

Capital Program Funding Update

Adding PFAS to the Mix



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Agenda

- LCWD's Capital Program Overview
- May 2021 to Today How has it changed? (PFAS)
- **Evaluation of Options**
- **Revised Capital Program**
- May 8th Vote



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Quantity

Challenged to meet summer demands (1.0-1.4 MGD)



Quality

Station 4 (Glen Drive) iron and manganese













Glen Drive WTP Design (Original)

- **Existing Glen Drive Pump Station**
- Addition of greensand filters to remove iron and manganese





MWRA/Wakefield Meter Vault Design



Capital Program Projects (Original)



Construction

Construction

Interbasin Transfer Act and **MWRA** Application

But What About PFAS? (September 2021)







% indicates contribution from each Station to LCWD supply

But What About PFAS? (Jan/Feb 2022)

- Need Station 2 to meet demands
- Address PFAS through extended interim treatment
- Provides time to evaluate permanent options
 - Station 2 treatment at Station 4 (Glen Drive)
 - Increase Wakefield/MWRA interconnection
 - Other MWRA interconnections
 - Permanent treatment at Station 2



But What About PFAS? (Jan/Feb 2022)

- Add separate PFAS building to Glen Drive WTP design
 - Maintain similar schedule
 - Be prepared for funding opportunities
- If no funding or select alternative PFAS mitigation
 → remove building from design
- Buildings can be combined after securing funding



LCWD Capital Program Funding Successes

- State Revolving Fund (SRF) Program
 - Typically low interest loan for clean water/drinking water projects
 - 2023 Fiscal Year PFAS projects 0% interest loan
 - Glen Drive WTP project qualified
 - Up to \$18.96 million loan at 0% interest
- Water Management Act Grant
 - Interconnection design
 - MWRA admission process
 - \$147,200 grant



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- Earmark in Economic Development Bill
 - **\$100,000** for LCWD PFAS design



PFAS Maximum Contaminant Level (MCL)

- Massachusetts Department of Environmental Protection (MassDEP) drinking water standard
- No Federal PFAS drinking water standard
 - Proposed EPA MCL March 2023
 - 4 ppt for PFOA and PFOS
 - Anticipated Effective December 2026





But What About PFAS?



But What About PFAS?



2022 – New Quality Challenge - PFAS



All Water from LCWD

Improvements to **LCWD** and **Supplemental** Water from MWRA



All Water from MWRA

Long Term PFAS Capital Project Options

Alternative	Brief Description				
1	 No Glen Drive WTP Wakefield MWRA Interconnection at 250 gpm Temp. PFAS treatment at Station 2 				
2	 Glen Drive WTP with iron, manganese and PFAS treatment for Station 2 Wakefield MWRA Interconnection at 250 gpm 				
3	 Glen Drive WTP with iron and manganese treatment for Station 4 only Increase Wakefield MWRA Interconnection to 575 gpm Discontinue use of Station 2 				
4	 Increase Wakefield MWRA Interconnection to 575 gpm LWD MWRA Interconnection for 250 gpm Discontinue use of Station 2 and Station 4 				
5	 Increase Wakefield MWRA Interconnection to 575 gpm LWD MWRA Interconnections for 650 gpm Discontinue use of all LCWD sources (Stations 1, 2, 3 and 4) 				
6	 Direct interconnection to MWRA Discontinue use of all LCWD sources (Stations 1, 2, 3 and 4) 				



LCWD Supply

Combined LCWD/MWRA

Full MWRA

and Station 4

Long Term PFAS Capital Project Options					ombined CWD/MWRA Supply all MWRA Supply	
Option	1	2	3	4	5	6
	 No Glen Drive WTP Wakefield MWRA Inter. @ 250 gpm 	 Glen Drive WTP Fe, Mn, PFAS St. 2 & St. 4 Wakefield MWRA Inter. @ 250 gpm 	 Glen Drive WTP Fe, Mn St. 4 only Wakefield MWRA Inter. @ 575 gpm Retire St. 2 	 Wakefield MWRA Inter. @ 575 gpm LWD MWRA Inter. @ 250 gpm Retire St. 2 & 4 	 Wakefield MWRA Inter. @ 575 gpm LWD MWRA Inter. @ 650 gpm Retire all LCWD sources 	 Retire all LCWD sources Direct connection to MWRA
Quality	Not Achieved		Partially Achieved			Fully Achieved
Timeframe	1-2 years	2 years	2 - 3 years	3 - 5 years	3 - 5 years	3 - 5 years
Capital Investment	\$2 M	\$18 – 20 M	\$18 – 20 M	\$12 – 14 M	\$18 - 20 M	\$25 - \$30 M
Borrowing	Capital Borrowing (5%)	Capital Borrowing (0% SRF Loan)	Capital Borrowing (5%)	Capital Borrowing (5%)	Capital Borrowing (5%)	Capital Borrowing (5%)
Total 30-year Cost	\$140 M	\$210 M	\$290 M	\$300 M	\$380 M	\$330 M
Water Rates	MWRA+20%20%Local Rates80%	MWRA+20%20%Local Rates80%	MWRA+20% 50% Local Rates 50%	MWRA+20%67%Local Rates33%	MWRA+20% 100% Local Rates 0%	MWRA100%Local Rates0%
(% of capacity)						

