NOTICE

(PLEASE POST)

Advisory Board Meeting

The next regular meeting of the MWRA Advisory Board will be held remotely via Zoom on May 18, 2023 at 10:00 AM. Instructions for accessing the meeting can be found on the online event page at www.mwraadvisoryboard.com/event. Attendees can join by calling in or by using a computer or mobile device. The proposed agenda for the meeting will be made final at an open meeting of the Executive Committee on Friday, May 12, 2023, at 10:00 AM, which will be conducted remotely. The instructions for accessing the Executive Committee meeting remotely can be found on the online event page at www.mwraadvisoryboard.com/event Please contact Joseph Favaloro at the Advisory Board office no later than May 10, 2023, with any additional items for the final agenda.

Charlestown Navy Yard
100 First Avenue, Building 39 – 4th Floor
Boston, MA 02129

Joseph E. Favaloro
Executive Director

www.mwraadvisoryboard.com

Telephone: (617) 788-2050
Fax: (617) 788-2059
Email: mwra.ab@mwraadvisoryboard.com

Advocacy & Accountability

Representing Over 3 Million People in Massachusetts Communities Since 1985

MWRA ADVISORY BOARD MEETING

Thursday, May 18, 2023

Online Remote Zoom (www.mwraadvisoryboard.com/event)

(pursuant to An Act Relative to Extending Certain COVID-19 Measures Adopted During the State of Emergency suspending certain provisions of the open meeting law)

10:00 AM

PROPOSED AGENDA

A. Roll call attendance

B. Welcome

C. Approval of Advisory Board meeting minutes from April 20, 2023

D. Report of the Executive Director/Incoming Executive Director

E. **Action Item:** Approval of the MWRA Advisory Board's final FY24 operating budget

F. **Presentation – Advisory Board *Comments & Recommendations* on MWRA's proposed FY24 CEB & CIP – James Guiod, Advisory Board Director of Finance**

- **Action Item:** Approval of the Advisory Board's *Comments & Recommendations* and transmittal to the MWRA

G. **Action Item:** Approval of Burlington's application for receiving additional water from the MWRA water system under MWRA operational policy #10 as an "Additional Purchase Community" as noted in *Rider One* approved September 15, 2022

H. **Action Item:** Approval of Dedham/Westwood Water District application for receiving additional water from the MWRA water system under MWRA operational policy #10 as an "Additional Purchase Community" as noted in *Rider One* approved September 15, 2022

I. **Committee Reports**

Executive Committee – Louis M. Taverna

- **Update:** Advisory Board move to Chelsea

Finance Committee – Elena Proakis Ellis

- **Update:**

Operations Committee – John Sanchez

- **Update:** Deer Island NPDES Permit updates

J. **Adjournment**

Charlestown Navy Yard
100 First Avenue, Building 39 – 4th Floor
Boston, MA 02129

Joseph E. Favaloro
Executive Director

www.mwraadvisoryboard.com

Telephone: (617) 788-2050
Fax: (617) 788-2059
Email: mwra.ab@mwraadvisoryboard.com

MWRA ADVISORY BOARD BUDGET - FISCAL YEAR 2024					
	DRAFT				
	Approved FY22	Approved FY23	Draft FY24	Change from FY23 (%)	Change from FY23 ($)
PERSONNEL					
Regular employees	4 full time	4 full time	4 full time		
Part-Time employees					
Total employees	$439,310	$448,641	$406,643	-9.4%	-$41,998
Consultant/Contract Employee (2 interns)	$0	$4,725	$9,450	100.0%	$4,725
Benefits	$2,500	$3,260	$3,455	6.0%	$195
Medicare	$6,370	$6,755	$5,896	-12.7%	-$859
SUBTOTAL	$8,870	$14,740	$18,801	27.6%	$4,061
OFFICE SPACE					
Rent	$74,000	$67,000	$0	-100.0%	-$67,000
Insurance & Workers' Comp.	$2,900	$2,900	$2,900	0.0%	$0
SUBTOTAL	$76,900	$69,900	$2,900	-95.9%	-$67,000
MATERIALS					
Office & PC supplies	$10,000	$10,000	$10,000	0.0%	$0
Postage	$500	$200	$50	-75.0%	-$150
Printing	$1,000	$750	$0	-100.0%	-$750
SUBTOTAL	$11,500	$10,950	$10,050	-8.2%	-$900
FURNITURE & EQUIPMENT					
Furniture & Fixtures			$1,000		
Equipment	$0	$500	$500	0.0%	$0
SUBTOTAL					
OTHER EXPENSES					
Audit & Accounting	$22,700	$19,380	$25,000	29.0%	$5,620
Equipment Maintenance	$0	$0	$0	0.0%	$0
Equipment Lease	$3,000	$1,800	$0	-100.0%	-$1,800
Education/Training/Conferences	$2,500	$2,500	$5,000	100.0%	$2,500
Information Services/Telecom*	$9,948	$10,159	$10,159	0.0%	$0
Public Meetings	$17,000	$17,000	$17,000	0.0%	$0
Publications	$350	$350	$350	0.0%	$0
Advertising/Legal Notices	$300	$2,000	$2,000	0.0%	$0
Members' Reimbursement	$2,600	$2,000	$2,000	0.0%	$0
Miscellaneous/Payroll Expense					
Temp Help	$0	$0	$0	0.0%	$0
Bank Charges	$50	$50	$50	0.0%	$0
SUBTOTAL	$58,448	$55,239	$61,559	-100.0%	$6,320
Previous year surplus					
SUBTOTAL	**$595,028**	**$599,470**	**$499,953**	-16.6%	-$99,517
Interest Income					
MWRA CONTRIBUTIONS					

DEDHAM-WESTWOOD WATER DISTRICT
50 Elm Street • Dedham, MA 02026
(781) 329-7090 • Fax (781) 329-8737 • www.dwwd.org

May 09, 2023

MWRA Advisory Board
100 First Avenue
Building 39 – 4th Floor
Boston, MA 02129

MWRA Board of Directors
Charlestown Navy Yard
100 First Ave.
Building 39
Boston, MA 02129

Dear MWRA Advisory Board and MWRA Board of Directors,

This letter is to formally request that the Dedham-Westwood Water District (DWWD) be able to increase its current withdrawal limit from the Massachusetts Water Resources Authority (MWRA) from 73 million gallons (MG) a year to 565.75 MG a year. The rationale behind this request is described in detail below and DWWD believes that all requests fall within the eligible criteria for a waiver of the MWRA's entrance fee, as summarized in the MWRA's Staff Summary, dated September 14, 2022.

It should also be noted that DWWD would not require any additional permitting in order to increase its current withdrawal limit from the MWRA. The Water Resources Commission has previously reviewed the MWRA Enabling Act (Chapter 372 of the Acts of 1984) and the DWWD Enabling Act (Chapter 193 of the Acts of 1985) and indicated that the Interbasin Transfer Act does not apply to DWWD's applications to obtain water from the MWRA.

