands, unless noted)

Net Position. When the Trust refunds or advance refunds a refunding series of bonds, there would be an acceleration of the amortization of the balance of the corresponding excess of reacquisition price over net carrying value of defeased bonds. This was the case in fiscal year 2018 when the Trust defeased Refunding Series 2009A and 2010A.

Excess of reacquisition price over net carrying value of defeased bonds (deferred outflows of resources – see note 12):

| | | 2019 | 2018 |
|---|---|---|---|
| Beginning balance | $ | 66,715 | 85,050 |
| Additions | | — | — |
| Reductions | | (9,348) | (18,335) |
| Ending balance | $ | 57,367 | 66,715 |

## (9) Net Position

As of June 30, 2019, and 2018, the Trust has a restricted net position in the amount of $2,040,327 and $1,964,713, respectively, and an unrestricted net position in the amount of $537,969 and $481,425, respectively. Restricted net position represents capitalization grants received cumulative to date from the EPA and corresponding matching amounts received from the Commonwealth, required to revolve back to the program. The capitalization grants are restricted to provide financial assistance, but not grants, to local communities and interstate agencies for the construction of wastewater treatment works, drinking water infrastructure improvements, and other related projects as described in note 1.

## (10) Commitment

As of June 30, 2019, and 2018, the Trust has agreed to provide interim financing loans to eligible borrowers amounting to approximately $267,330 and $253,049, respectively, excluding loan amounts already disbursed, which will be funded or collateralized with grant awards received by the Trust.

## (11) Derivative Transactions

Interest Rate Swap Agreements – $77,255 dated November 21, 2006.

*Objective of the Interest Rate Swap* – As a means to lower its borrowings costs, when compared with fixed-rate bonds at the time of their issuance in November 2006, the Trust entered into two interest rate swap agreements in connection with its Pool Program Refunding Bonds, Series 2006 bonds. The intention of the swaps was to hedge the Trust's exposure to interest rate risk by effectively changing the Trust's variable rate bonds maturing in 2022 and 2023 to a synthetic fixed rate of 3.88% and 3.90%, respectively. The Series 2006 carry an interest rate indexed to the Municipal Consumer Price Index (Muni-CPI).

(Dollars in thousands, unless noted)

*Terms* – Under the terms of these swaps, the Trust agrees to receive a variable rate, based on the Muni-CPI, equal to the amounts due on variable rate bonds issued by the Trust concurrently with the execution of the swap agreement. The Trust agrees to pay a fixed rate to the counterparty. Payments are made semiannually, due August 1 and February 1 of each year, on the same schedule as the fixed rate bonds issued in December 2006. The counterparty is JP Morgan Chase & Co. JP Morgan Chase Bank, N.A. The terms of each swap agreement are summarized below:

| | 2022 Termination | 2023 Termination |
|---|---|---|
| Trade date | November 21, 2006 | November 21, 2006 |
| Effective date | December 14, 2006 | December 14, 2006 |
| Termination date | August 1, 2022 | August 1, 2023 |

| | | 2022 Termination | 2023 Termination |
|---|---|---|---|
| Notional amount | $ | 30,650 | 46,605 |
| Fair value at June 30, 2019 | | (1,212) | (2,304) |
| Fair value at June 30, 2018 | | (651) | (1,190) |
| Variable rate bond coupon payments | | Muni-CPI* rate + 0.99% | Muni-CPI* rate + 0.99% |
| Variable rate payment from counterparty | | Muni-CPI* rate + 0.99% | Muni-CPI* rate + 0.99% |
| Fixed-rate payment to counterparty | | 3.88 % | 3.90 % |
| Synthetic fixed rate on bonds | | 3.88 % | 3.90 % |

* Muni-CPI rate is equal to the quotient of (1) the Reference CPI-U for the current debt service payment date minus the prior Reference CPI-U divided by (2) the prior Reference CPI-U. Reference refers to 3 months preceding the debt service payment date. Prior Reference period refers to 15 months preceding the debt service payment date.

