

# Massachusetts Clean Water Trust

## New Issue Report

### Ratings

#### New Issues

State Revolving Fund Bonds, Series 20 (Green Bonds)	AAA
State Revolving Fund Refunding Bonds, Series 2017	AAA

#### Outstanding Debt

State Revolving Fund Bonds	AAA
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### Rating Outlook

Stable

### New Issue Details

**Sale Information:** Approximately \$212,835,000 State Revolving Fund Bonds, Series 20 (Green Bonds), and \$97,190,000 State Revolving Fund Refunding Bonds, Series 2017, expected to sell the week of April 3 via negotiation.

**Security:** Pledged loan repayments, Commonwealth of Massachusetts (the commonwealth) contract assistance payments (CAPs), rights and interest of the Massachusetts Clean Water Trust (MCWT, or the trust) and certain other funds held by the trust (including the equity funds).

**Purpose:** To finance or refinance costs related to certain wastewater and drinking water projects within the state, refund bonds previously issued by the trust and pay the costs of issuance.

**Final Maturity:** Feb. 1, 2047.

### Key Rating Drivers

**Sound Financial Structure:** Fitch Ratings' cash flow modeling demonstrates that the trust's combined pool state revolving fund (SRF) bond program can continue to pay bond debt service even with loan defaults in excess of Fitch's 'AAA' liability rating stress hurdle, as produced using Fitch's Portfolio Stress Calculator (PSC).

**Highly Rated Borrower Pool:** Approximately 94% of the SRF bond program consists of borrowers exhibiting investment-grade ratings. Loan security is also strong as borrowers are secured by general obligation pledges of cities and towns, local utility revenue pledges or a combination of both.

**High Single-Borrower Concentration:** Single-borrower concentration is high, with the Massachusetts Water Resources Authority (MWRA) representing 27% of total outstanding loan principal.

**Strong Program Management:** MCWT manages one of the largest SRF programs in the nation. To date, there have been no pledged or leveraged loan defaults in any of the MCWT's SRF programs.

### Rating Sensitivities

**Reduction in Modeled Stress Cushion:** Significant deterioration in aggregate borrower credit quality, increased pool concentration or increased leveraging resulting in the SRF program's inability to pass Fitch's 'AAA' liability rating stress hurdle would put downward pressure on the rating. The Stable Rating Outlook reflects Fitch's view that these events are unlikely to occur.

### Related Research

[Fitch Rates Massachusetts Clean Water Trust's \\$310MM SRF Bonds 'AAA' \(March 2017\)](#)

[State Revolving Fund and Municipal Loan Pool Peer Review: 2016 \(October 2016\)](#)

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**Rating History —  
Revenue Bonds**

Rating	Action	Outlook/ Watch	Date
AAA	Affirmed	Stable	3/23/17
AAA	Affirmed	Stable	9/25/03
AAA	Affirmed	—	10/25/02
AAA	Affirmed	Stable	10/11/02
AAA	Affirmed	—	10/10/00
AAA	Upgraded	—	11/23/99
AA+	Affirmed	Positive <sup>a</sup>	10/12/99
AA+	Upgraded	—	6/22/98
AA	Downgraded	—	10/31/95
AA+	Upgraded	—	4/28/95
AA	Assigned	—	2/17/93

<sup>a</sup>Rating Watch.

**Credit Profile**

MCWT provides subsidized financial assistance to local governments and other eligible borrowers in the commonwealth under its SRF programs. The series 20 bonds will be the third series of bonds issued under the 2015 master trust agreement (2015 MTA). MCWT also administers two outstanding SRF programs (one single-borrower program and an earlier pooled bond program) under a prior program resolution that is now closed.

The 2015 MTA program pledges amounts available in the equity fund to all SRF program bondholders on a parity basis. In light of this feature, Fitch combines all of MCWT's SRF programs in its cash flow model analysis.

**Sound Financial Structure**

Fitch measures the financial strength of the SRF program by calculating the program's asset strength ratio (PASR). The PASR includes total scheduled pledged loan repayments, CAP payments, excess releases from standalone SRF programs, plus any reserve balances and account earnings divided by total scheduled bond debt service. MCWT's SRF program PASR is 1.4x, which is below Fitch's 2016 'AAA' rating category median level of 1.9x but still considered sound. Minimum annual debt service coverage is also calculated to be somewhat low at about 1.1x, though lower minimum annual coverage is typical for SRF structures enhanced with large reserve fund balances.

