

Board of Water Commissioners
Meeting Minutes
693 Massachusetts Avenue, Acton MA
Monday, May 20, 2019

AGENDA

A. Comments from Citizens

B. Approve Minutes of May 6, 2019 Meetings

C. Discuss Finance Committee's Recommendations for Future Management of Water Rates, Debt Impacts and Investment Funds.

- Items of discussion include, but not limited to, water rates, debt fee, management and designation of the WR Grace Receipt Reserved for Appropriation Account.
- Update by Chairman Stuntz from a recent New England Water Works seminar on Affordability of Water.

Present at Tonight's Meeting:

Commissioners: Stephen Stuntz (Chair), Erika Amir-Lin, Barry Rosen

District Manager: Chris Allen

District Treasurer: Mary Jo Bates

District Counsel: Mary Bassett

Commissioner's Secretary: Lynn Protasowicki

Finance Committee: Chuck Bradley, Dave Butler, Bill Guthlein, Bill Mullin (Associate Member)

Green Acton: Lucy Kirshner

Citizen: Joseph Cooney

The Board of Water Commissioners meeting was called to order at 7:30 PM on Monday, May 20, 2019 at the Acton Water District office by Mr. Stuntz.

A. Comments from Citizens.

No comments from citizens tonight.

B. Approve Minutes of May 6, 2019 Meeting.

Counselor Bassett stated that there was action taken to renew the lease with Baldco through 3/31/2020, and that action was not annotated in the DRAFT minutes and should be added.

Mr. Stuntz motioned to approve the amended minutes of May 6, 2019. Ms. Amir-Lin seconded the motion and it was unanimously approved.

C. Discuss Finance Committee's Recommendations for Future Management of Water Rates, Debt Impacts and Investment Funds.

- Items of discussion include, but not limited to, water rates, debt fee, management and designation of the WR Grace Receipt Reserved for Appropriation Account.
- Update by Chairman Stuntz from a recent New England Water Works seminar on Affordability of Water.

The Finance Committee presented to the Board of Commissioners their recommendations for future management of water rates, debt impacts, and investment funds. Below is the presentation.

Summary of Acton Water Revenue

2019 Forecast

Water Sold (cubic feet) 61,574,704

Budgeted Revenue \$5,382,297

Service and Debt Fee Payers 8,511

Revenue Split by Fixed and Volume Components

100% Fixed	Acton 2019	100 % Volume
\$632.39	\$272.00 Fixed (43%)	\$0.0878 ft ³
	\$360.93 Vol (57%)	

AWD Customers by Water Bought

<u>Quarterly (ft³)</u>	Number of Units		Water Bought (ft ³)	
	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>
0-300	303	259	33,489	30,536
301-1,500	5,126	4,589	5,148,277	4,518,516
1,501-3,000	2,674	2,309	5,347,326	4,728,778
3,001-4,500	231	550	794,761	1,995,001
4,501 -6,000	41	285	209,571	1,467,258
> 6,000	92	519	1,546,080	6,201,165
Total	8,467	8,511	13,079,504	18,941,254

<u>Quarterly (ft³)</u>	Number of Units		Water Bought (ft ³)	
	<u>Winter</u>	<u>Summer</u>	<u>Winter</u>	<u>Summer</u>
0-300	3.6%	3.0%	0.3%	0.2%
301-1,500	60.5%	53.9%	39.4%	23.9%
1,501-3,000	31.6%	27.1%	40.9%	25.0%
3,001-4,500	2.7%	6.5%	6.1%	10.5%
4,501 -6,000	0.5%	3.3%	1.6%	7.7%
> 6,000	1.1%	6.1%	11.8%	32.7%
	100.0%	100.0%	100.0%	100.0%

April Breakdown of Billing is used for Winter, October for Summer.

