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TOWNSEND WATER DEPARTMENT
540 Main Street West Townsend, Massachusetts 01474

Todd Melanson, *Chairman*
David Vigeant, *Superintendent*

Nathan Mattila, *Vice-Chairman*
(978) 597-2212

, Clerk
water@townsendwater.org

WATER COMMISSIONERS MEETING MINUTES

October 20, 2022 – 7:00 P.M.

Water Department 540 Main Street, Meeting Room

On July 16, 2022, Governor Baker signed into law An Act Relative to Extending Certain State of Emergency Accommodations, which, among other things, extends the expiration of the provisions pertaining to the Open Meeting Law to March 31, 2023. Specifically, this extension allows public bodies to continue holding meetings remotely without a quorum of the public body physically present at a meeting location, and to provide "adequate, alternative" access to remote meetings. The Act does not make any new changes to the Open Meeting Law other than extending the expiration date of the temporary provisions regarding remote meetings from July 15, 2022, to March 31, 2023

<https://us06web.zoom.us/j/83522432275?pwd=aHF2WUxNWElIMTZTMWF1ZS9BYUsvdz09>

Meeting ID: 835 2243 2275 Passcode: 324652 Log on Thursday, October 20, 2022, at 7:00 P.M. to participate.

I. PRELIMINARIES:

- 1.1 TM called the meeting to order at 7:04 P.M. By Zoom.
- 1.2 TM announced that the meeting is being recorded on Zoom and tonight's meeting and all future meetings will be available for viewing on YouTube.
- 1.3 Roll call showed members present: Todd Melanson (TM)-Chairman and Nathan Mattila (NM)-Vice Chairman. Roll call showed citizens present: David Vigeant (DV)-Water Superintendent, Chaz Sexton-Diranian, Karen Rapoza, Leanne Jackson, Tyler Champagne, Bill Rideout, William Considine, Kevin Keefe, and Ryan Abraham.
- 1.4 Chairman's additions or deletions. TM presented a presentation on the need for a rate raise. (Attached)
- 1.5 Approve Meeting Minutes of August 15, 2022 & September 19, 2022, **NM motioned to approve the meeting minutes of August 15, 2022 & Sept 19, 2022. TM seconded. Unanimous vote.**
- 1.6 Review correspondence. Public Comments. TM read the correspondence presented and Karen Rapoza started a conversation concerning the water rate increase (see questions and answers attached)

II. APPOINTMENTS-VOTES MAY BE TAKEN

- 2.1 7:10 Karen Rapoza Re: communication methods in relation to rate increase.
- 2.2 7:20 Town residents Re: discussion of water rates. (See questions and answers attached)
- 2.3 7:30 Joanne Beauchamp -15 Hickory Dr. Re: Bill adjustment. Not present.
- 2.4 7:40 Leanne Jackson-1 Birch Ln. Re: Bill adjustment. Leanne reported that DV went to her home and discovered a leak. **NM made a motion to adjust acct#1310 to tier 1 rate. TM seconded. Unanimous vote.**

NM would like the information on the website with the recent rates and how to calculate your bill portion of the website.

Kevin Keefe many times would like to post or respond to a post on the water department page. TM stated that all posts should be reviewed and approve before posting for safety.

III. MEETING BUSINESS-VOTES MAY BE TAKEN:

- 3.1 Review Dig-safe procedures. NM stated you can clearly tell where the curbstop and the point of entry is. We should be doing our best not to disrupt or destroy a customer's service. TM and NM will get together and write up a procedure. TM suggested a plan should be reviewed by town counsel and we may be able to find a grant to pay for the ground penetrating radar equipment needed to locate the water lines.
- 3.2 Review/Discuss interest adjustment for account number 60370. **TM made a motion to adjust the interest on account# 60370 to zero. NM seconded. Unanimous vote.**
- 3.3 Review/Discuss interest adjustment for account number 4640. **TM made a motion to adjust the interest on account# 64640 to zero. NM seconded. Unanimous vote.**
- 3.4 Review/Discuss bill adjustment for account number 1180. Tabled until next meeting. TM asked the customer to put dye in the back of the toilet tank, don't use the toilet for a few days to see if the color appears in the bowl.

IV. COMMISSIONERS UPDATES AND REPORTS-VOTES MAY BE TAKEN:

- 4.1 None

V. LIASON UPDATES AND REPORTS-VOTES MAY BE TAKEN:

- 5.1 None

VI. SUPERINTENDENT'S UPDATES AND REPORTS-VOTES MAY BE TAKEN:

- 6.1 Update/Discuss 169 Main St and Greely Rd. 169 Main St main that runs under the home has begun to leak. The project is almost completed the only process left is to cut out the old main.
- 6.2 Update/Discuss PFAS. Witches Brook 2 has an elevated reading of 12.6 and Witches Brook 2 is slightly elevated. If the wells at Witches Brook exceeds 20.5 for a 3-month average, we would need to shut down those wells also.
- 6.3 Update/Discuss Harbor Trace Treatment Plant. Treatment plant bids were submitted to the central register, COMMBUYS and the Groton Herald public notice. TM would like to schedule a meeting for the residents in January/February 2023. TM also stated. DV will send a letter all along Emery-South Row Road inviting them to the meeting. DV reported we will have to get our permits from the building inspector.
- 6.4 Update/Discuss 12 South St-Deluxe. They will be tapping the main on South Street on Tuesday. That will complete the project.
- 6.5 Update/Discuss Generators at Main Street and Cross Street Stations. Generators will go out to bid with the treatment plant, which is funded through ARPA.
- 6.6 Review/Discuss Operational Procedures and Guidelines.

VII. OFFICE UPDATES AND REPORTS-VOTES MAY BE TAKEN:

- 7.1 Schedule next BOWC meeting. Next meeting is scheduled for November 14, 2022 @ 7:00 P.M.
- 7.2 Review and sign September end of month reports.
- 7.3 Sign Bills Payable warrants. DV submitted to the BOWC an operational manual. TM stated it is a living document they will always need to change and evolve. TM ask NM to meet and work together to com up with a digsafe website which will the be reviewed by town counsel. TM would like to get together and get digsafe off the table.

ADJOURNMENT

NM motioned to review September 2022 reports and bill payable warrants out of session. TM seconded. Unanimous vote.

TM adjourned the BOWC meeting at 10:17 P.M.

Respectfully submitted,



Brenda Boudreau

Office Manager

Townsend Water Department.

TOWNSEND WATER DEPT AND WATER RATES

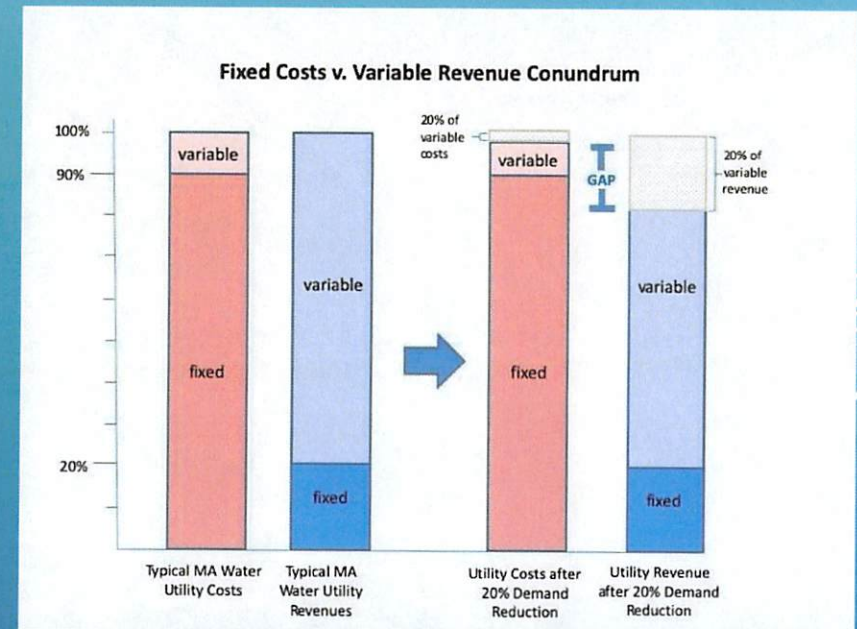
1. To explain Tiered Water Rates
2. Why it was chosen over a block rate
3. How the lack of consistent rate increases affected the increases
4. How water Conservation plays a part
5. The implementation of the PFAS treatment plant

Note: Referencing <https://www.mass.gov/guides/water-pricing#-water-rate-challenges-> and the Tighe & Bond rate Study performed for Townsend Water Dept.



WATER RATE CHALLENGES

- ▶ Fixed Costs / Variable Revenue Conundrum
- ▶ In Massachusetts, suppliers' short-term fixed costs often represent 90% or more of total costs. These costs (such as infrastructure maintenance, debt service, regulatory compliance, administration, and source protection) stay approximately the same no matter how much water is sold. However, most suppliers collect most or all revenues on a volumetric basis (charge-per-unit-sold). As a result, demand reduction can reduce revenues far more than costs, exacerbating financial gaps.
- ▶ In simple terms, a single fixed rate leaves a water department budget vulnerable to seasonal changes and makes it potential unsustainable over the long term, and a case could be made that this is the case with Townsend given the multiple issues the department has faced over the last few years..





FULL-COST PRICING

Key Concepts:

- Full-Cost Recovery
- Long-Term Planning and Budgeting

Rates should reflect the true cost of providing safe, reliable water service into the future. Revenues should be high enough to cover the full cost of operating, maintaining, and protecting the water supply system, with a minimum of a 10-year planning horizon.

A planning horizon of ten or more years helps:

- 1) educate customers and decision makers about the water system's financial needs
- 2) build in revenue to cover longer-term capital needs
- 3) justify debt acquisition: prior debt and incoming (IE: PFAS treatment plant)
- 4) avoid high costs of deferred maintenance by budgeting for regular infrastructure upkeep



ENSURING AFFORDABILITY AND FAIR COST ALLOCATION

Key Concepts

1. Cost Allocation
2. Affordability Protections
3. Public Engagement

Specific Note of Importance: Rates should reflect fair distribution of costs and protect affordability of water for basic needs.

Water rates are a way to recuperate costs. But who should pay for what component of a utility's costs? The answer is unique to each system, but in all cases cost allocations should be *fair* and should *protect basic health and safety*. Lawn Irrigation is not considered nor defined a basic health or safety factor. In fact, it is specifically defined by the MassDEP and the Water Resource Commission as "Unnecessary Usage".

RESIDENTIAL FINANCIAL BURDEN & AFFORDABILITY



Measuring Affordability. Affordability, like temperature, is highly subjective. To determine whether or not water and sewer costs represents a financial burden we use the two most common and appropriate indicators.

Annual Cost

Scenario	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	Total
Alt. A - Maintain Existing Rate Structure	\$ 409	\$ 614	\$ 737	\$ 854	\$ 991	\$ 1,031	\$ 1,072	\$ 1,093	\$ 1,137	\$ 1,137	\$ 8,666.40
Increase	\$ -	\$ 205	\$ 123	\$ 118	\$ 137	\$ 40	\$ 41	\$ 21	\$ 44		
Alt. B - Tiered Rates	\$ 409	\$ 491	\$ 565	\$ 632	\$ 708	\$ 765	\$ 780	\$ 780	\$ 780	\$ 780	\$ 6,282.87
Increase	\$ -	\$ 82	\$ 74	\$ 68	\$ 76	\$ 57	\$ 15	\$ -	\$ -	\$ -	

The Residential Indicator. Adopted from EPA guidance developed in the late 90's to determine the cost impacts of federal regulatory programs, this indicator divides the total annual cost of water and sewer and divides it by the median household income. A score of 2% or more is considered to be a financial burden.

Scenario	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
Alt. A - Maintain Existing Rate Structure	1.3%	1.5%	1.7%	1.9%	2.1%	2.1%	2.2%	2.2%	2.3%	2.3%
Alt. B - Tiered Rates	1.3%	1.4%	1.5%	1.6%	1.7%	1.7%	1.8%	1.8%	1.8%	1.8%

The Household Burden Indicator. Introduced in 2019, this indicator is based the lowest quintile income (the lowest 20%), which is more representative of household financial status. The second component, the Poverty Prevalence Indicator is the percentage of the community below 200% of the Federal Poverty Level. The burden is determined by using the chart below.

Household Burden (HBI) - Static LQI

Scenario	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31
Existing										
Alt. A - Maintain Existing Rate Structure	5.3%	6.5%	7.2%	7.8%	8.6%	8.9%	9.1%	9.2%	9.5%	9.5%
Alt. B - Tiered Rates	5.3%	5.7%	6.2%	6.6%	7.0%	7.3%	7.4%	7.4%	7.4%	7.4%

Townsend Income Data (US Census)

Median Household Income: \$72,500

Lowest Quintile Income: \$17,265

Poverty Prevalence Indicator: 18%

Note: \$500 in annual cost was included in both analysis to represent septic system costs

Household Burden Indicator	Poverty Prevalence Indicator		
	>= 35%	20% to 35%	<20%
>= 10%	Very High Burden	High Burden	Moderate - High Burden
7% to 10%	High Burden	Moderate - High Burden	Moderate - Low Burden
<7%	Moderate - High Burden	Moderate - Low Burden	Low Burden

CAPITAL IMPROVEMENT PLAN

Capital Improvement Planner

System Component	Scope	Description	Funding source	Interest Rate	Estimated Cost	Start Year	Term
Pumping	Construction	Main St. Pump Station Rehabilitation	Rate		\$ 600,000	2021	1
Distribution	Construction	Main St. and Greely Road Valve Project	Rate		\$ 70,000	2022	1
Source	Other	Main St Wellhouse Generator	ARPA		\$ 120,000	2023	1
Source	Other	Cross St. Wellhouse Generator	ARPA		\$ 100,000	2023	1
Distribution	Other	Fusing Machine for Water Mains	Rate		\$ 25,000	2023	1
Enterprise	Other	36" Wide Scanner Copier	Rate		\$ 7,000	2023	1
Treatment	Engineering	PFAS Water Treatment Plant - Prelim Engineering	ARPA		\$ 205,000	2023	1
Treatment	Engineering	PFAS Water Treatment Plant - Design	Debt	4.0%	\$ 495,000	2023	5
Distribution	Other	Trailer Mounted Gate Exerciser with vacuum	Rate		\$ 85,000	2026	1
Distribution	Engineering	Year 1 - Watermain Replacement 950' S. Row Road	Rate		\$ 55,000	2026	1
Distribution	Construction	Year 1 - Watermain Replacement 950' S. Row Road	Debt	4.0%	\$ 550,000	2024	20
Distribution	Engineering	Valve and Hydrant Replacement Program	Rate			2024	5
Distribution	Construction	Valve and Hydrant Replacement Program	Rate		\$ 90,000	2026	5
Enterprise	Vehicle	Hybrid or Electric Dump Truck (F 450 or Equivalent) with snowplow	Rate		\$ 83,000	2025	1
Treatment	Construction	PFAS Water Treatment Plant	SRF	1.0%	\$ 12,828,846	2025	30
Distribution	Engineering	Year 2 - Watermain Replacement 2,200' S. Row to Emery St.	Rate		\$ 80,000	2027	1
Distribution	Construction	Year 2 - Watermain Replacement 2,200' S. Row to Emery St.	Debt	4.0%	\$ 770,000	2027	20
Distribution	Engineering	Year 3 - Watermain Replacement 2,000 Emery Street to Exist. System	Rate		\$ 75,000	2028	1
Distribution	Construction	Year 3 - Watermain Replacement 2,000 Emery Street to Exist. System	Debt	4.0%	\$ 740,000	2028	20
Distribution	Engineering	Year 4 - Watermain Replacement 1,850' New Fitchburg Road	Rate		\$ 75,000	2029	1
Distribution	Construction	Year 4 - Watermain Replacement 1,850' New Fitchburg Road	Debt	4.0%	\$ 730,000	2029	20
Enterprise	Vehicle	Utility Truck plus equipment	Rate		\$ 60,000	2030	1
Distribution	Engineering	Year 5 - Watermain Replacement 1,650' New Fitchburg Road	Rate		\$ 70,000	2030	1
Distribution	Construction	Year 5 - Watermain Replacement 1,650' New Fitchburg Road	Debt	4.0%	\$ 675,000	2031	20
Total					\$18,588,846		

1. Total construction cost estimated at \$14.8M with assumed principal forgiveness of \$1.96M (13.26%)

EXPENSES

Dashboard

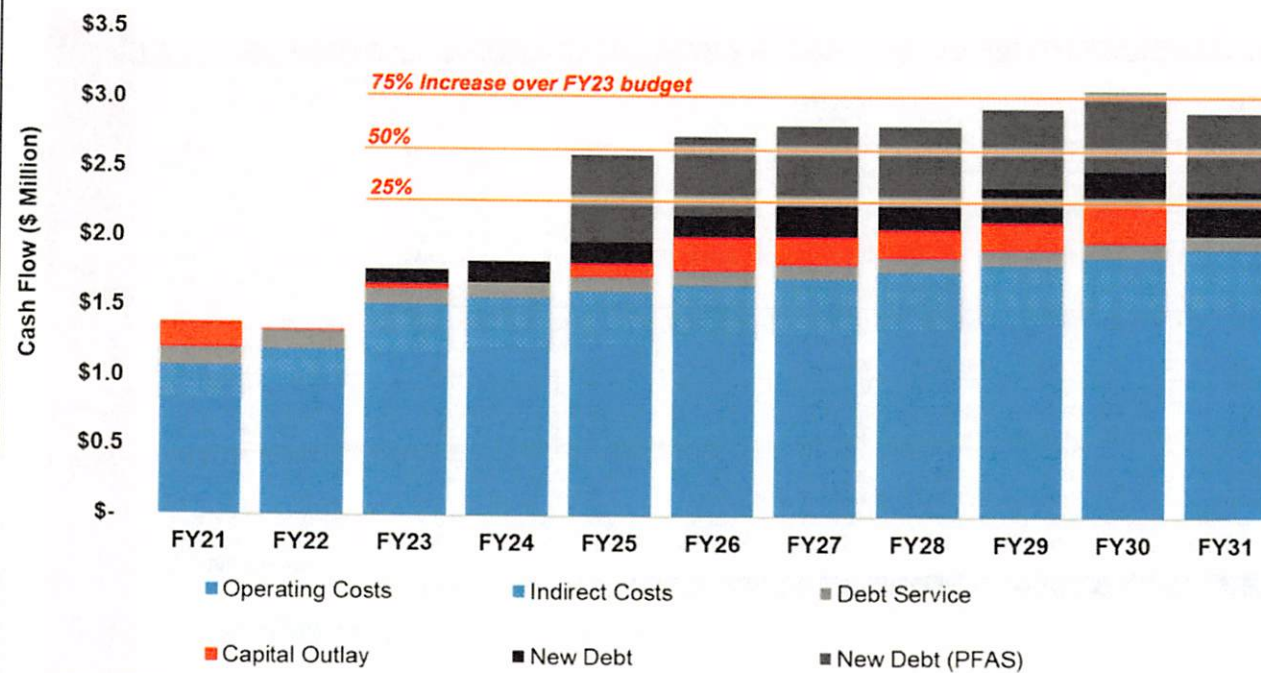
Town of
Townsend

Water Enterprise Financial Model

	Budget FY20	Budget FY21	Budget FY22	Projected FY23	Projected FY24	Projected FY25	Projected FY26
Operating Expenses							
Personal Services	\$363,990	\$395,316	\$455,200	\$575,503	\$592,768	\$610,551	\$628,868
Purchase Of Services	\$194,200	\$197,280	\$229,930	\$248,000	\$255,440	\$263,103	\$270,996
Supplies	\$75,500	\$98,125	\$143,618	\$218,700	\$225,261	\$232,019	\$238,979
Repair & Maint Bldg	\$25,000	\$50,000	\$50,000	\$50,000	\$51,500	\$53,045	\$54,636
Repair & Maint Equip	\$20,000	\$40,000	\$40,000	\$40,000	\$41,200	\$42,436	\$43,709
Repair & Maint Dist	\$27,000	\$30,000	\$0	\$0	\$0	\$0	\$0
Other Charges And Expenses	\$17,311	\$15,270	\$12,025	\$27,225	\$28,042	\$28,883	\$29,749
Repair & Maint SCADA	\$15,000	\$10,500	\$15,000	\$16,000	\$16,480	\$16,974	\$17,484
Subtotal	\$738,001	\$836,491	\$945,773	\$1,175,428	\$1,210,691	\$1,247,012	\$1,284,422
	▲ 13.4%	▲ 11.8%	▲ 11.6%	▲ 19.5%	▲ 2.9%	▲ 2.9%	▲ 2.9%
Indirects	\$233,070	\$234,125	\$243,944	\$343,281	\$353,579	\$364,187	\$375,112
	▲ 15.5%	▲ 0.5%	▲ 4.0%	▲ 28.9%	▲ 2.9%	▲ 2.9%	▲ 2.9%
Capital Expenses							
Capital Outlay	\$1,124,729	\$180,343	\$10,000	\$34,000	\$0	\$94,000	\$241,000
Articles	\$537,283	\$371,634	\$0				
Debt Service	\$127,258	\$127,257	\$134,000	\$103,957	\$103,957	\$103,957	\$103,957
New Debt Service (SRF)	\$0	\$0	\$0	\$0	\$0	\$635,352	\$572,238
New Debt Service	\$0	\$0	\$0	\$111,190	\$155,413	\$155,413	\$155,413
Subtotal	\$1,789,270	\$679,234	\$144,000	\$249,147	\$259,370	\$988,722	\$1,072,608
	▼ 4.2%	▼ 163.4%	▼ 371.7%	▲ 42.2%	▲ 3.9%	▲ 73.8%	▲ 7.6%
Capital Outlay (ARPA)*			\$0	\$425,000	\$0	\$0	\$0
* NOT included in Total Expenses							
TOTAL BUDGET	\$2,760,341	\$1,749,850	\$1,333,717	\$1,767,856	\$1,823,640	\$2,599,921	\$2,732,142
	▲ 2.2%	▼ 57.7%	▼ 31.2%	▲ 26.6%	▲ 3.1%	▲ 29.9%	▲ 4.6%

EXPENSES

Water Proforma - Proposed Rates

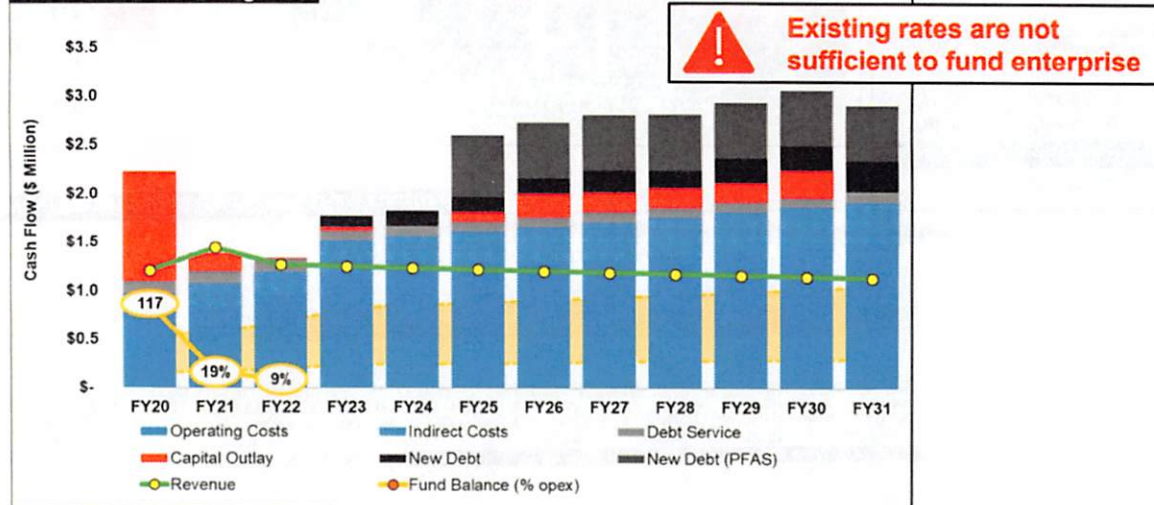


PROFORMA

Existing rates at projected usage

	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Revenue	<i>Rate Increase</i>						
Rate Revenue	\$ 926,206	\$ 1,231,920	\$ 1,153,730	\$ 1,138,043	\$ 1,122,654	\$ 1,107,558	\$ 1,092,748
Non Rate Revenue	\$ 280,340	\$ 206,127	\$ 107,000	\$ 107,000	\$ 107,000	\$ 107,000	\$ 107,000
Total Revenue	\$ 1,206,546	\$ 1,438,046	\$ 1,260,730	\$ 1,245,043	\$ 1,229,654	\$ 1,214,558	\$ 1,199,748
Change previous (Rate Revenue)		+23.3%	+6.3%	+1.4%	+1.4%	+1.3%	+1.3%
Net Revenue	\$ 1,206,546	\$ (311,803)	\$ (72,987)	\$ (522,813)	\$ (593,086)	\$ (1,385,363)	\$ (1,532,004)
Fund Balance	\$861,883	\$156,875	\$83,888	-\$438,925	-\$1,032,911	-\$2,418,274	-\$3,950,659
(as % OpEx)	117%	19%	9%	-37%	-85%	-194%	-308%

