

**MEETING OF THE MASSACHUSETTS
CLEAN WATER TRUST
BOARD OF TRUSTEES**

November 1, 2023
1:30 PM

Location: Remote*

NOTICE & AGENDA

CALL TO ORDER

Item #1 **MOTION- VOTE REQUESTED**

Acceptance and approval of minutes of the meeting held on October 11, 2023.

Item #2 **REPORT OF THE EXECUTIVE COMMITTEE**

Item #3 **MOTION- VOTE REQUESTED**

Expand the Definition of Disadvantaged Community for Certain Purposes

1. That the Trust approve the definition of “Disadvantaged Community” for the Drinking Water State Revolving Fund for purposes of the Bipartisan Infrastructure Law (“BIL”) to include public water systems or municipalities that either (i) qualify under new criteria described below based on environmental factors (such community, an “Environmentally Disadvantaged Community”) or (ii) qualify under the Trust’s existing three-tiered affordability criteria.
2. That the criteria for designation as an Environmentally Disadvantaged Community shall be that the people living in or served by the public water system or municipality are at risk for negative health effects due to the presence in the community of PFAS contamination and/or lead in the community’s water supply or service lines, all as determined by the Department of Environmental Protection (“DEP”).
3. That designation as an Environmentally Disadvantaged Community for a particular year will confer eligibility for additional subsidy provided with funds made available by the Bipartisan Infrastructure Law only for the projects of such community on that year’s Intended Use Plans (“IUPs”) that DEP has identified as mitigating the environmental factors responsible for such designation; such designation will not confer eligibility for additional subsidy on any other projects by such Environmentally Disadvantaged Community.
4. That such definition and all designations of Environmentally Disadvantaged Communities shall be retroactive to the effective date of the Bipartisan Infrastructure Law.
5. That the Trust authorizes and directs the Executive Director, and such other officers of the Trust as the Executive Director may delegate, to perform all such additional acts, not inconsistent with this vote, as may be necessary or desirable in effecting the purposes of this vote, including without limitation any actions by the Trust required to amend existing IUPs to incorporate designations of Environmentally Disadvantaged Communities.

Item #4

MOTION- VOTE REQUESTED

Approval of Asset Management Program Grant Commitments and Grant Agreements

<u>PAC No.</u>	<u>Recipient</u>	<u>Amount</u>
DWA-23-11	Chester	\$68,100
CWA-23-28	Harwich	\$75,000
CWA-23-13	Haverhill	\$150,000
CWA-23-49	Lowell	\$150,000
DWA-23-11	Russell	\$90,600

Item #5

MOTION- VOTE REQUESTED

Approval of Lead Service Line Planning Program Grant Commitments and Grant Agreements

<u>PRA No.</u>	<u>Recipient</u>	<u>Amount</u>
DWL-23-111	Aquarion Water Company – Oxford	\$167,000
DWL-23-113	Aquarion Water Company – Springdale Farms	\$107,200
DWL-23-112	Holden	\$154,300
DWL-23-34	Wilbraham	\$193,000 ¹

Item #6

MOTION- VOTE REQUESTED

Approval of Clean Water Commitments

<u>PAC No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
CW-22-59	Falmouth	\$31,265,218 ²	2%
CW-23-09	Lawrence	\$410,000	1.5% ³

Item #7

MOTION- VOTE REQUESTED

Approval of the Clean Water Loans and Financing Agreements

<u>PRA No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
CWP-22-59	Falmouth	\$27,202,218	2%
CWP-22-59-A	Falmouth	\$4,063,000	2%
CW-23-09	Lawrence	\$410,000	1.5% ³
CW-22-46	Nahant	\$1,191,582	2%

Item #8

MOTION- VOTE REQUESTED

Approval of the Drinking Water Loans and Financing Agreements

<u>PRA No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
DWP-22-41	Barnstable Fire District	\$6,983,405	0% ⁴
DW-22-37	MWRA	\$6,000,000	2%

¹ First revision. Previous grant amount was \$160,000

² First revision. Previous PAC amount \$24,000,000.