Since 2009 revenue increases are weighted toward fixed charges

Annual Total Water Bought (ft ³)	Fixed as % Total Bill	
	2009	2019
3,000	19%	69%
6,000	10%	53%
12,000	5%	33%
18,000	3%	23%
36,000	2%	16%
Quarterly		
Fixed Charge	2009	2019
Service Fee	\$ 5.00	\$ 15.00
Debt Fee	\$ -	\$ 53.00
Total	\$ 5.00	\$ 68.00

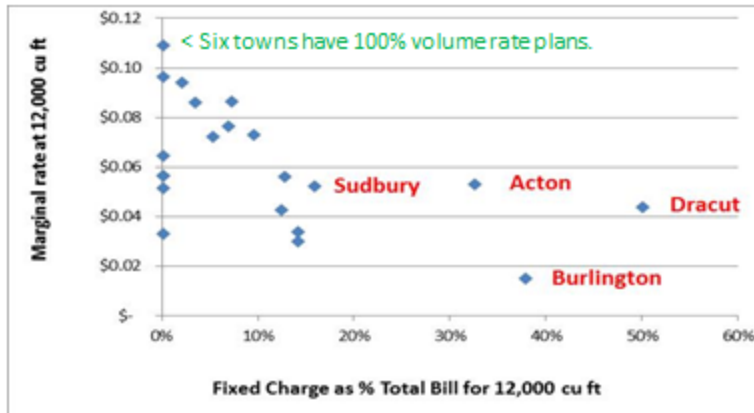
Source of 2009 data is Tighe & Bond Water Rate Survey. The 2019 data is based on new rates approved in 2019. Annual costs assume steady quarterly water use.

Higher fixed charges impact small customers the most as a % increase

Total Water Bought (ft ³)	Annual Customer Billing		Growth	
	2009	2019	Cumulative	CAGR
3,000	\$ 103.20	\$ 395.00	283%	14.36%
6,000	\$ 199.20	\$ 518.00	160%	10.03%
12,000	\$ 397.20	\$ 830.00	109%	7.65%
18,000	\$ 607.20	\$ 1,208.00	99%	7.12%
24,000	\$ 861.20	\$ 1,652.00	92%	6.73%

Source of 2009 data is Tighe & Bond Water Rate Survey. The 2019 data is based on new rates approved in 2019. Annual costs assume steady quarterly water use.

Acton has a high fixed charge vs. Middlesex County peers



Peers are 20 Middlesex County towns with similar population to Acton and town or district water suppliers. Source: Tighe & Bond 2017 MA Water Rate Survey

Considerations volume vs. fixed

Move to More Volume Plan

- Fixed debt fee puts too much of the burden of capital spending on small customers.
- Conservation is encouraged by a high volume rate.
- Peer water companies and other utilities are mostly to 100% volume rate.
- Volatility in water demand, i.e. weather, won't materially impact revenue.

Stay or More Fixed Charge Plan

- Certainty of fixed fee is viewed favorably by S&P.
- Customers are okay with fixed fee, v. few complaints.
- High volume rates could cause heavy users with discretionary needs to cut back reducing water sold and revenue below budget.
- Water demand is declining. Fixed charges reduce revenue volatility.

Should the rate plan consider matching customer revenue with costs to service?

May 20, 2019

The AWWA believes that rate plans should try to match revenue with costs

“A primary consideration in the derivation of water-rate schedules is the establishment of equitable charges to customers commensurate with the costs of providing that service. As previously discussed, the only method of assessing entirely equitable rates would be the determination of each customer’s water bill, based on his or her particular service requirements. Since this is obviously impractical, if not impossible, when dealing with thousands of customers, rates are normally designed to fit average conditions...”

Excerpt from “Water Rates (1991)”, pages 32-33, published by the American Water Works Association.

There is a steady base demand and a seasonal peak usage in summer

- Assume a simple model of the AWD customer base. All customers have a steady, year round need for water. Roughly this accounts for about 13.5 to 14.0M ft³ per quarter.
- Some of these customers have high demand in the summer. Peak quarter demand (October bill) is 18.9M ft³, about 35% greater than the base demand.
- Monthly water pumped data show June – August is 40%+ above base demand (Nov-Apr average).