Water Proforma - Existing Rates

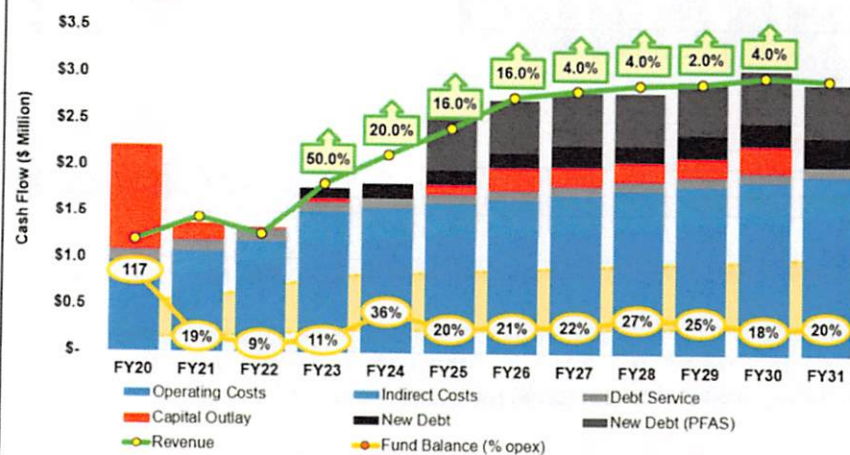


PROFORMA

Alternative A – Maintain Existing Rate Structure

	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Revenue							
Rate Revenue	\$ 926,206	\$ 1,231,920	\$ 1,153,730	\$ 1,707,065	\$ 2,020,777	\$ 2,312,580	\$ 2,646,723
Non Rate Revenue	\$ 280,340	\$ 206,127	\$ 107,000	\$ 107,000	\$ 107,000	\$ 107,000	\$ 107,000
Total Revenue	\$ 1,206,546	\$ 1,438,046	\$ 1,260,730	\$ 1,814,065	\$ 2,127,777	\$ 2,419,580	\$ 2,753,723
Delta previous (Rate Revenue)		Δ 33.0%	Δ 9.3%	Δ 48.0%	Δ 18.4%	Δ 13.4%	Δ 14.0%
Net Revenue	\$ 1,206,546	\$ (311,803)	\$ (72,987)	\$ 46,208	\$ 304,137	\$ (180,340)	\$ 21,581
Fund Balance	\$861,883	\$156,875	\$83,888	\$130,096	\$434,233	\$263,893	\$275,474
(as % OpEx)	117%	19%	9%	11%	36%	20%	21%

Water Proforma - Maintain Existing Rate Structure



Rates

Description	Type	Rate Increase	
		FY22	FY23
WATR	Base Charge	\$37.50	\$56.25
WATR	Usage \$/KG	\$5.36	\$8.04
TWD	Base Charge	\$37.50	\$56.25
TWD	Usage \$/HCF	\$4.32	\$6.48

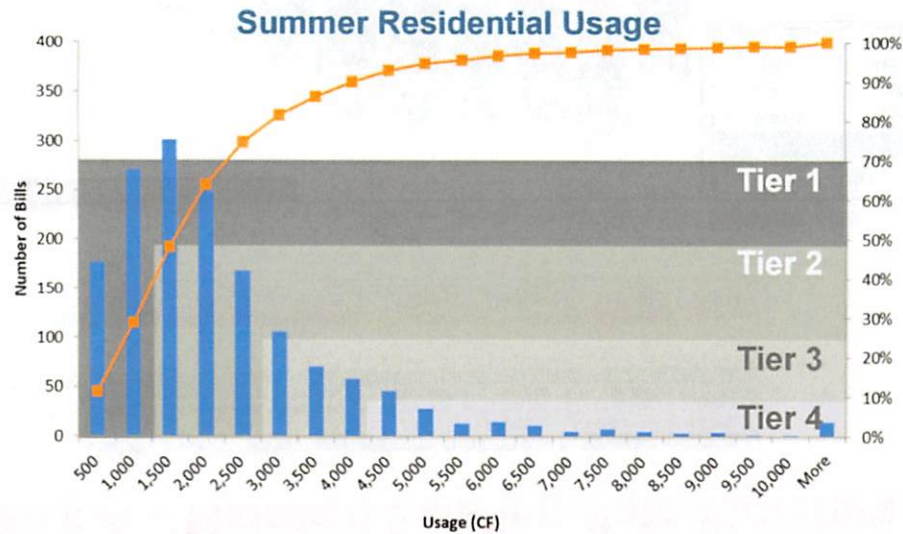
ALTERNATIVE B – TIERED RATES

Existing Rate Structure

- All customers pay same base charge
- All usage billed at same rate

Tiered Rate Structure

- All customers pay same base charge
- Usage cost goes up based upon volume used
 - Used to encourage water conservation
 - Based upon evaluation of usage patterns
 - Used by 65% of Water Systems in 2017 Tighe & Bond water rate survey



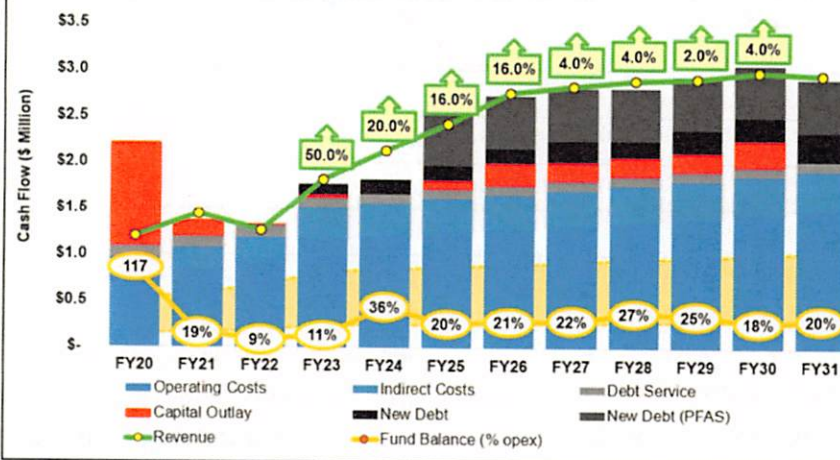
PROFORMA

Alternative A – Maintain Existing Rate Structure

	FY20	FY21	FY22	FY23	FY24	FY25	FY26
Revenue	Rate Increase						
Rate Revenue	\$ 926,206	\$ 1,231,920	\$ 1,153,730	\$ 1,707,065	\$ 2,020,777	\$ 2,312,580	\$ 2,646,723
Non Rate Revenue	\$ 280,340	\$ 206,127	\$ 107,000	\$ 107,000	\$ 107,000	\$ 107,000	\$ 107,000
Total Revenue	\$ 1,206,546	\$ 1,438,046	\$ 1,260,730	\$ 1,814,065	\$ 2,127,777	\$ 2,419,580	\$ 2,753,723
Delta previous (Rate Revenue)		▲ 31.0%	▼ 5.3%	▲ 48.0%	▲ 18.4%	▲ 14.4%	▲ 14.4%

Net Revenue	\$ 1,206,546	\$ (111,803)	\$ (72,987)	\$ 46,208	\$ 304,137	\$ (180,340)	\$ 21,581
Fund Balance	\$861,883	\$156,875	\$83,888	\$130,096	\$434,233	\$283,893	\$275,474
(as % OpEx)	117%	19%	9%	11%	36%	20%	21%

Water Proforma - Maintain Existing Rate Structure

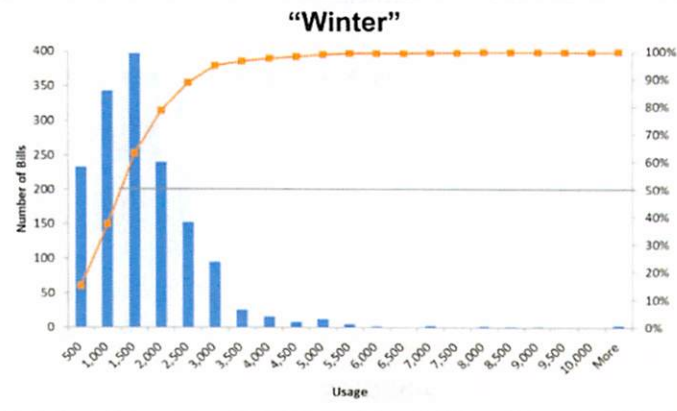
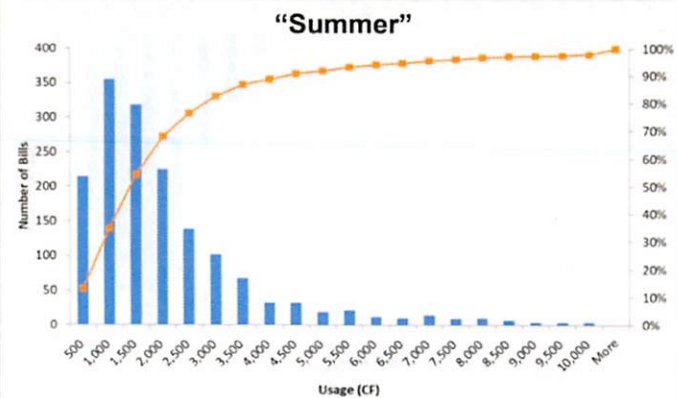


Rates

Description	Type	Rate Increase	
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WATR	Usage \$/KG	\$5.36	\$8.04
TWD	Base Charge	\$37.50	\$56.25
TWD	Usage \$/HCF	\$4.32	\$6.48

CUSTOMER COST IMPACTS

Residential – Low water users



User	Period	Usage (cf)	Water Bill / Rate Structure			
			Tiered Rates	Existing	Delta	S/W
1	"Summer"	1,500	\$122.76	\$153.45	\$ (30.69)	0.9
	"Winter"	1,600	\$130.54	\$159.93	\$ (29.39)	
2	"Summer"	1,500	\$122.76	\$153.45	\$ (30.69)	1.7
	"Winter"	900	\$91.66	\$114.57	\$ (22.91)	
3	"Summer"	1,500	\$122.76	\$153.45	\$ (30.69)	0.8
	"Winter"	1,800	\$146.09	\$172.89	\$ (26.80)	
4	"Summer"	1,500	\$122.76	\$153.45	\$ (30.69)	0.8
	"Winter"	1,800	\$146.09	\$172.89	\$ (26.80)	

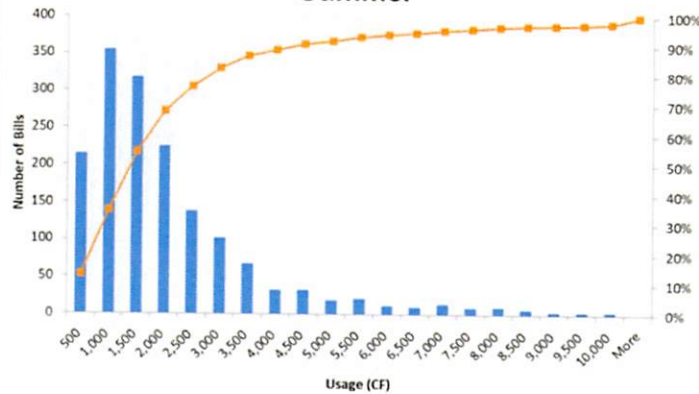
Example:



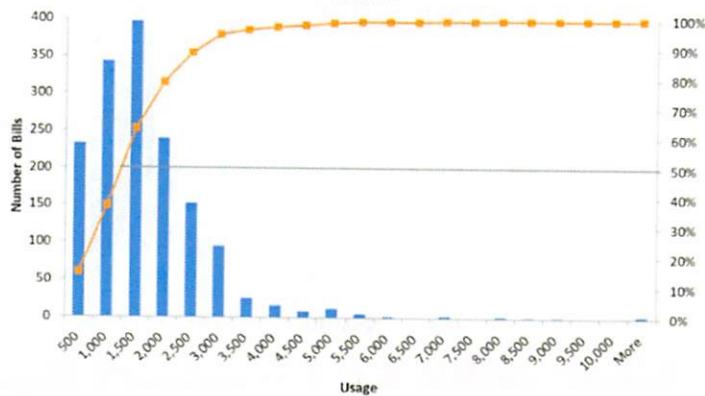
2 People each using 65 Gallons per day
Minimal Discretionary Usage

Residential – Moderate water users

"Summer"



"Winter"



Water Bill / Rate Structure

User	Period	Usage (cf)	Tiered Rates	Existing	Delta	S/W
1	"Summer"	3,100	\$249.77	\$257.13	\$ (7.36)	1.1
	"Winter"	2,900	\$231.62	\$244.17	\$ (12.55)	
2	"Summer"	3,100	\$249.77	\$257.13	\$ (7.36)	1.2
	"Winter"	2,500	\$200.52	\$218.25	\$ (17.73)	
3	"Summer"	3,100	\$249.77	\$257.13	\$ (7.36)	1.2
	"Winter"	2,500	\$200.52	\$218.25	\$ (17.73)	
4	"Summer"	3,100	\$249.77	\$257.13	\$ (7.36)	1.1
	"Winter"	2,700	\$216.07	\$231.21	\$ (15.14)	

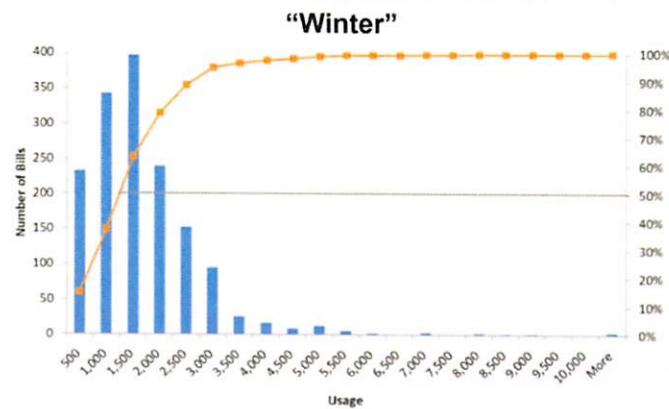
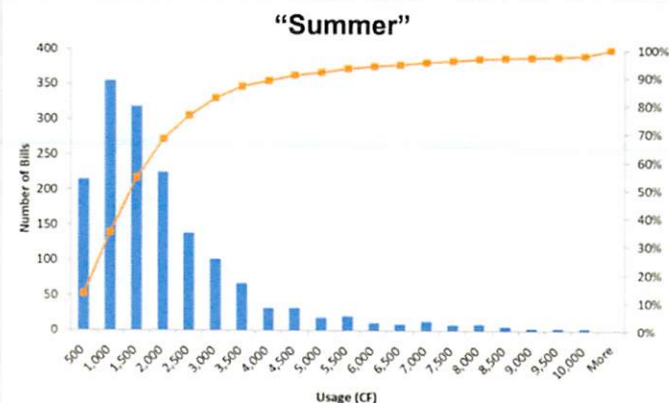
Example:



4 People each using 65 Gallons per day
Minimal Discretionary Usage

CUSTOMER COST IMPACTS

Residential – High water users



User	Period	Usage (cf)	Water Bill / Rate Structure			
			Tiered Rates	Existing	Delta	S/W
1	"Summer"	41,800	\$5,229.00	\$2,764.89	\$ 2,464	13.5
	"Winter"	3,100	\$249.77	\$257.13	\$ (7.36)	
2	"Summer"	34,417	\$4,272.16	\$2,286.47	\$ 1,986	25.4
	"Winter"	1,356	\$115.30	\$144.12	\$ (28.82)	
3	"Summer"	17,876	\$1,940.17	\$1,270.86	\$ 669	2.0
	"Winter"	9,036	\$883.36	\$698.03	\$ 185.33	
4	"Summer"	17,456	\$2,074.02	\$1,187.40	\$ 887	3.7
	"Winter"	4,667	\$416.56	\$358.67	\$ 57.89	

1.6

To: Water Commissioner, Todd Melanson; Water Superintendent, David Vigeant

From: Conrad V Baranowski, 13 Proctor Rd

Subject: Flush Water Heater recommended by T. Melanson

Water heater was flushed on September 20, 2022. The result was there were some minor manganese in the water and almost zero sediment. The 5 Micron filter up front did its job of preventing any black silt and brown vegetation passing through the line.

Thanks for scrubbing the water tank on Highland St. It help.

Conrad V Baranowski

To: White Commander Todd Melanson

WATER RATES QUESTIONS

TM was asked to further explain slide fifteen in his presentation?

TM explained that it was a summary of all the information Tighe & Bond had collected. It shows the summer usage and the percent of water bills that would potentially be affected. Only 5-10% of the large water user would be impacted by the new tiered rates and will depend on their usage. He also stated that some water takers used more than 17,000 cubic feet or 135,00 gallons for the summer quarter.

What 10% percent of users will see what percent increase in their water bill?

TM responded that it would depend on the customers usage. There is no way to gauge what a person uses.

Some people have a 300% increase in their bill?

TM explained that everyone is in control of their water bill. DEP designed these rates to promote water conservation. Furthermore, we were in a level three drought, according to the guidelines we must adhere to what is in our permit and with a level three drought there should have been no outdoor watering.

I received the letter sent to us indicating that the new rates were going up and I found them misleading and deceptive.

We do not bill in gallons we bill in cubic ft. we have a few meters that still read in gallons, but we are in the process of updating them. We must report two things to the state in water conservation. One is to average 65 gallons per person, per day or we are out of compliance. The other one is unaccounted for water. The state allows us a 10% leeway, or we are out of compliance. The water department was at 33%. We were mandated to begin to change out the water meter to run more efficiently. TM explained that meter always slowdown overtime and do not accurately meter the water correctly.

Could we provide the conversion rate again?

TM explained that the rate is available on the towns website. 1-cubic ft=7.48gallons. We bill in 100 cubic feet= 748 gallons.

A resident stated she feels it would have been clearer to give an example of what a bill would have calculated at last year compared to the new rates this year. Also, what percent of customers will be affected.

TM explained that we did change billing systems and we can always do better. Will ask the water department to make sure the cubic feet or gallons will show. TM stated he understands, and we can always do better and the presentation on the website does calculate bills. TM reported we are paying for the plant on a bond debt fee which will impact the community low to moderate with this rate structure it should not impact 90% of our customers.

When will the forgives on our water bills be determined?

This will be determined when the SRF is completed, and the project is finished. The increase on the bills will never go down but it may not increase. The staff will try to accommodate her needs by reaching out to Vadar for information.

The customer would like to see the data as to how many customers bills went up by 20, 30, 40 etc. percent. A comparison from old rates to new rates for the October 2022 water bills.

Who votes on the rate structure? And DEP excessive water usage is arbitrary. And by going to a tiered structure, it unfair for all.

TM explained that the Board of Water Commissioners is an independently elected board we have sole jurisdiction over the water department except for the final signing of contracts which is signed by the Board of Selectmen.

In applying for a SRF loan we needed to be a tiered system. Which is an accepted practice. And anything above your basic needs is deemed excessive. Any water used outside the house is labeled unnecessary by DEP. The whole point of a tiered system is to change behavior by attaching a monetary consequence.

A customer shared a presentation of tiered pricing (attached)

A customer shared that he is in the 90% that did not have a significant increase in his water bill. He also noted that electric companies throughout the country are now using tiered rates. His question is if we are in line with other water department rates?

TM reported that Pepperell has a similar system and their rates are comparable if not higher. If you compare like to like utilities which we are comparable to systems which are similar in size and complexity.

A customer reported his current water bill was \$2,577.93. He called the department and had his meter checked for accuracy and use the eye on water app to use as a tool. The customer cannot fathom how he and his wife used that much water over a period when he typically averages \$200.00 per quarter. The customer requests that his bill be adjusted to reflect the first tier.

TM stated he will take it under consideration and that he should come back next month's Board of Water Commissioners meeting. He should also call a plumber.



TOWNSEND WATER DEPARTMENT
540 Main Street West Townsend, Massachusetts 01474

Todd Melanson, *Chairman*

, *Vice Chairman*

Christopher Jones, *Clerk*

David Vigeant
Water Superintendent

(978) 597-2212
water@townsendwater.org

Water Rate Increase

Effective 1 March 2022
For the July 2022 Billing

Dear Customer,

At the instruction of MassDEP, the Townsend Water Department is required to build a Water Treatment Plant at the Harbor Trace Well Site because of elevated levels of PFAS. The treatment plant will treat the water from the Harbor Trace Well, as well as the 2 wells in Timberlee Park. The Water Department has hired Tighe and Bond Consulting Engineers to study the PFAS problem and come up with a solution, which is to build the Treatment Plant.

A rate study was conducted by Tighe and Bond to develop an economic plan to implement the building of the Water Treatment Plant. A rate increase was advised by Tighe and Bond and approved by the Board of Water Commissioners to manage the costs associated with building the treatment plant. The Water Treatment Plant should be completed in approximately 2 years. The Water Department continues to care deeply about the quality of the water it supplies to you and is continually seeking the best ways to provide the highest quality water to all customers.

Please see the table below regarding the new rates.

Water Rates:	Unit Charge: \$45.00
	Residential
	Tier One: \$5.18 per unit* 0-15 *A unit is 100 cubic feet
	Tier Two: \$7.78 per unit* 15.001-30
	Tier Three \$10.37 per unit* 30.001-45
	Tier Four \$12.96 per unit* 45.001 and up
	Commercial/Industrial
	Tier One: \$5.18 per unit* 0-50
	Tier Two: \$7.78 per unit* 50.001 and up

Thank You,

David W Vigeant

Superintendent

Townsend Water Department

Townsend Water Department Billing

Water Rates: Unit Charge: \$45.00 Residential *A unit is 100 cubic feet (748 Gallons)

Residential

Tier One: \$5.18 per unit* 0-15 (0 Gallons - 11,220 Gallons)

Tier Two: \$7.78 per unit* 15.001-30 (11,220.748 Gallons – 22,440 Gallons)

Tier Three \$10.37 per unit* 30.001-45 (22,440.748 Gallons – 33,660 Gallons)

Tier Four \$12.96 per unit* 45.001 and up (33,660.748 Gallons and up)

Commercial/Industrial

Tier One: \$5.18 per unit* 0-50 (0 Gallons- 37,400 Gallons)

Tier Two: \$7.78 per unit* 50.001 and up (37,400.748 Gallons and up)

graton

Fire Protection \$5.21 per quarter

Service Charge \$13.00 per quarter per meter

Effective January 1, 2022

Manganese Capital Charge \$35.00

Domestic Water Meter Rates

Effective January 1, 2022

Tier	Units Charged	Price per Unit
1	1-15	\$3.97
2	16-30	\$5.26
3	31-45	\$6.03
4	Over 45	\$6.92

Irrigation Water Meter Rates

Effective January 1, 2022

Groton

Tier	Units Charged	Price per Unit
1	1-15	\$5.50
2	16-30	\$6.31
3	30-45	\$7.24
4	Over 45	\$8.32
Capital Plant Upgrade Charge:		\$15.00

Water and Sewer Rate Schedule and Fees Town of
Ayer, Massachusetts
Effective July 1, 2022 (changes voted 3-15-22)

Water and Sewer Rates (Rates are per 100 cubic feet)

Residential-billed 4 times per year	Water Rate	Sewer Rate
Minimum	\$10.00	\$10.00
0-3000 C.F.	\$3.01	\$8.78
3001-6000 C.F.	\$3.72	\$10.06
>6000 C.F.	\$4.42	\$11.44

**Outdoor Water Use - Residential
billed 4 times per year**

Minimum	\$10.00
0-3000 C.F.	\$4.42
3001-6000 C.F.	\$4.42
>6000 C.F.	\$4.42

Commercial- Billed 4 times per year

	Water Rate	Sewer Rate
Minimum	\$10.00	\$10.00
0 to 3000 CF	\$3.01	\$8.78
3001 to 6000 CF	\$3.72	\$10.06
> 6,000 CF	\$4.42	\$11.44

Water Fees

Connection Fee - 1" Service	\$4,500.00 per ERU (\$1500.00 Per Bedroom)
Connection Fee - 1 -1 /2" Service	\$4,500.00 per ERU (\$1500.00 Per Bedroom)
Connection Fee - 2" Service	\$4,500.00 per ERU (\$1500.00 Per Bedroom)
Connection Fee - 3" Service	\$10,000.00
Connection Fee - 4" Service	\$15,500.00
Connection Fee - 6" Service	\$23,500.00
Connection Fee - 8" Service	\$35,000.00
Connection - 10" Service	\$35,000.00
Connection - 12" Service	\$35,000.00
Connection Fee – Second Meter	\$1,350.00

FEES:**Water Rates**

\$69.00/quarter 600 cubic foot minimum Water usage based on past and present meter readings using more than the minimum are charged fees based on the rates listed below.

