

WATER AND SEWER COMMITTEE MEETING MINUTES

TUESDAY, DECEMBER 19, 2017

In attendance: Art Flavin – Treasurer, John Scenna – Director of Public Works, Elena Proakis Ellis – City Engineer, Scott Forbes – BOA Representative, Donna Cardillo – Enterprise Fund Manager, Lisa Patterson – Water and Sewer Administrator, Amy Heidebrecht - Clerk, Gerry Mroz.

The meeting was opened at 3:00 PM.

1. FY18 COMMITTEE MEMBERS

John Scenna provides an update on Order 2018-23 which was passed by the Board of Alderman in October. The Committee will now include two citizens of Melrose and we are required to hold at least one meeting a year after 7:00 PM. Order 2018-23 now reads, "There is hereby created a Water Rate Review Committee, to consist of the Director of Public Works, City Engineer, the Auditor, Treasurer-Collector and a member of the Board of Aldermen appointed by the President of the Board of Aldermen, and two citizens of Melrose appointed by the President of the Board of Aldermen. The Committee shall meet at least annually to review the water rate charges established pursuant to this section, the costs of operating and maintaining the water system and any capital improvements to the system. The Committee shall hold at least one meeting per year after 7:00p.m." John further explains that the current President of the Board of Alderman has not selected the two citizens yet, and that the new President of the Board of Alderman of 2018 will select the two new resident members.

2. PAST MEETING MINUTES

John Scenna presented draft meeting minutes from Tuesday, June 13th which had been emailed to the Committee members in advance of the meeting. Art Flavin made a motion to accept the set of minutes. Elena Proakis Ellis seconded. All approved the set of minutes.

3. PUBLIC PARTICIPATION

Elena Proakis Ellis made a motion to open public participation and Scott Forbes seconded. All approved.

Jerry Mroz from 62 Mt. Vernon Street asked if we could postpone public participation until after the agenda items were discussed.

John Scenna made a motion to close public participation. Scott Forbes seconded. All were in favor.

4. UPDATE ON CAPITAL PROJECTS: WATER SYSTEM AND I/I SEWERS PROGRAMS

Water Main Replacement Update:

Elena Proakis Ellis explains that the water main replacement program was bid out at approximately \$850,000 and we are about 75% to 80% done with the project. We are continuing to work through the winter. We have replaced water mains on Altamont Avenue, Perkins Street from Warwick Road to the City limit, Day Street and a portion of Warwick Road. In addition, the contractor also helped out with some service replacements on Spear Street.

Infiltration & Inflow (I/I) Project Update:

Elena Proakis Ellis provided an update on the 1.2 million contract with Rapid Flow. They are lining about 33,000 linear feet of sewers and then they go back and test them. We have pre-lining inspection videos, flow metering and night time flow isolation data. They will go back in the spring once they have finished all the lining and they redo that testing to compare the pre and post conditions in terms of I/I removal. She further explains that we will not have results of the flow testing until the spring.

Flushing Program Update:

John Scenna provides a review of the water main flushing program. The City's flushing program began in mid-September and concluded at the beginning of November. This was a good exercise because we had some changes in personnel, so it gave the new water crew the opportunity to work on the system. We found some areas where the system improved and some where the system reduced in volume which was expected. We also do leak detection every year instead of every other year, which will help determine what lines need to be replaced. We expect a report soon from our consultant and we will go over all of this with our engineers and water crew.

5. UPDATE ON IMPLEMENTATION OF MONTHLY BILLING PROGRAM

Donna Cardillo explains how we approached offering monthly billing to the residents. The residents receive their quarterly bill, which has an insert in it regarding monthly billing. They can mail in the insert, drop it off to us in person, or email us to sign up. We have to change their service codes in MUNIS to monthly billing codes. Then 30 days from their last quarterly bill, they will receive their monthly bill. For now, during this transition the City is only offering monthly billing to one section per billing cycle so we can manage the process internally. She reports that only between 5% and 10% seem to be signing up for monthly billing. For example, in section B we have 129 accounts that signed up for monthly billing out of approximately 1350 total accounts in that section. Section C was sent out at the beginning of the month and we have 51 accounts that have signed up for monthly billing so far, which is roughly 3.6%. She expects the responses to be a little slower given that it is the holidays. She goes on to say that she thinks that we will eventually get 10% of the City, which could be around 820 bills. We also have an online payment system called City Hall Systems, where you can see a PDF for your bill and pay bills online, as well as see the history of your bills. Donna says that we read in three sections: two sections for the quarterly and one section for the monthly, one week we do the quarterly and the next week we do the monthly readings. Lisa Patterson adds that when residents call we need to look up both their quarterly and monthly bills to get an accurate history. She continues to explain that we are notifying 15 to 30 accounts per section that they have a leak because we can see the history with these new meters.

6. MUNICIPAL ACCOUNTS

Lisa Patterson states that in January of 2018 we are going to start monthly reads on municipal accounts. Those accounts are all of our schools, parks, concession stands, the library, etc. We will be able to have a better history of the accounts and be able to address any issues that may arise during the process. We can do our internal processing to detect leaks, find broken meters and change them out to radio meters. Alderman Forbes asks if this is information that the City will be sharing with the public. John Scenna says that we will be sharing what we find with the Committee on a quarterly basis. Donna Cardillo says that this is a launching point for gathering and sharing this information.