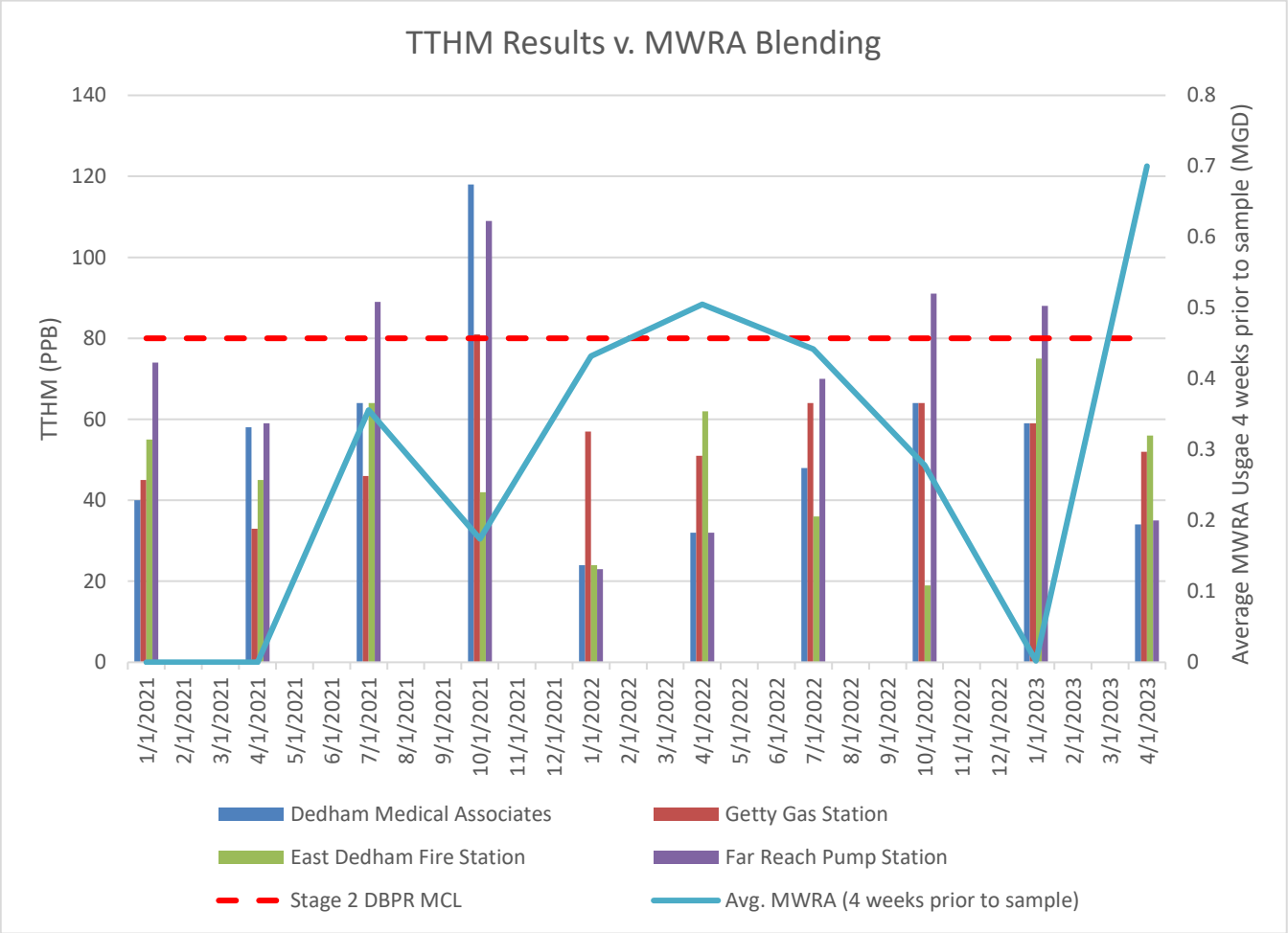
Total Trihalomethane (TTHM) MCL

During the Districts 4th quarter compliance sampling for TTHM's in October of 2021, we experienced an exceedance in the Locational Running Annual Average (LRAA) at one of the four regulatory sampling points, resulting in a violation of the Stage 2 Disinfection Byproducts Rule. Although we only exceeded the LRAA at one sampling point, the TTHM levels at all sampling points were elevated, with 3 in excess of the 80 parts per billion (ppb) level. Please find the 4th quarter sampling compliance sheet for 2021 in Enclosure No. 1.

As part of the Districts actions to remediate these elevated TTHM levels, among other things such as flushing, we began blending with MWRA water in November of 2021. In the Districts January 2022 regulatory samples, we saw a significant reduction and were able to come back into compliance which can be largely attributed to blending. Therefore, in January and July of 2022, the District contacted the MWRA seeking approval for the ability to temporarily purchase additional volumes of water for the remainder of 2022 and into 2023 in order to

maintain compliance with the TTHM MCL, which were both approved by the MWRA. This approval allowed the District to continue blending through all of the 2022 regulatory TTHM samples, which all yielded results compliant with both the Operational Evaluation Level (OEL) and LRAA. Please find the 4th quarter sampling compliance sheet for 2022 in Enclosure No. 2, which shows all samples taken while blending with MWRA water.

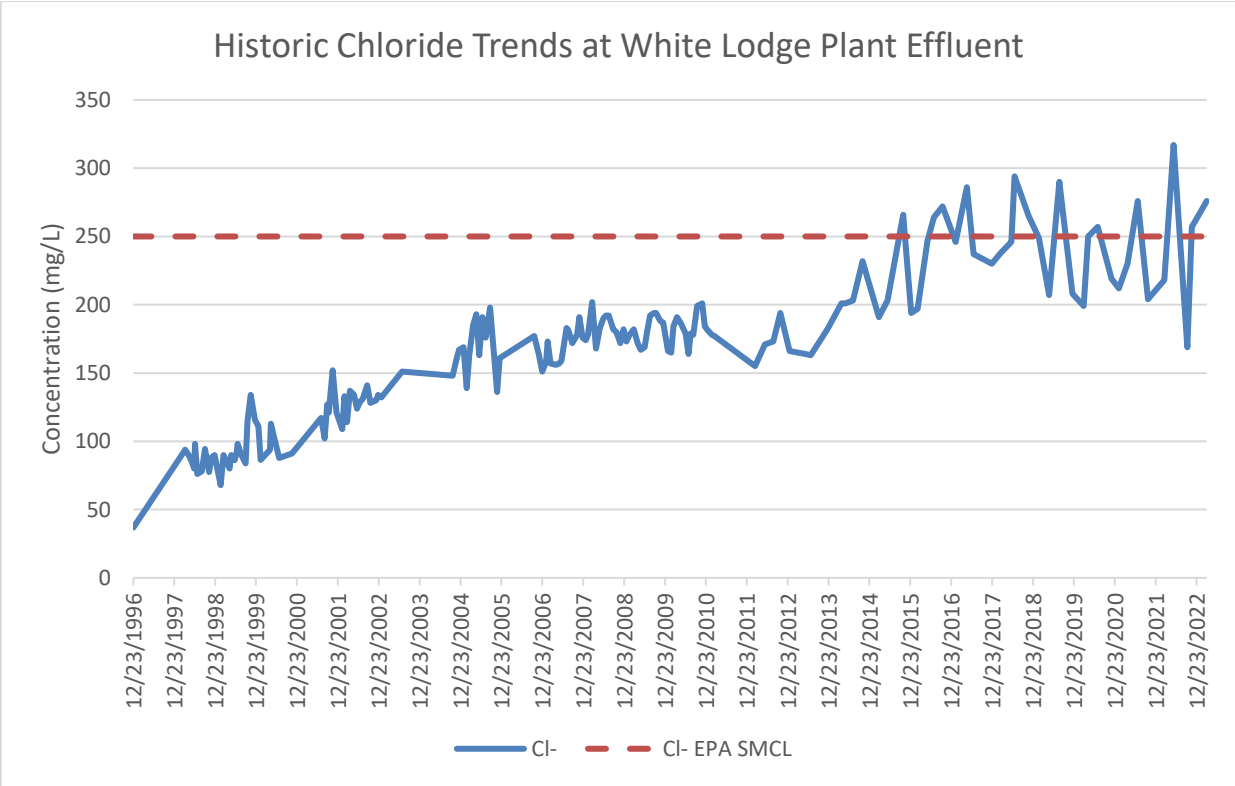
However, in mid-October 2022 the District stopped blending to see if we could keep TTHM levels down through the winter having completed the installation of two automatic flushing stations within the distribution system. Upon completion of the 1st quarter 2023 TTHM sampling, we found that the measures that we had taken did not lead to reduced TTHM levels. The results showed insignificant reductions in three sample location and the fourth sample actual had a significant increase. This was a stark contrast to the drop in TTHM levels we saw between October 2021 to January 2022, when we were blending at a rate of 0.400 million gallons per day (mgd). It should also be noted that we exceeded the OEL for the Far Reach pump station in the January 2023 sample. Given these results, we began blending again on February 6, 2023, and have since seen a positive result in our April 2023 compliance samples with all four samples seeing a reduction of TTHM levels. The chart below depicts the TTHM levels for each sample point and the average amount of MWRA the District was purchasing in the 4 weeks preceding the sample.