601 cu.ft – 3000 cu.ft \$4.80 per 100 cu. ft. 3001 - unlimited \$5.60 per 100 cu. ft. Meters are read around three weeks prior to the actual billing. 1 cu.ft of water equals 7.48 gallons of water. 600 cu.ft. of water equals a total of 4488 gallons of water. Above information is for a single unit building. Depending on how many units you have in your building will determine how many minimum charges you have. If you have 2 units, your minimum charge will be \$126.00 per quarter and you will receive 1200 cu.ft. of water per quarter. Other Miscellaneous Fees

Water Turn On \$50.00 Water Turn Off \$0.00 Valve Change (¾") \$95.00 Final Readings \$25.00 Fire Flow Tests \$150.00 Returned Check S/C \$30.00

Fire Sprinkler Charges

Commercial \$50.00/quarter Residential \$5.00/quarter Backflow Device Tests \$50.00 \$25.00 per additional test at same location Labor Rate for District Employees



TOWN OF PEPPERELL

DPW - WATER DIVISION

Fiscal Year 2023 Water Usage Rates and Fees

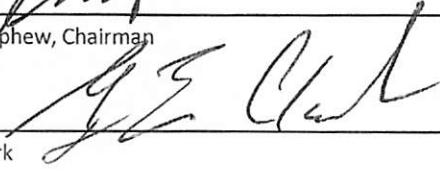
	Usage (cf)	Rate
Base Charge per Unit* per Quarter		\$ 30.00
Tier 1 (per cubic foot)	0 - 800	\$ 0.0500
Tier 2 (per cubic foot)	801 - 2300	\$ 0.0740
Tier 3 (per cubic foot)	2301 - 5300	\$ 0.1000
Tier 4 (per cubic foot)	5301+	\$ 0.1500

Effective Date 8/1/22

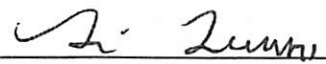
*unit - as derived from Town Assessor's database. A unit may be commercial, industrial, or residential in nature. No consumption is provided within the Base Charge.


Thomas Nephew, Chairman

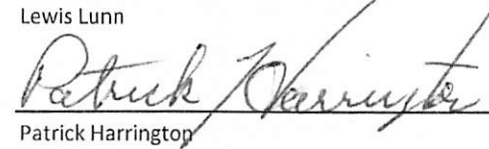
28-Jul-2022
Date


George Clark

Date


Lewis Lunn

7-28-22
Date


Patrick Harrington

7/28/22
Date

Joe Mercado

Date

BILLING

Billing Frequency

Effective January 2012 residential water bills are now billed monthly.

Explanation of Charges

The bills include both water and sewer charges. Some accounts only have water and will only be billed for water usage. The sewer charges on your water/sewer bill are based on your water usage. No bills are estimated. Every meter in the city is read either by the radio read technology or by a meter reader.

Current Water Rates

The current water rate is \$4.20 per 100 cubic feet/748 gallons

The rate for the minimum is based on the meter size is as follows:

5/8", 3/4", 1" meter- \$7.09

1.5" meter- \$22.31

2" meter- \$33.45

3" meter- \$63.70

4" meter- \$97.67

6" meter- \$192.67

8" meter- \$306.24

Past Due Payments

All payments must be received by the due date.

Bills that are paid past the due date will be assessed a \$5 late fee for both water and sewer (\$10 total). Daily interest will accrue at a rate of 14% per annum.

Failure of owner to receive a bill does not relieve him/her from obligation of its payment not consequences of non payment.

Any past due amount not paid by will become a lien on your real estate tax bill and will

ATTN

HOW OFTEN WILL I RECEIVE A WATER BILL AND HOW IS IT CALCULATED?

The water meters throughout the system are billed four(4) times a year. The bills are issued the first week of January, April, July and October. They are calculated and billed on the following basis:

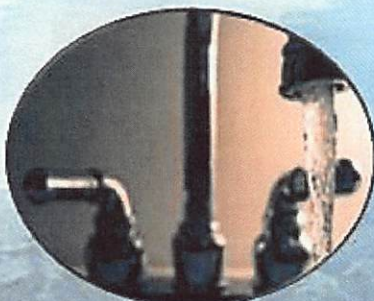
Inclining Block Rates in cubic feet	January Bill Winter Rate	April Bill Winter Rate	July Bill Summer Rate	October Bill Summer Rate
Between 0 and 300	0.000	0.000	0.000	0.000
If usage is greater than 300				
Between 0 and 1,500	.040	.040	.048	.048
Between 1,501 and 3,000	.052	.052	.060	.060
Between 3,001 and 4,500	.063	.063	.071	.071
Between 4,501 and 6,000	.075	.075	.083	.083
Greater than 6,000	.087	.087	.095	.095
Municipal Rate	.052	.052	.052	.052
Service charge per Unit	\$15.00	\$15.00	\$15.00	\$15.00
Debt Fee Charge per Unit	\$60.00	\$60.00	\$60.00	\$60.00

*Posted March
2022
2.2*

Water Shortages and Discolored Water

As we head into this summer and demand is at it the highest levels the water department is working hard to maintain the water system. We have had to shut down Harbor Trace Well last August 2021 due to high levels of PFAS in the water and will not be turned back on till the Treatment Plant is completed in the Spring of 2024. This Treatment Plant will not only service Harbor Trace but Witches Brooks Wells. Till that time our current wells are being over worked which causes discolored water at times especially from 6am to 9am and 5pm and 9pm where water demand is the greatest. Some help is on the way with the new Main Street well going on-line this June 2022. This well will produce an additional 500,000 gallons per day of which will off-set the 1,000,000 gallons a day lost from losing Harbor Trace and take some of the strain off the other wells. Especially hard hit is the Witches Brook Well number 2.

MASSACHUSETTS WATER CONSERVATION STANDARDS



The Commonwealth of Massachusetts
EXECUTIVE OFFICE of ENERGY AND
ENVIRONMENTAL AFFAIRS
and
WATER RESOURCES COMMISSION
July 2018



there is an incentive for the leak to be fixed. Other strategies for suppliers include a policy for service replacement by the supplier, especially as part of a water main replacement, and the inclusion of service connections in leak detection surveys.

4. **Leak Detection Services** – Water suppliers should consider pooling resources to procure leak detection services, similar to the Massachusetts Water Resources Authority program that procures a leak detection consultant for a three-year period and makes the consultant services available to customer communities on a task order basis. The three-year procurement results in lower pricing because it addresses a greater length of water main (about 5,000 miles) than would be procured by any one community (typically 100 to 200 miles).
5. **Automated Leak Detection** – Water suppliers should consider investing in an automated remote leak detection system. Leak listening devices may be installed permanently or temporarily throughout a system or just in problem areas. Noise information is logged and then automatically downloaded and processed. Alerts may be generated if there is a suspected leak. In addition, there are automated leak detection devices that can be installed on customer meters. These devices are able to listen for leaks on customer services and the near portion of the main.
6. **Pressure Reduction** – The Massachusetts Plumbing Code (248 CMR 10.14(g) Excessive Water Pressure) requires that a pressure-reducing valve be installed on the water service connection to a building when the supplied water pressure is 80 pounds per square inch (psi) or greater. Pressures of 80 psi or greater can damage building plumbing systems and fixtures and cause higher leakage and flow rates. Generally, service areas that can exceed 80 psi are found at low points or near water pumping stations. A licensed plumber can assess the need for, install, and adjust pressure-reducing valves thereby protecting a property owner's plumbing and conserving water. Water suppliers should evaluate their systems to determine where sustained system pressures may exceed 80 psi in order to respond to user inquiries and to work with plumbing inspectors and property owners to make them aware of the potential need of a pressure-reducing valve.
7. **Establish penalties and/or fines for stealing water** – Those with authority to set and enforce penalties for theft of public water such as municipal Water Commissioners, Town Selectmen, and public water suppliers should develop a new bylaw/ordinance or amend existing bylaws/ordinances to establish a penalty, by providing authority to levy a significant fine and/or penalty, that may be enforced criminally or otherwise. Private water suppliers are encouraged to work with those with authority to develop bylaws and ordinances for water theft. Massachusetts General Law ([MGL Ch. 165, Sec. 11](#)), establishes penalties for water theft consisting of triple the amount of damages or \$1,000, whichever is greater, or imprisonment, or both¹⁰.

2.3 Resources

- U.S. Environmental Protection Agency. 2013 "Water Audits and Water Loss Control for Public Water Systems," EPA 816-F-13-002
<https://www.epa.gov/dwcapacity/water-efficiency-and-conservation-resources-small-drinking-water-systems>

¹⁰ [MGL Chapter 165, Section 11](#): Intentional injury to or interference with meter; penalty

4.2 Recommendations

1. **Use Price Signals to Reduce Inefficient and Nonessential Use.** Communities and water suppliers should adopt rate structures that encourage efficiency in essential¹³ water use and reduction of nonessential¹⁴ water use.

The most frequently used approach to encourage efficiency targets inefficient and nonessential uses with higher per-unit charges. These types of structure are referred to as *conservation-oriented rates*, and they can be customized in a number of ways to fit a particular community and system and to be compatible with full-cost recovery. To be effective, a conservation-oriented rate should demonstrate: a) a mechanism that reasonably distinguishes water being used efficiently for essential purposes from water being used excessively, for discretionary purposes, or at times that place a particularly high burden on the system or environment; and b) a meaningful increase in unit price between the former and the latter. Examples – which can be combined and are not mutually exclusive – include, but are not limited to:

- Seasonal Rates – unit charges increase to reflect seasonal peak demands and/or seasonal source stressors, such as naturally low flows
- Tiered Rates – unit charges increase as a customer’s usage crosses set volume thresholds within a billing period

Note that simple increasing blocks, in which tiers are applied identically across a customer base, can promote conservation if structured appropriately and applied to a fairly homogeneous customer base. More tailored or customized tiers account for differences in customer type, such as single-family vs. multi-family units, household size (*budget-based tiers*), or other distinguishing factors. Such rates are more data and resource-intensive¹⁵, but have been shown to be more effective at conservation, and generally more equitable, than simple increasing block rates.¹⁶

- Drought or Scarcity Rates (unit charges increase based on drought triggers or other specific indicators of source stress, such as deteriorating water quality or decline in reservoir levels caused by increasing demands).

An alternative way to encourage efficiency in water use is to set uniformly high water rates. Such an approach is conceptually and administratively simple; however, it may present affordability concerns for customers even when they are using water efficiently.

2. **Establish an Enterprise Fund.** Municipalities that operate as public water suppliers should establish an enterprise fund in accordance with Massachusetts General Law [Chapter 44, Section 53F 1/2](#), or equivalent, to segregate water supply accounting from the municipal general fund and other governmental activities. Such a fund allows the water supplier to account for the total costs of operating

¹³ Essential uses are defined by MassDEP as uses required: a) for health or safety reasons; b) by regulation; c) for the production of food and fiber; d) for the maintenance of livestock; or e) to meet the core functions of a business.

¹⁴ Nonessential uses are those *other than* essential uses.

¹⁵ To reduce the administrative burden of determining every household size, some suppliers implement budget based tiers by assigning tiers to all residential customers that presume a given household size (such as 4 people) and allow larger households to apply for adjusted tiers based on actual household size.

¹⁶ Wang et al., American Water Works Association (2005). *Water Conservation-Oriented Rates: Strategies to Extend Supply, Promote Equity, and Meet Minimum Flow Levels*.

- **Bill monthly (or at a minimum bi-monthly).** This is particularly important in encouraging improved efficiencies or reductions in landscape irrigation and other seasonal discretionary uses and in identifying and repairing leaks in a timely fashion.
- **Indicate the rate structure on the water bill.** This allows customers to better understand the monetary implication of using more or less water, especially when their water use is near the threshold between pricing tiers.
- **Use gallons as a billing unit.** This assists customers in visualizing their usage volumes in familiar terms and making adjustments that may meaningfully impact their rates. Consider providing a table to help customers compare their household water use to the state standard of 65 gallons per person per day (see Appendix C).
- **Present information to help customers chart trends in their individual water use and compare their use to others in their customer class.** If possible, include sufficient historic use to allow customers to compare their current use to the previous year's corresponding time block. Where Advanced Metering Infrastructure allows, consider a secure website where customers can find and track more detailed information on their water use.
- **Include educational components in bills.** Billing is an opportunity to provide customers tips on how to conserve water; inform them of any available rebate or home water audit programs; and help them better understand aspects of the utility such as key infrastructure components, large capital projects, and the costs associated with providing reliable service. Consider partnering with environmental education groups that may have well-developed water conservation tips and resources.

Note that automatic bill payment systems can provide substantial convenience for customers, but may reduce customers' exposure to targeted price signals, key messages about their water use, and educational materials. Suppliers who offer the convenience of auto-pay billing should consider supplemental communications to ensure delivery of information specific to customers' usage and related educational messages.

6. **Engage in Positive Messaging.** As the pricing and rate approaches outlined above may represent a departure from what customers have become accustomed to, suppliers, community leaders, and state policy makers are encouraged to proactively engage in messaging campaigns to help rate payers:
 - Recognize the value of reliable access to clean water for public health, safety, and the economy;
 - Understand the drivers of water utility costs (which may involve emphasizing that utilities maintain a safe and reliable water supply *system* in addition to delivering a *commodity*);
 - Appreciate the environmental and financial benefits of water conservation;
 - Appreciate the importance of long-range planning for water supply sustainability.

Consider partnering with environmental education and local watershed groups on messaging related to the environmental benefits of water conservation. Chapter 10, Public Education and Outreach, includes some useful strategies for communicating with the public.

7. **Engage Rate Payers in Rate Making.** Public conversations and engagement can make a critical difference in setting effective water rates that rate payers and community decision-makers will understand and support, especially if substantial rate restructuring is needed. The resources listed at the end of the chapter provide some useful guidance for planning and structuring public engagement. Additional useful suggestions can be found in Chapter 10, Public Education and Outreach. Some key points of guidance include:

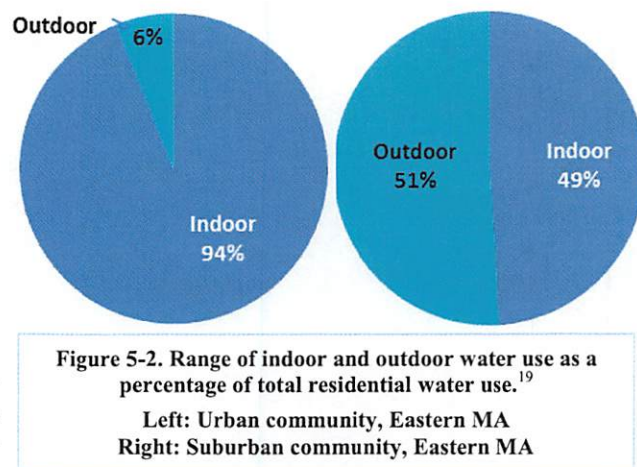
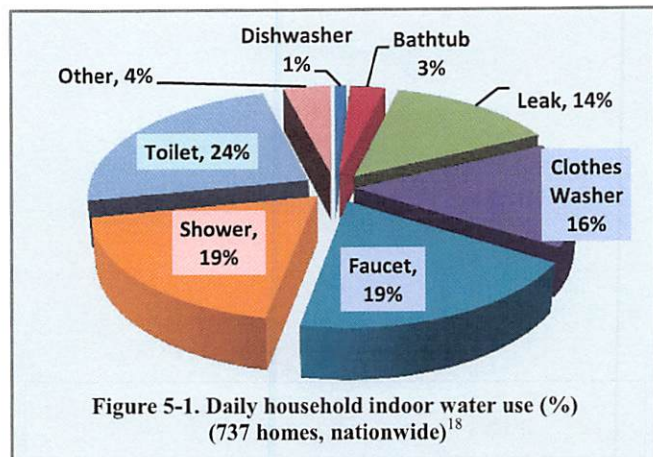
5.0 Residential Water Use

This chapter applies primarily to:

- Residential consumers
- Water suppliers
- Municipal boards and departments
- State facilities personnel
- State policy and regulatory entities

Over sixty-seven percent of the metered public water supply in Massachusetts is used for residential purposes.¹⁷ Therefore, any improvements in residential water efficiency will result in significant water savings.

Residential water use consists of **both indoor and outdoor water use**. **Indoor use** typically includes toilets, clothes washers, showers, faucets, dishwashers, and other domestic uses including cleaning and cooking (Figure 5-1).¹⁸ **Outdoor water use** includes irrigation of lawns and gardens, filling and refilling swimming pools, car washing, and other cleaning. The percentage of total residential use that outdoor use represents varies widely across Massachusetts communities (Figure 5-2)¹⁹ and is influenced by many factors. Standards and recommendations specific to outdoor use are presented in Chapter 9. Leakage within the consumer-owned portion of the water system can be an additional and sometimes substantial component of indoor and outdoor water use.



Higher Efficiency through WaterSense. In order to better educate the public and promote the use of water-efficient fixtures, the Massachusetts Water Resources Commission has partnered with the Environmental Protection Agency's WaterSense program and recommends that others do too. WaterSense-labeled products and services are certified to meet the program's rigorous water efficiency, performance, and testing requirements. Certified products must be at least **twenty percent more efficient** than standard products, while offering equivalent or superior performance.

¹⁷ Based on MassDEP analysis of Annual Statistical Report data for 2011 and 2012 on water metered through service connections.

¹⁸ DeOreo, W., P. Mayer, B. Dziegielewski, and J. Kiefer. 2016. Residential end uses of water, version 2. Denver: Water Research Foundation.

¹⁹ Based on MassDEP analysis of summer-to-winter water-use ratios from the 2016 Annual Statistical Report data for two communities in eastern Massachusetts. Communities were chosen to reflect the low end and high end of the range of summer-to-winter water use.

9.0 Outdoor Water Use

This chapter applies to all water users.

It is the policy of the Commonwealth that water used for maintaining landscapes and lawns should not be used at the expense of public health and safety or the environment. Water use for maintaining landscapes and lawns should be minimized through the implementation of sound water conservation and water-efficiency practices.

Sources of inefficiency in outdoor water use include applying more water than is needed to maintain healthy turf and plants and watering in the middle of the day, when evaporation rates are highest. In addition to wasting water, inefficient watering practices can lead to runoff of nutrients and pollutants, contributing to water quality problems.

Spikes in water demand may lead to water delivery problems and potential water quality, water pressure, or public safety concerns, such as diminished fire-fighting capabilities. Spikes in summer water use can also affect the amount of water in streams and wetlands, potentially creating stress on the local environment and the wildlife it supports³⁸. Large peak demands may also compel managers of water systems to find new sources or increase the capacity of water systems, resulting in potential environmental impacts and higher costs for water system customers.

The standards and recommendations in this section provide guidance to all water users on practices that will reduce waste and improve efficiency in the use of water for lawns, landscapes, and other outdoor uses.

9.1 Standards

All Water Users

1. **Minimize lawn or landscape water needs by following established water-smart principles** (see sidebar). In most years, Massachusetts receives enough rainfall to naturally supply the water needs of a healthy, mature lawn or landscape, designed to be drought-resistant, *without the need for supplemental watering*.

Water-Smart Principles

◆ **Maintain healthy soils.**

Healthy soils retain water, cycle nutrients, minimize runoff, and absorb pollutants. For healthy turf, provide a minimum 6-inch depth.

◆ **Choose native plants or plants and turf that need less water.**

Once established, native plants suited to the Massachusetts climate require little water beyond normal rainfall.

◆ **Group plants with similar water needs.**

This reduces water use by targeting water to each zone's specific needs.

◆ **Be selective when adding turf areas.**

Turfgrass receives the highest percentage of irrigation in traditional landscaping. Plant turfgrass only where it has a practical function.

◆ **Water wisely.**

Avoid watering during the heat of the day (9:00 AM to 5:00 PM). If using an irrigation system, make regular adjustments to ensure efficiency.

◆ **Use mulch.**

Use mulch around shrubs and garden plants to help reduce evaporation, inhibit weed growth, moderate soil temperature, and prevent erosion.

◆ **Provide appropriate maintenance.**

Allow turfgrass to reach 2 to 3 inches before mowing. Leave grass clippings on the lawn to return nutrients to the soil. Prune in the dormant season.

Adapted from [Water-Smart Landscapes Start with WaterSense](#) (EPA WaterSense) and [Water-Wise Landscaping & Watering Guide](#) (from [WaterUseItWisely](#)).

³⁸ Barlow, P.M., and Leake, S.A., 2012, Streamflow depletion by wells—Understanding and managing the effects of groundwater pumping on streamflow: U.S. Geological Survey Circular 1376, 84 p. (available at <https://pubs.usgs.gov/circ/1376/>).

3. **Maximize efficiency of irrigation.** If conditions warrant use of an irrigation system, use best management practices (see Appendix I) and the best available technology along with regular system evaluation to ensure maximum efficiency of water use.³⁹ If using a manual sprinkler or hand-held device, follow best management practices to maximize water efficiency (see Appendix I).
4. **During a drought or extended period of dryness,** all users should follow state guidance for limiting nonessential⁴⁰ outdoor water use during droughts (see Appendix J or guidance in the most recent *Massachusetts Drought Management Plan*). Be aware that turf may become dormant (turning brown) during dry periods, but should green up again with the return of wetter conditions (see Figure 9-1).⁴¹



Figure 9-1. Left: Lawn in drought dormancy in July. Right: The same lawn, recovered by October. (Photos courtesy of P. Lauenstein, Massachusetts)

Municipal Governments and Water Districts

5. **Adopt and implement a water-use restriction bylaw, ordinance, or regulation,** which applies to both municipal water customers and, where possible, those with private wells. This should limit the number of watering days per week and hours per day. To protect public health and the environment, this bylaw, ordinance or regulation should outline a set of increasingly stringent restrictions on nonessential outdoor water use, with associated triggers based on the specifics of the community's water supply. Triggers can be calendar based (such as May 1 through September 30), or identify water supply and environmental indicators (such as streamflow or reservoir levels). Drought triggers with increasingly stringent restrictions, depending on drought severity, should also be included. **During a state-declared drought, follow state guidance on watering restrictions.**⁴² The bylaw, ordinance, or regulation should provide the community government or designee (e.g., water supplier, police department) with the ability to implement mandatory water-use restrictions and empower authorities to enforce these rules through increasingly stringent citations and penalties, culminating with potential shut-offs. See Appendix B for model water-use restriction bylaws/ordinances and links to sample bylaws/ordinances.

³⁹ Massachusetts law requires system interruption devices for newly installed or renovated irrigation systems and inspection every three years by a certified irrigation contractor ([MGL ch.21 sec. 67](#)). For best available technology, see Smart Water Application Technologies (SWAT), including EPA WaterSense-labeled irrigation products (available at <https://www.epa.gov/watersense/watersense-products>).

⁴⁰ Essential uses are defined by MassDEP as uses required: a) for health or safety reasons; b) by regulation; c) for the production of food and fiber; d) for the maintenance of livestock; or e) to meet the core functions of a business. Nonessential uses are those *other than* essential uses. Water used for agricultural operations (as defined in MGL Chapter 128 section 1A) is considered an essential use. However, a Water Management Act permit may still be required if withdrawals exceed certain thresholds. Agricultural operations should confirm permitting requirements with MassDEP.

⁴¹ For details on managing turf to minimize water input, maximize water-use efficiency, and manage drought dormancy, see section 6 of *Best Management Practices for Lawn and Landscape Turf* (available from the UMass Extension Turf Program at <https://ag.umass.edu/turf/publications-resources/best-management-practices>).

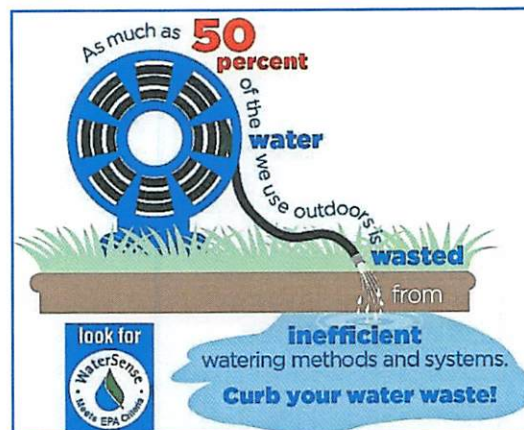
⁴² See Appendix J for statewide guidance on watering restrictions at different levels of drought.

I) Guidelines for Efficient Irrigation

Common-Sense Guidelines for Watering Landscapes

For hand watering, manual sprinklers, or more complex irrigation systems, observe these five common-sense principles:

1. Water only when needed. Rainfall in Massachusetts generally provides enough water for landscape needs.
2. Water early in the day. Do not water between 9:00 AM and 5:00 PM.
3. Water deeply and less often to encourage deep root growth.
4. Know the water needs of each part of your landscape and water accordingly.
5. Direct water to vegetated areas; avoid spraying sidewalks, driveways, decks, and other hard surfaces.