7. UPDATE ON DISCOUNT PROGRAMS

Donna Cardillo says that we advertised the senior discounts more the past couple years and brings up the Senior Fair as an example of how the City is getting the word out to the senior citizens. Donna explains that we audit the accounts and remove anyone who is way over the 6250 cubic feet of consumption and that we were a little more flexible last year because of the drought. In FY17 we had 712 seniors who were receiving the 20% discount on water and sewer. For FY18 we have 570 seniors who are receiving the 20% on water and sewer. The number of residents receiving the discount has gone down, but the amount of money spent six months into FY18 is roughly the same. Last year the condominium water and sewer discount program was new and we had 71 seniors who received the discount. This year we have 82 seniors who are receiving the condominium discount, which totals \$11,972. These are senior citizens who live in a condominium, with a master meter, and use under the 6250 cubic feet but do not have their own water bill. They receive a credit on their January real estate tax bill instead of on their water bill. We have also advertised the senior citizen trash discount, which is an income based discount. We had changed the threshold for the qualifications for the 50% or 100% discount. We also continue to accept applications for our 2nd meter program, and we had 65 new 2nd meters this year.

8. FY17 BALANCES AND CURRENT RESERVE ACCOUNTS BALANCES

John Scenna has some notes from the City CFO, Patrick Dello Russo. We currently have \$611,924.80 in reserves in the water enterprise fund. We also have \$412,429 in free cash in the water enterprise fund. That is a combination of surplus funds from FY16 and FY17. There was an Order before the Board to transfer all of our surplus 2016 funds at the end of last year into reserves, but \$123,500 was just put in free cash. The \$412,429 includes the \$123,500. John continues to explain that as part of our rate analysis, we put a placeholder to collect reserves into the calculation. We are not raising a lot more than we need. Elena Proakis Ellis asks if we have a gap to get to that 10%, or are we at the 10% already so we did not put anything into reserves for the FY18 rates. John explains that we brought the reserves contribution to zero for FY18 on both water and sewer because we were projecting this. He says that for sewer our current balance in reserves is \$860,370.70. Our free cash balance is \$379,450. In FY16 there was \$16,427 of surplus funds that was not put into the reserve in June and the balance was surplus funds from FY17. Elena asks why the Alderman made that decision. Alderman Forbes says that he believes it was because of the 10% thresholds; we were in year three out of the five year period and once we hit the 10% we cut it off. John Scenna says that if there are no big surprises operationally by the time we get closer to the end of our fiscal year, we will send that allocation to the Board to see what their wishes are.

9. CY 2017 CONSUMPTION REVIEW

John Scenna reports that the City is billing almost 10% less for water and 5.5% less for sewer than the prior fiscal year. He says that these numbers are through November and that this is because we are using less. Everyone is using less according to the MWRA chart (see attached); they are down 9.3%. Our water consumption is down 9.6% and our system share is down 2.7% through October. We were consistently lower than the last two years through October and we believe that any increase seen is due to the flushing program. John passes out a chart (see attached) that shows a reduction in our flow share and says that we will see where that takes us over the next couple months in terms of the projected FY19 MWRA assessment. On the sewer side in terms of possible projections, the MWRA is using a three year average and they are projecting a 0.3% increase at this time.

10. MWRA ADVISORY BOARD INFORMATION

Elena Proakis Ellis provides highlights about what the MWRA Advisory Board has been discussing. The Advisory Board is starting to talk about the next five year capital plan. The Board approves a spending cap, their requested cap is 1.2 billion. She explains that they have been in that range before, but the last five years was below a billion for capital spending. The next period will be from FY24 to FY29 and there is going to be a large increase because of the water redundancy project. There are parts of the metropolitan Boston area that do not have any redundancy. If something were to compromise one of those aqueducts there would be whole sections of the Boston area without water. Now that the MWRA is done addressing all the big picture needs like Deer Island and the Carroll Treatment Plant, the water redundancy will be the next big project. On the sewer end, they are going to replace all the meters in the next three years. In terms of rates, the Advisory Board has been pushing to see rate increases stabilized at under 4% per year. Elena does not expect there to be a rate increase higher than 3.9% anytime in the near future. Even with the redundancy project coming up, there is a lot of debt dropping off like the Deer Island and Carroll Treatment Plant projects in the next five to ten years. She further explains that part of the 1.2 billion will go towards the infrastructure at Deer Island because a lot of the equipment is getting close to 30 years old. Another update is that they just completed a rate survey that has an interactive online system that compares all the communities in the same quantities.

11. UPCOMING SCHEDULE OF MEETINGS AND TOPICS

John Scenna proposes three meeting dates: January 30th at 3:00 PM, February 27th at 3:00 PM and March 27th at 7:00 PM.

12. PUBLIC PARTICIPATION

Elena Proakis Ellis moves to reopen public participation, Alderman Forbes seconds. All were in favor.

Gerry Mroz from 62 Mt. Vernon Street says that we had high consumption last fiscal year because it was such a dry summer. He says that residents are going to complain at the Alderman meeting that the rates are going up, so he asks that the City put the money towards to water and sewer to help avoid an increase. He does not want to wait for a disaster to happen to apply the money to it, he wants the City to plan ahead and take care of it now. He continues to explain that he has a spreadsheet with ideas that he can present to the Aldermen. He asks if we have flow results for November. John Scenna replies that we do not have those results yet. Gerry states that we should take the positive steps so when we have the flooding rain it does not cost us. He asks if most of the water meters have been replaced now that we are enforcing fines. Art Flavin replies that this is a comment portion of the meeting and not a back and forth questioning opportunity. Gerry suggests that the City should put out some sort of public announcement together regarding inflow. He says that the residents of Melrose need to be educated and he asks for our help doing that. He adds that he would be happy to put something together for the City if we will use it.