Given that DWWD has seen positive results in TTHM reductions by blending our water with the MWRA, we would need at least 0.5 mgd to reliably meet the TTHM standard.

Chloride SMCL

The DWWD's White Lodge wellfield has seen a steady increase in chloride levels since recording began in 1996. The White Lodge wellfield is located along University Avenue in Westwood, in close proximity to the intersection of interstates I-93 and I-95. The increased chloride levels are due to road salt application for winter maintenance operations on these major highways. The chart below shows the historical Chloride levels from 1996 to date.



An analysis was performed by Weston & Sampson Engineers in 2016 and 2022 to determine the most feasible solution to reduce chloride levels within the finished water. Through these analyses, it was concluded that the most economically feasible solution is blending treated MWRA water directly with the White Lodge Treatment Plant effluent water. A blending rate of 24% MWRA water to local water was recommended to reliably reduce chloride levels to a level below the secondary maximum contaminant level (SMCL) of 250 milligrams per liter (mg/L). Included below is a chart prepared by Weston & Sampson, showing different flow volumes and the resulting blended chloride levels. Please find the 2016 report and excerpts from 2022 report relating to Chloride in Enclosure No. 3.

MWRA & White Lodge Blending Ratios - Chloride

WTP Flow (mgd)	MWRA Flow (mgd)	Combined Flow (mgd)	Max WTP Chloride (mg/L)	Average MWRA Chloride (mg/L)	Blended Chloride (mg/L)	Chloride SMCL (mg/L)	% of Flow coming from MWRA
4.00	1.25	5.25	317	30	249	250	24%
2.75	0.85	3.60	317	30	249	250	24%
3.05	0.95	4.00	317	30	249	250	24%
2.10	0.65	2.75	317	30	249	250	24%

Although the maximum capacity of the plant is 4.5 mgd, MassDEP has approved the wellfield at a combined registered and permitted volume of 3.11 mgd. This would result in an average volume of 0.75 mgd of MWRA water for blending (3.11 mgd x 24%). Therefore, we would need 0.75 mgd to reliably meet the Chloride standard.

Stressed Basin

The Districts White Lodge wellfield is within the Neponset River water shed, which according to the "Stressed Basins in Massachusetts" report as approved by the Water Resources Commission in December of 2001, is considered a Medium Stressed basin. This fact limits the availability of the use of our highest producing well (no. 5) during certain times of the year, based on USGS streamflow gauge levels. There is a restriction for the months of March, April, and May if the USGS gauge at Milton Lower Falls (monitoring location 011055566) is to fall below 95.0 cubic feet per second (cfs) and all year round (Jan-Dec) if the USGS gauge at Greenlodge St. (monitoring location 01105554) is to fall below 12.6 cfs.

Historically, the District has only seen streamflow fall below the criteria which require the well to be turned off during the peak summer months during drought like conditions we had in 2016 and 2022. In these years we had to stop using well no. 5 for approximately one month and in 2016 had to make a special request to the MWRA to temporarily increase its withdrawal amount in order to overcome the loss of this source. The District is seeking the ability to increase our water supply agreement in the amount of 0.10 mgd, or 36.5 MG, in order to meet demand conditions during the peak summer months when well no. 5 may need to be offline. The 0.1 mgd was calculated by taking the total capacity of well no. 5 and multiplying it by 1 month (1.15 mgd x 31 days ≈ 36.5 MG). Although this water may not be used on a regular basis, including this request now will reduce the need for future special requests and additional paperwork in the event the well is required to be turned off.

Summary of Current Request

To better understand the total increase that DWWD is requesting, it will first be helpful to share a little background of DWWD's water system and its current connections to the MWRA. DWWD has two major pressure zones within its distribution system, Westwood high service area and Dedham main service area, and each is fed by a different MWRA connection. The Westwood High service area is fed by the MWRA via a booster station located on Route 1 in Westwood and the Dedham Main service area is fed by an underground vault within Dedham. The majority of our TTHM production occurs within the Westwood High service area, which requires the use of the MWRA booster station to blend. Alternatively, the anticipated blending at the White Lodge Treatment plant for Chloride reduction would not utilize the booster station that feeds the Westwood high service area, but rather a different interconnection. In addition, water from the White Lodge treatment plant only partially makes it to the Westwood High service area based on the flow patterns of the effluent water at this plant. This is important to note as it provides some context as to why DWWD is not just asking for the larger amount of the requests, but instead is adding them together in making the request to increase its withdrawal limit.

As summarized above, DWWD is seeking to increase its withdrawal limit from the MWRA in order to reliably meet the water quality standards for TTHM and Chloride as well as meet its peak summer demands at time where it's largest source of water may be limited due to streamflow conditions. The total requested withdrawal limit increase is 492.75 MG, which is comprised of 182.5 MG for TTHM's, 273.75 MG for Chloride's, and 36.5 MG for Stressed Basin. When combined with our current annual withdrawal limit of 73 MG, DWWD is requesting a total revised withdrawal limit of 565.75 MG.

Proposed EPA PFAS MCL

Although the District is meeting the current Massachusetts MCL for the six regulated per- and polyfluoroalkyl substances (PFAS6), it will not be able to meet the proposed U.S. Environmental Protection Agency (EPA) MCL for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) if promulgated at the proposed level of 4 parts per trillion (ppt). The District is currently moving forward with pilot studies at each plant to determine the effectiveness of Ion Exchange and granular activated carbon (GAC) filtration at each location and, based on the results, determine the costs of installation and long term operation and maintenance. There is a probability that this analysis will show that purchasing water from the MWRA may be a more cost effective alternative than the capital investment at DWWD's Bridge Street Treatment Plant, with a maximum production of 1.91 mgd. Although the District has not factored this amount in its current request, we wanted to be sure to inform the MWRA of this possibility and leave the door open for this future request. This analysis should be performed within the next year and if this additional request is made, it will be accompanied by the necessary sampling and cost information at that time.

DWWD would like to thank you in advance for your consideration on this matter and hope that you find the information included in this letter and the enclosed data set sufficient to make an informed decision. If after your review of this information you have any questions, comments, or require additional information, please do not hesitate to contact me.

Sincerely,

Blake D. Lukis,
Executive Director

Cc: Joseph Favaloro, Executive Director, MWRA Advisory Board
Fred Laskey, Executive Director, MWRA
Dave Coppes, Chief Operating Officer, MWRA
Matthew Romero, Deputy Executive Director, MWRA Advisory Board
Rebecca Weidman, Director, Environmental and Regulatory Affairs, MWRA
Robert Lexander, Chair, DWWD Board of Water Commissioners
Steve Locke, Operations Manager, DWWD

Enclosure 1

Total Trihalomethane

2021 - 4th quarter sampling compliance Form

Massachusetts Department of Environmental Protection - Drinking Water Program

Stage 2 Disinfection By-Products Rule (DBPR) Quarterly Compliance Worksheet

PWSID:	PWS Name:	City/Town:
3073000	Dedham Westwood Water District	Dedham-Westwood

(●) COM ( ) NTNC | **Monitoring Frequency:** (●) Quarterly ( ) Annual or less | **Monitoring Type:** (●) Routine ( ) Reduced ( ) Increased

CERTIFICATION: I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

YEAR: 2021 **QUARTER:** ( ) Q1: Jan-Mar ( ) Q2: Apr-Jun ( ) Q3: Jul-Sep (●) Q4: Oct-Dec

Primary Operator Signature: **Date:**

SYSTEMS USING CHLORINATION or CHLORAMINATION - COMPLETE TABLES A, B & C

A. CHLORINE RESIDUAL COMPLIANCE

	Month	Year	# Samples	Monthly Avg (ppm)
Q1	January	2021	53	0.53
	February	2021	53	0.50
	March	2021	54	0.54
Q2	April	2021	53	0.50
	May	2021	53	0.53
	June	2021	53	0.65
Q3	July	2021	53	0.47
	August	2021	53	0.53
	September	2021	53	0.52
Q4	October	2021	53	0.50
	November	2021	53	0.55
	December	2021	53	0.81