Maximum daily demand is 46% greater than average daily demand

**TABLE 3-3
WATER DEMAND TRENDS
ACTON, MASSACHUSETTS**

Year	Total Production (gallons/year)	Average Daily Demand (gallons/day)	Maximum Daily Demand (gallons/day)	Ratio (Maximum- day/Average-day)
	(A)	(B)	(C)	(C/B)
2012	612,600,000	1,678,356	2,430,000	1.45
2013	624,300,000	1,710,411	2,310,000	1.35
2014	627,660,000	1,719,616	2,500,000	1.45
2015	598,090,000	1,638,600	2,332,000	1.42
2016	596,040,000	1,632,986	2,660,000	1.63
Average	611,738,000	1,675,994	2,446,400	1.46

Master Plan Update, Wright-Pierce (August 2018)

Pumping and treatment capacity must be sufficient to handle peak demand

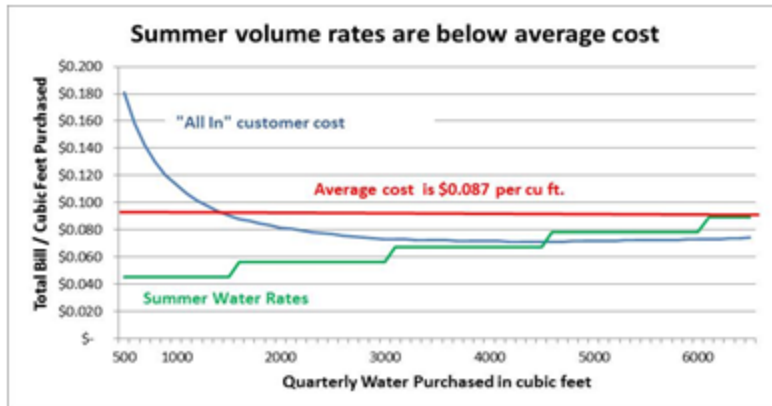
- Since there is no material storage capacity treated water pumping and treatment capacity (P&T) must meet peak demand.
- Therefore peak demand drives the need for P&T capacity.
- Capacity of 35% to 45% above base demand is needed to deal with summer peak demand.
- This extra capacity is not needed 6-8 months each year.

AWD is Investing in Summer Capacity

- Acton Center wells are used principally to meet summer capacity. In the last year bordering land was purchased. A \$9-\$10M treatment plant is in the planning phase.
- More peak capacity may be necessary. "Therefore, in order for the AWD to more reliably meet its projected maximum-day demands, the pursuit of other reliable sources of supply was recommended."

Master Plan Update, Wright-Pierce (August 2018)

Current summer rates feature high fixed fee and marginal rates below cost



Marginal summer water rates are well below the average cost per cubic foot. Maximum capacity is driven by summer peak demand. A high marginal rate would encourage conservation and help pay for the investment in peak P&T assets.

AWD's rate setting conundrum

- Average cost to pump, treat and deliver a cubic foot of water is \$0.0878.
- Average cost to pump, treat, and deliver an extra cubic foot of water? Almost zero, it all falls to the bottom line until...
- Extra capacity is needed. Cost to increase capacity is likely greater than average \$0.0878 ft³.
- Low marginal rates encourage higher use.

Potential benefits of a volume rate plan with high summer rates

- A “Base-Excess Capacity” rate structure* would better match recovery of peak P&T capital costs with peak users.
- Summer discretionary users are more likely to respond to high rates and reduce stress on extra capacity. A volume rate plan, especially one with increasing block rates, encourages conservation.

** “Extra capacity costs are costs associated with meeting rate-of-use requirements in excess of average and include O&M expenses and capital costs for system capacity beyond that required for average rate of use” This is an American Water Works Association pricing methodology.*

Potential Discussion Points

- What is the appropriate balance of fixed charges vs. volume rates?
- Is there value in going deeper on the impact of peak demand and if/how to match the cost of peak capacity with those who use it?
- Should the impact of different rate structures on conservation be considered in the rate setting process?
- And.....