Elena Proakis Ellis made a motion to close public participation. Alderman Forbes seconded. All were in favor.

Alderman Forbes moves to close the meeting. Elena Proakis Ellis seconded. All were in favor.

The meeting was adjourned at 3:55 PM.

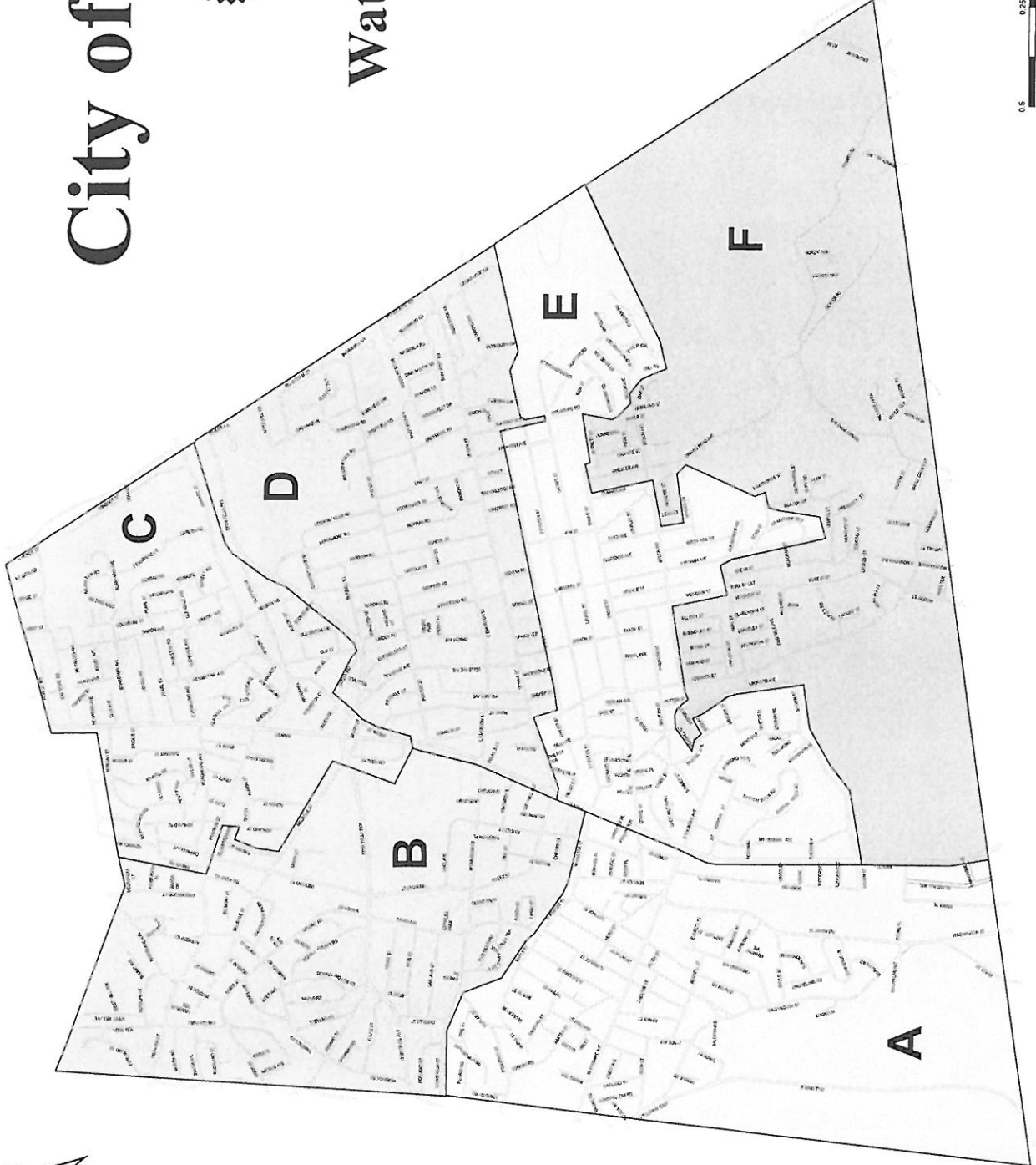
City of Melrose



Water Routes Map

When Monthly Billing Will be Available For Water Routes

A	1/6/2018
B	11/8/2017
C	12/6/2017
D	4/6/2018
E	2/6/2018
F	3/6/2018



Massachusetts Water Resources Authority MWRA Water Supplied (MGD)