Chlorine Running Annual Average (RAA): (Average of 12 Monthly Averages)	**0.55**
Chlorine MRDL (ppm):	**4.0**
Was Chlorine MRDL exceeded? If Yes, then MRDL violation for period.	**NO**

B. TTHM COMPLIANCE

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		*OEL* [1]	*LRAA*
	Date	ppb	Date	ppb	Date	ppb	Date	ppb	*Q4*	
Dedham Medical Associates	1/5/2021	40	4/6/2021	58	7/8/2021	89	10/7/2021	118	**97**	77
Getty Gas Station	1/5/2021	45	4/6/2021	33	7/8/2021	46	10/7/2021	81	60	51
East Dedham Fire Station	1/5/2021	55	4/6/2021	45	7/8/2021	64	10/7/2021	42	48	52
Far Reach Pump Station	1/5/2021	74	4/6/2021	59	7/8/2021	89	10/7/2021	109	**92**	**83**
	MCL = 80 (ppb)				**Was OEL exceeded?[1]**	**YES**			**Was MCL exceeded?:**	**YES**

C. HAA5 COMPLIANCE

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		*OEL* [1]	*LRAA*
	Date	ppb	Date	ppb	Date	ppb	Date	ppb	*Q4*	
Dedham Medical Associates	1/5/2021	31	4/6/2021	39	7/8/2021	47	10/7/2021	26	35	36
Getty Gas Station	1/5/2021	40	4/6/2021	32	7/8/2021	50	10/7/2021	60	51	46
East Dedham Fire Station	1/5/2021	27	4/6/2021	35	7/8/2021	19	10/7/2021	32	30	28
Far Reach Pump Station	1/5/2021	17	4/6/2021	25	7/8/2021	57	10/7/2021	22	32	30
	MCL = 60 (ppb)				**Was OEL exceeded?[1]**	**NO**			**Was MCL exceeded?:**	**NO**

D. IMPORTANT COMPLIANCE NOTES

[1]OELs apply to systems sampling quarterly only.

- ☐ PWS has exceeded the OEL for TTHM and/OR HAA5 but is authorized to limit the scope of the OEL evaluation to reporting only. (Refer to letter regarding seasonal OEL exceedances)
- ☑ PWS has exceeded the OEL for TTHM and/OR HAA5 and must **complete and submit an Operational Evaluation Report** within 90 days of receipt of the analytical results (systems sampling quarterly only).
- ☐ PWS continues to qualify for reduced monitoring based on LRAAs of TTHM and HAA5 (and TOC if applicable)
- ☐ PWS **NO LONGER QUALIFIES** for reduced monitoring based on average concentrations of TTHM, HAA5 and/or TOC. *(Refer to quarterly monitoring criteria on "Instructions" Tab)*
- ☐ PWS has exdeeded the MCL for TTHM or HAA5 during ANNUAL monitoring and therefore will be subject to **INCREASED monitoring** (quarterly dual sample sets at each location) until further notice.

Enclosure 2

Total Trihalomethane

2022 - 4th quarter sampling compliance Form

Massachusetts Department of Environmental Protection - Drinking Water Program

Stage 2 Disinfection By-Products Rule (DBPR) Quarterly Compliance Worksheet

PWSID:	PWS Name:	City/Town:
3073000	Dedham Westwood Water District	Dedham-Westwood

(◉) COM ( ) NTNC

Monitoring Frequency: (◉) Quarterly ( ) Annual or less

Monitoring Type: (◉) Routine ( ) Reduced ( ) Increased

CERTIFICATION: I certify under penalties of law that I am the person authorized to fill out this form and the information contained herein is true, accurate and complete to the best extent of my knowledge.

YEAR: 2022 **QUARTER:** ( ) Q1: Jan-Mar ( ) Q2: Apr-Jun ( ) Q3: Jul-Sep (◉) Q4: Oct-Dec

Primary Operator Signature: **Date:**

SYSTEMS USING CHLORINATION or CHLORAMINATION - COMPLETE TABLES A, B & C

A. CHLORINE RESIDUAL COMPLIANCE

	Month	Year	# Samples	Monthly Avg (ppm)
Q1	January	2022	53	0.97
	February	2022	53	0.69
	March	2022	53	0.72
Q2	April	2022	53	0.59
	May	2022	53	0.61
	June	2022	53	0.72
Q3	July	2022	53	0.73
	August	2022	53	0.76
	September	2022	53	0.66
Q4	October	2022	53	0.76
	November	2022	53	0.62
	December	2022	53	0.63

Chlorine Running Annual Average (RAA): (Average of 12 Monthly Averages)	**0.71**
Chlorine MRDL (ppm):	**4.0**
Was Chlorine MRDL exceeded? If Yes, then MRDL violation for period.	**NO**

[1]Note that you are required to notify MassDEP within 10 days of the end of the quarter of any DBPR MCL or MRDL violation. Tier 2 (30 day) Public Notification must also be conducted for all MCL and MRDL violations.

B. TTHM COMPLIANCE

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		*OEL*[1]	*LRAA*
	Date	ppb	Date	ppb	Date	ppb	Date	ppb	*Q4*	
Dedham Medical	1/6/2022	24	4/5/2022	32	7/1/2022	48	10/6/2022	64	52	42
Getty Gas Station Bridge St.	1/6/2022	57	4/5/2022	51	7/1/2022	64	10/6/2022	64	61	59
East Dedham Fire Station	1/6/2022	24	4/5/2022	62	7/1/2022	36	10/6/2022	19	34	35
Far Reach Pump Station	1/6/2022	23	4/5/2022	32	7/1/2022	70	10/6/2022	91	71	54
	MCL = 80 (ppb)		**Was OEL exceeded?[2]**		**NO**		**Was MCL exceeded?[1]**		**NO**	

C. HAA5 COMPLIANCE

Sample Location	Q1 (Jan - Mar)		Q2 (Apr - Jun)		Q3 (Jul - Sep)		Q4 (Oct - Dec)		*OEL*[1]	*LRAA*
	Date	ppb	Date	ppb	Date	ppb	Date	ppb	*Q4*	
Dedham Medical	1/6/2022	13	4/5/2022	11	7/1/2022	27	10/6/2022	37	28	22
Getty Gas Station Bridge St.	1/6/2022	54	4/5/2022	38	7/1/2022	32	10/6/2022	39	37	41
East Dedham Fire Station	1/6/2022	22	4/5/2022	40	7/1/2022	18	10/6/2022	23	26	26
Far Reach Pump Station	1/6/2022	13	4/5/2022	19	7/1/2022	32	10/6/2022	28	27	23
	MCL = 60 (ppb)		**Was OEL exceeded?[2]**		**NO**		**Was MCL exceeded?[1]**		**NO**	

D. IMPORTANT COMPLIANCE NOTES

[2]OELs apply to systems sampling quarterly only.

- ☐ PWS has exceeded the OEL for TTHM and/OR HAA5 but is authorized to limit the scope of the OEL evaluation to reporting only. (Refer to letter regarding seasonal OEL exceedances)
- ☐ PWS has exceeded the OEL for TTHM and/OR HAA5 and must **complete and submit an Operational Evaluation Report** within 90 days of receipt of the analytical results (systems sampling quarterly only).
- ☐ PWS continues to qualify for reduced monitoring based on LRAAs of TTHM and HAA5 (and TOC if applicable)
- ☐ PWS **NO LONGER QUALIFIES** for reduced monitoring based on average concentrations of TTHM, HAA5 and/or TOC. *(Refer to quarterly monitoring criteria on "Instructions" Tab)*
- ☐ PWS has exdeeded the MCL for TTHM or HAA5 during ANNUAL monitoring and therefore will be subject to **INCREASED monitoring** (quarterly dual sample sets at each location) until further notice.

Enclosure 3

2016 Alternatives for Introducing MWRA Water for Blending with White Lodge Water Treatment Plant Water to Reduce Sodium and Chloride Concentrations in the Water Supplied to Customers Report by Weston & Sampson

and

Excerpts from the 2022 Water Treatment Plant Feasibility Study relating to Chloride prepared by Weston & Sampson.