A 100% Volume Plan at \$0.0878 ft³

A \$34 Quarterly Fixed Charge Plan + \$0.0694 ft³

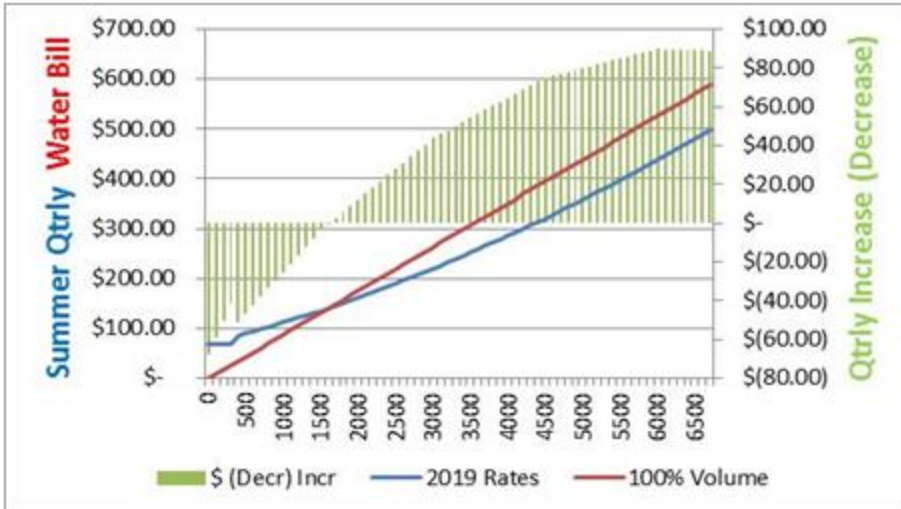
A Peak / Non-Peak Plan with Summer @ \$0.0982 ft³ and Winter @ \$0.0745 ft³

HYPOTHETICAL ALTERNATIVE RATES

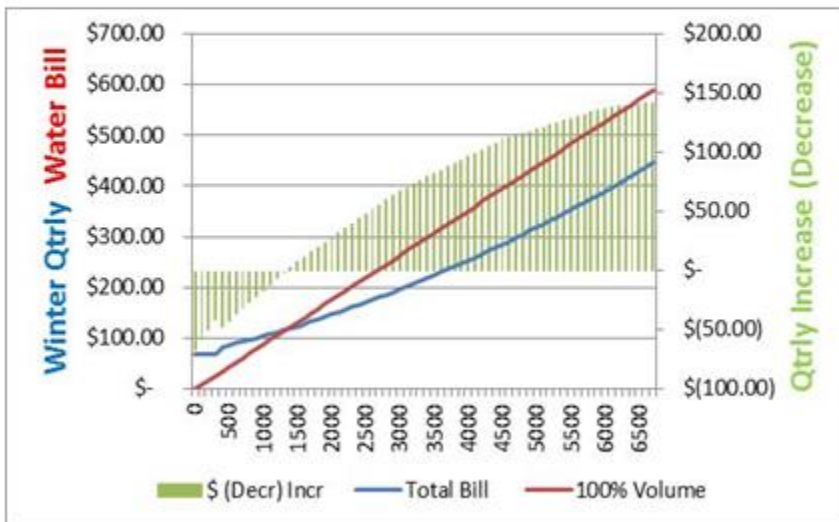
Assumptions

- Rate changes do not impact water sold or the number of units billed a fixed fee.
- The 2019 Plan includes the impact of block rates and different summer and winter rates.
- The All Volume and \$34 Fixed Charge rates are flat. There is no assumption of rate blocks or different summer and winter rates.
- The Peak / Non-Peak rates are set for summer revenue to recover 63% of annual costs.