Automatic Irrigation Systems

Consult WaterSense or Irrigation Association guidelines (see References below) for irrigation system design, installation, operation, auditing, and maintenance. Irrigation systems should:

- Be designed, installed, and audited by professionals with the appropriate certification. WaterSense certifies professionals in design, installation and maintenance, and auditing of irrigation systems. To find a WaterSense-certified professional in your area, see <https://www.epa.gov/watersense/irrigation-pro>
- Be designed and installed to sustain the landscape without creating runoff or direct overspray
- Achieve at least a distribution uniformity of 0.65
- Be equipped with technology that inhibits or interrupts operation during periods of rainfall or sufficient moisture, **as required by Massachusetts law** (MGL ch.21 §67); this includes Smart Water Application Technology (SWAT), such as WaterSense-labeled irrigation controllers meeting specified criteria

Fixed-spray irrigation is best suited to turfgrass. Drip or micro-irrigation systems deliver water more efficiently to plants other than turfgrass. A certified professional can help determine the most appropriate type of system.

Guidelines for Irrigation System Audits

WaterSense guidelines for irrigation audits are reproduced in Attachment I-1 to this appendix. The Irrigation Association also provides audit guidelines and worksheets at

<http://www.irrigation.org/IA/Resources/Technical-Resources/Irrigation-Auditing/Audit-Guidelines/IA/Resources/Audit-Guidelines.aspx>.

REFERENCES

Irrigation System BMPs:

- EPA WaterSense. July 24, 2014. Section 4.2, "Irrigation System," in WaterSense New Home Specification (available at <https://www.epa.gov/watersense/homes-specification>)
- Irrigation Association. May 2014. Landscape Irrigation Best Management Practices (available for download on this page: <https://www.irrigation.org/IA/Advocacy/Standards-Best-Practices/Landscape-Irrigation-BMPs/IA/Advocacy/Landscape-Irrigation-BMPs.aspx?hkey=93b546ad-c87a-41b8-bf70-8c4fd2cff931>)
- University of Massachusetts Extension Turf Program. 2016. Best Management Practices for Lawn and Landscape Turf. Ver. 1.51. Section 6, "Irrigation and Water Management" (available at <http://ag.umass.edu/turf/publications-resources/best-management-practices>)

2.3

<p align="center">Town of Townsend Townsend Water Department</p>
<p>PO Box 321 Medford, MA 02155 978-597-2212 Water@Townsendwater.org</p>

Remittance Coupon Please Return With Payment	
Account Number: 4520	
New Charges:	\$755.32
Credits:	\$0.00
Past Due:	\$0.00
Interest:	\$0.00
Total Due: 10/31/22	\$755.32

BEAUCHAMP PAUL
15 HICKORY DRIVE
TOWNSEND, MA 01469

04 00 001078 0000075532 103122 00000755329

Account #	Service Location	Parcel Identifier	Billing Date	Due Date	Total Due
4520	15 HICKORY DRIVE	53C-452A-0	10/1/2022	10/31/2022	\$755.32

Meter Readings				Usage Summary		New Charge Summary			
Meter	Date	Type	Read	Rate	Total Usage	Charge	Quantity	Amount	Total
14326914	9/2/2022	ACT	535,000	WATR	59,000	Water		\$710.32	\$710.32
14326914	6/1/2022	ACT	476,000			WR	1	\$45.00	\$45.00

Tax Payer Message	Rate Information
<p>New Online Payment system City Hall Systems, please follow the link on the Townsend Water Department web page. DOXO is not affiliated with the Townsend Water Department.</p> <p>Updated PFAS information can be found on our website.</p> <p>Please visit our website Townsendwater.org and like our facebook page TOWNSEND WATER DEPARTMENT for important updates.</p> <p>In case of emergencies, please contact the office at 978-597-2212 Monday-Friday 9-3. For after-hour emergencies, please call 978-597-6214 or 911.</p> <p>Payments can be made online through UniPay at Townsendwater.org, in person at the Treasurers Department in Memorial Hall or by mail to PO Box 321 Medford, MA 02155.</p>	<p>\$45.00 Unit charge</p> <p>\$5.18 0-1500 cubic feet \$7.78 1500-3000 cubic feet \$10.37 3000-4500 cubic feet 12.96 4500 cubic feet and up</p> <p>Water bills are mailed quarterly January, April, July and October Interest will now be accrued daily totaling a rate of 1.5% monthly on all unpaid invoices over 30 days.</p> <p>Please be sure to include your account number on your check when mailing in your payment to ensure proper posting. Thank you!</p>

2.4

Brenda Boudreau

From: Leanne [REDACTED]
Sent: Wednesday, October 12, 2022 8:45 AM
To: Water
Subject: Place on agenda

Board of Water Commissioners,

I am writing an email to you requesting to be placed on the next water commissioners meeting which I believe to be on October 20, 2022 to discuss my bill and my irrigation system leak.

In May I turned on my irrigation for the season. My last bill seemed much higher than normal and I called the water department to ask why and they said it was due to a price increase. This current bill that I received was very high. \$2,212.46. It showed my usage as being 18,524. The usage was significantly more than I have ever used in the past. I called the water department and asked for them to come out and check my new meter that was put in prior thinking there was a problem with the meter. The water superintendent came to my house last week and said the water usage was more than even a leaky toilet he averaged me to be using 17 gallons an hour consistently and that I had a leak somewhere and not just a toilet. Although my irrigation was shut off inside at the panel within my home for months due to the water ban he found that when we closed the shut off the valve that day and reevaluated I was now only using an average of 2/10ths a gallon an hour so he concluded that my irrigation system has a leak and the water was going back into the ground. I would like to be placed on the next agenda to discuss my bill with you and request a reduction in my bill.

Please confirm by sending me the date of your meeting and a copy of the agenda.

Thank you,
Leanne Jackson
1 Birch Lane
Townsend, MA

Sent from my iPhone

[REDACTED]

**Town of Townsend
Townsend Water Department**

PO Box 321
Medford, MA 02155
978-597-2212
Water@Townsendwater.org

**Remittance Coupon Please Return
With Payment**

Account Number: 1310

New Charges: \$2,212.46
Credits: \$0.00
Past Due: \$0.00
Interest: \$0.00
Total Due: 10/31/22 \$2,212.46

JACKSON LEANNE
1 BIRCH LANE
TOWNSEND, MA 01469

04 00 000034 0000221246 103122 00002212463

Account #	Service Location	Parcel Identifier	Billing Date	Due Date	Total Due
1310	1 BIRCH LANE	53A-131-0	10/1/2022	10/31/2022	\$2,212.46

Meter Readings				Usage Summary		New Charge Summary			
Meter	Date	Type	Read	Rate	Total Usage	Charge	Quantity	Amount	Total
210712425	9/6/2022	ACT	27,801	TWD	18,524	Water		\$2,167.46	\$2,167.46
210712425	6/8/2022	ACT	9,277			WR	1	\$45.00	\$45.00

Tax Payer Message

New Online Payment system City Hall Systems, please follow the link on the Townsend Water Department web page. DOXO is not affiliated with the Townsend Water Department.

Updated PFAS information can be found on our website.

Please visit our website Townsendwater.org and like our facebook page TOWNSEND WATER DEPARTMENT for important updates.

In case of emergencies, please contact the office at 978-597-2212 Monday-Friday 9-3. For after-hour emergencies, please call 978-597-6214 or 911.

Payments can be made online through UniPay at Townsendwater.org, in person at the Treasurers Department in Memorial Hall or by mail to PO Box 321 Medford, MA 02155.

Rate Information

\$45.00 Unit charge

\$5.18 0-1500 cubic feet
\$7.78 1500-3000 cubic feet
\$10.37 3000-4500 cubic feet
\$12.96 4500 cubic feet and up

Water bills are mailed quarterly January, April, July and October

Interest will now be accrued daily totaling a rate of 1.5% monthly on all unpaid invoices over 30 days.

Please be sure to include your account number on your check when mailing in your payment to ensure proper posting. Thank you!

Town of Townsend
 Townsend Water Department
 540 Main Street
 West Townsend, MA 01474
 978-597-2212

3.2

as of October 20, 2022

Balance: \$2,159.86

Account	Owner	Parcel	Location
60370	ABRAHAM RYAN	11-38-26	10 FOX RUN

Commitments

Billing Date	Due Date	Charges	Interest	Credit	Balance	Total Due
10/1/2022	10/31/2022	\$2,157.51	\$0.00	\$0.00	\$2,157.51	\$2,157.51
7/1/2022	7/30/2022	\$459.75	\$2.35	\$459.75	\$2.35	\$2.35
4/1/2022	4/30/2022	\$97.98	\$0.00	\$97.98	\$0.00	\$0.00
1/1/2022	1/31/2022	\$136.86	\$0.07	\$136.93	\$0.00	\$0.00
10/1/2021	10/31/2021	\$434.94	\$0.90	\$435.84	\$0.00	\$0.00
7/1/2021	7/31/2021	\$331.26	\$0.00	\$331.26	\$0.00	\$0.00
4/5/2021	5/5/2021	\$158.46	\$0.00	\$158.46	\$0.00	\$0.00
2/24/2021	2/24/2021	\$5.10	\$0.16	\$5.26	\$0.00	\$0.00
Grand Total		\$3,781.86	\$3.48	\$1,625.48	\$2,159.86	\$2,159.86

Transactions

Type	Effective Date	PostDate	Batch	Total	Comments
Payment	8/9/2022	8/10/2022	ELB-8	\$459.75	Lockbox
Payment	4/29/2022	5/2/2022	136-ELB	\$98.05	Lockbox
Payment	2/1/2022	2/2/2022	CLB-120	\$137.76	Lockbox
Payment	11/4/2021	11/10/2021	CLB-75	\$434.94	Lockbox
Payment	7/30/2021	8/3/2021	CLB-21	\$331.24	Lockbox
Transfer Out	7/1/2021	6/18/2021	Credit transfer for bills	(\$0.02)	Transfer Out
Transfer In	7/1/2021	6/18/2021	Credit transfer for bills	\$0.02	Transfer In
Payment	4/27/2021	4/28/2021	#77-CLB	\$163.74	
Grand Total				\$1,625.48	

3.2

Town of Townsend
 Townsend Water Department
 540 Main Street
 West Townsend, MA 01474
 978-597-2212

3.3

as of October 20, 2022

Balance: \$902.24

Account	Owner	Parcel	Location
4640	BOUCHARD MARK	53D-464-0	15 VIRGO LANE

Commitments

Billing Date	Due Date	Charges	Interest	Credit	Balance	Total Due
10/1/2022	10/31/2022	\$901.56	\$0.00	\$0.00	\$901.56	\$901.56
7/1/2022	7/30/2022	\$443.81	\$0.68	\$443.81	\$0.68	\$0.68
4/1/2022	4/30/2022	\$63.81	\$0.00	\$63.81	\$0.00	\$0.00
1/1/2022	1/31/2022	\$69.55	\$0.00	\$69.55	\$0.00	\$0.00
10/1/2021	10/31/2021	\$252.59	\$0.52	\$253.11	\$0.00	\$0.00
7/1/2021	7/31/2021	\$241.18	\$0.25	\$241.43	\$0.00	\$0.00
4/5/2021	5/5/2021	\$112.54	\$0.00	\$112.54	\$0.00	\$0.00
2/24/2021	2/24/2021	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Grand Total		\$2,085.04	\$1.45	\$1,184.25	\$902.24	\$902.24

Transactions

Type	Effective Date	PostDate	Batch	Total	Comments
Payment	8/2/2022	8/3/2022	ELB-7	\$443.81	Lockbox
Payment	4/29/2022	5/2/2022	136-ELB	\$63.81	Lockbox
Payment	1/28/2022	1/31/2022	CLB-119	\$70.07	Lockbox
Payment	11/4/2021	11/10/2021	CLB-75	\$252.84	Lockbox
Payment	8/2/2021	8/4/2021	CLB-22	\$241.18	Lockbox
Payment	5/4/2021	5/6/2021	#81-CLB	\$112.54	
Grand Total				\$1,184.25	

W
W

Mistie Demazure

From: Kris <bouchakl@comcast.net>
Sent: Thursday, October 13, 2022 10:11 AM
To: Water
Subject: Erroneous charges

Hi Mistie

As discussed this morning, attached is a copy of my epay from Santander where payment was scheduled for 7/28. I appreciate the explanation.

I also noticed the same issue from October / January from last year.

In both cases, the payment posted to my account before the due date.
So please have fees / interest credited from BOTH issues.

Thank you. Attached are statement copies.

\$0.50 + \$0.02 on Jan 2022 statement
\$0.66 + \$0.03 on 10 2022 statement.

Kris bouchard.
15 Virgo lane



Payment Details

\$443.81

COMPLETED
JUL 28, 2022

PAYMENT DETAILS

FROM

Mdbklb Checking (*2878)

TO

Qtrly Water Bill (*64-0)

DATE

Jul 28, 2022



Transaction Details

-\$252.84

APPEARS ON YOUR
STATEMENT AS

Town Of Townsend Online Pmt211025

MADE ON

Monday, Oct 25, 2021

Financial Summary**Statement Period 07/11/22 - 08/10/22**MARK BOUCHARD
KRISTINE BOUCHARD**Deposit Accounts**

Account #

Total Deposits

SANTANDER PREFERRED CHECKING**Statement Period 07/11/22 - 08/10/22**MARK BOUCHARD
KRISTINE BOUCHARD**Balances**

Beginning Balance

Current Balance

Deposits/Credits

Average Daily Balance

Withdrawals/Debits

Interest

0.01%

may differ depending on when interest is credited to your account.

Account Activity

Date	Description	Additions	Subtractions
07-11	Beginning Balance		
07-11			
07-15	DR M...		
07-28	TOWN OF TOWNSEND ONLINE PMT220728		\$443.81

November 2021 Statements

Account Activity

Description
Beginning Balance

Additions

Subtractions

TOWN OF TOWNSEND ONLINE PMT211025

\$252.84

What You Need to Know About Overdrafts and Overdraft Fees

From: Bill Considine <billc@inscocorp.com>
Sent: Thursday, October 13, 2022 11:45 AM
To: Water
Cc: Bill Considine
Subject: Water Bill for 5 Walnut Street Account 1180
Attachments: Townsend Water Bill 5 Walnut Street Account 1180.pdf; Townsend Water Bill History 5 Walnut Street Account 1180.pdf

Attention: Board of Water Commissioners

Mr. Nathan Mattila & Mr. Todd Melanson

Dear Sirs,

My name is Bill Considine, myself and my wife Kathy have lived at 5 Walnut Street in Timberlee Park for the past 25-years.

I am writing to appeal my most recent water bill issued on 10/1/2022 which indicated an extremely inordinate usage. I called the water department last Thursday the 6th and spoke with Mistie initially and she put me in-touch with Dave Vigeant. After speaking with Dave he scheduled a technician come to my house on Tuesday of this week to examine my meter. I met two technicians at my house at 9am on Tuesday. They examined the meter and stated that everything appeared to be in proper working order. After they left, I went up to the water department as discussed my bill with Mistie and Dave. Dave agreed to meet me at my house this morning to conduct a water volume test and look for any obvious leaks. Dave took an initial reading of the meter and then we used a graduated container to extract 7.48 gallons (1 cubic foot) of water from the faucet. We then checked the meter and it did register an increase usage of 1 cubic foot. Therefore, we concluded that the meter appeared to be measuring the water flow properly. I took Dave around my house to verify that there we no leaks anywhere to be found. We then went out into my yard and he confirmed that we do not have any irrigation system.

I have attached my recent water bill and two previous bills as well as a documented history of bills dating back to August 2014 for your review. You will see that my current water bill dated 10/1/2022 indicating a total usage of 21,344 cubic feet (159,664 gallons) for one quarter at \$2,577.93 dollars. The other bills attached are my prior bill dated 7/1/2022 which was the first bill we received that uses the new tiered rate system. The other attached bill is for comparison of usage and total amount due from this time last year dated 10/1/2021. I have also attached a history of water bill payments going back 32 consecutive quarters (8 years) that indicate our average bill was \$197 per quarter.

I cannot explain nor could Dave explain how our current bill could indicate our usage for last quarter is 159,664 gallons. At that rate we would have to use 72.31 gallons every hour non-stop for 92 days straight. As previously stated, it is just myself and my wife living at our residence. We are both in our sixties on a fixed income and have not changed our water consumption routine since we have lived here. We have had the same small raised-bed vegetable garden for the past twenty years. We abide by the water restrictions during the drought period and we don't water our lawn. With just the two of us, we are conservative with our water use for bathing, washing machine and dish washer. You can look at our payment history which demonstrates a consistent and on-time payment of our bills.

I saw on your last zoom meeting there was a resident with a similar billing situation. Your fair and equitable resolution was to re-bill their total cubic feet at the tier-1 rate of \$5.18 per unit. I realize that you cannot abate the usage reading. I am requesting that you afford us the same consideration to re-bill my account for this bill only issued on 10/1/2022. Going forward, at the recommendation of your technicians, I have installed the "EyeOnWater" app on my phone to closely monitor our water usage in real-time to immediately identify any anomalies and to notify the water department immediately if something seems irregular.

I appreciate your reviewing my appeal and considering my requested resolution. I look forward to hearing from you!

Thank you,

Bill Considine
Email: billc@inscocorp.com
Cell: (978) 877-2227



TOWN OF TOWNSEND
540 MAIN STREET
TOWNSEND, MA 01474
978-597-2212
000004 0001480

TOWN OF TOWNSEND WATER BILLING

New Online Payment system City Hall Systems now available. Please follow the link on the Townsend Water Department web page. DOXO is not affiliated with the Townsend Water Department.

Updated PFAS information can be found on our website.

Please visit our website Townsendwater.org and like our facebook page TOWNSEND WATER DEPARTMENT for important updates.

In case of emergencies, please contact the office at 978-597-2212 Monday -Friday 9-3.
For after-hour emergencies, please call 978-597-6214 or 911.

Payments can be made online through Townsendwater.org, in person at the Treasurer's Department in Memorial Hall or by mail to PO Box 321, Medford, MA 02155

SCH 5-DIGIT 01720

CONSIDINE WILLIAM

5 WALNUT STREET

TOWNSEND, MA 01469-1364



TOWN OF TOWNSEND - WATER CHARGES									
Service Location 5 WALNUT STREET				Parcel Identifier 53B-118-0		Account # 1180		Issue Date	Due Date
								10/01/2022	10/31/2022
Meter Readings Meter Date Type Read 18833036 09/06/2022 Actual 51101 18833036 06/08/2022 Actual 29757				Usage Summary		Charge Summary			
				Total Usage		Charge Desc.		Quantity	Total
				21,344		Water		-	\$2,532.93
						WR		1	\$45.00
						Total New Charges:		\$2,577.93	
Current Charges		Credits		Past Due		Interest		Amount Due	
\$2,577.93		\$0.00		\$0.00		\$0.00		\$2,577.93	

Rate Information per cubic feet	
Base Charge	\$45.00
0-1,500	\$5.18
1,501-3000	\$7.78
3,001-4,500	\$10.37
4,501+	\$12.96

Water Bills are mailed quarterly January, April, July and October.

Interest will now be accrued daily totaling a rate of 1.5% monthly on all unpaid invoices over 30 days.

Please be sure to include your account number on your check when mailing in your payment to ensure proper poston. Thank you!

Service Location	Parcel Identifier	Account #	Issue Date	Due Date
5 WALNUT STREET	53B-118-0	1180	10/01/2022	10/31/2022

CONSIDINE WILLIAM
5 WALNUT STREET
TOWNSEND, MA 01469-1364

MAIL TO:

Townsend Water Department
PO BOX 321
Medford, MA 02155-0004

REMITTANCE COUPON Please Return With Payment	
Account Number: 1180	
Current Charges:	\$2,577.93
Credits:	\$0.00
Past Due:	\$0.00
Interest:	\$0.00
Amount Due If Paid By	\$2,577.93

04 00 000027 0000257793 103122 00002577933

Account Number		Service Location		Parcel ID		Bill Date				
1180		5 WALNUT STREET		53B-118-0		07/01/2022				
Meter Readings				Usage Summary		New Charge Summary				
Meter	Date	Type	Read	Rate	Total Usage (HCF)	Charge	Quantity	Amount	Total	
18833036	02/28/2022	ACT	23,162	TWD	6,595					
18833036	06/08/2022	ACT	29,757							
						Water		\$621.46	\$621.46	
						WR	1	\$45.00	\$45.00	
Current Charges		Credits		Past Due		Interest		Total Due		Due Date
\$666.46		\$0.00		\$0.00		\$0.00		\$666.46		07/30/2022

CK# 2472



001037

MESSAGES	RATE INFORMATION
<p>Please be aware of the town water restrictions. There is no watering between the hours of 9 AM and 5 PM. Thank you for your cooperation.</p> <p>PFAS Update: As of August 27, 2021 Harbor Trace Well is no longer in use. This resolves the elevated PFAS levels in the distribution system.</p> <p>Please visit our website Townsendwater.org and like our facebook page TOWNSEND WATER DEPARTMENT for important updates.</p> <p>We will soon be joining the CodeRed program with the police station. Find the link to sign up at townsendpd.org.</p> <p>In case of emergencies, please contact the office at 978-597-2212 Monday-Friday 9-3. For after-hour emergencies, please call 978-597-6214 or 911.</p> <p>Payments can be made online through UniPay at Townsendwater.org, in person at the Treasurer's Department in Memorial Hall, or by mail to PO Box 321 Medford, MA 02155.</p>	<p>\$45.00 Unit charge</p> <p>\$5.18 per 0-1500 cubic feet \$7.78 per 1500-3000 cubic feet \$10.37 per 3000-4500 cubic feet \$12.96 per 4500 cubic feet and up</p> <p>Water bills are mailed quarterly January, April, July and October</p> <p>Interest will now be accrued daily totaling a rate of 1.5% monthly on all unpaid invoices over 30 days.</p> <p>Please be sure to include your account number on your check when mailing in your payment to ensure proper posting. Thank you!</p>

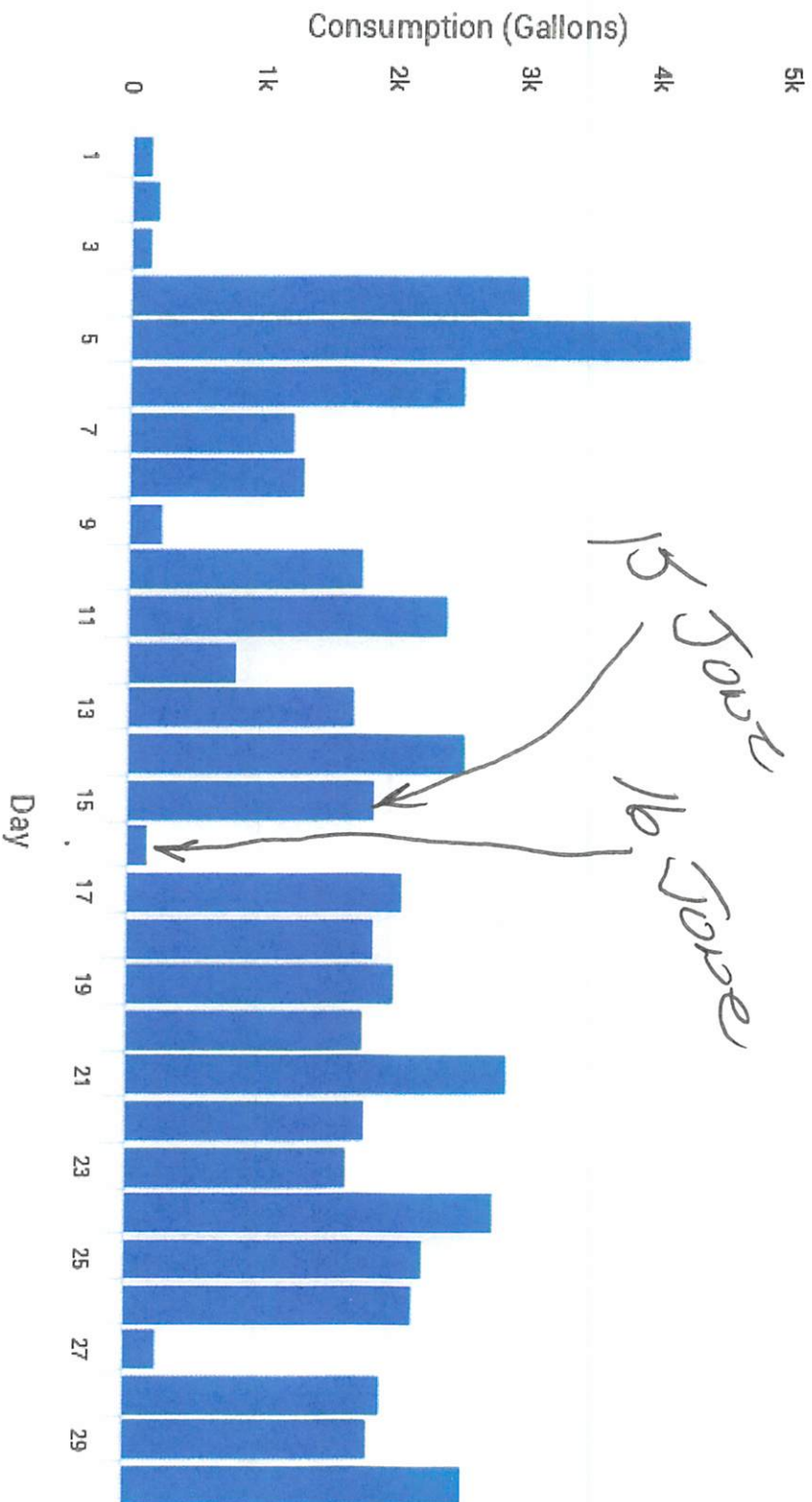
Account Number		Service Location		Parcel ID		Bill Date					
1180		5 WALNUT STREET		53B-118-0		10/01/2021					
Meter Readings			Usage Summary		New Charge Summary						
Meter	Date	Type	Read	Rate	Total Usage (HCF)	Charge	Quantity	Amount	Total		
18833036	08/07/2021	ACT	8,661	TWD	7,932						
18833036	09/02/2021	ACT	16,593								
						Water		\$342.66	\$342.66		
						WR	1	\$37.50	\$37.50		
Current Charges		Credits		Past Due		Interest		Total Due		Due Date	
\$380.16		\$0.00		\$0.00		\$0.00		\$380.16		10/31/2021	