Alternatives for Introducing MWRA Water for Blending with White Lodge Water Treatment Plant Water to Reduce Sodium and Chloride Concentrations in the Water Supplied to Customers

Background and Goal

Concentrations of sodium and chloride in the White Lodge Wells source water have been increasing consistently year after year since 1996 when extensive recording began. The increase has been consistent and shows no immediate sign of stabilizing or decreasing. White Lodge water treatment plant (WTP) treated water concentrations of sodium are currently approaching 125 mg/l and chloride is exceeding 250 mg/l. Figures 1 shows the historic trend of concentrations since 1996.

The DWWD has determined that is advisable to decrease the concentrations of these two constituents to lower levels in the water delivered to customers. Reducing concentrations can be achieved by treating the water or blending with MWRA water. Achieving various target concentrations of sodium and chloride will have direct impacts on the ability to fully utilize the White Lodge source water, as well as cost impacts. This evaluation will determine the feasibility of various MWRA supply options, improvements necessary to implement them and the estimated costs.

The cost to construct a treatment plant to remove sodium was considered but would be very expensive. Reverse osmosis (RO) is a treatment process that would work effectively. Typically, only a portion of the source water would be treated since the process would remove all constituents, including sodium. If half were treated, the blend would result in about 60mg/l sodium. For future planing, a treatment plant of at least 2 mgd to treat a portion of the available water was considered. The cost of this would exceed $20 million. Energy costs would likely exceed the cost to purchase MWRA water, and disposal of the brine waste to the MWRA sewer system could be an issue.

MWRA Supply Alternatives

The closest source of MWRA water is at the intersection of University Avenue and Canton Street. The DWWD recently completed construction of a 12-inch emergency connection to the MWRA at this location. The pressure of the water from the MWRA at this location is similar to the Westwood High Service (WWHS). It will require pressure reduction prior to blending with WTP finished water which is discharged at the pressure of the Dedham Main Service (DMS).

<u>Blending Location</u>

The MWRA water will need to be blended with the WTP finished water. Several options are available to achieve the blending, as follows:

- Location Option 1 - Blend the MWRA water with the wells raw water, prior to treatment. This option would require treatment of the MWRA water, thereby increasing cost. It would require construction work within the WTP. It would also reduce the amount of water that can be withdrawn from the wells, leading to underutilization of the available resource. There would

also be additional annual cost to pump this water back into the DMS. The cost to buy, treat and then re-pump the MWRA water is very significant.

- Location Option 2 - Blend the MWRA water with the WTP treated water by introducing it into the clearwell, post treatment. This would be inefficient due to the small size of the clearwell and the need to repump the water after pressure reducing it. It would require construction work within the WTP. It would not reduce the amount of water that is withdrawn from the wells, but there would still be additional annual cost to pump this water back into the DMS. The cost to buy and then re-pump the MWRA water is significant.
- Location Option 3 - Blend the MWRA water with the WTP treated water by introducing it into the distribution main outside of the WTP, after the WTP pumps it into the Dedham Main Service system (DMS). This option does not require any additional pumping to blend the MWRA water with the WTP treated water. It is the most efficient, involves the least amount of modification to the water system, does not require any modification of the WTP, and is therefore recommended.

Pipeline Options

The MWRA water will also need to be transmitted to the WTP. Three options are available to achieve the transfer, as follows:

- Pipeline Option 1 - Construct a pipeline from the MWRA connection to the WTP. This length is about 3,500 feet and would require trenching through the newly reconstructed and paved University Avenue and crossing of an active railroad. The cost of this pipeline including repaving of the street is estimated to be approximately $900,000.
- Pipeline Option 2 - Construct a pipeline from the MWRA connection to Dartmouth Street. From this point the existing raw water main for well 2 could be converted for use as the MWRA transmission main. Well 2 discharge could be transferred to the parallel 16-inch raw water main for wells 3 and 4. The length of the necessary pipeline is about 2,400 feet and would also require trenching through the newly reconstructed and paved University Avenue. The cost of this pipeline including repaving of the street is estimated to be approximately $650,000.
- Pipeline Option 3 - Utilize the distribution system serving the University Avenue area to transmit the water to the WTP. This would require some limited construction at the MWRA connection and at the WTP, but would not impact the newly constructed roadways significantly. It would require closing of one valve on the Blue Hill Avenue 12-inch water main. The University Avenue service area would then become a subsystem of the DMS but operating at a slightly higher pressure. This option is recommended as it is least costly and avoids trenching within the newly reconstructed University Avenue. There is no additional cost for this alternative.

Meter & Control Improvements

Other improvements are necessary to accomplish the transfer, including the following:

- Construct a metering chamber at the connection to the MWRA. According to the MWRA, this meter chamber would need to be constructed to their standards at the cost of the DWWD. The concept and potential location is shown on an attached figure. The cost of this is estimated to be approximately $340,000.

- Construct a pressure reducing valve (PRV) chamber. The MWRA has indicated that the PRV cannot be located in the metering chamber. At the point of connection to the treatment plant discharge main. This PRV would reduce pressure to a level slightly above the normal operating pressure of the DMS. The cost of this is estimated to be approximately $160,000.
- Construct a control valve and meter chamber at the point of connection into the 20-inch WTP discharge water main. This control valve would be automated and would function to control the flow of MWRA water to a desired volume, as measured by the flow meter, to achieve the desired blending rate. The concept and potential location is shown on an attached figure. The cost of this is estimated to be approximately $190,000.
- SCADA system additions would be required to coordinate the MWRA blending rate with the WTP pump rate to control the required volume of water to achieve the desired sodium concentration. The cost of this is included in the above costs.

Water Purchase Volumes for Blending

The desired blended sodium/chloride concentration will determine the volume of water purchased. The table below shows the results for several blends. This assumes DWWD water is at 125 mg/l sodium and MWRA water is at 20mg/l sodium. The results for 100 mg/l are shown in horizontal boxes; with the 2.75 mgd WTP average daily flow (in red) the most likely average target.

White Lodge and MWRA Flow Rates to Achieve Sodium Blended Concentrations

WTP Flow (mgd)	MWRA Flow (mgd)	Combined Flow (mgd)	WTP Sodium (mg/l)	MWRA Sodium (mg/l)	Blended Sodium (mg/l)
4.00	6.40	10.40	125	20	60
4.00	4.40	8.40	125	20	70
4.00	3.00	7.00	125	20	80
4.00	2.00	6.00	125	20	90
4.00	1.25	5.25	125	20	100
4.00	0.65	4.65	125	20	110
4.00	0.20	4.20	125	20	120
2.75	4.50	7.25	125	20	60
2.75	3.00	5.75	125	20	70
2.75	2.05	4.80	125	20	80
2.75	1.40	4.15	125	20	90
2.75	0.85	3.60	125	20	100
2.75	0.45	3.20	125	20	110
2.75	0.15	2.90	125	20	120
1.54	2.46	4.00	125	20	60
1.90	2.10	4.00	125	20	70
2.30	1.70	4.00	125	20	80
2.65	1.35	4.00	125	20	90
3.05	0.95	4.00	125	20	100

3.45	0.56	4.00	125	20	110
3.80	0.20	4.00	125	20	120
1.05	1.70	2.75	125	20	60
1.30	1.45	2.75	125	20	70
1.58	1.17	2.75	125	20	80
1.84	0.91	2.75	125	20	90
2.10	0.65	2.75	125	20	100
2.35	0.40	2.75	125	20	110
2.62	0.13	2.75	125	20	120

Hydraulic Limitations

The typical volume that would be expected to achieve a target 100 mg/l sodium concentration would have the WTP operating at an average capacity of 2.75 mgd, which is the average over the course of the past year. This would require an MWRA flow of at least 0.85 mgd. The hydraulics of these volumes does not add any stress to the distribution system and work well within the existing water system limits. At this rate, approximately 310 million gallons of MWRA water would have to be purchased over the course of the year for blending alone.

The hydraulics of the 2.75 mgd and several other flow rates were evaluated. The disadvantage of taking MWRA water near the WTP is that this large volume of water must be transmitted into the water system with a limited number and size of water mains to move it. All of the WTP and MWRA water must leave the vicinity of the WTP through the 16-inch DMS main or the 12-inch WWHS main. The DMS main splits into two 12-inch mains on Blue Hill Avenue that then transmit water under Route 128 and into Dedham. The 12-inch WWHS main is fairly long as it transmits water into the center of Westwood.