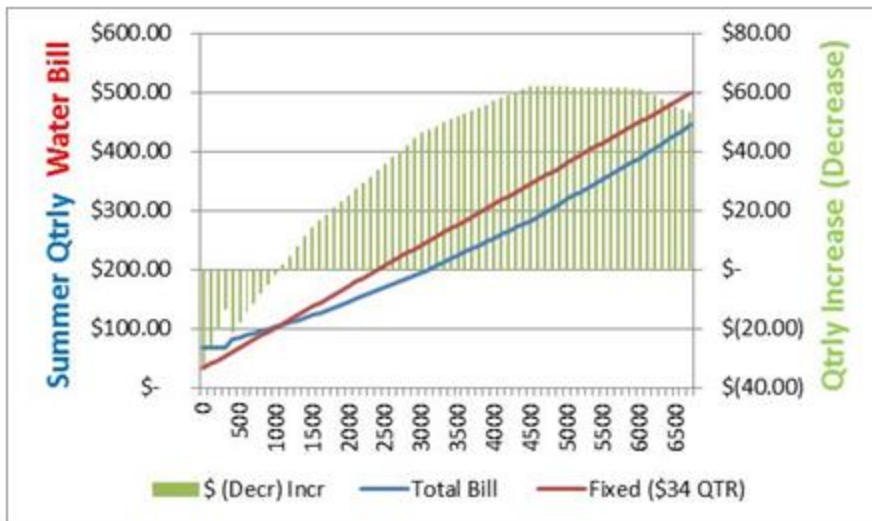
All Volume (\$0.0878 ft³) Summer



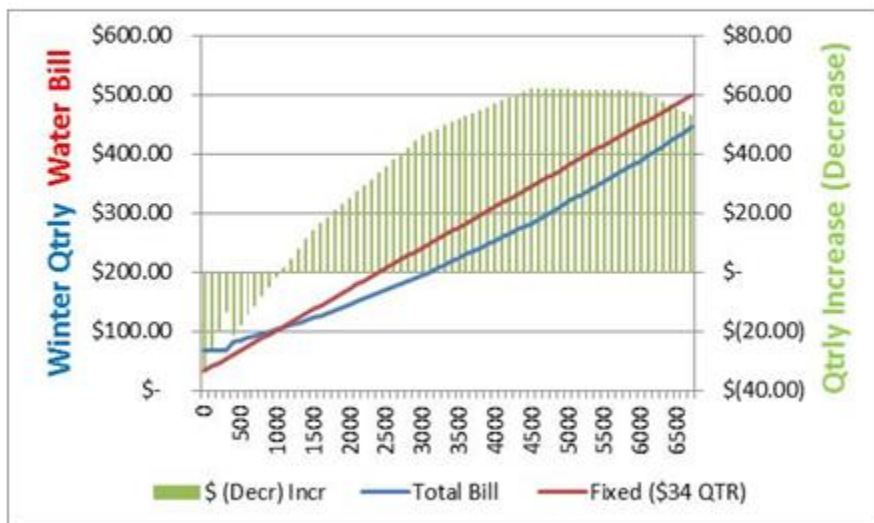
All Volume (\$0.0878 ft³) Winter



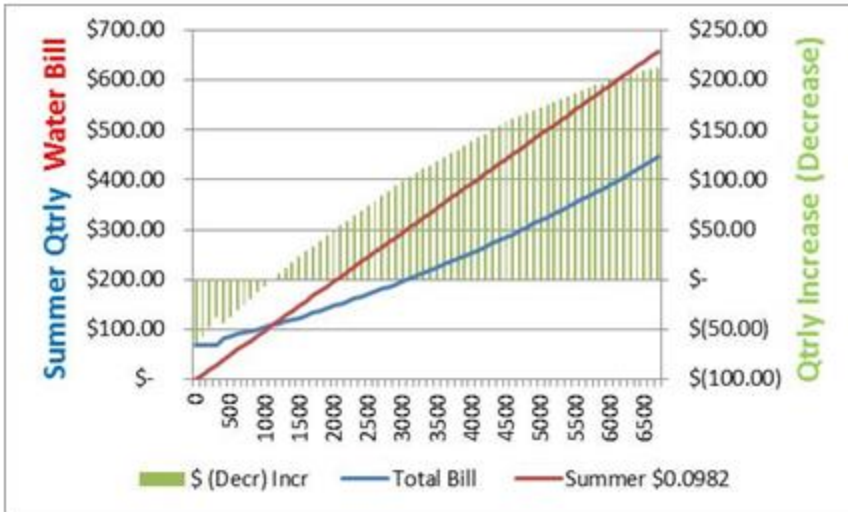
Fixed Quarterly \$34 + \$0.0694 ft³ Summer