001901

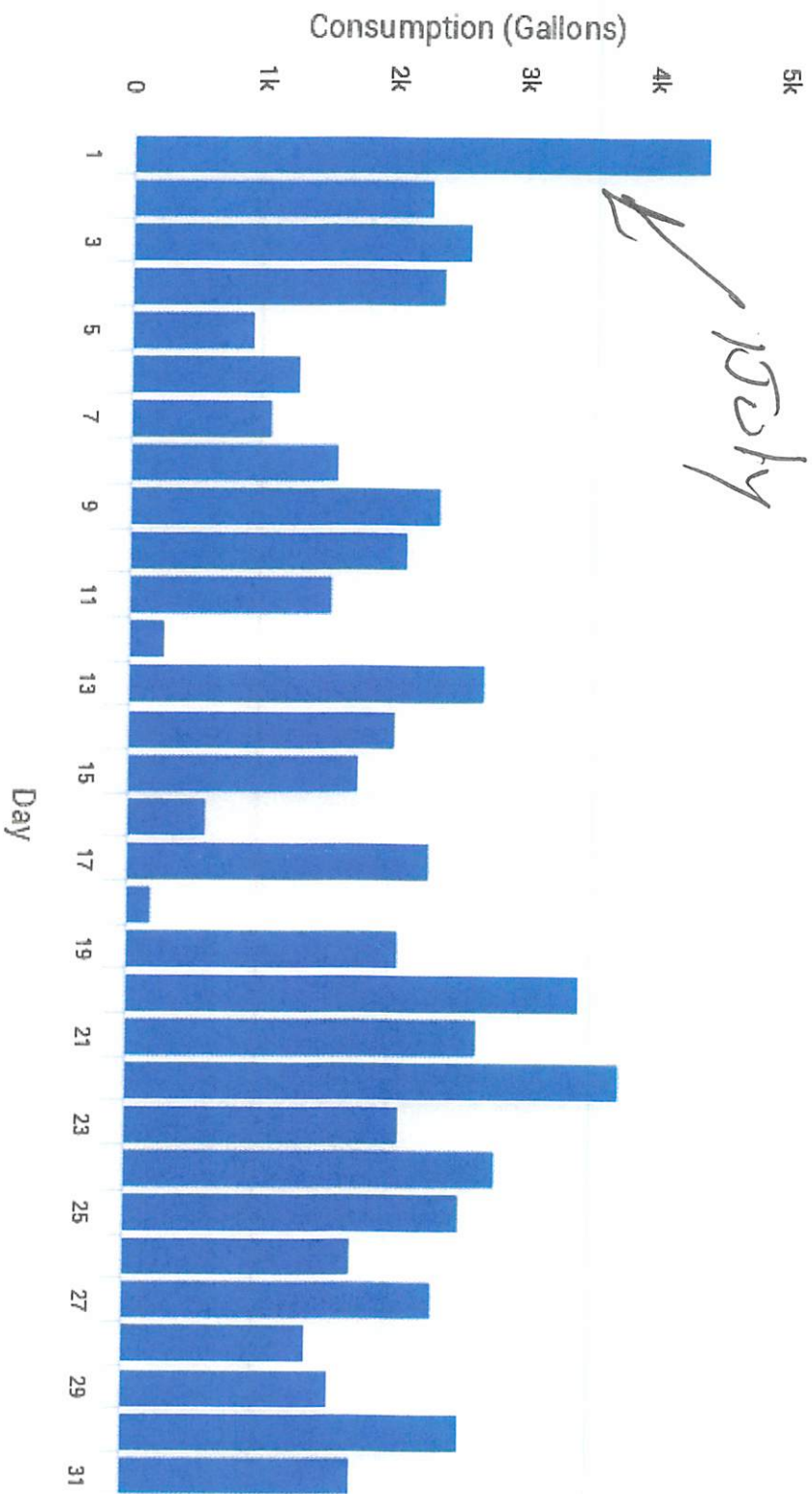
MESSAGES	RATE INFORMATION
<p>PFAS Update:</p> <p>As of August 27, 2021 Harbor Trace Well is no longer in use. This resolves the elevated PFAS levels in the distribution system.</p> <p>Please review the enclosed letter from DEP for additional information.</p> <p>Please visit our website Townsendwater.org and like our facebook page TOWNSEND WATER DEPARTMENT for important updates.</p> <p>We will soon be joining the CodeRed program with the police station. Find the link to sign up at townsendpd.org.</p> <p>In case of emergencies, please contact the office at 978-597-2212 Monday-Friday 9-3. For after-hour emergencies, please call 978-597-6214 or 911.</p> <p>Please be sure to include your account number on your check when mailing in your payment to ensure proper posting. Thank you!</p>	<p>\$37.50 Unit charge \$4.32 per 100 cubic feet \$5.36 per 1,000 gallons 748 gallons</p> <p>Water bills are mailed quarterly January, April, July and October</p> <p>Interest will now be accrued daily totaling a rate of 1.5% monthly on all unpaid invoices over 30 days.</p>

Daily for June 2022

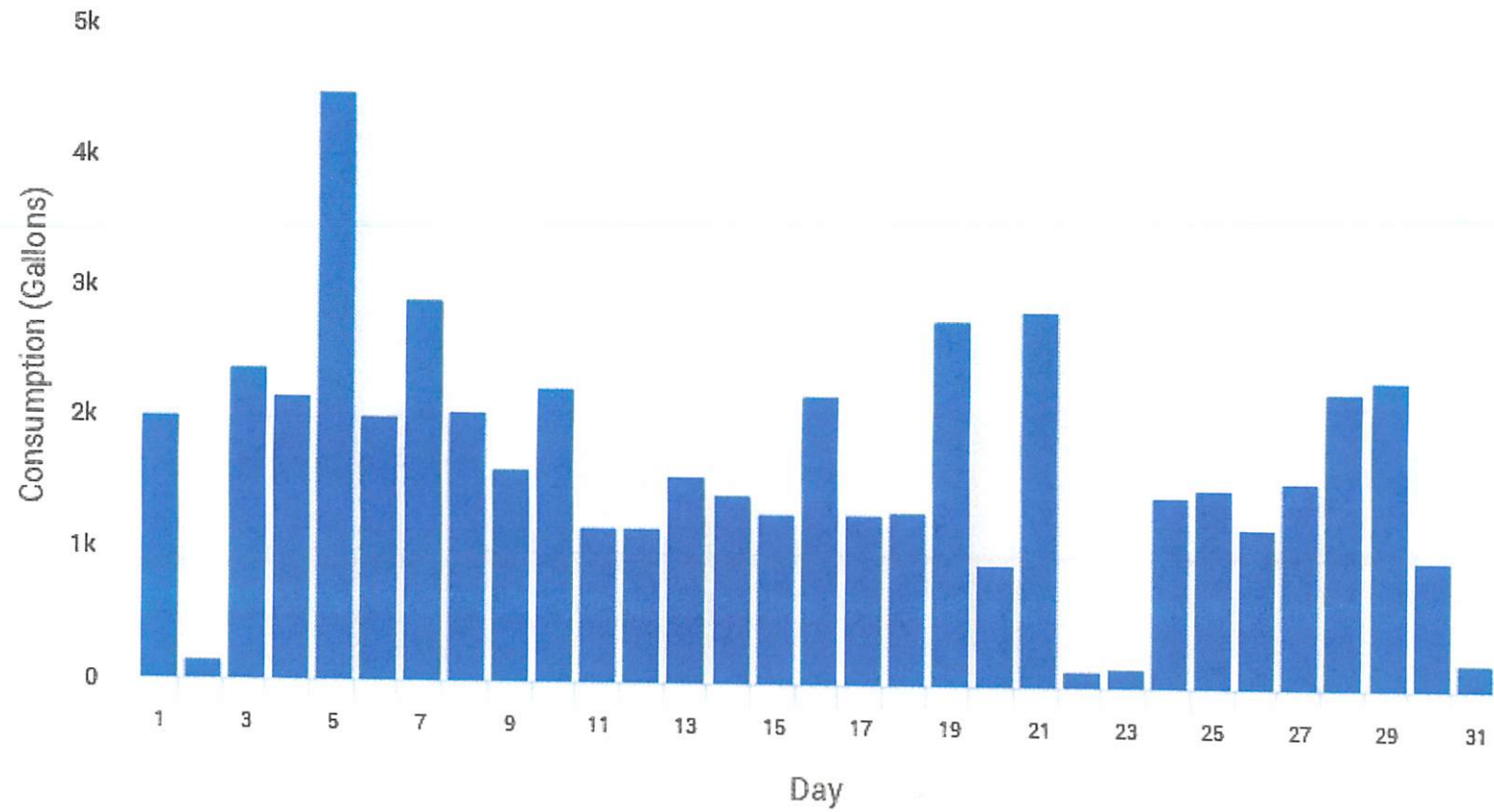


● 53B-118-0

Daily for July 2022

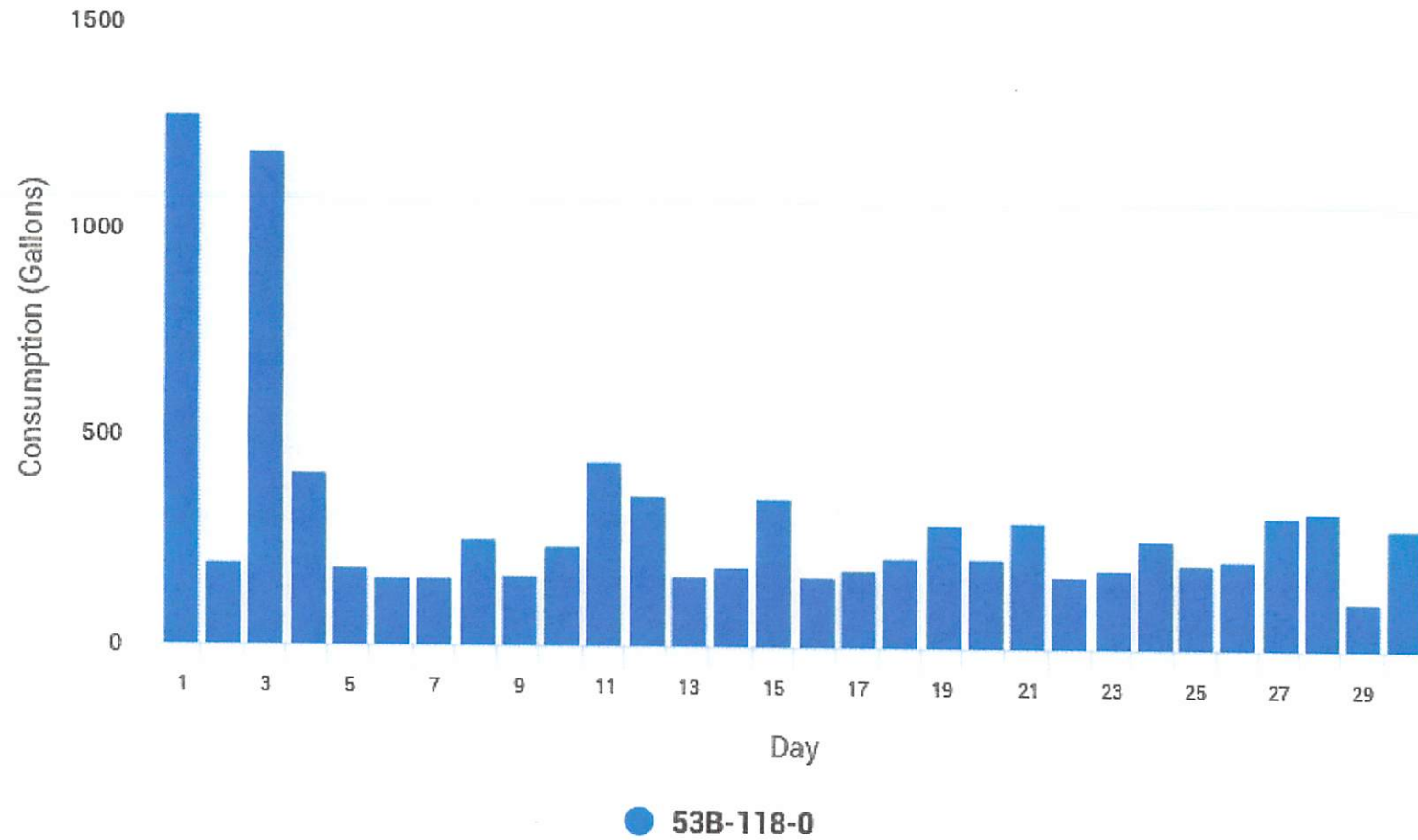


Daily for August 2022

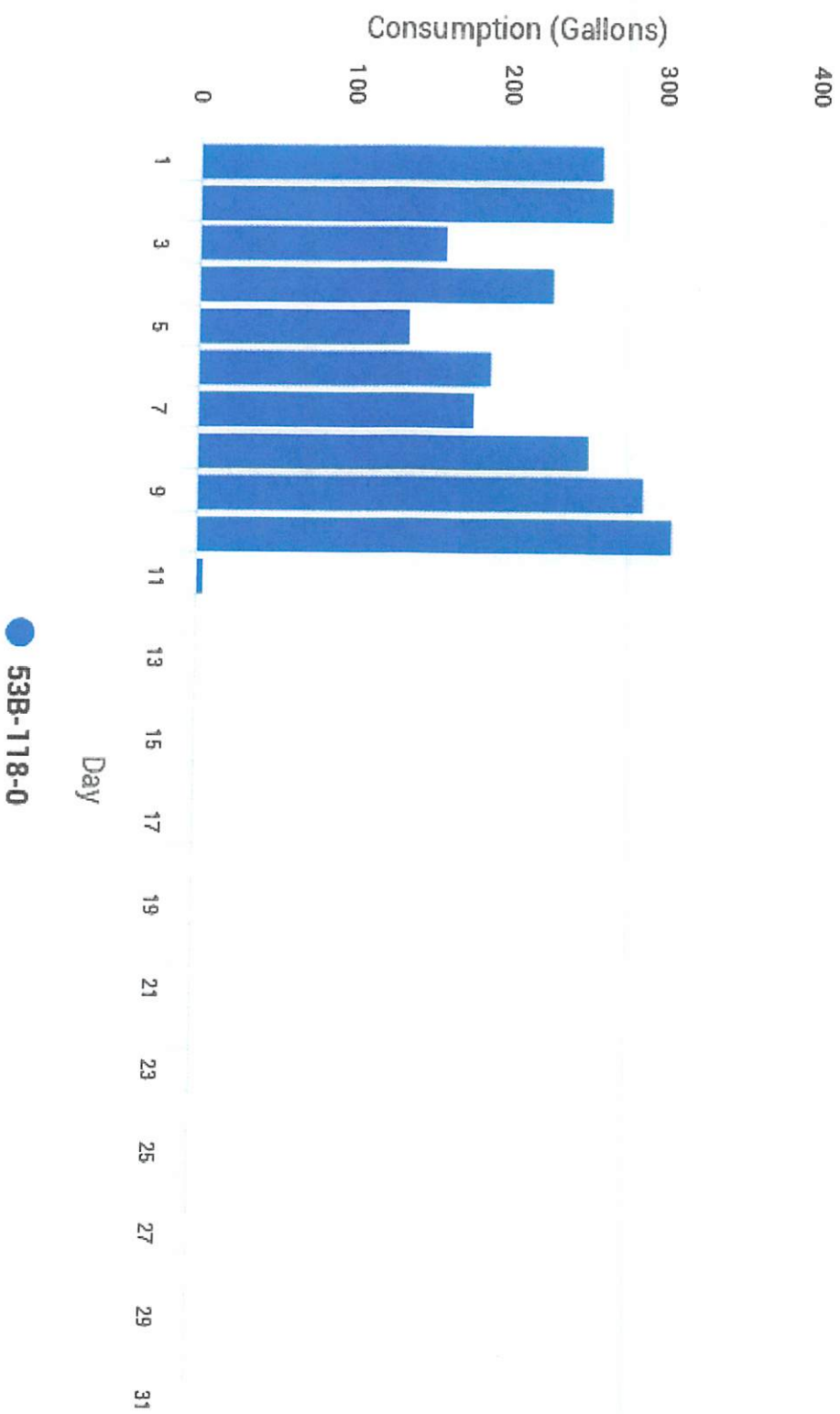


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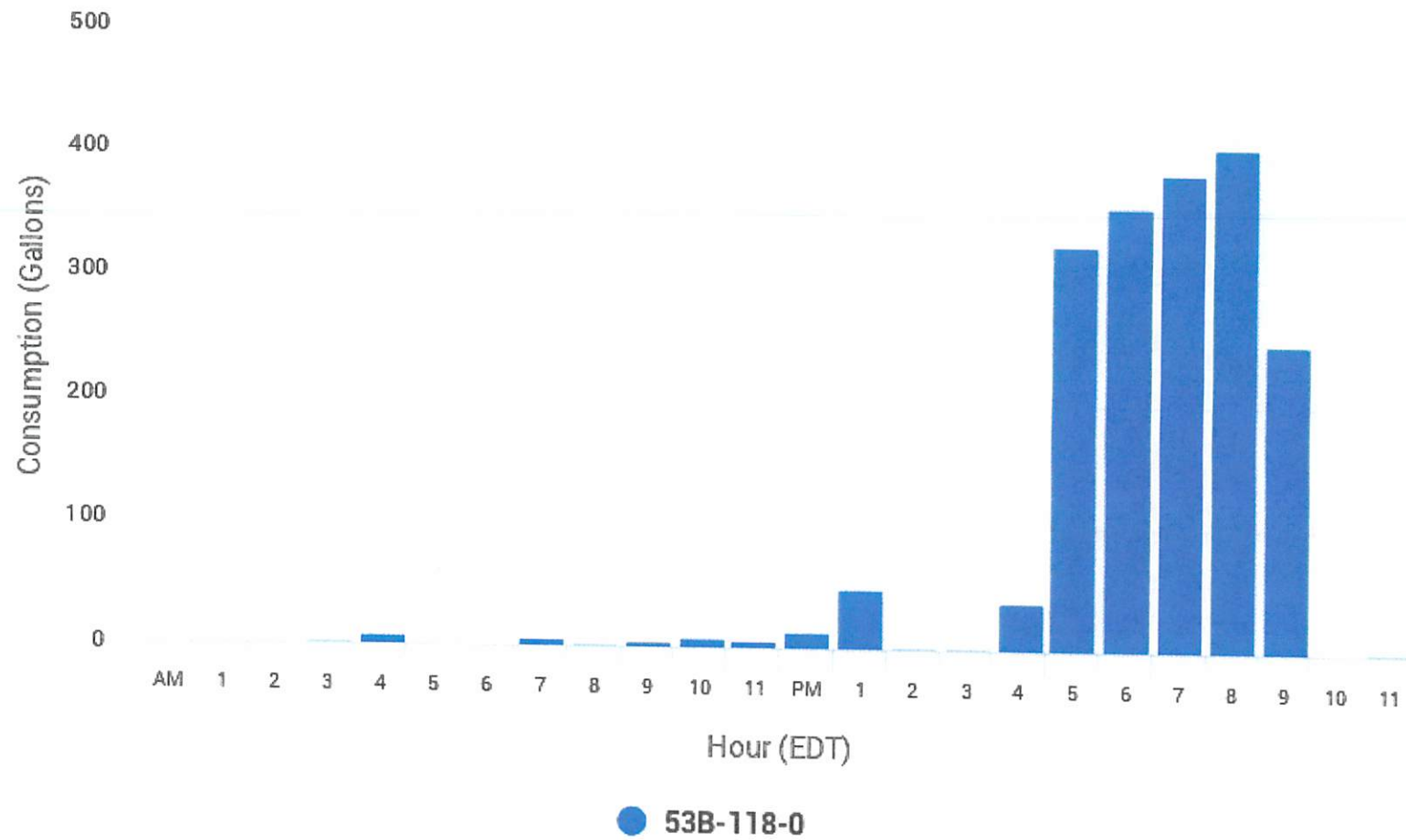
Daily for September 2022