³ Housing Choice Loan

⁴ PFAS Remediation Loan

OTHER BUSINESS

(Items not reasonably anticipated by the Chair 48 hours in advance of the meeting)

ADJOURN

***Location: Remote:** Notice is hereby given that the Wednesday, November 1, 2023 meeting of the Massachusetts Clean Water Trust's Board of Trustees will be held through remote participation in accordance with M.G.L.c.30A, §20, as modified by c.20 of the Acts of 2021, c.22 of the Acts of 2022, and c.2 of the Acts of 2023.

Those who would like to attend the meeting, please e-mail masswatertrust@tre.state.ma.us to request meeting information. Information to access the meeting will be available through the duration of the meeting. However, we encourage participants to request the information by 5:00 PM the day before the meeting.

To ensure that the audio is clear to all attendees, unless you are actively participating in the meeting, please mute your audio. If you have technical difficulties joining the meeting, please email masswatertrust@tre.state.ma.us.

Please Note: There will be no physical meeting at the offices of the Massachusetts Clean Water Trust.



**Item #1: *Minutes of the Meeting Held on October 11,
2023***

**MEETING OF THE MASSACHUSETTS
CLEAN WATER TRUST
BOARD OF TRUSTEES**

October 11, 2023
1:30 PM

Location: Remote*

Minutes

Attendees: State Treasurer Deborah Goldberg, Chair
Maria Pinaud, Director of Municipal Services, MassDEP
Timur Yontar, Capital Budget Director, Executive Office for
Administration & Finance

Also Present: James MacDonald, First Deputy Treasurer, Office of the State Treasurer
Susan Perez, Executive Director, MCWT
Nate Keenan, Deputy Director, MCWT
My Tran, Treasurer, MCWT
Sally Peacock, Controller, MCWT
Nicole Munchbach, Accountant, MCWT
Pam Booker, Accountant, MCWT
Sunkarie Konteh, Accountant, MCWT
Julian Honey, Program Associate, MCWT
Kailyn Fellmeth, Program Associate, MCWT
Josh Derouen, Senior Program Associate, MCWT
Jonathan Maple, Senior Program Associate, MCWT
Rachel Stanton, Investor Relations and Communications Graphic Designer,
MCWT
Kathryn Armour, Data Analyst, MCWT
Robin McNamara, Deputy Director of Municipal Services, MassDEP
Greg Devine, Section Chief, MassDEP
Mary Wilkins, Communications Executive Assistant, Office of the State
Treasurer
Makayla Fucile, Special Assistant, Office of the State Treasurer
Jennifer Pederson, Executive Director, MWWA
Emily Kowtoniuk, Legislative Director, Office of the State Treasurer

CALL TO ORDER: The meeting was called to order by Treasurer Goldberg at 1:32 p.m.

Item #1 **MOTION- VOTE**

Acceptance and approval of September 6, 2023 Minutes

The motion was made by Mr. Yontar and seconded by Ms. Pinaud and voted unanimously in favor of acceptance and approval of the minutes of the meeting of the Board held on September 6, 2023.

Item #2 **REPORT OF THE EXECUTIVE COMMITTEE**

Loan Forgiveness for 2022 Intended Use Plan (IUP) Projects

Ms. Perez stated that the Board will be voting on loan forgiveness amounts for 2022 IUP projects with approved loan agreements. Any loan forgiveness approved at this meeting will mark the start of the Trust's use of Bipartisan Infrastructure Law (BIL) funds and continued use of American Rescue Plan Act (ARPA) funds.

2024 IUP Project Solicitation

Ms. Perez said that the 2024 IUP project solicitation is complete. Projects are being ranked and final IUPs will be drafted by MassDEP shortly.

Lead Service Line (LSL) Planning Grants

Ms. Perez said that including the grants up for vote today, 113 LSL planning grants have been issued for a total of approximately \$26.3 million. There are 81 grants totaling approximately \$18.5 million that have been issued to Disadvantaged Communities. The Trust is hoping to see these grant recipients undergo constructions projects to replace LSLs found with the help of these planning grants.

Update from Great Boston Chamber of Commerce

Treasurer Goldberg said that she spoke very highly of the Massachusetts Clean Water Trust's work, such as the School Water Improvement Grant (SWIG) program, at the Great Boston Chamber of Commerce's event earlier in the day.