Cash flow modeling demonstrates that the SRF program can continue to pay bond debt service even with hypothetical loan defaults of 100% in any four-year period of the outstanding bonds' expected life (per Fitch criteria, a 90% recovery is also applied in the cash flow model when determining default tolerance). This result is in excess of Fitch's 'AAA' liability stress hurdle of 22%, as produced by the PSC. The liability rating stress hurdle is calculated based on overall pool credit quality as measured by the rating of underlying borrowers, loan size and term, and concentration.

**CAPs and Deallocations Support Bond Debt Service**

CAPs provide approximately 9% and 5% of support to the prior pool and the 2015 MTA programs' bond debt service, respectively, on behalf of certain borrowers. CAPs constitute a general obligation of the commonwealth (GOs rated 'AA+/Stable'), for which the commonwealth's full faith and credit are pledged. Additional enhancement equal to approximately 10% of total pool program debt service is provided by scheduled releases from the single-borrower SRF program. Both the CAPs and the releases from the standalone programs were stressed in Fitch's cash flow model analysis.

**High-Quality Loan Pool with Significant Single-Borrower Concentration**

Fitch estimates that at least 94% of SRF program participants exhibit investment-grade credit quality, with the large majority rated 'A' or higher. In aggregate, pool credit quality is strong versus similar municipal pools as reflected by the commonwealth pool programs' low 'AAA' liability stress of 22%, which compares favorably to Fitch's rating category median of 32% (lower liability stresses correlate to stronger credit quality). Loan security is also solid as the loan portfolio in the program is secured by general obligation pledges of cities and towns, local utility revenue pledges or a combination of the two.

**Related Criteria**

[Revenue-Supported Rating Criteria \(June 2014\)](#)

[State Revolving Fund and Leveraged Municipal Loan Pool Criteria \(October 2016\)](#)

The SRF program consists of approximately 290 borrowers, the top 10 of which contribute to about 50% of total outstanding loan obligations. After MWRA's 27% (senior- and subordinate-lien revenue bonds rated 'AA+' and 'AA', respectively, with a Stable Outlook), the remaining top 10 borrowers range in more manageable sizes of 1.9% to 4%. Fitch's concern with MCWT's high single-borrower concentration is somewhat mitigated by the high rating of the MWRA. Overall, MCWT's SRF program composition is mostly in line with what Fitch observed in its previous few reviews.

**Largest Borrowers**

Borrower	% of Portfolio
Massachusetts Water Resources Authority	26.6
Fall River	3.9
Upper Blackstone Water Pollution Abatement District	3.5
New Bedford	2.9
Taunton	2.4
Chicopee	2.4
Springfield Water and Sewer Commission	2.3
Brockton	2.1
Marlborough	2.1
Lowell	1.9
<b>Total</b>	<b>50.0</b>

Source: Massachusetts Clean Water Trust.

**Enhancement Provided by Overcollateralization and Reserves**

The series 20 and certain prior series of bonds are primarily protected from losses by surplus-pledged direct loan repayments funded from program equity made in excess of bond debt service. Enhancement (or overcollateralization) provided by such direct loans typically ranges from 33% to 50% of the supported bonds. As bonds enhanced by overcollateralization amortize, excess amounts are eventually released to the MTA's pledged equity fund and are therefore available to other SRF program borrowers.

Certain other prior series of SRF bonds in both the prior pool program and single-borrower programs have been enhanced by reserves initially funded by MCWT (from federal and state grants) in amounts typically ranging from 33% to 50% of the related borrower loans. As bonds secured by reserve funds amortize, such reserves are also eventually released to the pledged equity fund and thereafter available to all SRF program borrowers. Although no reserves are being funded with this issue, combined series' reserves from the previous pool program issues equal approximately \$748 million, or 25% of outstanding bonds.