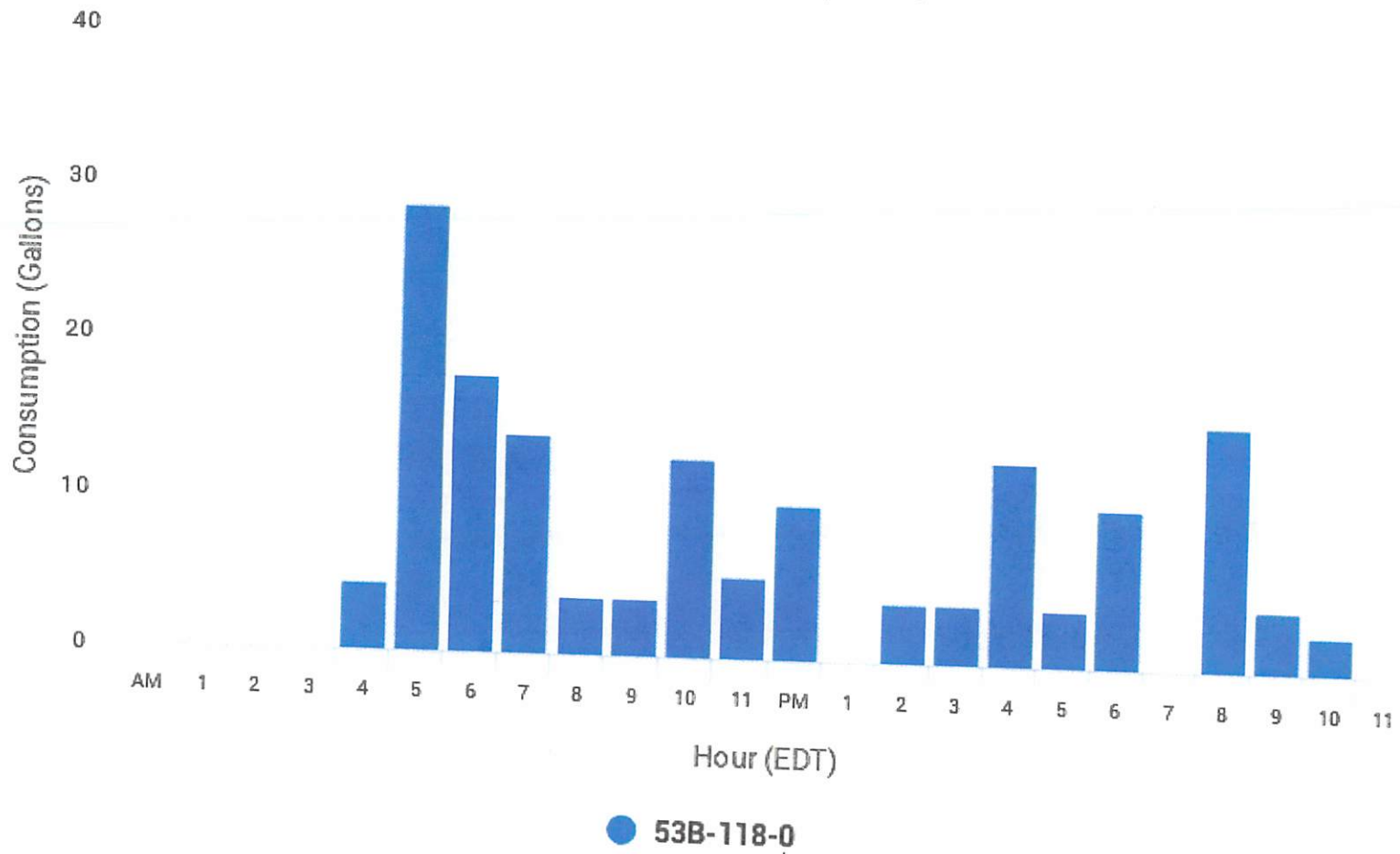
Daily for October 2022



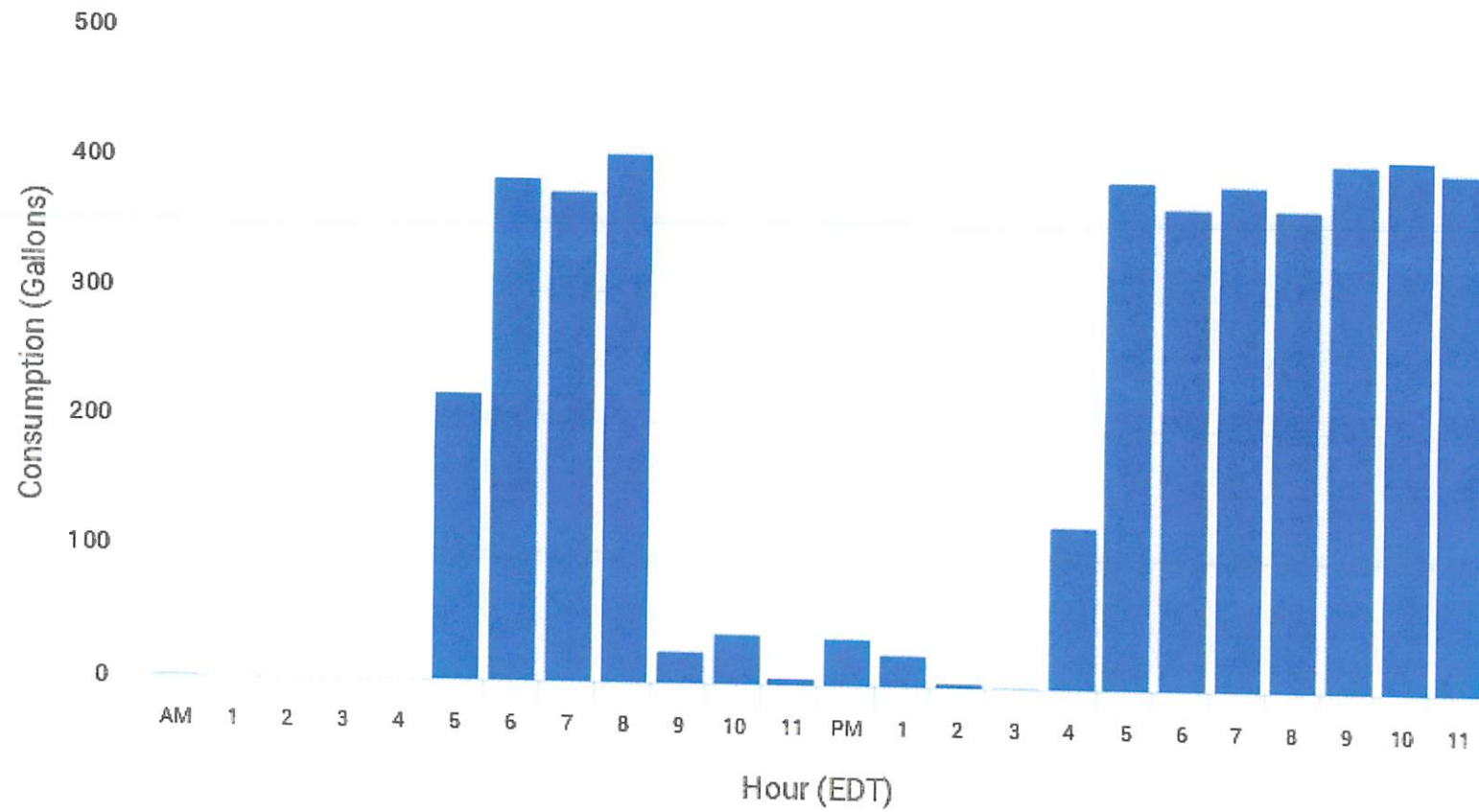
Wednesday, June 15, 2022



Thursday, June 16, 2022

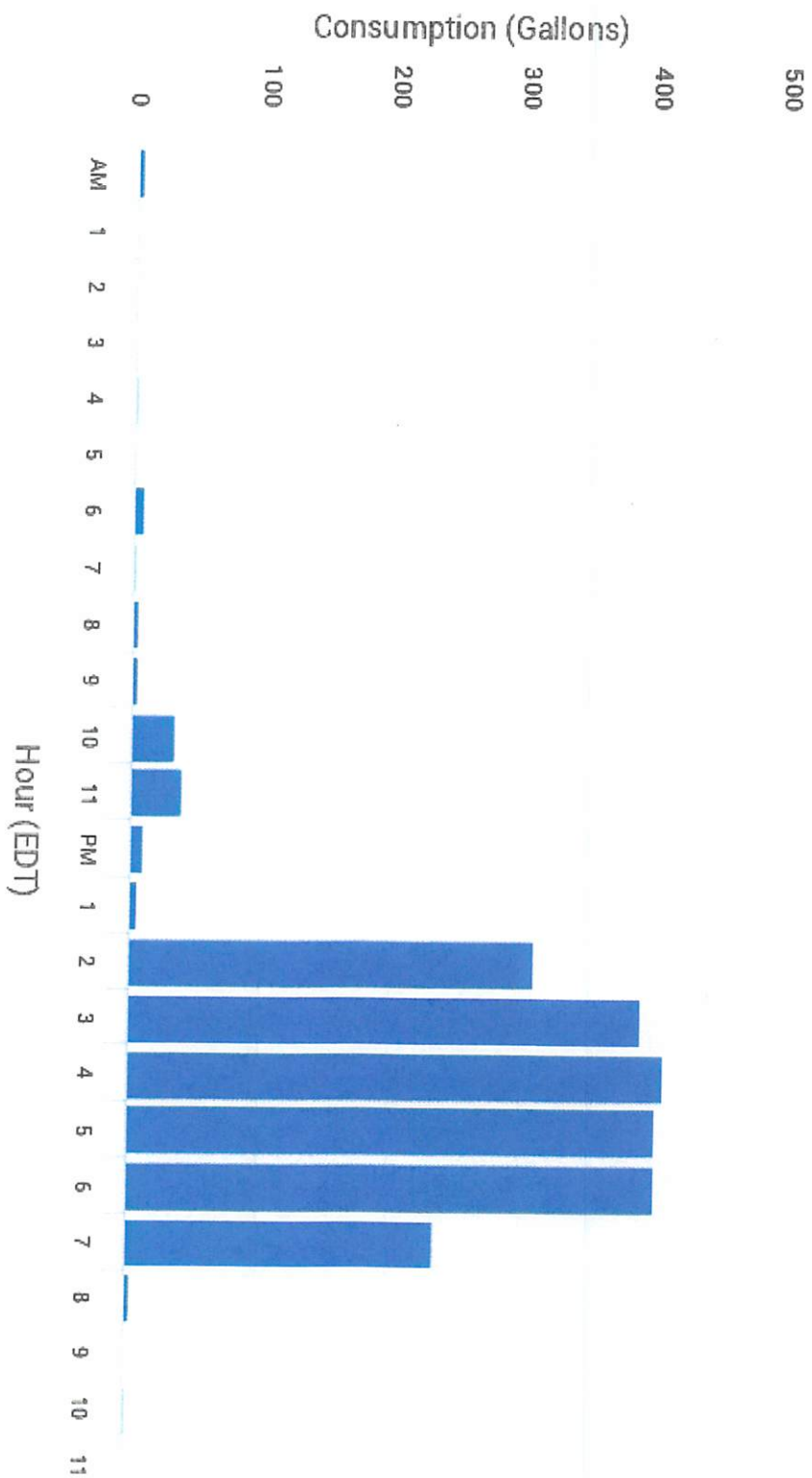


Friday, July 01, 2022



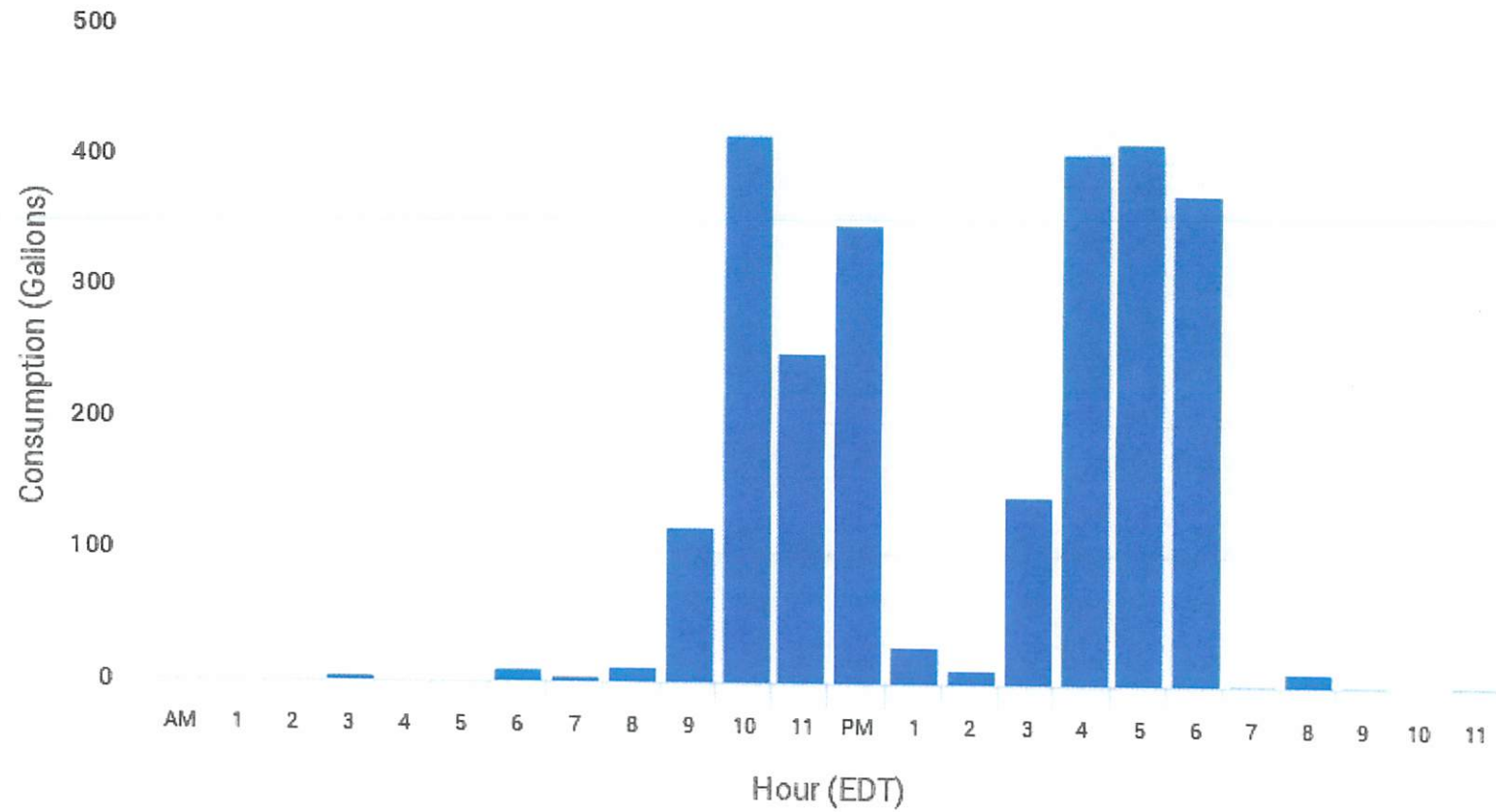
● 53B-118-0

Saturday, July 02, 2022



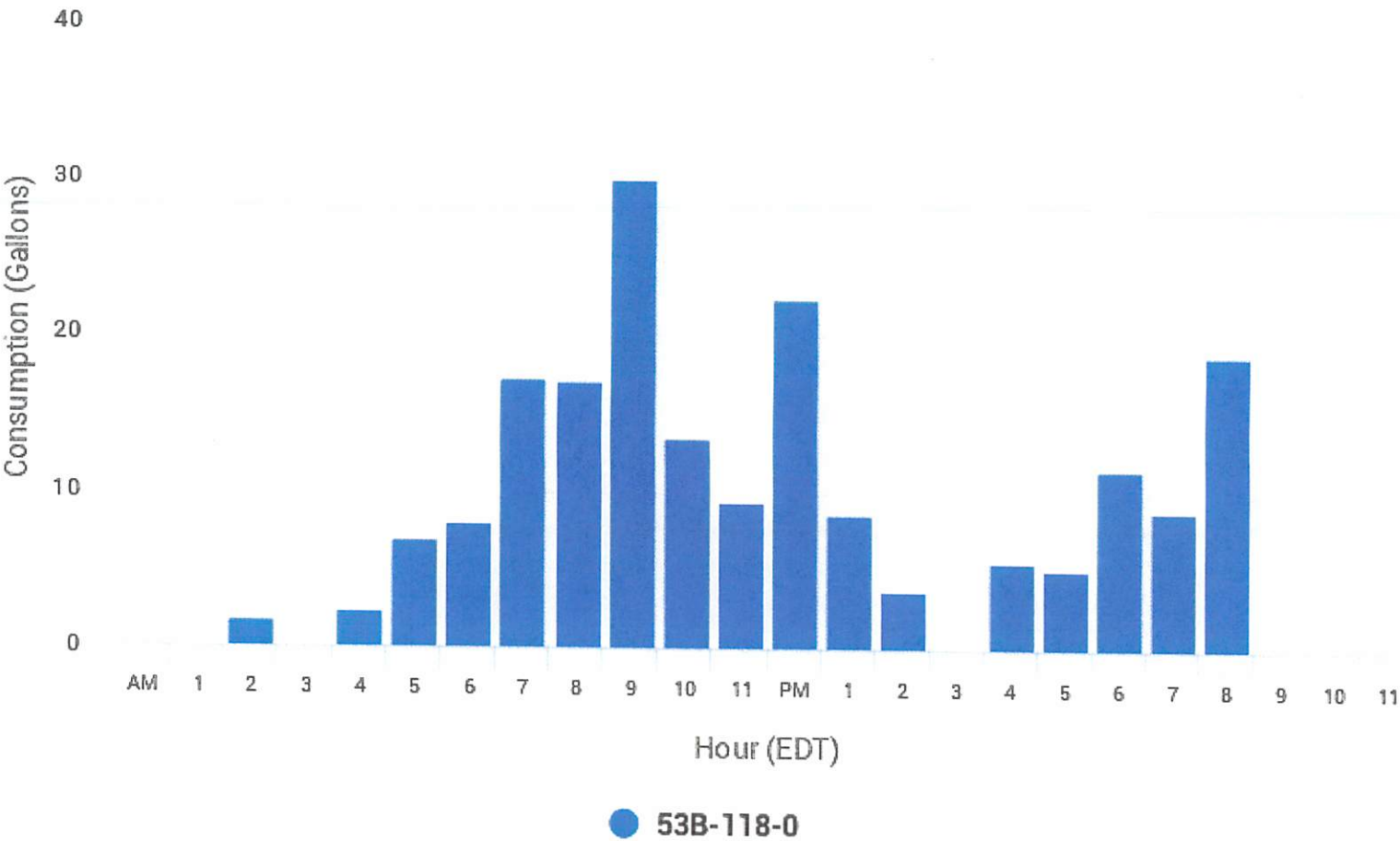
● 53B-118-0

Sunday, July 03, 2022

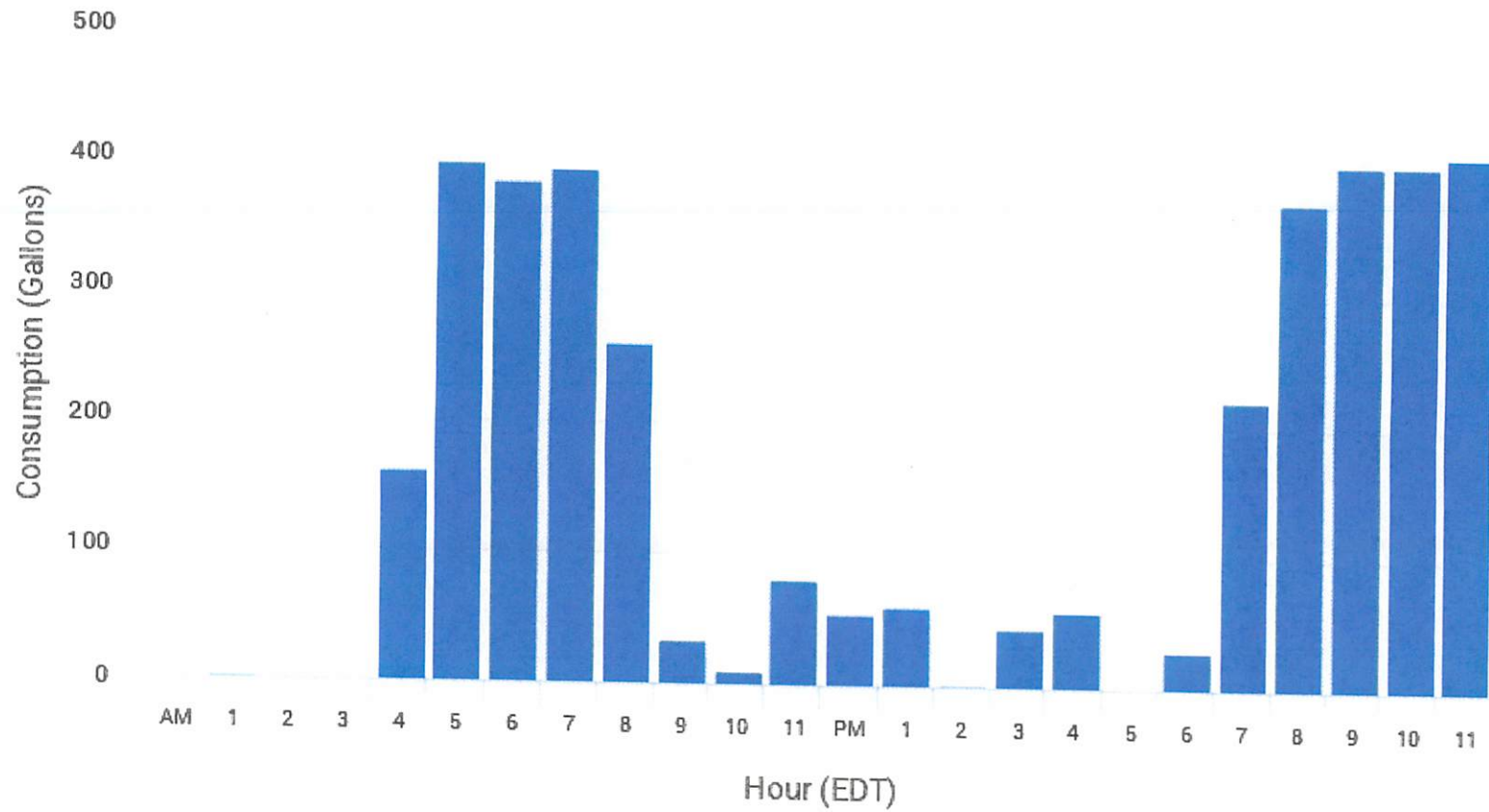


● 53B-118-0

Monday, July 18, 2022

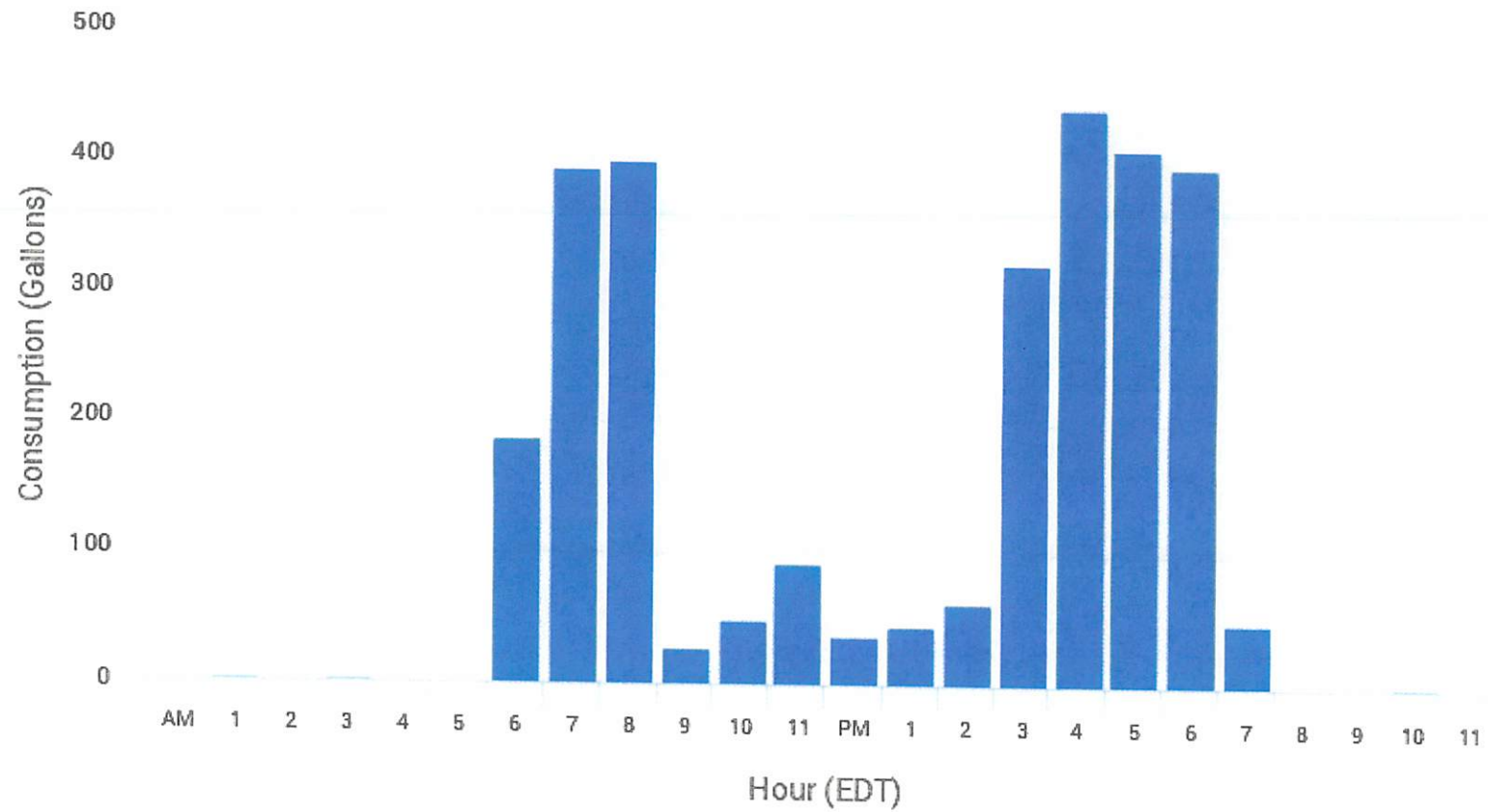


Friday, July 22, 2022



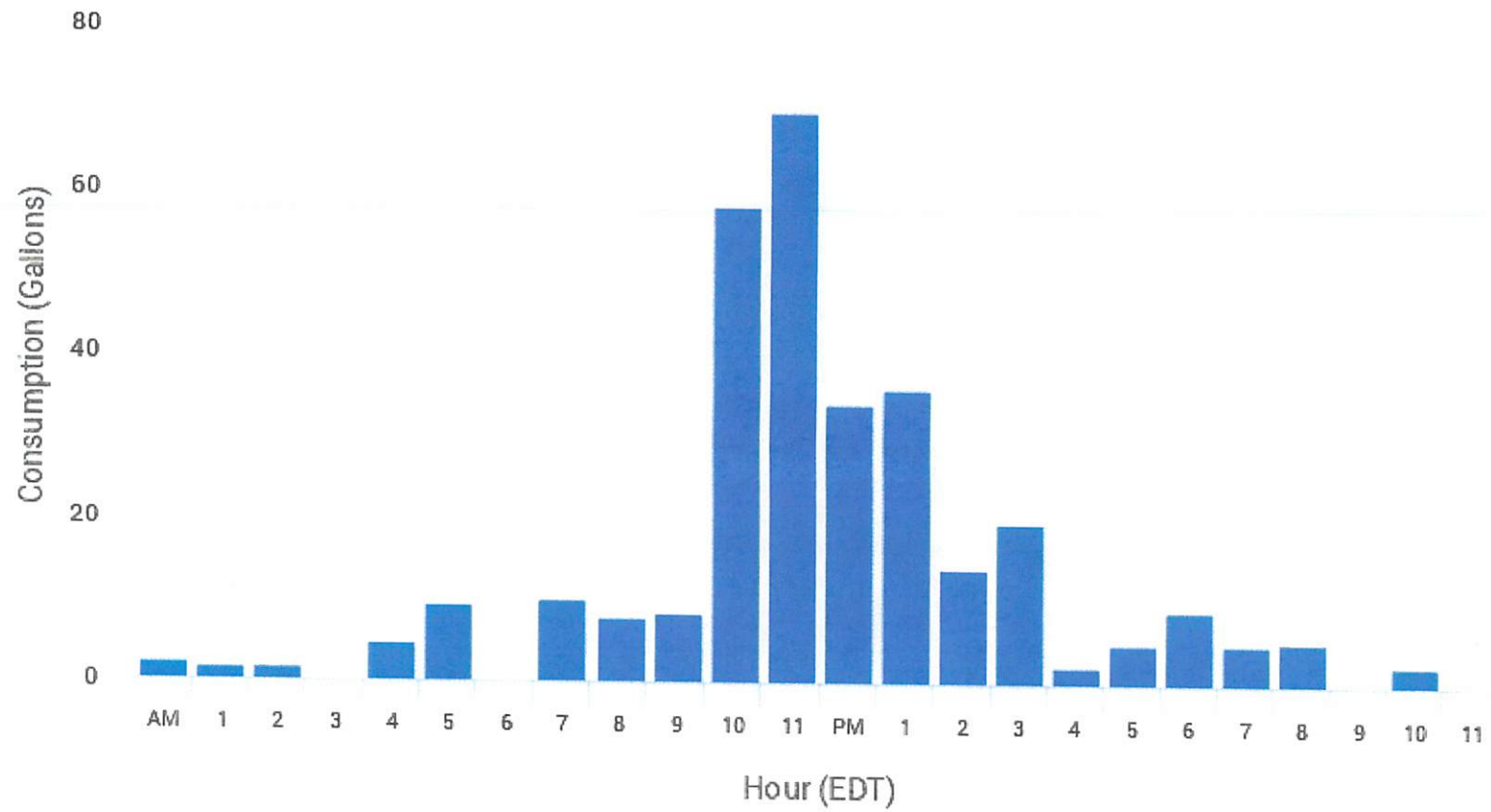
● 53B-118-0

Sunday, August 07, 2022



● 53B-118-0

Monday, October 10, 2022



● 53B-118-0

David Vigeant

6.3

From: Mary Danielson <MDanielson@tighebond.com>
Sent: Friday, October 14, 2022 1:36 PM
To: David Vigeant
Cc: Louis A. Soracco
Subject: FW: WS 24 Permit to Construct a WTP - Townsend, MA
Attachments: Townsend WS 24_Permit to Construct FINAL_SIGNED.pdf

Sorry Dave, in the flurry of emails I sent today I missed you on this CC...