Item #3

MOTION- VOTE

The motion was made by Ms. Pinaud and seconded by Mr. Yontar.

Ms. Perez stated that responses are accepted on a rolling basis for the Request for Responses to prequalify engineering firms to assist communities with developing asset management plans. Responses are accepted on a rolling basis to prequalify as many firms as possible. The procurement management team met, reviewed the response, and recommends adding one new firm.

The motion was voted unanimously in favor of acceptance and approval of the following:

Prequalification of Additional Consulting Engineering Firm for the Development of Asset Management Plans for Eligible Borrowers

1. That the recommendation of the procurement management team, established pursuant to the Trust's ongoing request for responses, dated June 2, 2021, distributed to the Board, to prequalify an additional firm to provide consulting engineering services to "eligible entities" that are Massachusetts cities, towns, and utility districts for the development of asset management plans, is hereby approved.
2. That the Board hereby delegates to the Executive Director, and/or other authorized officers of the Trust, all necessary power and authority to take any such further action as necessary to finalize the prequalification of the additional firm.

Item #4

MOTION- VOTE

The motion was made by Mr. Yontar and seconded by Ms. Pinaud and voted unanimously in favor of acceptance and approval of the following:

Approval of Asset Management Program Grant Commitments and Grant Agreements

<u>PAC No.</u>	<u>Recipient</u>	<u>Amount</u>
CWA-23-08	Dudley	\$111,000
CWA-23-10	Easton	\$81,825
DWA-23-103	Marion	\$33,000

Item #5

MOTION- VOTE

The motion was made by Ms. Pinaud and seconded by Mr. Yontar and voted unanimously in favor of acceptance and approval of the following:

Approval of Lead Service Line Planning Program Grant Commitments and Grant Agreements

<u>PRA No.</u>	<u>Recipient</u>	<u>Amount</u>
DWL-23-95	Aquarion Water Company – Dover	\$127,000
DWL-23-99	Aquarion Water Company – Millbury	\$168,000
DWL-23-100	Aquarion Water Company – Plymouth	\$128,000
DWL-23-98	Aquarion Water Company – Sheffield	\$130,400
DWL-23-104	Bellingham	\$131,000
DWL-23-102	Belmont	\$96,400
DWL-23-96	Hopkinton	\$127,510
DWL-23-109	Longmeadow	\$191,000
DWL-23-101	North Adams	\$204,000
DWL-23-97	Saugus	\$250,000
DWL-23-108	Uxbridge	\$171,700
DWL-23-106	Wakefield	\$198,800
DWL-23-91	Williamstown	\$119,000

Item #6

MOTION- VOTE

The motion was made by Ms. Pinaud and seconded by Mr. Yontar and voted unanimously in favor of acceptance and approval of the following:

Approval of Community Septic Management Program Commitment

<u>PAC No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
CW-23-07	Nantucket	\$2,000,000	2%

Item #7

MOTION- VOTE

The motion was made by Mr. Yontar and seconded by Ms. Pinaud and voted unanimously in favor of acceptance and approval of the following:

Approval of Clean Water Commitment

<u>PAC No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
CW-20-23	Barnstable	\$14,125,023¹	1.5%²

Item #8

MOTION- VOTE

The motion was made by Mr. Yontar and seconded by Ms. Pinaud and voted unanimously in favor of acceptance and approval of the following:

Approval of Drinking Water Commitments

<u>PAC No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
DW-23-105	Andover	\$1,800,000	1.5%²
DW-23-107	Chatham	\$15,000,000	2%
DW-22-47	New Bedford	\$18,412,748³	0%⁴
DW-23-42	Somerville	\$1,926,577⁵	0%⁴
DW-22-34	Winthrop	\$1,903,750	2%

Item #9

MOTION- VOTE

The motion was made by Ms. Pinaud and seconded by Mr. Yontar and voted unanimously in favor of acceptance and approval of the following:

Approval of the Community Septic Management Program Loan/Local Government Obligation and Financing Agreement

<u>PRA No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
CWT-23-07	Nantucket	\$2,000,000	2%

Item #10

MOTION- VOTE

The motion was made by Ms. Pinaud and seconded by Mr. Yontar and voted unanimously in favor of acceptance and approval of the following:

Approval of the Clean Water Loans and Financing Agreements

<u>PRA No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
CWP-20-23-B	Barnstable	\$850,000	1.5%²
CWP-22-65	Barnstable	\$11,000,000	1.5%²
CW-22-73	New Bedford	\$1,621,200⁶	2%
CWP-22-66	New Bedford	\$1,844,744	2%
CWP-22-66-A	New Bedford	\$510,600	2%

¹ First revision, previous PAC Amount \$13,275,023

² Housing Choice Loan

³ First revision, previous PAC Amount \$16,170,000

⁴ Lead Service Line Replacement Project

⁵ First revision, previous PAC Amount \$1,917,210

⁶ First revision, previous PAC Amount \$1,950,000

Item #11 **MOTION- VOTE**

The motion was made by Mr. Yontar and seconded by Ms. Pinaud and voted unanimously in favor of acceptance and approval of the following:

Approval of the Drinking Water Loans and Financing Agreements

<u>PRA No.</u>	<u>Borrower</u>	<u>Amount</u>	<u>Interest Rate</u>
DW-20-16-A	Barnstable	\$32,300	0%⁷
DWPLC-22-47	New Bedford	\$18,412,748	0%⁴
DWPLC-23-42	Somerville	\$1,926,577	0%⁴
DWP-22-34	Winthrop	\$1,903,750	2%

Item #12 **MOTION- VOTE**

The motion was made by Ms. Pinaud and seconded by Mr. Yontar.

Ms. Perez stated that 2022 Clean Water projects totaling approximately \$242 million will receive approximately \$47 million in loan forgiveness. 2022 Drinking Water projects totaling approximately \$185 million will receive approximately \$68.2 million in loan forgiveness. In total, 2022 projects will receive approximately \$115.2 million in loan forgiveness.

The motion was voted unanimously in favor of acceptance and approval of the following:

Authorization of Loan Forgiveness for 2022 Projects

That the Board hereby approves principal forgiveness for Loans to the Borrowers, for the 2022 Clean Water Projects and 2022 Drinking Water Projects, in the amounts, all as listed in Schedules 1 and 2; subject to the availability of funds therefor and to the terms and conditions of the Financing Agreements.

Item #13 **MOTION- VOTE**

The motion was made by Ms. Pinaud and seconded by Mr. Yontar and voted unanimously in favor of acceptance and approval of the following:

Approval of School Water Improvement Grants

<u>Grant No.</u>	<u>Grantee</u>	<u>Grant Amount</u>
SWIG-23-09	Taunton Public Schools	\$30,000
SWIG-23-10	Temple Israel of Natick	\$3,000

OTHER BUSINESS: None

ADJOURN: The motion was made by Ms. Pinaud and seconded by Mr. Yontar and voted unanimously in favor of adjourning the meeting at 1:45 p.m.

⁷ PFAS Remediation Loan

LIST OF DOCUMENTS AND EXHIBITS USED:

1. Minutes, September 6, 2023
2. Memorandum of Prequalified Consulting Engineering Firm Recommendation
3. Project Descriptions
4. 2022 Loan Forgiveness Schedules for Clean Water and Drinking Water Amounts

***Location: Remote:** Notice is hereby given that the Wednesday, October 11, 2023 meeting of the Massachusetts Clean Water Trust's Board of Trustees will be held through remote participation in accordance with M.G.L.c.30A, §20, as modified by c.20 of the Acts of 2021, c.22 of the Acts of 2022, and c.2 of the Acts of 2023.

Those who would like to attend the meeting, please e-mail masswatertrust@tre.state.ma.us to request meeting information. Information to access the meeting will be available through the duration of the meeting. However, we encourage participants to request the information by 5:00 PM the day before the meeting.

To ensure that the audio is clear to all attendees, unless you are actively participating in the meeting, please mute your audio. If you have technical difficulties joining the meeting, please email masswatertrust@tre.state.ma.us.

Please Note: There will be no physical meeting at the offices of the Massachusetts Clean Water Trust.