The practical maximum that can be discharged into the DMS and WWHS simultaneously is about 4 mgd and 1.5 mgd, respectively, for a total of about 5.5 mgd. At flows greater than this, a pump would be required to push the desired volume of MWRA water into the WTP discharge main. Alternatively, additional pipeline capacity could be constructed to transmit the additional water into Dedham at reasonable pressure.

Water Quality Issues

The MWRA uses chloramines for disinfection whereas the DWWD uses free chlorine. In chlorinated waters and blended waters, it is important that the ratios of chlorine to ammonia are understood so that the formation of trichloramine and dichloramine, which can lead to taste and odor problems, can be avoided. At certain lower pH levels and higher MWRA flow ratios, the blend could result in undesirable odors.

Our preliminary review of the blended water, at about 30% MWRA, with pH typically maintained in the two waters (9.4 for MWRA and 8.0 DWWD); there should be no resulting taste and odor problem. Additional chlorine may be required by DWWD to maintain the desired chlorine residual in the blended water of about 8.0. Further review of this issue is necessary to determine when issues could arise, such as lower blended pH, lower chlorine residual from DWWD and higher temperature water in the summer.

Recommendations

The recommended option involves the following:

- A meter vault/PRV vault at the MWRA connection at University Avenue and Canton Street
- A meter and control valve vault at the WTP
- Utilize the University Avenue service area to transmit MWRA water to the WTP vault for blending

Positive aspects

- Construction in the newly constructed streets is avoided
- The well's utilization and WTP capacity is maximized
- The least amount of construction is required

Negative aspects

- Repumping cost for MWRA water pumped to the WWHS. There will be additional cost incurred to pump the water into the WWHS from this location as compared to the Pump Station on Route 1 near Glacier Drive.
- There may be added cost to purchase additional MWRA water consumed by the University Avenue area
- There may be additional cost to purchase additional MWRA water for blending. With a ratio of 30% MWRA and 70% MWRA, approximately 310 MG would need to be purchased based on a recent years average production of 2.75 mgd at the WTP

Other Issues

- Consider taking all the water that is normally purchased from the MWRA at the new Canton Street connection point, thereby minimizing the total volume of water that is purchased from the MWRA. Currently most of the water purchased is via the connection on Route 1 near Glacier Drive.

Costs

The costs below represent construction values, based upon recent construction projects. The final project cost includes an added 30% for engineering and contingencies.

- MWRA Meter Vault - The MWRA has received bids for several meter vaults recently that would be virtually identical to the new vault. The average cost has been about $340,000.
- PRV & Vault at Meter - We have asked the MWRA if it would be acceptable to include the PRV in the meter vault. They indicated that they should be separate. We estimate the cost to be approximately $160,000.
- Control & Meter Vault at WTP – The estimated cost for this vault, mechanical equipment and control systems is $190,000.

The total project cost is estimated to be $900,000.

2.0 SODIUM AND CHLORIDE TREATMENT ALTERNATIVES AND FEASIBILITY

The following section presents alternatives for NaCl reduction at White Lodge WTP. Weston & Sampson has previously evaluated alternatives for reducing NaCl concentrations at the White Lodge WTP in 2016 and a copy this evaluation is included as Appendix B. The 2016 evaluation concluded that the most economically feasible solution is blending treated MWRA water directly with the White Lodge WTP effluent. The evaluation recommended blending ratios that generated sodium levels less than 100 mg/L and chloride levels less than 200 mg/L.

2.1 Blending with MWRA Water

The closest source of MWRA water from White Lodge is at the intersection of University Avenue and Canton Street. This connection is currently a 12-inch emergency connection to the MWRA. The pressure of the water from the MWRA at this location is similar to the Westwood High Service (WWHS). One alternative for sodium and chloride reduction is to blend the MWRA water with the WTP treated water by introducing it into the distribution main outside of the WTP, after the WTP pumps it into the Dedham Main Service system (DMS). MWRA water will require pressure reduction prior to blending with WTP finished water which is discharged at the pressure of the Dedham Main Service (DMS). This option requires permitting with the MWRA. This report and analysis assume that the MWRA will approve additional purchasing of water to facilitate the required blending ratios.

Option #1

Blending is feasible by utilizing the existing 12-inch Well #2 raw water transmission main along University Avenue and converting it to transmit finished MWRA water to blend at the WTP. Raw water from Well #2 will be tied into the existing 16-inch raw water main that currently transports raw water from Well #3 and Well #4 to the WTP. The 16-inch main will instead transport raw well water from Wells #2, #3, and #4 to the WTP. A schematic of this alternative is presented in Figure 2-1 below. In this scenario, MWRA water will be blended outside the WTP and will not be retreated. Blending at the White Lodge WTP would require limited construction at the MWRA connection, at the WTP, and University Avenue roadways. Infrastructure improvements include:

- Construction of approximately 1,500 LF of new 12-inch ductile iron pipe to connect to the existing 12-inch Well #2 raw water transmission main to the MWRA connection. This existing 12-inch raw water transmission main will be extended to the MWRA connection and converted to transport finished MWRA water to the WTP.
- Closing of one valve on the Blue Hill Avenue 12-inch water main
- Installation of control valves, metering chambers, and pressure reducing valve

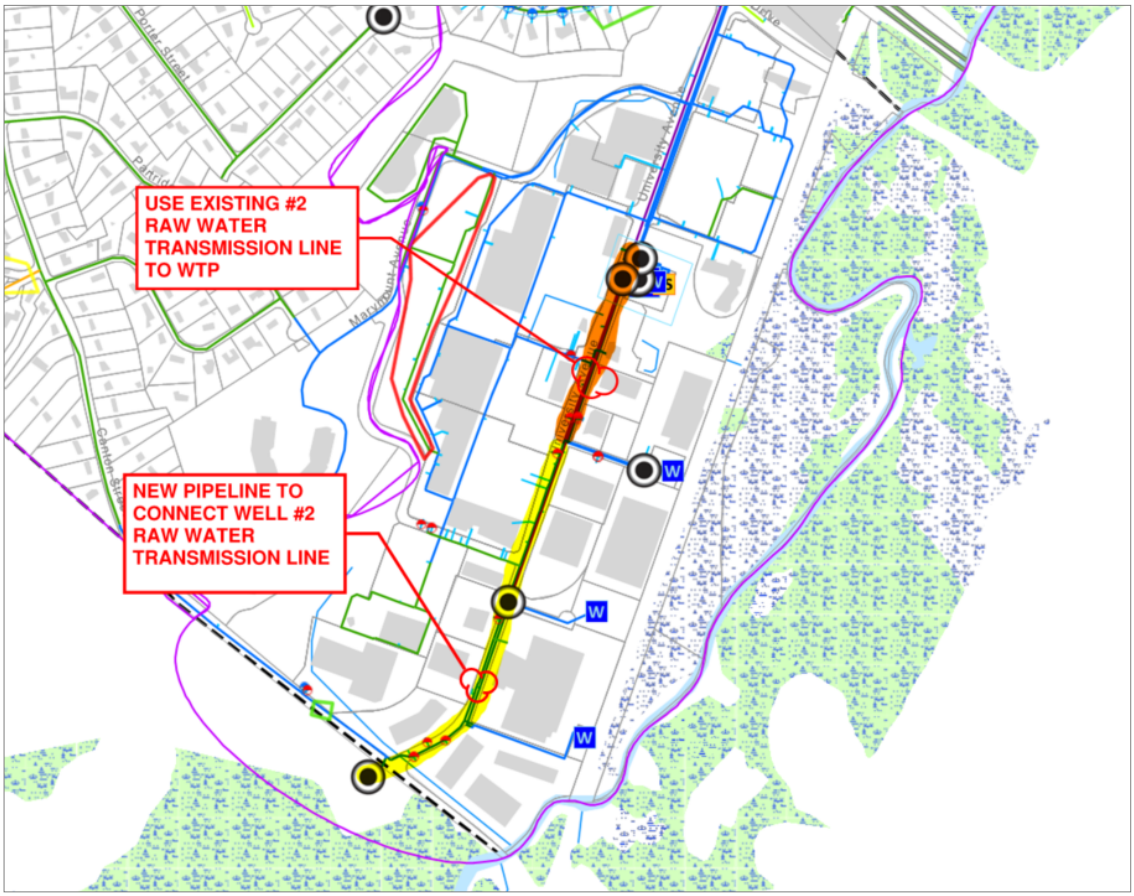


Figure 2-1: White Lodge Blending Pipeline

Option # 2

Utilize the distribution system serving the University Avenue area to transmit the water to the WTP. This would require some limited construction at the MWRA connection and at the WTP, but would not impact the newly constructed roadways significantly. It would require closing of one valve on the Blue Hill Avenue 12-inch water main. The University Avenue service area would then become a subsystem of the DMS but operating at a slightly higher pressure.