Anyway, this was the last item for today. We have successfully submitted the following:

- SRF Loan Application (submitted to Patricia, Michele, and Maria)
- WS 24 Permit to Construct (submitted to Bob, Randy, and Kate)
- WS 32 Distribution System Modification Permit (submitted to Bob, Randy, and Kate)
- NOI was mailed to Townsend Conservation yesterday

Thank you for all of the help! I expect to get our MEPA certificate shortly as well.

Have a nice weekend,

Mary Danielson, PE (*she/her/hers*)

Project Engineer

Tighe&Bond

o. 508.471.9637 | m. 207.702.1993

120 Front Street, Suite 700, Worcester, MA 01608

w: tighebond.com | halvorsondesign.com



From: Mary Danielson
Sent: Friday, October 14, 2022 1:25 PM
To: Bostwick, Robert (DEP) <robert.bostwick@state.ma.us>
Cc: Swigor, Randy (DEP) <randy.swigor@state.ma.us>; Conoby, Kathryn (DEP) <kathryn.conoby@state.ma.us>; Louis A. Soracco <LASoracco@tighebond.com>; Derek R. Belanger <DRBelanger@tighebond.com>; Darline Tenney <DTenney@tighebond.com>; April Locke <ALocke@TigheBond.com>
Subject: WS 24 Permit to Construct a WTP - Townsend, MA

Good afternoon,

Please see the attached permit documents for the aforementioned permit application for a the PFAS Water Treatment Plant project in Townsend MA (funded by SRF). The plans and specs can be downloaded from the links below.

Plans: [Click to Download](#)

Specs: [Click to Download](#)

Feel free to reach out with any questions,

Mary Danielson, PE *(she/her/hers)*

Project Engineer

Tighe&Bond

o. 508.471.9637 | m. 207.702.1993

120 Front Street, Suite 700, Worcester, MA 01608

w: tighebond.com | halvorsondesign.com



**Townsend Water Department
Operational Procedures
And
Guidelines
January 2023**

Table of Contents

- Section 1: Staffing and Staff Duties**
- Section 2: Infrastructure Inventory**
- Section 3: Treatment Plant Operations and Maintenance**
- Section 4: Well Operations and Maintenance**
- Section 5: Tank Operation and Maintenance**
- Section 6: Hydrant Operation and Flushing Program**
- Section 7: Booster Pump Operations and Maintenance**
- Section 8: Water Gate Operations and Maintenance**
- Section 9: Building and Water Property maintenance**
- Section 10: Waterline operations and Maintenance**
- Section 11: Meter Operation and Maintenance**
- Section 12: Service Line operations and Maintenance**
- Section 13: Dig-safe Program**
- Section 14: GIS and operational Records**
- Section 15: Backflow Program**
- Section 16: IT and Phone System Providers**
- Section 17: Billing and Payment Systems**
- Section 18: Equipment Inventory and Maintenance schedules**
- Section 19: Generator Maintenance and Propane supply**
- Section 20: Minimum Inventories**
- Section 21: Safety**
- Section 22: Water Quality Testing and Schedules**
- Section 23: Licenses, certification and Training**

Section 1

Staffing and Staffing Duties

Part 1 Staff

Water Superintendent

David W Vigeant

Office Manager/Water Tech

Brenda Boudreau

Accounts Manager/Water Tech

Mistie Demazure

Distribution Forman

Kevin Keefe

Chief Water Treatment Operator

Ryan Lapierre

Water Tech 1

Alec Gaetz

Water Tech 2

Spring 2023

Water Tech 3

Summer 2023

Section 1 Part 2

On-call treatment Plant Rotation

Week one

On-call Kevin Keefe Treatment plant Mistie Demazure

Week two

On-Call Water Tech 2 Treatment Plant Ryan Lapierre

Week Three

On-call Water Tech 3 Treatment Plant Alec Gaetz

Week Four

On-Call Mistie Demazure Treatment Plant Kevin Keefe

Week Five

On-Call Ryan Treatment Plant Water Tech 2

Week six

On-Call Alec Gaetz Treatment Plant Water Tech 3

Section 1 Part 3

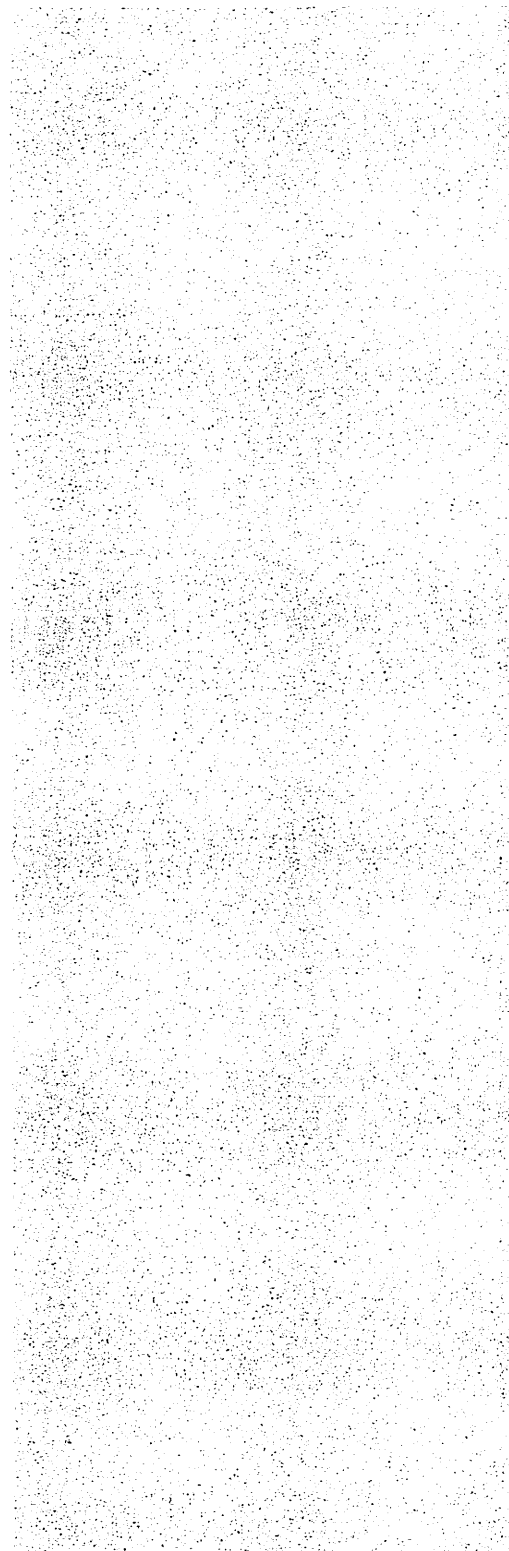
On-call and water Tech Pay

A Staff member listed in the On-call position is to be paid by union contract. On-Call starts period starts Monday morning at 7am and ends on Monday morning the following week. Any call in of a staff member is a minimum of 2 hours following overtime rules as stated in the union contract. Staff members on-call will not do wells or treatment plant once the treatment plant is on-line, this violates staffing requirements set forth by DEP. Staff members who do not have at least a Distribution 1 water license cannot work on the distribution system without a licensed operator present as per DEP regulations.

Treatment Plant Operators on their weekend are responsible for the wells and treatment plants on days when the Water Department is Closed. The shift must be staffed a minimum of 4 hours as per DEP requirements. This is not an on-call position, the staff member only works in that schedule 4 hours. Staff Members are paid according to union contract. A staff member who does not have a Treatment 1 water license can not man in the water Treatment Plant alone as well as work on the treatment plant even with a license operator present they can only observe as per DEP regulations.

Section 1 Part 4

Job Description



WATER DEPARTMENT
Office Manager/ Water Technician

DEFINITION

Under general supervision, manages, organizes, and evaluates the Water Departments business operations and office staff; performs responsible secretarial, administrative, and general office work to ensure the proper functioning of the office; performs or supervises accounts receivable, accounts payable, and payroll; responds to customer complaints and concerns. Performs additional work as required.

ESSENTIAL FUNCTIONS

The essential functions or duties listed below are intended only as illustrations of the various type of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Duties may include, but are not necessarily limited to:

- Performs or supervises all office work regarding customer accounts including billing, processing payments, applications for service, final notices to discontinued customers, computer system updating, inquiries and complaints, etc.
- Performs or supervises bookkeeping work related to processing of accounts receivables invoicing, accounts payable, and payroll including reviewing for accuracy, calculating monthly journal entries, balancing to general ledger, and filing of required reports to State and Federal government.
- Performs confidential administrative tasks for the Water Superintendent when requested; keeps the Water Superintendent fully informed regarding all office activities and issues.
- Supervises, schedules, plans, monitors, and evaluates work of clerical staff responsible for accounting, customer services, and billing; recommends corrective actions, as necessary.
- Plans, prepares, reviews, and monitors operational budgets for office supplies and expenses, benefit insurance, employee retirement, and payroll taxes.
- Prepares, creates, and files reports such as capital expenditures, statistics, capital projects, payroll distribution, and monthly water sample reports.
- Carries out related banking functions such as deposits, transfers, and record keeping.
- Processes general ledger: inputs into computer, calculates monthly journal entries, performs trial balance, creates income statements.
- Organizes and maintains office filing system including general, financial, personnel, and payroll files.
- Prepares financial and other reports as directed by the Water Superintendent; prepares final reports drafted by the Water Superintendent and other staff members.
- Provides administrative services to the Water Department by performing a variety of administrative, technical, fiscal, and clerical responsibilities.
- Acts as staff liaison to Board of Water Commissioners; attends meetings and provides necessary administrative support.
- Prepares agendas and materials for all regular and special meetings (or hearings) of the Board.
- Attends and participates in all meetings of the Board; performs all necessary follow-up for

decisions or inquiries made in those meetings and between those meetings.

- Oversees the issuance of various decisions, determinations, and permits under the jurisdiction of the Boards. Maintains public records and prepares reports as required.
- Provides extensive customer service in person, over the telephone and via e-mail; Interacts frequently with members of the public, vendors, Town departments and state and outside agencies.
- Enters new services and new water meters; Schedules and performs water meter reading using various systems; processes final water readings; issues payment demands and files liens, as necessary.
- Coordinate with private vendor to process the mailing of water bills; download and record payments to customer accounts. Apply abatements and/or refunds to water accounts; balance water receivables with Accounting office.
- Prepares and processes departmental payroll and payables; receives and processes applications; deposits fees with the Treasurer.
- Maintains department records and documentation, updates department records, electronic and paper files.
- Responds to complaints and prepares reports of investigations and related material for possible Board or legal action; provides educational information to the general public.

SUPERVISION RECEIVED

Under the general direction of the Water Superintendent.

JUDGMENT AND COMPLEXITY

The work requires examining, analyzing, and evaluating facts and circumstances surrounding individual problems, situations, or transactions, and determining actions to be taken within the limits of standard or accepted practices. Guidelines include a large body of policies, practices and precedents which may be complex or conflicting, at times. Judgment is used in analyzing specific situations to determine appropriate actions. Requires understanding, interpreting, and applying federal, state, and local regulations.

NATURE AND PURPOSE OF CONTACTS

Relationships are constantly with co-workers, vendors, the public, groups and/or individuals such as peers from other organizations, and representatives of professional organizations. May be required to discuss controversial matters where tact is required to avoid friction and obtain cooperation.

CONFIDENTIALITY

Employee has unlimited access to confidential information in the performance of their duties.

EDUCATION AND EXPERIENCE

High school diploma or equivalent, Associates Degree preferred, and three to five years of related experience required, or any equivalent combination of education, training, certification, and experience. Motor Vehicle Operator's License. Pass the D1/T1 Water Operator Class within

1 year and obtain a D1 License. Take and pass a course in procurement within 1 year.

KNOWLEDGE, ABILITY, AND SKILLS

Knowledge: Thorough knowledge of municipal and municipal utility finance and budgeting. Working knowledge of the Code of the Town of Townsend. Knowledge of related federal, state, and local laws, rules and regulations Knowledge of software commonly utilized by municipalities for billing, word processing, financial analysis, and presentations. Working knowledge of GIS mapping applications. Familiarity of office procedures and equipment. Working knowledge of Public Records, Open Meeting, Public Procurement, and Public Ethics laws.

Abilities: Ability to communicate effectively both orally and in writing. Ability to understand and explain various types of correspondence, reports, and media. Ability to maintain good public relations and to maintain effective collaborative working relationships with Town departments, department heads, fellow employees, officials, and the public. Ability to be diplomatic, professional, and courteous when dealing with others, especially in contentious or confrontational situations. Ability to meet deadlines. Ability to work independently and prioritize tasks. Ability to provide excellent customer service. Ability to keep accurate and detailed records; ability to use computers; ability to interact with the public in a professional and courteous manner; ability to handle multiple tasks in an effective manner.

Skills: Excellent organizational skills. Strong customer service skills. Strong research skills. Proficient in the use of computers and software applications for data management, word processing, mapping, and presentations. Detail orientated.

WORK ENVIRONMENT

The work is performed in a typical office environment.

PHYSICAL, MOTOR, AND VISUAL SKILLS

Physical Skills

The work involves sitting, standing, walking, and stooping. May be required to lift objects such as files, boxes of papers, office supplies, and office equipment weighing up to 30 pounds.

Motor Skills

Duties are largely mental rather than physical, but the job may occasionally require minimal motor skills for activities such as moving objects, using office equipment, including but not limited to telephones, personal computers, handheld technology, and other office equipment.

Visual Skills

Visual demands require routinely reading documents for general understanding and analytical purposes.

**WATER DEPARTMENT
ACCOUNTS MANAGER/WATER TECHNICIAN**

DEFINITION

Head of Accounts Receivable and Payable as well as HR for the Water Department.

ESSENTIAL FUNCTIONS

The essential functions or duties listed below are intended only as illustrations of the various type of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

- Reporting financial information and managing accounting staff.
- Achieves accounting operational objectives by contributing accounting information and recommendations to strategic plans and reviews; preparing and completing action plans; implementing production, productivity, quality, and customer-service standards; resolving problems; completing audits; identifying trends; determining system improvements; and implementing change.
- Meets accounting financial objectives by forecasting requirements, preparing an annual budget, scheduling expenditures, analyzing variances, and initiating corrective actions.
- Confirms financial status by monitoring revenue and expenses; coordinating the collection, consolidation, and evaluation of financial data; and preparing special reports.
- Maintains accounting controls by establishing a chart of accounts and defining accounting policies and procedures.
- Guides other departments by researching and interpreting accounting policy and applying observations and recommendations to operational issues.
- Maintains financial security by establishing internal controls.
- Avoids legal challenges by understanding current and proposed legislation, enforcing accounting regulations, and recommending new procedures.
- Protects organization's value by keeping information confidential.
- Updates job knowledge by participating in educational opportunities, reading professional publications, maintaining personal networks, and participating in professional organizations.
- Accomplishes accounting and organization mission by completing related results as needed.
- Provides administrative services to the Water Department by performing a variety of administrative, technical, fiscal, and clerical responsibilities.
- Leads in the preparation and administration of water billing; schedules final meter readings, prepares the lien list for transmittal to the Assessor's Office; processes notices and payment plans for delinquent accounts; reconciles accounts receivable with the Town Accountant monthly.
- Provides extensive customer service in person, over the telephone and via e-mail.
- Interacts frequently with members of the public, vendors, and Town departments.

NON-EXEMPT HIGHWAY/WATER UNION

- Handles phone and email inquiries from ratepayers, members of the public, and businesses; Processes in-coming and outgoing mail.
- Processes departmental payroll and accounts payable in a timely manner; posts to accounts payable and reconciles monthly with the Town Accountant.
- Processes work orders for action by operations personnel.
- Performs clerical tasks including but not limited to typing, filing, copying, and scanning.
- Maintains accurate records, files, and correspondence.

Attends and participates in all meetings of the Board; performs all necessary follow-up for decisions or inquiries made in those meetings and between those meetings.

SUPERVISION RECEIVED

Under general direction of the Office Manager, employee plans and prioritizes most of the work independently, in accordance with standard practices. Employee is expected to solve most problems of detail or unusual situations by adapting methods or interpreting instructions accordingly. Instructions for new assignments or special projects usually consist of statements of desired objectives, deadlines, and priorities. Technical and policy problems or changes in procedures are discussed with supervisor.

JUDGMENT AND COMPLEXITY

The work involves numerous standardized practices, procedures, or general instructions that govern the work and, in some cases, may require additional interpretation. Judgment is needed to locate, select, and apply the most pertinent practice, procedure, regulation, or guideline.

NATURE AND PURPOSE OF CONTACTS

Relationships are constantly with co-workers, vendors, the public, groups and/or individuals such as peers from other organizations, and representatives of professional organizations. May be required to discuss controversial matters where tact is required to avoid friction and obtain cooperation.

CONFIDENTIALITY

Employee has access to sensitive information in the performance of their duties.

EDUCATION AND EXPERIENCE

High school diploma or equivalent and one to three years of related experience required, or any equivalent combination of education, training, certification, and experience. Motor Vehicle Operator's License. Take and pass the D1/T1 Drinking Water Introduction Course within 1 year. Take and pass the Procurement Course within 1 year.

KNOWLEDGE, ABILITY, AND SKILLS

Knowledge: Thorough knowledge of office practices and procedures. Thorough knowledge of departmental policies and practices regarding utility billing and payroll. Basic understanding of the Water Department operations. Working knowledge of public ethics, records, procurement, and open meeting laws.

NON-EXEMPT HIGHWAY/WATER UNION

Abilities: Ability to communicate orally and in writing departmental policies, rules, and application procedures to the public. Ability to type, file, maintain records, and prepare reports. Ability to perform math. Ability to keep accurate and detailed records; ability to use computers; ability to interact with the public in a professional and courteous manner; ability to handle multiple tasks in an effective manner.

Skills: Skill in using a computer keyboard, typing, creating, and using word processing and spreadsheet applications.

WORK ENVIRONMENT

The work is performed in a typical office environment.

PHYSICAL, MOTOR, AND VISUAL SKILLS

Physical Skills

The work involves sitting, standing, walking, and stooping. May be required to lift objects such as files, boxes of papers, office supplies, and office equipment weighing up to 30 pounds.

Motor Skills

Duties are largely mental rather than physical, but the job may occasionally require minimal motor skills for activities such as moving objects, using office equipment, including but not limited to telephones, personal computers, handheld technology, and other office equipment.

Visual Skills

Visual demands require routinely reading documents for general understanding and analytical purposes.

WATER DEPARTMENT

Distribution Foreman

DEFINITION:

Under direction of the Water Superintendent, plans, coordinates, supervises, and directs the construction and maintenance of water services; supervises the water distribution system and equipment maintenance operations; performs a variety of meter service duties; performs other related duties, as required.

ESSENTIAL FUNCTIONS

Under direct supervision of the Water Superintendent. The essential functions or duties listed below are intended only as illustrations of the various type of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

Duties may include, but not necessarily limited to:

- Supervise water distribution, maintenance operations, and emergency services.
-
- Prepare and present a variety of reports to include staff reports and presentations.
- Coordinate contract work.
- Facilitate employee training in the operation of tools and equipment and the function and operation of facilities.
- Meet with customers to evaluate complaints and address the issues to resolve the complaint.
- Interface with other departments in a cooperative manner.
- Inspect meter boxes, lids, and meters to ensure proper maintenance and functionality.
- Perform repairs or orders replacements of meter boxes, lids, and meters, as needed.
- Locate and read meters, when required.
- Ensure that meters are flow tested.
- Investigate leaks and reports service interruptions.
- Turn water service on and off.
- Supervise the meter replacement and rotation programs.
- Participate in emergency call, on-call on a rotation basis and treatment plant rotation.
- Attend meetings and conferences, as necessary.
 - Operates light, medium trucks and Class B trucks. May operate Class 2 and 4 hydraulic equipment normally assigned to a public works equipment operator. Type of equipment varies by the assigned task.
 - Inspect equipment prior to operation to assure that all controls and safety devices are functioning properly. Lubricate and otherwise service the equipment as part of a programmed preventive maintenance schedule. Report malfunctions to the Foreman. Assists in making repairs.
 - Performs preventative maintenance and minor repairs on vehicles and equipment.
 - Clears/removes snow and ice from roadways, parking lots, walkways, ramps, and steps.
 - Operates equipment as directed during snow and ice events.
 - Responds to weather related emergencies and other emergencies as required.

- Respond to emergencies such as inclement weather, infrastructure failures including water main breaks; emergency overtime is mandatory, scheduled overtime may also be necessary, acceptance of overtime is expected.
- Maintains digital and/or manual records of water quality data, pumping data, and daily work performed; creates and revises as necessary diagrams of water services and mains.
- Attends seminars and training classes required to maintain various licenses.
- Performs similar or related work as required, or as the situation dictates.

SUPERVISION RECEIVED

Under supervision of the Superintendent. The employee is familiar with the work routine and uses initiative in carrying out recurring assignments independently. The supervisor provides additional, specific instruction for new, difficult, or unusual assignments, including suggested work methods. The employee refers unusual situations to the supervisor for advice and further instructions.

JUDGMENT AND COMPLEXITY

The work involves numerous standardized practices, procedures, or general instructions that govern the work and, in some cases, may require additional interpretation. Judgment is needed to locate, select, and apply the most pertinent practice, procedure, regulation, or guideline.

NATURE AND PURPOSE OF CONTACTS

Relationships are primarily with co-workers, vendors, and the public, involving frequent explanation, discussion or interpretation of practices, procedures, regulations, or guidelines to render service, plan, or coordinate work efforts, or resolve operating problems. Other regular contacts are with service recipients and employees of outside organizations. More than ordinary courtesy, tact and diplomacy may be required to resolve complaints or deal with hostile, uncooperative or uninformed persons.

EDUCATION AND EXPERIENCE

High School diploma or equivalent; one to three years of related work experience or technical training to perform assigned duties at the journeyman level; or any equivalent combination of education and experience.