Reporting Period: October 2017

ALL DATA SUBJECT TO CHANGE OR ADJUSTMENT PENDING ADDITIONAL MWRA AND COMMUNITY REVIEW

	Monthly (MGD)			YTD (MGD)			YTD		System Share		Prior Year-End Totals	
	Oct		Flow Change	YTD		Flow Change	Flow Share ¹		% Change in YTD Flow Share	2016		
	2017	2016		2017	2016		2017	2016		Ave. Flow mgd	Flow Share ¹	
Metro-System Customers												
Arlington	3,729	3,806	-2.0%	3,659	4,118	-11.1%	2.1%	2.2%	-4.3%	3,981	2.1%	
Belmont	2,085	2,057	1.4%	2,016	2,323	-13.2%	1.1%	1.2%	-5.5%	2,217	1.2%	
Boston (BWSC)	65,204	65,236	-0.0%	63,746	66,429	-4.0%	36.0%	34.8%	3.3%	65,524	35.4%	
Brookline	5,212	5,095	2.3%	5,038	5,404	-6.8%	2.8%	2.8%	0.4%	5,192	2.8%	
Canton (P)	1,263	1,973	-36.0%	1,405	1,994	-29.5%	0.8%	1.0%	-24.1%	1,936	1.0%	
Chelsea	3,266	3,197	2.2%	3,381	3,297	2.5%	1.9%	1.7%	10.4%	3,263	1.8%	
Dedham-Westwood W.D. (P)	0,033	0,086	-61.2%	0,157	0,264	-40.4%	0.09%	0.14%	-35.8%	0,226	0.1%	
Everett	3,914	4,028	-2.8%	3,804	3,966	-4.1%	2.1%	2.1%	3.3%	3,953	2.1%	
Framingham	6,135	5,822	5.4%	5,808	6,296	-7.7%	3.3%	3.3%	-0.7%	6,104	3.3%	
Leominster (P)	0,000	0,000	0.0%	0,000	0,000	0.0%	0.0%	0.0%	0.0%	0,000	0.0%	
Lexington ²	5,315	4,963	7.1%	5,127	5,885	-12.9%	2.9%	3.1%	-6.2%	5,549	3.0%	
Lynn (LWSC) (P)	0,239	0,385	-37.9%	0,226	0,253	-10.5%	0.13%	0.13%	-3.6%	0,249	0.13%	
Lynnfield W.D.	0,565	0,469	20.6%	0,561	0,611	-8.1%	0.32%	0.32%	-1.0%	0,571	0.31%	
Malden	5,082	4,990	1.9%	4,935	5,240	-5.8%	2.8%	2.7%	1.4%	5,158	2.8%	
Marblehead	1,847	1,721	7.3%	1,830	1,998	-8.4%	1.0%	1.0%	-1.3%	1,884	1.0%	
Marlborough (P)	4,284	3,993	7.3%	4,114	3,783	8.8%	2.3%	2.0%	17.1%	3,739	2.0%	
Medford	4,566	4,689	-2.6%	4,493	4,945	-9.1%	2.5%	2.6%	-2.2%	4,869	2.6%	
Melrose	2,076	1,914	8.5%	2,040	2,258	-9.6%	1.2%	1.2%	-2.7%	2,177	1.2%	
Milton	2,342	2,344	-0.1%	2,512	2,757	-8.9%	1.4%	1.4%	-1.9%	2,666	1.4%	
Nahant	0,320	0,371	-13.7%	0,361	0,427	-15.4%	0.20%	0.22%	-8.9%	0,410	0.22%	
Needham (P)	0,968	0,460	110.4%	0,710	1,000	-29.0%	0.4%	0.5%	-23.5%	0,846	0.5%	
Newton	8,527	8,835	-3.5%	8,616	10,285	-16.2%	4.9%	5.4%	-9.8%	9,833	5.3%	
Northborough (P)	0,915	0,887	3.1%	0,890	0,970	-8.2%	0.5%	0.5%	-1.2%	0,946	0.5%	
Norwood	2,925	2,708	8.0%	2,891	2,901	-0.4%	1.6%	1.5%	7.3%	2,825	1.5%	
Peabody (P)	3,091	1,503	105.6%	2,860	1,507	89.8%	1.6%	0.8%	104.4%	1,479	0.8%	
Quincy	8,136	8,914	-8.7%	8,451	9,511	-11.1%	4.8%	5.0%	-4.3%	9,305	5.0%	
Reading	1,526	1,461	4.4%	1,633	1,749	-6.6%	0.9%	0.9%	0.5%	1,687	0.9%	
Revere	3,562	3,657	-2.6%	3,619	3,794	-4.6%	2.0%	2.0%	2.7%	3,735	2.0%	
Saugus	2,664	2,723	-2.2%	2,823	3,097	-8.8%	1.6%	1.6%	-1.8%	3,016	1.6%	
Somerville	5,619	5,818	-3.4%	5,613	6,169	-9.0%	3.2%	3.2%	-2.0%	6,048	3.3%	
Southborough	1,021	0,891	14.6%	0,963	1,163	-17.3%	0.5%	0.6%	-10.9%	1,069	0.6%	
Stoneham	2,124	2,006	5.9%	2,214	2,407	-8.0%	1.2%	1.3%	-1.0%	2,309	1.2%	
Stoughton (P)	0,081	0,075	8.3%	0,109	0,205	-46.8%	0.1%	0.1%	-42.7%	0,194	0.1%	
Swampscott	1,418	1,356	4.6%	1,439	1,505	-4.3%	0.8%	0.8%	3.0%	1,444	0.8%	
Wakefield (P)	1,711	1,687	1.4%	1,514	1,680	-9.9%	0.9%	0.9%	-3.0%	1,655	0.894%	
Waltham	6,715	6,147	9.2%	6,656	7,212	-7.7%	3.8%	3.8%	-0.6%	6,894	3.7%	
Watertown	2,734	2,530	8.1%	2,607	2,638	-1.2%	1.5%	1.4%	6.4%	2,584	1.4%	
Wellesley (P)	2,052	0,954	115.1%	1,224	1,594	-23.2%	0.7%	0.8%	-17.3%	1,329	0.7%	
Weston	2,090	1,839	13.6%	1,855	2,376	-21.9%	1.0%	1.2%	-15.9%	2,150	1.2%	
Wilmington (P)	0,375	0,699	-46.3%	0,392	0,697	-43.5%	0.22%	0.37%	39.4%	0,592	0.32%	
Winchester (P)	1,474	1,257	17.3%	1,405	1,757	-20.1%	0.8%	0.9%	-13.9%	1,618	0.9%	
Winthrop	1,238	1,189	4.1%	1,174	1,254	-6.4%	0.7%	0.7%	0.8%	1,232	0.7%	
Woburn (P)	2,339	2,667	-12.3%	2,280	3,061	-25.5%	1.3%	1.6%	-19.8%	2,773	1.5%	
Subtotal Metro-System	180,781	177,399	1.9%	177,154	190,779	-7.1%	100%	100%		185,233	100%	
Chicopee Valley Aqueduct												
Chicopee	5,271	4,839	8.9%	5,109	5,552	-8.0%	70.1%	68.7%	2.0%	5,339	69.3%	
South Hadley FD #1	1,006	0,923	9.0%	1,055	1,194	-11.6%	14.5%	14.8%	-2.1%	1,132	14.7%	
Wilbraham	1,092	1,004	8.9%	1,123	1,329	-15.5%	15.4%	16.5%	-6.4%	1,238	16.1%	
Subtotal CVA System	7,369	6,765	8.9%	7,287	8,076	-9.8%	100%	100%		7,709	100%	
Other Revenue Supply												
Cambridge (P)	0,000	5,122	-100.0%	0,000	2,012	-100.0%				2,320		
Clinton ³	1,466	1,324	10.8%	1,442	1,582	-8.9%				1,509		
Worcester (P)	0,000	10,730	-100.0%	0,000	1,965	-100.0%				2,315		
Other Revenue Customers ⁴	1,363	1,487	-8.4%	1,348	1,421	-5.2%				1,427		
Subtotal Other Revenue Supply ⁵	2,829	18,664	-84.8%	2,790	6,980	-60.0%				7,571		
Total Water Supplied												
Fully Supplied Metro Communities	161,957	160,775	0.7%	159,868	172,014	-7.1%				167,650		
CVA Communities	7,369	6,765	8.9%	7,287	8,076	-9.8%				7,709		
Partially Supplied Communities	18,824	32,476	-42.0%	17,287	22,741	-24.0%				22,218		
Other Revenue Customers	2,829	2,811	0.6%	2,790	3,003	-7.1%				2,936		
Total Water Supplied ⁶	190,979	202,827	-5.8%	187,232	205,834	-9.0%				200,513		