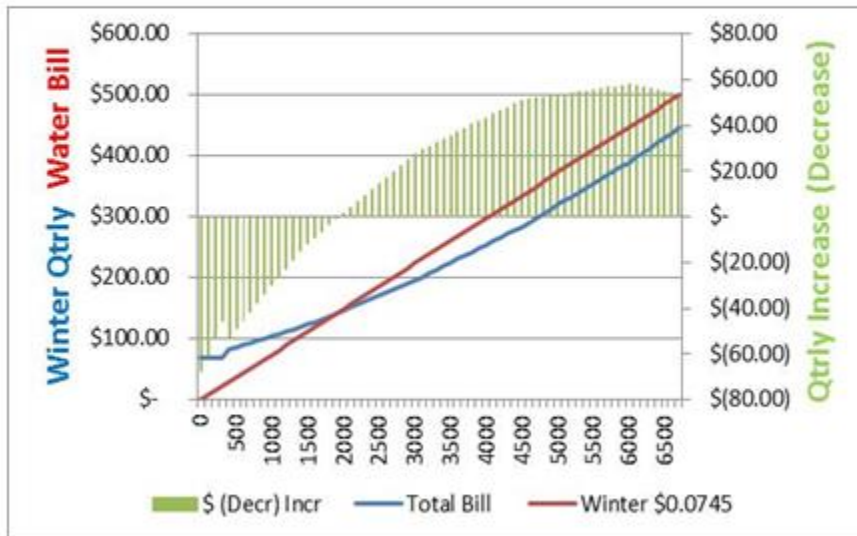
Fixed Quarterly \$34 + \$0.0694 ft³ Winter



Peak Summer Rate $\$0.0982 \text{ ft}^3$



Non-Peak Winter Rate $\$0.0745 \text{ ft}^3$



Acton Water District												
Debt Service FY 2020-2030												
	Original Loan Amount	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
North Acton WTP	\$ 6,000,000.00	\$ 418,050	\$ 408,450	\$ 397,950	\$ 386,850	\$ 374,850	\$ 362,850	\$ 350,550	\$ 338,250	\$ 325,650	\$ 312,900	\$ -
16 Knox Trail, Eng & Mains	2,135,000.00	243,575	237,125	225,750	219,450	213,150	-	-	-	-	-	-
South Acton WTP	13,470,757.00	835,053	835,191	835,334	835,479	835,627	835,779	835,932	836,091	836,252	836,417	836,585
585 Main Street	1,049,000.00	286,935	285,000	285,000	275,000	-	-	-	-	-	-	-
Acton Center Engineering	450,000.00	-	175,000	175,000	175,000	-	-	-	-	-	-	-
Acton Center WTP	9,242,000.00	25,000	25,000	25,000	285,750	580,000	580,000	580,000	580,000	580,000	580,000	580,000
Total Annual Debt Service		\$ 1,808,613	\$ 1,965,766	\$ 1,944,034	\$ 2,177,529	\$ 2,003,627	\$ 1,778,629	\$ 1,766,482	\$ 1,754,341	\$ 1,741,902	\$ 1,729,317	\$ 1,416,585
Debt Fee Per Unit Per Quarter		\$ 52.34	\$ 56.49	\$ 55.54	\$ 61.86	\$ 56.76	\$ 50.24	\$ 49.76	\$ 49.28	\$ 48.93	\$ 48.58	\$ 39.79
An additional payment of \$69,525 to 585 Main Street Project in FY 2020, making that payment \$355,935 in FY 2020												
Rollover debt would be \$715,500. Principal to be paid in year 2 & 3, \$262,500. Final principal to be paid in FY 2023 \$190,501 Interest an additional \$12K												
Debt Fee for FY 2023 would be \$60.02												

Quantity and Value of water sold since FY 2014							
Date	CF	Value	Services	FY total CF	FY total \$	CY total CF	CY total \$
Jul-13	16,546,654	\$ 891,805	6393				
Oct-13	20,039,224	\$ 1,090,350	6415				
Jan-14	16,086,430	\$ 772,310	6442				
Apr-14	13,592,319	\$ 682,531	6451				
Jul-14	15,594,123	\$ 911,997	6477	65,312,096	\$ 3,457,187		
Oct-14	19,529,591	\$ 1,124,326	6514				
Jan-15	14,887,126	\$ 790,287	6522			63,603,159	\$ 3,509,140
Apr-15	13,871,003	\$ 754,636	6532				
Jul-15	17,360,290	\$ 1,339,093	6575	65,648,010	\$ 4,008,342		
Oct-15	22,781,872	\$ 1,698,274	6592				
Jan-16	14,797,481	\$ 1,090,122	6597			68,810,646	\$ 4,882,125
Apr-16	14,584,568	\$ 1,069,242	6626				
Jul-16	17,475,043	\$ 1,343,677	6641	69,638,964	\$ 5,201,315		
Oct-16	22,889,751	\$ 1,703,019	6655				
Jan-17	14,190,422	\$ 1,060,111	6662			69,139,784	\$ 5,176,048
Apr-17	13,888,652	\$ 1,087,798	6688				
Jul-17	15,291,586	\$ 1,218,408	6696	66,260,411	\$ 5,069,335		
Oct-17	20,077,429	\$ 1,638,108	6700				
Jan-18	14,326,109	\$ 1,064,774	6704			63,583,776	\$ 5,009,088
Apr-18	13,494,028	\$ 1,022,219	6696				
Jul-18	16,217,533	\$ 1,260,200	6725	64,115,099	\$ 4,985,301		
Oct-18	19,374,378	\$ 1,483,600	6744				
Jan-19	13,365,156	\$ 1,094,665	6740			62,451,095	\$ 4,860,684
Apr-19	13,398,635	\$ 1,098,209	6715				
Jul-19							