Items #2 through #3 (*No Reference Documents*)



Items #4 through #8 *Project Descriptions*

Project Descriptions for November 1, 2023

Board of Trustees Meeting

Asset Management Planning Commitments and Agreements

Chester DWA-23-11

The Project will develop an all-encompassing GIS-based AMP to further advance the 2021 Asset Management Plan to capture institutional knowledge of the system.

Harwich CWA-23-28

The Project will map culverts and catch basins in ArcGIS online and prepare condition assessment field forms for each of these structures., and it will rank the assessed culverts with respect to Probability of Failure (PoF) and Consequence of Failure (CoF) and prepare a capital improvement plan. This Project provides the Town with an understanding of the condition of their culverts and to budget repairs and replacements accordingly.

Haverhill CWA-23-13

Phase 2 of the City's Asset Management Plan (AMP) will expand on the inventory dataset as the City works to capture its water infrastructure facilities and equipment information for operations and maintenance. The goal of the Phase 2 AMP is to continue to improve upon the Phase 1 efforts to update and maintain the drinking water system.

Lowell CWA-23-49

The Project is to ensure the long-term sustainability of the LRWWU's Duck Island WWTF and wastewater collection systems by developing a tool, an Asset Management Plan, that will assist managers in making decisions on when it is most appropriate to repair, replace, or rehabilitate particular assets. By developing a long-term funding strategy, the managers can ensure the utility's ability to deliver the required level of service in perpetuity.

Russell DWA-23-11

The Project will capture and digitize the institutional knowledge and insight of Town employees as part of an asset management plan (AMP) by developing horizontal and vertical inventories. The water and sewer systems will be digitized in a Geographic Information System (GIS), allowing for a more proactive approach to managing and funding the infrastructure.

Lead Service Line Planning Program Commitments and Agreements

Aquarion Water Company - Oxford DWL-23-111

This project includes the evaluation and development of a Lead Service Line (LSL) replacement plan for utility and customer side service line materials connected to AWC's Oxford water distribution system in order to meet the 2021 Lead and Copper Rule Revision (LCRR) issued by the EPA. The project is divided into two phases: Phase 1- Initial Water Service Inventory Development and Phase 2- Lead Service Line Replacement Plan. Tasks for Phase I include a review of current water distribution data, field investigations to verify service line materials, and the finalization of an initial inventory. During Phase 2, Engineers will work closely with AWC to produce a LSL replacement plan. The plan will include a procedure for conducting replacements and a funding strategy. To comply with the LCRR requirements, this work must be complete by October 2024.

Aquarion Water Company - Springdale Farms DWL-23-113

This project includes the evaluation and development of a Lead Service Line (LSL) replacement plan for utility and customer side service line materials connected to AWC's Springdale Farms water distribution system in order to meet the 2021 Lead and Copper Rule Revision (LCRR) issued by the EPA. The project is divided into two phases: Phase 1- Initial Water Service Inventory Development and Phase 2- Lead Service Line Replacement Plan. Tasks for Phase I include a review of current water distribution data, field investigations to verify service line materials, and the finalization of an initial inventory. During Phase 2, Engineers will work closely with AWC to produce a LSL replacement plan. The plan will include a procedure for conducting replacements and a funding strategy.

Holden DWL-23-112

This project includes the evaluation and development of a Lead Service Line (LSL) replacement plan for utility and customer side service line materials connected to the Town of Holden water distribution system in order to meet the 2021 Lead and Copper Rule Revision (LCRR) issued by the EPA. The project is divided into two phases: Phase 1- Initial Water Service Inventory Development and Phase 2- Lead Service Line Replacement Plan. Tasks for Phase I include a review of current water distribution data, field investigations to verify service line materials, and the finalization of an initial inventory. During Phase 2, Engineers will work closely with the Town of Holden to produce a LSL replacement plan. The plan will include a procedure for conducting replacements and a funding strategy.

Wilbraham DWL-23-34

This project includes the evaluation and development of a Lead Service Line (LSL) replacement plan for utility and customer side service line materials connected to the Wilbraham water distribution system in order to meet the 2021 Lead and Copper Rule Revision (LCRR) issued by the EPA. The project is divided into two phases: Phase 1- Initial Water Service Inventory Development and Phase 2- Lead Service Line Replacement Plan. Tasks for Phase I include a review of current water distribution data, field investigations to verify service line materials, and the finalization of an initial inventory. During Phase 2, Engineers will work closely with the Town to produce a LSL replacement plan. The plan will include a procedure for conducting replacements and a funding strategy.