1) System share for each rate revenue community is the community's share of total MWRA water use for all rate revenue communities. System share for each Chicopee Valley Aqueduct (CVA) community is each CVA community's share of total MWRA water supplied to the CVA system. Water assessments for revenue communities are calculated by allocating the total annual water rate revenue requirement based on each community's share of flow. Water assessments for CVA communities are calculated by allocating the annual CVA rate revenue requirement based on each CVA community's share of CVA flow.

2) Lexington supplies Bedford with partial MWRA water service.

3) The Town of Clinton receives up to 800 million gallons of water per year free of charge and is charged a flat wholesale rate per million gallons for water in excess of 800 million gallons per year.

4) Other Revenue Customers: D.C.R. (Parks & Pools), Stone Zoo, Deer Island WWTP and Department of Youth Services.

5) Other Revenue Customers are charged a flat wholesale rate per million gallons of water supplied.

6) This report includes only water supplied for which revenue is collected in accordance with existing user agreements. It does not include water utilized for system maintenance.

(P) Community is partially supplied by MWRA.

Question's regarding water supplied can be directed to David Liston @ (617) 305-5853 or Leo Norton @ (617) 788-2256.

MWRA Sewer Customer	AVERAGE SEWER FLOWS			MAXIMUM MONTH SEWER FLOWS		
	CY15 to CY17 Average 12-Month Projection mgd	CY14 to CY16 Average 12-Month Actual % Share	Changes Flow Percent	CY15 to CY17 Average 12-Month Actual mgd	CY14 to CY16 Average 12-Month Actual mgd	Changes Flow Percent
Arlington	4.30	1.50%	2.80%	7.39	1.75%	10.0%
Andover	1.22	0.43%	5.1%	1.66	0.39%	3.1%
Belmont	2.43	0.85%	0.4%	3.81	0.90%	5.9%
Boston (BWSO)	84.04	29.30%	-0.5%	108.91	1.12%	3.4%
Braintree	6.60	2.30%	0.1%	10.35	25.85%	9.6%
Brookline	7.50	2.61%	0.2%	11.22	2.66%	8.5%
Burlington	3.19	1.11%	2.4%	12.32	3.02%	3.4%
Cambridge	17.08	5.95%	0.6%	4.87	1.16%	7.0%
Canton	2.70	0.94%	0.5%	20.44	4.85%	5.9%
Chelsea	4.57	1.59%	-0.2%	4.09	0.97%	3.8%
Dorham	3.25	1.13%	-0.3%	3.80	0.96%	7.3%
Everett	4.86	1.69%	-0.8%	5.68	1.35%	1.3%
Framingham	7.09	2.47%	3.5%	6.47	1.47%	4.0%
Hingham S.D.	1.24	0.43%	-0.7%	2.14	0.51%	2.9%
Hoboken	0.84	0.29%	-0.8%	9.86	2.34%	3.0%
Lexington	4.48	1.56%	0.6%	11.68	2.77%	3.4%
Malden	8.40	2.93%	-0.9%	11.68	2.77%	3.4%
Mattapan	7.15	2.49%	-0.9%	11.68	2.77%	3.4%
Milford	2.81	1.0%	-1.1%	6.85	1.63%	1.7%
Milton	4.05	1.41%	0.2%	5.65	1.34%	1.3%
Natick	2.77	0.97%	-0.2%	4.03	0.96%	1.3%
Needham	3.21	1.12%	2.1%	25.42	6.03%	23.7%
Norfolk	14.45	5.04%	1.4%	8.61	2.04%	8.1%
Norwood	5.05	1.76%	1.3%	5.39	1.37%	6.0%
Randolph	12.48	4.35%	-1.4%	18.23	4.37%	17.5%
Reading	3.18	1.11%	0.5%	5.37	1.27%	4.4%
Revere	2.65	0.92%	1.4%	8.33	1.98%	8.7%
Roslindale	10.07	3.51%	-0.2%	14.05	3.34%	12.9%
Somerville	2.60	0.91%	0.4%	4.37	1.04%	1.1%
Stoughton	2.77	0.96%	1.2%	4.69	1.11%	1.6%
Stoughton	3.84	1.34%	1.4%	2.76	0.65%	6.8%
Walden	8.40	2.93%	0.5%	12.13	2.88%	11.6%
Waltham	2.98	1.04%	1.5%	4.81	1.14%	4.4%
Wellesley	3.16	1.10%	0.7%	5.20	1.23%	4.3%
Westwood	1.60	0.56%	0.6%	2.60	0.62%	8.4%
Weymouth	7.59	2.65%	9.9%	11.34	2.87%	8.4%
Winthrop	1.33	0.46%	4.6%	1.68	0.40%	8.4%
Woburn	2.08	0.72%	1.9%	3.75	0.89%	10.0%
Woburn	1.96	0.68%	4.6%	2.56	0.61%	15.3%
Woburn	6.34	2.21%	-2.7%	9.20	2.18%	4.6%
TOTL	286.85	100.00%	0.1%	421.26	100.00%	6.7%