*Fair Value* – The swaps had an aggregate negative fair value as of June 30, 2019 and 2018, which means on the August 1, 2019 debt service payment date the Trust will make a payment to the swap counterparty. At June 30, 2019 and 2018, the fair value of these swaps is reflected as a liability for derivative instruments and deferred outflows in the accompanying financial statements. GASB defines certain hierarchy of inputs to valuation techniques used to measure fair value. Derivative instruments are classified as Level 2 of the fair value hierarchy using the zero coupon method. This method calculates the future net settlement payments/receipts required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero coupon bonds due on the date of each future net settlement of the swap. Because all of the interest rate swaps were deemed effective hedges, changes in fair value of the interest rate swaps during the fiscal year ended June 30, 2019 and 2018 were recognized as deferred outflows resulting in no impact on the Statement of Revenues, Expenses, and Changes in Net Position.

*Credit Risk* – As of June 30, 2019 and 2018, the Trust is not exposed to credit risk because the swaps had a negative fair value. The swap counterparty is JP Morgan Chase & Co. JP Morgan Chase Bank, N.A. and is rated AA-/Aa1/AA-by S&P Global Ratings, Moody's Investors Service, and Fitch Ratings, respectively. To mitigate credit risk, the Trust has the right to terminate the swap upon a ratings downgrade by the counterparty's credit support provider below BBB-/Baa3 by S&P Global Ratings, and Moody's Investors Service, respectively.

*Termination Risk* – The swap contract uses the International Swaps and Derivatives Association Master Agreement, which includes standard termination events, such as failure to pay and bankruptcy. In addition, the Trust may terminate upon a ratings downgrade by the counterparty, as described above. The Trust and the counterparty may terminate if either party fails to perform under the terms of the Contract. If at the time of termination, the swap has a negative fair value, the Trust would be liable to the counterparty for a payment equal to the swap's fair value. The source of funds for this payment is from "legally available funds." Legally available funds is defined as, "funds held in the Trust's Federal Clean Water State Revolving Fund or Drinking Water State Revolving Fund…only to the extent that Congress passes a law or EPA adopts a regulation or issues an opinion or other notice…making such amounts legally available to pay settlement amounts."

*Swap Payments and Hedged Debt* – In accordance with the swap agreement, the variable rate is calculated using the preceding 3 months' Muni-CPI rate with settlement payments made on the debt service payment dates of February 1 and August 1. As of June 30, 2019, the variable rate was calculated using the May 31, 2019 Muni-CPI rate. Assuming this rate remains the same, the debt service requirements of the variable rate debt and the net swap payments are presented in the table on the following page. As the Muni-CPI rate varies, the variable rate payments on the bonds and the variable rate receipts from the swap are equal, the net debt service will remain fixed.

(Dollars in thousands, unless noted)

| | | Variable rate bonds[1] | | Net swap | Total |
|---|---|---|---|---|---|
| | | Principal | Interest | payments[2] | debt service |
| Fiscal year ending June 30: | | | | | |
| 2020 | $ | — | 2,130 | 877 | 3,007 |
| 2021 | | — | 2,130 | 877 | 3,007 |
| 2022 | | — | 2,130 | 877 | 3,007 |
| 2023 | | 30,650 | 1,707 | 705 | 33,062 |
| 2024 | | 46,605 | 643 | 266 | 47,514 |

[1] Calculated rate uses May 31, 2019 Muni-CPI rate to reflect debt service payment for August 1, 2019.

[2] A positive net swap payment requires a payment from the Trust to the counterparty.

## (12) Deferred Outflows of Resources

The following is a summary of deferred outflows of resources at June 30, 2019 and 2018:

| | | 2019 | 2018 |
|---|---|---|---|
| Deferred outflows of resources: | | | |
| Derivative instruments (note 11) | $ | 3,516 | 1,841 |
| Excess of reacquisition price over net carrying value of defeased bonds (note 8) | | 57,367 | 66,715 |
| | $ | 60,883 | 68,556 |