Long Term PFAS Capital Project Options

Option	1	2	3	4	5	6
	 No Glen Drive WTP Wakefield MWRA Inter. @ 250 gpm 	 Glen Drive WTP Fe, Mn, PFAS St. 2 & St. 4 Wakefield MWRA Inter. @ 250 gpm 	 Glen Drive WTP Fe, Mn St. 4 only Wakefield MWRA Inter. @ 575 gpm Retire St. 2 	 Wakefield MWRA Inter. @ 575 gpm LWD MWRA Inter. @ 250 gpm Retire St. 2 & 4 	 Wakefield MWRA Inter. @ 575 gpm LWD MWRA Inter. @ 650 gpm Retire all LCWD sources 	 Retire all LCWD sources Direct connection to MWRA
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Total 30-year Cost	\$140 M	\$210 M	\$290 M	\$300 M	\$380 M	\$330 M
Water Rates (% of capacity)	MWRA+20% 20% Local Rates 80%	MWRA+20% 20% Local Rates 80%	MWRA+20% 50% Local Rates 50%	MWRA+20% 67% Local Rates 33%	MWRA+20% 100% Local Rates 0%	MWRA 100% Local Rates 0%



Combined LCWD/MWRA Supply

Full MWRA Supply



Selected Alternative

Capital Program Projects (April 2023)



Construction

Construction

Interbasin Transfer Act and **MWRA** Application



Glen Drive WTP 60% Design with Separate Buildings



Glen Drive WTP 30% Design **Combined Buildings**



Glen Drive WTP 60% Design with Separate Buildings



Glen Drive WTP 30% Design Combined Buildings

Glen Drive WTP Combined Buildings





Glen Drive WTP Schedule



June 19, 2023 60% OPCC*

October 31, 2023 **Final Design**

MWRA/Wakefield Meter Vault Design



Meter Vault Project Status

- Project in design 90% design complete
- Develop bid documents for Summer 2023 bid
- Coordination with MassDOT for easement
- Construction Summer 2023





Joining the MWRA

A WATER

What is the process?

LCWD will be taking water from MWRA which withdraws from a different water basin Requires review under the Interbasin Transfer Act (ITA), governed by Water Resources Commission (WRC) for applicability, insignificance and approval

Demonstrate acceptance of admission to MWRA by Board of Commissioners

Obtain approval of the Legislature and Governor



Submit application to the MWRA Advisory Board and Board of Directors community

WRC Process for Interbasin Transfer Act (ITA)

- Determination of Applicability
 - **MEPA**
 - Expanded Environmental Notification Form (EENF)
 - Single Environmental Impact Report (SEIR)
- SEIR as Application to WRC for ITA
- WRC Hearings
- WRC Approval for ITA



60 days	60 days	60 days + 16-31 days + 14-21 days + 60 days + 30 days
MEPA Approval	Jan Feb Mar Apr May Yun	Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
Notice to Proceed Prepare EENF Reviews by LCWD/MWRA Submit EENF to MEPA Publication and Comments Period Scoping Session with MEPA EEOEA Secretary's Certificate Issued		
Single Environmental Impact Report (SEIR) Notice to Proceed Prepare Draft SEIR Informal Reviews by LCWD and State Agencies Submit SEIR to MEPA Publication and Comments Period EEOEA Secretary's Certificate Issued		
Interbasin Transfer Act (IBTA) Approval MWRC Votes to Accept Application		
Public Hearing Process (2) Presentation of MWRC Staff Recommendation Public Hearing MWRC Review and Vote Publication of Decision in Massachusetts Register		
MWRA Approval Submit Documentation to MWRA Staff MWRA Staff Review Staff Makes Recommendation to Advisory Committee Advisory Board Staff and Operations Subcommittee Revie Advisory Board Executive Committee Vote Advisory Board Vote Last Date for Legislature/Governor Approvals	ew	
Staff Prepares Staff Summary MWRA Board of Directors Vote Water Supply Contract Developed Contract Execution and Fee Payment	22 days = mandated	duration public comment/review periods
Assumptions	Notes	Legend

LCWD and MWRA reviews of draft documents will be simultaneous.

- 2. EEOEA and MWRC will not require additional studies during their reviews.
- 3. LCWD meets all water system performance standards in 2022.

4. No wastewater system evaluations are needed.

1. With the submital of an Expanded Environmental Notification Form (EENF) the EIR will be a Single EIR (SEIR).

2. The SEIR constitutes the application for MWRC and MWRA approvals.

3. The SEIR preparation may be shorter or longer depending on the results of the MEPA scoping session.

+ 60 days + 30 days



Comment period - Incompressible timeline

CO Key Milestone

MWRA Admission

- EENF to be submitted end of June 2023
- Review by MEPA and public comments inform the SEIR
- SEIR to begin October 2023



Interbasin Transfer Act and **MWRA** Application

Capital Program Schedule





Special District Meeting – May 8th

- Adding PFAS to the Capital Program mix
- What are you voting on?
 - Addressing PFAS for Station 2 and Station 4, as funded by the SRF
 - Local appropriation required by SRF by June 30, 2023
 - Vote for approval to borrow up to \$17 million for the Glen Drive WTP project