The desired final sodium and chloride concentrations will determine the volume of water needed to be purchased from the MWRA. Table 2-1 shows the volume of water needed from the MWRA based on various typical daily flowrates from the White Lodge WTP. It is assumed that the White Lodge WTP effluent contains 125 mg/L sodium and MWRA water contains 20 mg/L sodium.

Table 2-1: MWRA Blending Volumes

WTP Flow (mgd)	MWRA Flow (mgd)	Combined Flow (mgd)	WTP Sodium (mg/l)	MWRA Sodium (mg/l)	Blended Sodium (mg/l)
4.00	1.25	5.25	125	20	100
2.75	**0.85**	**3.60**	**125**	**20**	**100**
3.05	0.95	4.00	125	20	100

Table 2-1 suggests that about 30% of the blended water leaving the White Lodge WTP needs to be from the MWRA to achieve sodium concentrations below 100 mg/L.

The treated water from MWRA contains chloramines for residual disinfectant, while the White Lodge WTP effluent contains free chlorine as a residual disinfectant. Direct blending of these two disinfectants is not encouraged as excess free chlorine in the presence of monochloramine will lead to destruction of the monochloramines and the total chlorine residual. This reaction is referred to as break point chlorination and is displayed in Figure 2-2. Water from MWRA is operated in the ideal zone for chloramines, while water from DWWD is operated past the break point so that all chlorine is available as free chlorine. Increasing the monochloramine concentration in the water leaving the White Lodge WTP may reduce the free chlorine residual and require an increase in chlorine dose leaving the plant to ensure adequate residuals are maintained at far ends of the distribution system.

The District should actively monitor chlorine residual throughout the distribution system following implementation of finished water blending. If chlorine residual is reduced throughout the system, it is recommended the District change their residual disinfectant to chloramines at both White Lodge WTP and Bridge Street WTP. Section 4.0 details the required capital improvements to facilitate chloramination at each WTP.

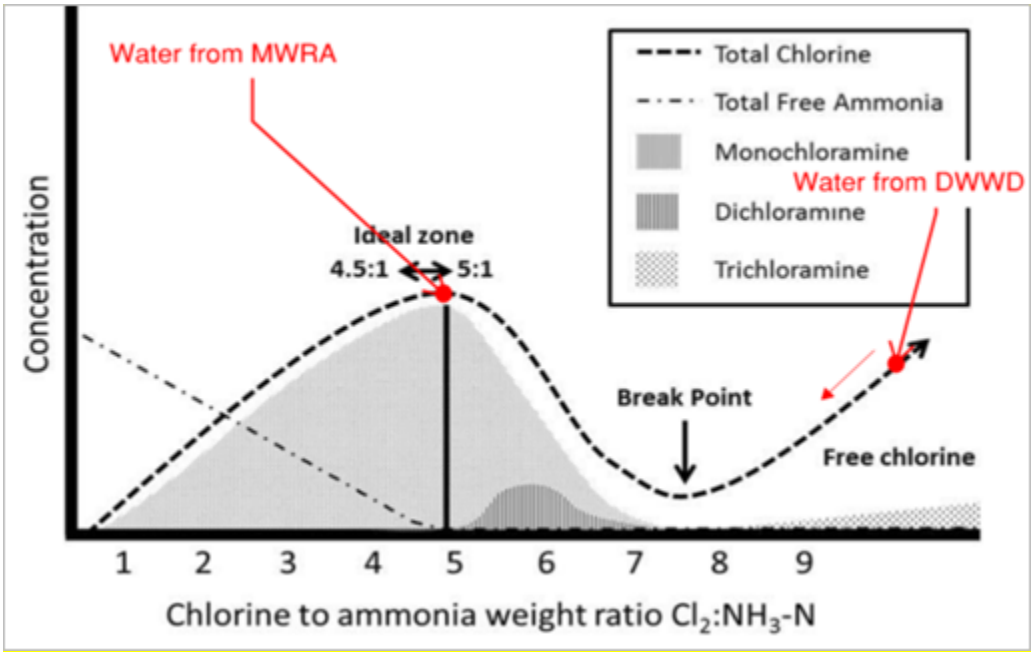


Figure 2-2: Break Point Chlorination Curve

Estimated costs for blending water with the MWRA are presented in Table 2-2. The annual costs assumes an average 0.85 MGD of water is purchased from MWRA for blending purposes. The costs also assume purchasing water from the MWRA will be $4,387.28 per million gallons of water.

Table 2-2: MWRA Blending Estimated Costs		
	Description	Estimated Cost
White Lodge WTP	Design	$200,000
	Construction (Option #1)	$2,170,000
	Construction (Option #2)	$500,000 - $800,000
	Total Capital Cost	$2,370,000
	Total Annual Costs	$1,362,000

2.2 Reverse Osmosis

Reverse Osmosis (RO) is a treatment technology that has shown to be effective in the removal of NaCl (typically from sea or brackish water sources), however, the expense of the process, both capital and operational, are very large. In addition, concentrated PFAS and salt levels in the reject water would require the District to manage this waste. Installation of a RO treatment system is not recommended at this time due to these considerations.

Advisory Board Meeting

Thursday, April 20, 2023
10:00 am

Online Remote Meeting via Zoom

MWRA ADVISORY BOARD, WSCAC, AND WAC JOINT MEETING
THURSDAY, APRIL 20, 2023
ONLINE REMOTE MEETING VIA ZOOM

Meeting Summary

A. Welcome

Advisory Board Chairman, Lou Taverna, opened the meeting at 10:00 AM and welcomed all attendees. He noted the virtual meeting would be recorded.

An opening roll call vote was had and voted as follows:

COMMUNITY	VOTE	APPOINTEE/ORGANIZATION	VOTE
ARLINGTON	Yes	*Quabbin and Ware Watershed*	Yes
ASHLAND		*Wachusett Watershed*	
BEDFORD	Yes	*Connecticut River Basin*	
BELMONT		MAPC	Yes
BOSTON	Yes		
BRAINTREE			
BROOKLINE	Yes		
BURLINGTON	Yes		
CAMBRIDGE	Yes		
CANTON			
CHELSEA	Yes		
CHICOPEE			
CLINTON			
DEDHAM	Yes		
EVERETT			
FRAMINGHAM	Yes		
HINGHAM			
HOLBROOK	Yes		
LEOMINSTER			
LEXINGTON	Yes		
LYNN			
LYNNFIELD	Yes		
MALDEN			
MARBLEHEAD	Yes		
MARLBOROUGH	Yes		
MEDFORD	Yes		
MELROSE			
MILTON			
NAHANT			
NATICK			
NEEDHAM			
NEWTON	Yes		
NORTHBOROUGH			
NORWOOD	Yes		
PEABODY			
QUINCY			
RANDOLPH			
READING			
REVERE	Yes		
SAUGUS			
SOMERVILLE			
SOUTH HADLEY			
SOUTHBOROUGH	Yes		
STONEHAM	Yes		
STOUGHTON	Yes		
SWAMPSCOTT	Yes		

WAKEFIELD	
WALPOLE	Yes
WALTHAM	
WATERTOWN	
WELLESLEY	Yes
WESTON	Yes
WESTWOOD	Yes
WEYMOUTH	
WILBRAHAM	
WILMINGTON	Yes
WINCHESTER	
WINTHROP	
WOBURN	
WORCESTER	Yes

B. **Presentation of Difference Maker Awards**

Executive Director, Joe Favaloro, presented the next series of Difference Maker awards to former MWRA Executive Director Paul Levy, former MWRA Executive Director Doug MacDonald, former MWRA Interim Executive Director Paul Shapiro, current MWRA Executive Director Fred Laskey, all MWRA staff past and present.