Mr. Stuntz provided an historical background regarding the period to which Mr. Guthlein presented when the District started treating the water and from decisions that were made within the past 10 years or so. Thoughts to consider - How we set our hookup fee? What is the value of the system for new users? Variable rates for commercial vs residential? hookup fees (peak vs reserved)? Goal - make it fair for all. Question: What graph would we like to see to make it more fair?

Mr. Rosen mentioned that he would like to understand other towns and their rate structures if they would provide that information (i.e.. Bedford, Lexington, Burlington, Sudbury) Interested in knowing how much to deliver per gallon? He doesn't know that answer.

Mr. Allen mentioned that unlike the District there are not a lot of towns who appropriate \$500K a year for infrastructure improvements. That appropriation is typically taken from Surplus Revenue (Free Cash) generated from metered sales.

Mr. Stuntz - is a treatment plant a betterment? Mr. Allen stated that, unlike a betterment, we don't tax people who are not connected to the service, have a service available, but don't use it. The District charges \$7,400 for a new 1" line to connect to the District's service pipes.

Ms. Bates stated that the reason why it was difficult for Mr. Guthlein to find other towns using a fixed fee is because the District is a leader in this area. She gets asked from time to time by other towns about how the District implemented their fixed fees; and they ask her how much the District generates in revenue from fixed fees.

Mr. Allen stated that this is just the start of this conversation, no decisions need be made this evening. It is good to promote the public process and have respectful debate on policy and procedures periodically.

WR Grace Receipt Reserved for Appropriation Fund: Mr. Allen mentioned that Mr. Guthlein has done a lot of work with Mass Department of Revenue (MA DOR) to re-designate the WR Grace fund to a stabilization fund. Mr. Allen stated that we can make the change per District vote but first need vote from Commissioners to recommend such for voter approval at Annual District Meeting in March.

Benefits of changing to a stabilization fund-

1. Diversify our investments.
2. Add to a stabilization fund (new money).

Mr. Allen recommended that the Commissioners make a decision soon on this item as they will need to notify Boston Financial, who is the investment firm that manages the WR Grace fund. The impetus being some of the current investments are coming to maturity in the imminent future, and the advisor should be maintaining liquidity in the interim versus committing to longer term, more restrictive investments.

- Update by Chairman Stuntz from a recent New England Water Works seminar on Affordability of Water - make sure that you measure it so that you can prove what you done is what you wanted. We need to talk about commercial and municipal rates, hookup fees...

Other Business:

1. Mr. Rosen mentioned that he received no response from WLMAC when he sent them an email regarding the WLMAC going forward. He then asked John Cipar to send email to WLMAC. As of tonight there was no response. He is not sure if WLMAC will be ready to discuss this topic at the next AWD open meeting on June 3rd.
2. Ms. Amir-Lin mentioned that the Acton's Finance Committee invited the Commissioners to attend one of their open meetings to give an overview of the District, since they have several new members. It was decided that Mr. Stuntz and Ms. Amir-Lin will attend one of their meetings. This meeting will be posted as an open meeting due to a quorum.

Mr. Stuntz moved to adjourn the meeting at 9:35 PM. Ms. Amir-Lin seconded the motion it was unanimously approved.