Clean Water Commitments

Falmouth CW-22-59

The Town of Falmouth's project will upgrade the Wastewater Treatment Facility (WWTF) to address nitrogen impacts to the Great Pond and Green Pond Watersheds. The current secondary treatment process is undersized to treat the flows and loads of the next phase of wastewater collection system expansions. The facility upgrade has been evaluated to consider future expansion for the continued phasing of the Town's collection system expansion to address the TMDLs of the nitrogen impaired watersheds.

Lawrence CW-23-09

Sanitary Sewer System Evaluation that consists of CCTV inspection of up to 46,000 linear feet of existing sanitary sewer pipe, up to 170 sewer manhole inspections, smoke testing, dye tracing, flow isolation and similar data collection methods. The Work also includes Illicit Discharge Detection and Elimination in up to 120 drainage catchment areas that consists of up to 10,000 linear feet of CCTV inspection, internal plumbing inspections and dye.

Clean Water Agreements

Falmouth CWP-22-59

The Town of Falmouth's project will upgrade the Wastewater Treatment Facility (WWTF) to address nitrogen impacts to the Great Pond and Green Pond Watersheds. The current secondary treatment process is undersized to treat the flows and loads of the next phase of wastewater collection system expansions. The facility upgrade has been evaluated to consider future expansion for the continued phasing of the Town's collection system expansion to address the TMDLs of the nitrogen impaired watersheds.

Falmouth CWP-22-59-A

The Town of Falmouth's project will upgrade the Wastewater Treatment Facility (WWTF) to address nitrogen impacts to the Great Pond and Green Pond Watersheds. The current secondary treatment process is undersized to treat the flows and loads of the next phase of wastewater collection system expansions. The facility upgrade has been evaluated to consider future expansion for the continued phasing of the Town's collection system expansion to address the TMDLs of the nitrogen impaired watersheds.

Lawrence CW-23-09

Sanitary Sewer System Evaluation that consists of CCTV inspection of up to 46,000 linear feet of existing sanitary sewer pipe, up to 170 sewer manhole inspections, smoke testing, dye tracing, flow isolation and similar data collection methods. The Work also includes Illicit Discharge Detection and Elimination in up to 120 drainage catchment areas that consists of up to 10,000 linear feet of CCTV inspection, internal plumbing inspections and dye.

Nahant CW-22-46

The Town of Nahant seeks to upgrade the wastewater collection system to be more reliable, resilient, energy efficient, and cost-efficient. The sewer system repair and replacement work is required to prevent sanitary sewer overflows, reduce inflow/infiltration to the sewer system, and build a more reliable and resilient wastewater system for the Town. The proposed work includes: Lowlands Pump Station Upgrades, Willow Road Force Main Replacement, Lowlands Pump Station Force Main Causeway Section Replacement, and Gravity Sewer Collection System Repairs.

Drinking Water Agreements**Barnstable Fire District DWP-22-41**

The Barnstable Fire District seeks to construct a water filtration plant to address PFAS concentrations in the drinking water. Wells 2 and 5 are located near the Barnstable Airport and the Barnstable Fire Training Academy. Well 2's highest recorded PFAS6 is 16.2 ppt; Well 5's highest recorded PFAS6 is 43.7 ppt. Should Well 2's pump fail, water from Well 5 would not be able to be pumped into the system due to excessive PFAS concentration. Construction of a GAC filtration plant at Wells 2 and 5 will address these concerns. Pretreatment will include Greensand Plus filters.

MWRA DW-22-37

The Massachusetts Water Resources Authority seeks to rehabilitate three water mains designated as Sections 23, 24 and 47 under contract 6392. The water mains serve the communities of Boston and Watertown. Section 23 and section 24 are 124-year-old cast iron pipes, Section 47 is a 103-year-old cast iron main. The goal of this project is to improve the condition, hydraulic capacity and reliability of the existing water mains, avoid potential service disruption as a result of breaks and leaks, and improve hydraulic and operating deficiencies in the distribution system.