C. **Action Item: Approval of Advisory Board meeting minutes from March 16, 2023**

David Manugian moved for the approval of the Advisory Board Meeting Minutes from March 16, 2022. John DeAmicis seconded the motion and it was added to the omnibus roll call vote for the end of the meeting.

D. **Report of the Executive Director and Deputy Executive Director**

Deputy Executive Director, Matthew Romero, gave updates on the Deer Island NPDES permitting process and developments on the exploration of system expansion. The new study on expansion in MetroWest is expected in January. Executive Director, Joseph Favaloro, gave a legislative update, focusing of introduced CSO and watershed legislation.

E. **Preview of Advisory Board comments and recommendations on MWRA's proposed FY24 CEB & CIP – James Guiod, Advisory Board Director of Finance**

Director of Finance, James Guiod, reviewed the proposed FY24 Capital Improvement Program and Current Expense Budget. Mr. Guiod noted that the Advisory Board platform of "2.4 by '24" is achievable. He highlighted area of interest in the FY24 budget review process. These included Debt Service Assistance, Pension, and an adjustment to the Personnel Vacancy Rate.

Committee Reports

Executive Committee – Lou Taverna

- **Action Item:** Nomination and election of Louis M. Taverna as a representative to the MWRA Board of Directors for remainder of term expiring June 30, 2023
    - Michael Rademacher made a motion for the nomination and election of Louis M. Taverna as a representative to the MWRA Board of Directors for remainder of term

expiring June 30, 2023. The motion was seconded by Maurice Handel. A roll on the motion was voted as follows:

COMMUNITY	VOTE	APPOINTEE/ORGANIZATION	VOTE
ARLINGTON	Yes	*Quabbin and Ware Watershed*	Yes
ASHLAND		*Wachusett Watershed*	
BEDFORD	Yes	*Connecticut River Basin*	
BELMONT		MAPC	Yes
BOSTON	Yes		
BRAINTREE			
BROOKLINE	Yes		
BURLINGTON	Yes		
CAMBRIDGE	Yes		
CANTON			
CHELSEA	Yes		
CHICOPEE			
CLINTON			
DEDHAM	Yes		
EVERETT			
FRAMINGHAM	Yes		
HINGHAM			
HOLBROOK	Yes		
LEOMINSTER			
LEXINGTON	Yes		
LYNN			
LYNNFIELD	Yes		
MALDEN			
MARBLEHEAD	Yes		
MARLBOROUGH	Yes		
MEDFORD	Yes		
MELROSE			
MILTON			
NAHANT			
NATICK			
NEEDHAM			
NEWTON	Yes		
NORTHBOROUGH			
NORWOOD	Yes		
PEABODY			
QUINCY			
RANDOLPH			
READING			
REVERE	Yes		
SAUGUS			
SOMERVILLE			
SOUTH HADLEY			
SOUTHBOROUGH	Yes		
STONEHAM	Yes		
STOUGHTON	Yes		
SWAMPSCOTT	Yes		
WAKEFIELD			
WALPOLE	Yes		
WALTHAM			
WATERTOWN			
WELLESLEY	Yes		
WESTON	Yes		
WESTWOOD	Yes		
WEYMOUTH			
WILBRAHAM			
WILMINGTON	Yes		
WINCHESTER			
WINTHROP			
WOBURN			
WORCESTER	Yes		

- **Action Item:** Nomination and election of Louis M. Taverna as a representative to the MWRA Board of Directors for a three-year term from July 1, 2023 to June 30, 2026
    - Michael Rademacher made a motion for the nomination and election of Louis M. Taverna as a representative to the MWRA Board of Directors for remainder of term expiring June 30, 2023. The motion was seconded by Maurice Handel. A roll on the motion was voted as follows:

COMMUNITY	VOTE	APPOINTEE/ORGANIZATION	VOTE
ARLINGTON	Yes	*Quabbin and Ware Watershed*	Yes
ASHLAND		*Wachusett Watershed*	
BEDFORD	Yes	*Connecticut River Basin*	
BELMONT		MAPC	Yes
BOSTON	Yes		
BRAINTREE			
BROOKLINE	Yes		
BURLINGTON	Yes		
CAMBRIDGE	Yes		
CANTON			
CHELSEA	Yes		
CHICOPEE			
CLINTON			
DEDHAM	Yes		
EVERETT			
FRAMINGHAM	Yes		
HINGHAM			
HOLBROOK	Yes		
LEOMINSTER			
LEXINGTON	Yes		
LYNN			
LYNNFIELD	Yes		
MALDEN			
MARBLEHEAD	Yes		
MARLBOROUGH	Yes		
MEDFORD	Yes		
MELROSE			
MILTON			
NAHANT			
NATICK			
NEEDHAM			
NEWTON	Yes		
NORTHBOROUGH			
NORWOOD	Yes		
PEABODY			
QUINCY			
RANDOLPH			
READING			
REVERE	Yes		
SAUGUS			
SOMERVILLE			
SOUTH HADLEY			
SOUTHBOROUGH	Yes		
STONEHAM	Yes		
STOUGHTON	Yes		
SWAMPSCOTT	Yes		
WAKEFIELD			
WALPOLE	Yes		
WALTHAM			
WATERTOWN			
WELLESLEY	Yes		
WESTON	Yes		
WESTWOOD	Yes		
WEYMOUTH			
WILBRAHAM			

WILMINGTON	Yes
WINCHESTER	
WINTHROP	
WOBURN	
WORCESTER	Yes

F. **ACTION ITEM: Omnibus Motion/Adjournment**

A motion was made by Michael Rademacher for:

- *Approval of meeting minutes from March 16, 2023*
- *Meeting Adjournment*

The motion was seconded by Jay Fink.

A rollcall of all voting Advisory Board communities and organizations was held weighted by community share of the MWRA system (organizations having a share 0.5% each). The rollcall results were as follows:

COMMUNITY	VOTE	APPOINTEE/ORGANIZATION	VOTE
ARLINGTON	Yes	*Quabbin and Ware Watershed*	Yes
ASHLAND		*Wachusett Watershed*	
BEDFORD	Yes	*Connecticut River Basin*	
BELMONT		MAPC	Yes
BOSTON	Yes		
BRAINTREE			
BROOKLINE	Yes		
BURLINGTON	Yes		
CAMBRIDGE	Yes		
CANTON			
CHELSEA	Yes		
CHICOPEE			
CLINTON			
DEDHAM	Yes		
EVERETT			
FRAMINGHAM	Yes		
HINGHAM			
HOLBROOK	Yes		
LEOMINSTER			
LEXINGTON	Yes		
LYNN			
LYNNFIELD	Yes		
MALDEN			
MARBLEHEAD	Yes		
MARLBOROUGH	Yes		
MEDFORD	Yes		
MELROSE			
MILTON			
NAHANT			
NATICK			
NEEDHAM			
NEWTON	Yes		
NORTHBOROUGH			
NORWOOD	Yes		
PEABODY			
QUINCY			
RANDOLPH			
READING			
REVERE	Yes		
SAUGUS			
SOMERVILLE			
SOUTH HADLEY			
SOUTHBOROUGH	Yes		

STONEHAM	Yes
STOUGHTON	Yes
SWAMPSCOTT	Yes
WAKEFIELD	
WALPOLE	Yes
WALTHAM	
WATERTOWN	
WELLESLEY	Yes
WESTON	Yes
WESTWOOD	Yes
WEYMOUTH	
WILBRAHAM	
WILMINGTON	Yes
WINCHESTER	
WINTHROP	
WOBURN	
WORCESTER	Yes

Respectfully submitted,

Michael Rademacher, Secretary

These minutes reflect the discussion of the meeting. The Advisory Board maintains audio recordings of Advisory Board meetings that are available upon request.