MWRA Sewer Customer	BASE SEWER ASSESSMENT ^{2,3}			PROJECTED FY19		
	Flow Assessment (based on CY17 Flows)	Population Assessment	Total Projected FY19 Base Assessment	Flow Assessment (based on CY17 Flows)	Population Assessment	Total Projected FY19 Base Assessment
Arlington	\$3,704,232	\$4,714,015	\$8,418,247	\$3,704,232	\$4,714,015	\$8,418,247
Andover	978,420	1,695,413	2,673,833	978,420	1,695,413	2,673,833
Belmont	2,053,806	1,496,741	3,550,547	2,053,806	1,496,741	3,550,547
Boston (BWSO)	2,241,402	2,691,829	4,933,232	2,241,402	2,691,829	4,933,232
Braintree	66,741,410	69,457,492	136,198,902	66,741,410	69,457,492	136,198,902
Brookline	5,666,451	3,931,641	9,598,092	5,666,451	3,931,641	9,598,092
Burlington	6,367,432	6,320,792	12,688,224	6,367,432	6,320,792	12,688,224
Cambridge	2,633,474	2,688,934	5,322,408	2,633,474	2,688,934	5,322,408
Canton	13,241,160	11,489,406	24,730,566	13,241,160	11,489,406	24,730,566
Chelsea	2,217,130	1,987,617	4,204,747	2,217,130	1,987,617	4,204,747
Dorham	3,593,497	3,758,787	7,352,284	3,593,497	3,758,787	7,352,284
Everett	2,824,814	2,613,735	5,438,549	2,824,814	2,613,735	5,438,549
Framingham	3,880,317	4,639,117	8,519,434	3,880,317	4,639,117	8,519,434
Hingham S.D.	5,724,289	7,822,316	13,546,605	5,724,289	7,822,316	13,546,605
Hoboken	1,072,260	756,421	1,828,681	1,072,260	756,421	1,828,681
Lexington	684,459	1,107,414	1,791,873	684,459	1,107,414	1,791,873
Malden	7,862,213	6,467,969	14,330,182	7,862,213	6,467,969	14,330,182
Mattapan	6,028,018	2,963,105	8,991,123	6,028,018	2,963,105	8,991,123
Milford	3,445,098	2,883,149	6,328,247	3,445,098	2,883,149	6,328,247
Milton	2,579,086	3,548,021	6,127,107	2,579,086	3,548,021	6,127,107
Natick	12,545,246	9,326,154	21,871,400	12,545,246	9,326,154	21,871,400
Needham	4,373,051	3,061,555	7,434,606	4,373,051	3,061,555	7,434,606
Norfolk	2,725,964	3,962,893	6,688,857	2,725,964	3,962,893	6,688,857
Norwood	10,411,335	9,961,555	20,372,890	10,411,335	9,961,555	20,372,890
Randolph	8,145,251	8,420,388	16,565,639	8,145,251	8,420,388	16,565,639
Reading	2,272,910	2,677,863	4,950,773	2,272,910	2,677,863	4,950,773
Revere	4,944,044	5,675,057	10,619,102	4,944,044	5,675,057	10,619,102
Roslindale	8,145,251	8,420,388	16,565,639	8,145,251	8,420,388	16,565,639
Somerville	2,222,638	2,563,121	4,785,759	2,222,638	2,563,121	4,785,759
Stoughton	3,343,408	2,780,252	6,123,660	3,343,408	2,780,252	6,123,660
Stoughton	1,532,917	2,820,100	4,353,017	1,532,917	2,820,100	4,353,017
Walden	3,343,408	2,780,252	6,123,660	3,343,408	2,780,252	6,123,660
Waltham	6,688,556	6,608,104	13,296,660	6,688,556	6,608,104	13,296,660
Wellesley	2,622,985	3,533,854	6,156,839	2,622,985	3,533,854	6,156,839
Westwood	2,572,878	3,042,209	5,615,087	2,572,878	3,042,209	5,615,087
Weymouth	1,354,224	1,532,740	2,886,964	1,354,224	1,532,740	2,886,964
Winthrop	6,420,398	5,832,240	12,252,638	6,420,398	5,832,240	12,252,638
Woburn	1,357,506	1,475,771	2,833,277	1,357,506	1,475,771	2,833,277
Woburn	1,819,193	1,780,081	3,600,274	1,819,193	1,780,081	3,600,274
Woburn	1,556,121	1,918,100	3,474,222	1,556,121	1,918,100	3,474,222
TOTL	\$236,103,638	\$238,534,805	\$474,638,443	\$236,103,638	\$238,534,805	\$474,638,443