**Strong Program Management**

MCWT is an interagency management team comprising officials from the commonwealth treasurer's office, the executive office of administration and finance. The commonwealth's department of environmental protection (DEP) administers Massachusetts' SRFs in an arrangement typical of such programs nationwide. DEP staff members review and monitor projects for several water and wastewater programs, including the SRF program. MCWT has never experienced a pledged or leveraged loan default across any of its SRF programs.

**Additional Bonds Test**

Upon the issuance of new bonds, a certificate must be delivered by the trust demonstrating, in detail, sufficient pledged revenues to cover senior-lien bond debt service and other parity obligations by 1.05x and subordinate-lien bond debt service by 1.00x.

Program/Series Comparison

Program – Series Name or Surveillance Review Date	2016 'AAA' Median <sup>a</sup>	MCWT Series 20 and 2017 (Refunding)	MCWT Series 19	MCWT Series 18	MCWT Series 2014	MCWT Series 17A
State	—	Massachusetts	Massachusetts	Massachusetts	Massachusetts	Massachusetts
Revolving Fund Type	—	CWSRF/DWSRF	CWSRF/DWSRF	CWSRF/DWSRF	CWSRF/DWSRF	CWSRF/DWSRF
Purpose	—	Financing/Refunding	Financing	Financing	Refunding	Financing/Refunding
Total New Issuance (\$ Mil.)	—	310.0	206.0	232.15	566.84	198.2
Fitch Rating	—	AAA	AAA	AAA	AAA	AAA
Rating Date	—	3/24/17	1/15/16	12/1/14	5/19/14	4/22/13
<b>Fitch Default Tolerance Test (%)</b>						
Minimum Default Tolerance Rate	100.0	100.0	100.0	100.0	100.0	100.0
Less: Fitch PSC Liability Rating Stress Hurdle	(32.0)	(21.7)	(20.4)	(18.7)	(20.0)	(21.6)
Rating Stress Cushion	68.0	78.3	79.6	81.3	80.0	78.4
<b>Financial Structure (\$ Mil.)</b>						
Total Outstanding Program Bonds	587	2,977	3,020	3,095	3,194	3,393
<b>Program Assets (\$ Mil.)</b>						
Total Pledged Revenues Excluding Reserves	1,604	4,891	5,105	5,024	4,847	4,925
Total Pledged Revenues Including Reserves	1,813	5,638	5,934	5,877	5,750	5,918
DSRF Balance	54	748	829	853	903	966
<b>Program Liabilities (\$ Mil.)</b>						
Total Debt Service	869	4,145	4,276	4,323	4,454	4,895
<b>Financial Ratios</b>						
Projected Minimum Annual DSC (x)	1.4	1.1	1.1	1.1	1.0	1.0
Program Asset Strength Ratio (x)	1.9	1.4	1.4	1.4	1.3	1.2
DSRF as % of Bonds Outstanding	9.9	25.1	27.5	27.6	28.3	28.5
<b>Portfolio Summary</b>						
Number of Borrowers	158	294	294	293	292	324
Implied Weighted Average Pool Rating (PSC)	BBB	A	A+	A	A+	A
Weighted Average Life (Years)	17.0	22.1	22.2	22.0	22.3	22.7
Percentage Investment Grade (%)	79.8	93.7	95.8	96.0	96.6	96.3
Top 10 Concentration (%)	55.0	50.0	50.5	50.9	50.9	50.5
Largest Single Borrower (%)	17.3	26.6	27.4	27.9	27.6	28.2
Largest Borrower Composite Rating	AA+	AA+	AA+	AA+	AA+	AA+
<b>Security Pledge Distribution (%)</b>						
Pledge 1	—	GO (69.6)	GO (69.1)	GO (68.4)	GO (68.7)	GO (67.0)
Pledge 2	—	Utility Revenues (30.4)	Utility Revenues (30.9)	Utility Revenues (31.6)	Utility Revenues (31.3)	Utility Revenues (33.0)
Pledge 3	—	—	—	—	—	—
Pledge 4	—	—	—	—	—	—

<sup>a</sup>Based on data collected for peer review (through Oct. 20, 2016). CWSRF – Clean water state revolving fund. DWSRF – Drinking water state revolving fund. DSRF – Debt service reserve fund. DSC – Debt service coverage. PSC – Portfolio stress calculator.

Source: Fitch.

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