Special Requirements

Massachusetts D2 and T2 Drinking Water Licenses
Massachusetts Class 2B/1C Hoisting Engineer's License
OSHA 10 Certification.

KNOWLEDGE, ABILITY, AND SKILLS

Knowledge: Thorough knowledge of practices, procedures, equipment, materials, and tools relative to public works and municipal water system construction and maintenance operations. Working knowledge of water system principles, practices, and methods as applicable to a municipal setting. General knowledge of the layout of the town; Knowledge of motor equipment maintenance requirements.

Abilities: Ability to operate heavy construction and maintenance related equipment safely and effectively; Ability to apply knowledge and experience to various departmental functions; ability

to work effectively as a member of a crew or independently. Able to be on-call 24 hours per day. Ability to work for extended periods under adverse conditions. Ability to read and understand maps, plans, technical manuals, and specifications. Ability to communicate effectively with the public.

Skills: Skill in the operation of all required tools, equipment, and software applications. Skill in handling public complaints tactfully and effectively.

WORK ENVIRONMENT

The nature of duties may involve continuous presence of unpleasant or irritating elements, such as considerable noise, odors, chemical fumes, dust, smoke, heat, cold, oil, dirt, or grease. Work may be continually performed outdoors, regardless of weather conditions.

PHYSICAL, MOTOR, AND VISUAL SKILLS

Physical Skills

Work requires moderate intermittent physical strength and effort daily, such as lifting heavy objects, carrying the object(s) and stacking them or moving them. In addition, pulling, pushing, standing, or walking for the full workday may also be involved. A great deal of physical effort must be exerted at this level.

Motor Skills

Duties may involve assignments requiring application of hand and eye coordination with finger dexterity and motor coordination.

Visual Skills

Visual demands require routinely reading documents for general understanding and analytical purposes.

WATER DEPARTMENT
Chief Water Treatment Plant Operator

DEFINITION: Under direction of the Water Superintendent, the Chief Water Treatment Plant Operator supervises and participates in the operation, direction, adjustment, repair and maintenance of the water treatment related assignments and related equipment; plans, organizes, schedules, and assigns work at the plants and performs related work as required.

ESSENTIAL FUNCTIONS

Under direction of the Water Superintendent. The essential functions or duties listed below are intended only as illustrations of the various type of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

Duties may include, but are not necessarily limited to:

- Supervises and participates in the operation and maintenance of municipal water purification plants and wells involving complete treatment processes to ensure compliance with all federal, state, and local health codes.
- Takes water quality sample throughout the system according to DEP schedules.
- Handles water quality customer issues effectively and courteously.
- Participates in emergency calls, treatment plant rotation, and on-call duty on a rotation basis.
- Determines daily water requirements of distribution system and amounts required for treatment to meet needs of consumers and reservoirs.
- Interprets meter and gauge data and regulates treatment processes.
- Plans, supervises, and assists in the repair and replacement of plant equipment.
- Performs emergency troubleshooting work; determines quantity and type of supplies and equipment required in maintenance work.
- Coordinates safety in-service training of subordinates and ensures compliance with safety procedures in the plant; sits on the safety committee.
- Tracks and maintains records of water treatment operations and maintenance, and requisitions plant materials and supplies.
- Makes regular and special written and verbal reports; evaluate operations and activities of assigned responsibilities; recommend improvements and modifications; assists in the preparation of the annual budget.
- Assists in the preparation of specifications for construction and other plant improvements.
- Submits justifications for staff, equipment, supplies and materials, modifications, and repairs of water well, treatment facility and related equipment.
- Performs preventative maintenance and minor repairs on vehicles and equipment.
- Clears/removes snow and ice from roadways, parking lots, walkways, ramps, and steps.
- Operates equipment as directed during snow and ice events.
- Responds to weather related emergencies and other emergencies as required.
- Respond to emergencies such as inclement weather, infrastructure failures including water

main breaks; Emergency overtime is mandatory, scheduled overtime may also be necessary, acceptance of overtime is expected.

- Maintains digital and/or manual records of water quality data, pumping data, and daily work performed; creates and revises as necessary diagrams of water services and mains.
- Attends seminars and training classes required to maintain various licenses.
- Performs similar or related work as required, or as the situation dictates.

SUPERVISION RECEIVED

Under direct supervision of the Water Superintendent.

JUDGMENT AND COMPLEXITY

The work involves numerous standardized practices, procedures, or general instructions that govern the work and, in some cases, may require additional interpretation. Judgment is needed to locate, select, and apply the most pertinent practice, procedure, regulation, or guideline.

NATURE AND PURPOSE OF CONTACTS

Relationships are primarily with co-workers, vendors, and the public, involving frequent explanation, discussion or interpretation of practices, procedures, regulations, or guidelines in order, to render service, plan, or coordinate work efforts, or resolve operating problems. Other regular contacts are with service recipients and employees of outside organizations. More than ordinary courtesy, tact and diplomacy may be required to resolve complaints or deal with hostile, uncooperative or uninformed persons.

EDUCATION AND EXPERIENCE

High School diploma or equivalent; one to three years of related work experience or technical training to perform assigned duties at the journeyman level; or any equivalent combination of education and experience. Any combination of training, education and experience which demonstrates an ability to perform the duties of the position. The typical qualifying entrance background are courses in water treatment and water works practice and four years of increasingly responsible experience in water treatment plant operation, including three years of supervisory experience.

Special Requirements

Massachusetts D2 and T2 Drinking Water Licenses

Massachusetts Class 2B/1C Hoisting Engineer's License

OSHA 10 Certification.

KNOWLEDGE, ABILITY, AND SKILLS

Knowledge: Thorough knowledge of practices, procedures, equipment, materials, and tools relative to public works and municipal water system construction and maintenance operations. Working knowledge of water system principles, practices, and methods as applicable to a municipal setting. General knowledge of the layout of the town; Knowledge of motor equipment maintenance requirements. Principles and practices of water treatment and water quality analysis.

Abilities: Ability to operate heavy construction and maintenance related equipment safely and effectively; Ability to apply knowledge and experience to various departmental functions; ability to work effectively as a member of a crew or independently. Able to be on-call 24 hours per day. Ability to work for extended periods under adverse conditions. Ability to read and understand maps, plans, technical manuals, and specifications. Ability to communicate effectively with the public.

Skills: Skill in the operation of all required tools, equipment, and software applications. Skill in handling public complaints tactfully and effectively.

WORK ENVIRONMENT

The nature of duties may involve continuous presence of unpleasant or irritating elements, such as considerable noise, odors, chemical fumes, dust, smoke, heat, cold, oil, dirt or grease. Work may be continually performed outdoors, regardless of weather conditions.

PHYSICAL, MOTOR, AND VISUAL SKILLS

Physical Skills

Work requires moderate intermittent physical strength and effort daily, such as lifting heavy objects, carrying the object(s) and stacking them or moving them. In addition, pulling, pushing, standing, or walking for the full workday may also be involved. A great deal of physical effort must be exerted at this level.

Motor Skills

Duties may involve assignments requiring application of hand and eye coordination with finger dexterity and motor coordination.

Visual Skills

Visual demands require routinely reading documents for general understanding and analytical purposes.

Water Technician

Job Description and Duties

Job Description: Works to perform skilled work in the installation, operation and repair of the Town's water distribution system, treatment system and maintenance of the water supply. Under direct supervision of the Distribution Manager and Water Quality Manger.

Duties: Installation and operation and repair of the Town's water distribution D-2 and T-2 facilities.

Operates pumps, motors, and related equipment at the pumping stations. Installs and maintains watermains, hydrants, valves, pipes, and meters. Reads, installs, repairs and tests water meters. Operates a variety of motor equipment, as licensed, used in the installation, repair, maintenance, and operation of the water facilities and performs light maintenance and servicing of equipment. Maintains Water Department Grounds in all seasons. Performs Backflow and Cross-connection tests. Workers are required to undergo training as required by the needs water department paid by the water department.

Will be required to be on-call after hours, weekends and holidays on a rotating schedule. Expected to be available to participate in emergency overtime situations. All other duties as required.

Position Specific Duties:

Water Technician/ Meters: Required to inventory meters and parts for meters, makes meter order list, reads meters, and helps schedule meters with the accounts Manager.

Water Technician/Backflow and Cross connections: Required to maintain backflow testing equipment and help schedule the testing and retesting of backflows throughout the system.

Water Technician/ Gate Exerciser: Maintain the departments gate exerciser and inventories gate covers, gate boxes and parts.

SUPERVISION RECEIVED

Under direct supervision of the Distribution Manager and Water Quality Manger in a rotation.

JUDGMENT AND COMPLEXITY

The work involves numerous standardized practices, procedures, or general instructions that govern the work and, in some cases, may require additional interpretation. Judgment is needed to locate, select and apply the most pertinent practice, procedure, regulation or guideline.

NATURE AND PURPOSE OF CONTACTS

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Motor Skills

Duties may involve assignments requiring application of hand and eye coordination with finger dexterity and motor coordination.

Visual Skills

Visual demands require routinely reading documents for general understanding and analytical purposes.

Section 1 Part 5
Water Service Tech
Pay Evaluation
And Collins report Compliance
Highway/Water Department Union

1) Passed to comply and fit to Collins report with new hires and existing not having met full Water Technician Qualifications

a) No Licences	Min. D1, see Page 15 Collins Report
b) Hydraulic License	2 Steps increase
c) Distribution 1	3 Steps Increase
d) Treatment 1	3 Step Increase
e) Distribution 2	3 Step Increase Primary operator
f) Treatment 2	2 Step Increase Primary Operator
Total	13 Steps equal to current

2) License Stipends:

- a) Current from 2014 union contract Art 29 line I says each employee who successfully completes all required licenses shall receive a lump sum payment of \$500.**
- b) We now ask for more Licenses.**
- c) Proposed \$250 for each license listed below.**
 - 1) Hydraulic**
 - 2) Distribution 1**
 - 3) Distribution 2**
 - 4) Treatment Plant 1**
 - 5) Treatment Plant 2**

Section 2
Infrastructure Inventory

Hydrants:385

Miles of Main:52.5

Cast Iron
Ductile
ABS
HDPE

Gates:838

Services Connections:2081

Units:2561

Meters:

.75 inch :
1 inch :
1.5 inch:
2 inch:
3 inch:

**Section 9 Part 1
Building and Water Property
Maintenance**

Well inspection and Cleaning (5 year rotation)

Cross St Cleaned and rehabbed	June 2021	next rehab	2026
Witches Brook 2 Cleaned and rehabbed	Feb 2022	next rehab	2027
Main St Well replaced	July 2022	next rehab	2029
Witches Brook 1 Cleaned and rehabbed	Sept 2022	next rehab	2028
Harbor Trace to be rehabbed	2023	next rehab	2030

Tank Inspection and clean all tanks (every 2 year)

Highland Rd Tank Painted 2021

Buildings Maintenance.

Witches Brook Maintenance truck port Building replaced Summer 2021
Cross St Driveway first 270 feet of entrance paved Aug 2022
Cross St Roof replaced Replaced sept 2022
Main St Treatment Plant Slate roof repaired oct 2022
Main St Utility Build roof replacement Summer 2023
Main St Utility Build siding upgrade Summer 2023
Witches Brook 1 Roof replace Summer 2024
Witches brook 2 Roof replace Summer 2025
Witches Brook utility build replace Summer 2026
Cross st 250 feet driveway upgrade Summer 2023
Fitchburg Rd Tank Driveway upgrade 200 feet Summer 2023
Cross St finish driveway Summer 2024
Fitchburg tank 200 feet pave Summer 2024
Fitchburg tank finish driveway Summer 2025
Main St well Paving 250 feet summer 2025
Main St window replacement Summer 2025
Main St well Paving 250 feet Summer 2026
Witches brook paving Summer 2026
Main Well Paving Summer 2027
Witches Brook Paving 2027
Main St Well finish paving 2028
Witches Brook Finish Paving 2028
Harbor Trace Seal Coat Summer 2029
Cross St Seal Coal Summer 2029
Highland Tank 250 feet Paving 2029

Fitchburg Rd Tank Seal Coat 2030
Highland Rd Tank Paving 2030
Main St Well Seal Coat Summer 2031
Highland St Tank Pave finish 2031
Witches Brook Seal Coat 2032
Rotate seal coating going forward

Vehicle Maintenance and replacement

Backhoe 1
Dump Truck 2
Emergency Van 3
Maintenance Vehicle 4
Maintenance Vehicle 5

Section 11 Meters

METER REPLACEMENT PROGRAM

The Town of Townsend initiated a comprehensive water meter replacement program to:

- Improve the efficiency of meter reading and water billing
- Increase the quality of customer service by eliminating the need for estimated bills

WHEN METERS NEED REPLACEMENT

The replacement of meters is required due to their age and serviceability. Water meters have a useful life of 10 to 15 years after which the accuracy may diminish.

METER REPLACEMENT PROCEDURE

In most cases, meter change out is a simple procedure that requires an hour or less. The new system will include automatic meter reading technology that will:

- Save staff time
- Prevent recording errors
- Eliminate estimated readings
- Minimize the need for personnel to go on the property

The meter reading system provides the ability to detect if a leak is occurring in your plumbing system. For example, leaks can occur in toilets without your knowledge resulting in high water bills. Downsizing of existing meters installed in commercial properties is a new program initiated by the Water Department to better account for water consumption in the Town of Townsend.

REPLACEMENT FOR EXISTING ACCOUNTS

Water meters will be replaced in existing properties at no cost to the owner. New valves may need replacement in order for the meter to be replaced. The new meters include a remote reading device mounted inside or outside the structure eliminating the need for the Water Department to obtain access to the building to read the meter.

NEW DOMESTIC & IRRIGATION METERS

Domestic and irrigation meters for new construction must be purchased by the property owner before making an appointment with the town for installation. The new meters can be purchased at the [Townsend](#) Water Department.

Section 12 Part 1 Services

What does the town own? The town owns from the water main to the curb stop or water gate and including the curb stop or water gate that is at the near the edge of town right of way. The town also owns the water meter.

What does the customer own? The customer owns from the curb stop or water gate that goes to their property into their building to exclude the water meter.

The water department only maintains what the owns. This includes mark outs.

Electronic water drawing are free to the public.

All new and repaired services will be sleeved and be minimum 1 inch dimensions.

All new and repaired services must be inspected.

All new and repaired services must have a new tie card

Inspection of existing curb stops will be done when time allows

Mapping of service lines will be done as equipment and time allows.

See Rates and fees for anything that involves homeowner services.

Section 13 Part 1 About Digsafe

What is Dig Safe® ?

Planning home improvements? Planting a tree? Installing a fence or deck? Whether you do it yourself or hire a professional, a safe job starts with a call to Dig Safe® at 811.

[Click here for our homeowner video.](#)

Dig Safe® is a not-for-profit clearinghouse that notifies participating utility companies of your plans to dig. In turn, these utilities (or their contract locating companies) respond to mark out the location of their underground facilities. Dig Safe is a free service, funded entirely by its member utility companies. (Note: Dig Safe does not mark utility lines.)

It's a risk to make faulty assumptions about when to notify Dig Safe. That's why [state law](#) requires you to notify Dig Safe for even small projects, like installing a mailbox or planting shrubs. The depth of utility lines vary, and there may be multiple utility lines in a common area.

It's important to know what's below. Call 811 to avoid utility service disruption to an entire neighborhood, harm to you and those around you, as well as fines and repair costs.

"Pre-mark" where you plan to dig before making the call to 811.

Pre-marking means to mark out the area on the ground where the work will take place, using white stakes, paint or flags. Note that pre-marking requirements vary slightly from state to state. [Download Laws/Rules](#)

When utility company representatives arrive to mark their lines, pre-marking provides visual boundaries to help guide them in placing their marks where you need them, and not where you don't.

Guide to Marking Proposed Excavations



Step 2

Call 811 in advance



Our call center is open from Monday through Friday from 6:00am to 6:00pm.

State law requires you give at least 72 hours notice in Massachusetts, Maine, New Hampshire and Rhode Island; 48 hours in Vermont. - not including weekends and legal holidays.

We only accept emergency locate requests during off-hours. For non-emergency requests, please call during regular office hours.

You will be given a Dig Safe ticket number as proof of notification.



Step 3

Notify non-member facility owners

Non-member companies are not notified by Dig Safe. See our [Laws at a Glance](#) chart to find out what types of utilities companies are required to be members of Dig Safe.

[Click here](#) to get a list of existing Dig Safe members, by state.

Step 4

Wait the required time

After notifying Dig Safe, you must wait 48 hours in Vermont, or 72 hours in Maine, Massachusetts, New Hampshire and Rhode Island. (Excluding weekends and legal holidays.)

During this time, utility representatives respond to mark their lines within your pre-marked area. They use this uniform color code system so the type of facility is identified.

RED	ELECTRIC
YELLOW	GAS, OIL, STEAM
ORANGE	COMMUNICATIONS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER
GREEN	SEWER / DRAINAGE
PINK	SURVEY MARKS
WHITE	PROPOSED EXCAVATION

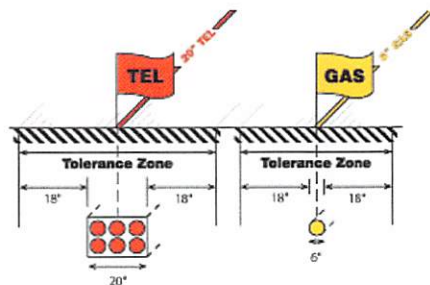


Step 5

Respect the marks

Remember that pipes, cables, and wires can be buried at any depth, so it can be risky to dig in close proximity of a buried line. This is why the laws of our five New England states observe a Safety Zone (or Tolerance Zone) requirement.

The use of mechanized equipment is prohibited when digging within 18 inches of a buried facility. In this Safety Zone (or Tolerance Zone), you must dig by hand, carefully, to avoid damage.



Step 6

Maintain the marks

Make sure the utility marks stay intact during your project. If the marks are compromised for any reason, call Dig Safe back at 811.

In Massachusetts, Maine, New Hampshire, Rhode Island and Vermont, your ticket expires if the excavation has not started before 30 days from the date of issue.

Ticket Expiration

In Massachusetts, New Hampshire and Vermont, Dig Safe tickets expire 30 days from the date of issue.

In Maine, tickets expire every 60 days from the date of issue.

In Rhode Island, tickets do not expire, provided that the marks are maintained.

For a more details, see our [Laws At A Glance](#)

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Will private lines on my property be marked?

Member utilities companies are responsible to mark only the facilities that they own or maintain. Private underground pipes and cables may not be owned or maintained by member utility companies, therefore they are unable to locate them. It is your responsibility to investigate if any privately owned utilities are in the area. [Click here for a list of private utility locators.](#)

Dig Safe provides notification services in connection with excavation projects. Dig Safe does not mark underground facilities. You must contact a member utility via Dig Safe, or a private locating service directly, to request that underground lines be identified.

Dig Safe member utilities may only mark lines they own or maintain.

The following is a list of private locating companies. The companies listed here are not agents, employees or contractors of Dig Safe. Dig Safe provides this list only as a courtesy and does not warrant the accuracy or completeness of this list or any other aspect of these contractors' services.

You may also consult the Yellow Pages under "Utilities Underground – Locating" for other private locators in your area.

Please be aware that, currently, no license is required to provide these services and there is no regulatory board of oversight.

The order in which contractors are listed is alphabetical, and not intended to signify any preference or recommendation.

Please check back at this page often, as we will add other private locate contractors to this list as we become aware of them.

- **360 Utility Solutions - Serving all of New England**
Contact: Warren Verga
Phone: 508-930-6002
E-mail: warren.verga@gmail.com
- **A A B Utility Locating & Professional Land Surveyors - Serving ME, NH**
Contact: James Nadeau, P.L.S., C.F.M.
Street: 918 Brighton Avenue
Address: Portland, ME 04102
Phone: 207.878.7870
Fax: 207.878.7871
Web: www.AAButilitylocating.com
E-mail: Jim@AAButilitylocating.com
- **A E I Subsurface Investigation & Vacuum Excavation - Serving Eastern CT, RI & MA**
Contact: Pat Aubin
Street: 339 Market St
Address: Warren, RI 02885
Phone: 401 289 2400
Fax: 401 289 0019
Web: www.aeisubsurface.com
E-mail: pat@aeisubsurface.com

- **A Pyburn & Sons, Inc. Water Leak Detection & Locating - Serving MA, ME & NH**

Contact: Greg Pyburn
Phone: 617-529-3646
Web: www.apsitech.com
E-mail: gpyburn@apsitech.com

- **A T Utility Locating Corp - Serving all of New England**

Contact: Nick Aubin
Street: 50 Winter St
Address: Rehoboth, MA 02769
Phone: 774.654.0402
Cell Phone: 401.430.6009
Web: www.utilitylocatingcorp.com
E-mail: nick@utilitylocatingcorp.com

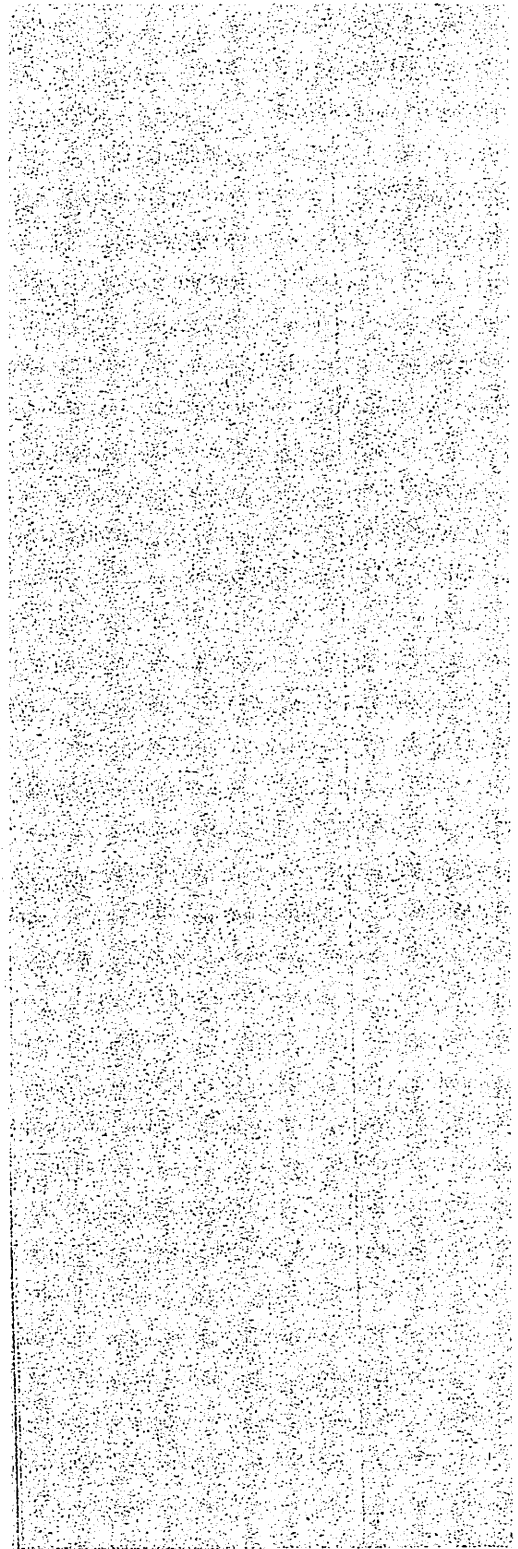
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Section 13 Part 2



FISCAL YEAR 22 SUMMARY
TOWNSEND WATER DEPARTMENT - ACCOUNTS RECEIVABLE
September 30, 2022

UNCOLLECTED FROM JUNE 30, 2021

96,406.83

CHARGED	07/01/21 09/30/22	9/30/2022	Previous Balance	Total
USER CHARGES		1,515.50	456,877.86	458,393.36
FEES		525.00	2,050.00	2,575.00
SERVICE CHARGES		3,000.00	8,450.00	11,450.00
BACKFLOW		0.00	0.00	0.00
SUBTOTAL		5,040.50		
TOTAL CHARGES				472,418.36
				568,825.19

RECEIVED	07/01/20 09/30/22	9/30/2022		
USER CHARGES		21,890.56	395,571.00	417,461.56
FEES		675.00	1,950.00	2,625.00
SERVICE CHARGES		3,650.00	8,881.98	12,531.98
LATE CHARGES		0.00	7.42	7.42
BACKFLOW		205.00	330.00	535.00
SUBTOTAL		26,420.56		
TOTAL RECEIPTS				433,160.96

SENT TO LIEN	
LIENS COLLECTED	
ABATEMENTS	1,269.20
ADJUSTMENTS	598.71
AJD TO MASTER	
UNCOLLECTED	133,796.32
	568,825.19

OUTSTANDING:	
USER CHARGES	132,333.13
FEES	500.00
SERVICE CHARGES	931.01
LATE CHARGES	127.40
BACKFLOW	-95.22
TOTAL OUTSTANDING	133,796.32