MWRA Sewer Customer	FY18 BASE SEWER ASSESSMENT ²			POTENTIAL IMPACT OF CY15-17 FLOWS ON FY19 BASE SEWER ASSESSMENT		
	Flow Assessment (based on CY14-CY16 Sewer Flows)	Population Assessment	Total Base Assessment	Flow Assessment Impact	Population Assessment Impact	Total Projected FY19 Base Assessment Impact
Arlington	\$3,621,970	\$4,714,015	\$8,335,985	\$82,262	0	\$82,262
Andover	946,353	1,695,413	2,641,766	32,066	0	32,066
Belmont	2,048,735	1,496,741	3,545,476	-14,929	0	-14,929
Boston (BWSO)	2,229,262	2,691,829	4,921,091	11,776	0	11,776
Braintree	66,471,278	69,457,492	135,928,770	270,132	0	270,132
Brookline	5,632,911	3,931,641	9,564,552	33,504	0	33,504
Burlington	6,667,793	6,320,792	12,988,585	-300,360	0	-300,360
Cambridge	2,595,633	2,688,934	5,284,567	43,042	0	43,042
Chelsea	13,214,438	11,489,406	24,703,844	26,702	0	26,702
Dorham	2,221,627	1,987,617	4,209,244	-4,493	0	-4,493
Everett	3,758,787	3,758,787	7,517,574	-165,290	0	-165,290
Framingham	2,866,623	2,613,735	5,480,358	-18,839	0	-18,839
Hingham S.D.	3,737,073	4,639,117	8,376,190	143,244	0	143,244
Hoboken	5,815,143	7,822,316	13,637,459	-93,854	0	-93,854
Lexington	1,089,055	756,421	1,845,476	-16,785	0	-16,785
Malden	6,968,749	1,107,414	8,076,163	-12,290	0	-12,290
Mattapan	3,933,550	6,467,969	10,401,519	-42,450	0	-42,450
Milford	6,007,996	2,963,105	8,971,101	20,022	0	20,022
Milton	3,423,267	2,963,105	6,386,372	21,831	0	21,831
Natick	2,563,336	3,548,021	6,111,357	13,749	0	13,749
Needham	2,797,684	3,061,555	5,859,239	-103,131	0	-103,131
Norfolk	3,274,334	3,548,021	6,822,355	55,269	0	55,269
Norwood	12,426,207	9,326,154	21,752,361	119,039	0	119,039
Randolph	4,346,441	3,061,555	7,407,996	26,610	0	26,610
Reading	10,605,283	9,961,555	20,566,838	-193,948	0	-193,948
Revere	9,961,555	9,961,555	19,923,110	-33,898	0	-33,898
Roslindale	2,287,038	2,563,121	4,850,159	-131,812	0	-131,812
Somerville	8,081,968	8,420,388	16,502,356	63,283	0	63,283
Stoughton	2,467,029	2,563,121	5,030,150	-86,053	0	-86,053
Stoughton	3,285,914	2,780,252	6,066,166	57,494	0	57,494
Walden	1,538,712	2,820,100	4,358,812	-28,964	0	-28,964
Waltham	6,608,104	6,608,104	13,216,208	34,073	0	34,073
Wellesley	2,585,911	3,533,854	6,119,765	-5,795	0	-5,795
Westwood	2,572,878	3,042,209	5,615,087	15,295	0	15,295
Weymouth	1,354,224	1,532,740	2,886,964	110,336	0	110,336
Winthrop	6,199,442	5,832,240	12,031,682	220,956	0	220,956
Woburn	1,357,506	1,475,771	2,833,277	29,016	0	29,016
Woburn	1,780,081	1,780,081	3,560,162	39,112	0	39,112
Woburn	1,476,074	1,918,100	3,394,174	80,047	0	80,047
TOTL	\$236,103,638	\$238,534,805	\$474,638,443	-\$131,611	0	-\$131,611

¹ MWRA will utilize a 3-year average of CY15-CY16-CY17 wastewater flows to calculate the Base-related components of MWRA's FY19 wholesale sewer assessments. Flow data is preliminary and subject to change pending additional MWRA and community review.

² Does not include prior year assessment adjustments.

³ Estimated FY19 sewer assessments do not include changes to census and sewer population or high strength user contributions, and do not include any changes from the FY18 to the FY19 sewer utility budget.

Massachusetts Water Resources Authority

Water Supplied: City of Melrose

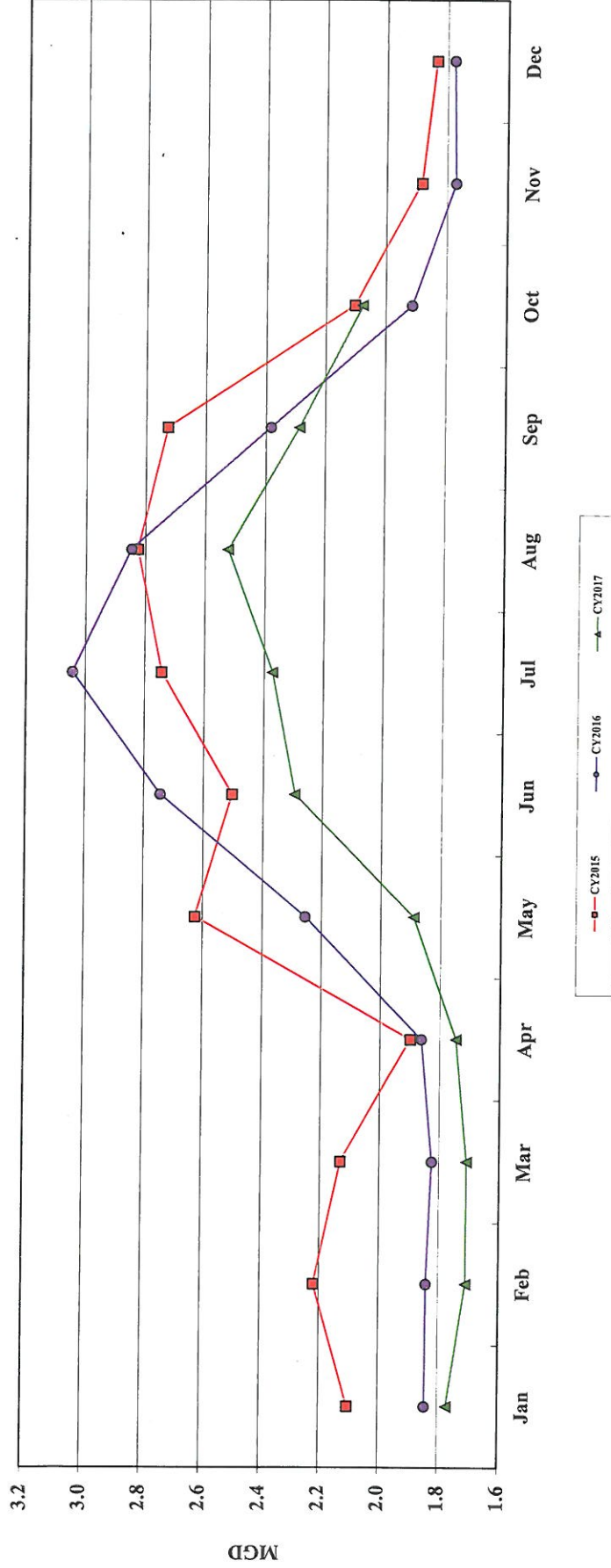
Share of Metro System Water Use		
Year to Date (YTD)		Annual
2017	2016	2016
1.15%	1.18%	1.18%

YTD CHANGES (CY17 vs. CY16)		
Water Supplied		Melrose System Share
Metro System	Melrose	
-7.4%	-9.6%	-2.7%

MGD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Average	Annual Average
CY2015	2.104	2.220	2.131	1.898	2.626	2.504	2.742	2.825	2.727	2.103	1.883	1.835	2.301	2.301
CY2016	1.844	1.842	1.825	1.862	2.255	2.744	3.044	2.848	2.383	1.914	1.771	1.776	2.258	2.177
CY2017	1.772	1.709	1.708	1.747	1.890	2.293	2.372	2.524	2.287	2.076	0.000	0.000	2.040	2.040

MG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Total	Annual Total
CY2015	65.216	62.146	66.063	56.944	81.399	75.122	85.014	87.560	81.799	65.188	56.491	56.900	839.841	839.841
CY2016	57.165	53.414	56.571	55.861	69.920	82.332	94.359	88.278	71.492	59.327	53.116	55.067	688.719	796.902
CY2017	54.939	47.862	52.959	52.404	58.585	68.795	73.544	78.240	68.604	64.364	0.000	0.000	620.296	620.296

Melrose Water Consumption



Massachusetts Water Resources Authority

Water Supplied: All Revenue Customers

YTD CHANGES (CY17 vs. CY16)
Water Supplied
-9.3%

MGD	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Average	Annual Average
CY2015	170.874	177.386	178.975	179.653	217.221	217.619	228.484	230.316	232.125	189.905	170.763	163.550	196.522	196.522
CY2016	169.989	175.229	169.161	173.080	197.940	236.644	253.923	247.681	230.631	202.827	182.020	166.059	205.834	200.513
CY2017	161.982	161.608	163.130	167.615	178.315	206.818	212.860	221.244	205.884	190.979	0.000	0.000	187.232	187.232

MG	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Total	Annual Total
CY2015	5,297.089	4,966.801	5,548.216	5,389.596	6,733.842	6,528.559	7,082.997	7,139.787	6,963.760	5,887.062	5,122.884	5,070.040	71,730.633	71,730.633
CY2016	5,269.650	5,081.631	5,244.002	5,192.412	6,136.128	7,099.331	7,871.618	7,678.123	6,918.941	6,287.652	5,460.602	5,147.831	62,779.488	73,387.922
CY2017	5,021.453	4,525.033	5,057.042	5,028.442	5,527.771	6,204.540	6,598.670	6,858.572	6,176.507	5,920.356	0.000	0.000	56,918.387	56,918.387

MWRA Water Supplied: All Revenue Customers

