

Town of Harwich
BOARD OF WATER/WASTEWATER COMMISSIONER'S MEETING AGENDA*
*Conference Room, Harwich Water Department
196 Chatham Rd, Harwich, MA
Wednesday, June 9, 2021, 1:00pm*

- I. CALL TO ORDER
- II. CONSENT AGENDA
 - A. Minutes
 - 1. April 28, 2021
 - 2. May 6, 2021
 - 3. May 26, 2021
- III. ABATEMENTS
- IV. OLD/UNFINISHED BUSINESS
- V. NEW BUSINESS
 - A. Proposed Water Rate Increase- *Review for Legal Ad and Public Hearing*
 - B. Sewer Rate- *Discussion*
 - C. Water/Wastewater Superintendent Evaluation
- VI. SUPERINTENDENT'S REPORT
- VII. COMMISSIONER'S REPORT
- VIII. CORRESPONDENCE/ANY OTHER BUSINESS
- IX. NEXT MEETING: TBD
- X. OPEN PUBLIC FORUM
- XI. ADJOURNMENT

**Per the Attorney General's Office: The Board of Water Commissioners may hold an open session for topics not reasonably anticipated by the Chair 48 hours in advance of the meeting following "New Business." *If you are deaf or hard of hearing or are a person with a disability who requires an accommodation, contact the Water Department Office at 508-432-0304 x.0 or by email at customerservice@harwichwater.com*

Authorized Posting Officer:

Tracey Alves

Tracey Alves, Board Secretary

Posted By: _____

Town Clerk

Date: _____

II. CONSENT AGENDA

- A. Minutes
 - 1. April 28, 2021
 - 2. May 6, 2021
 - 3. May 26, 2021

**MINUTES
HARWICH WATER DEPARTMENT
BOARD OF WATER/WASTEWATER COMMISSIONERS
WEDNESDAY, APRIL 28, 2021
1:00 P.M.**

WATER COMMISSIONER'S PRESENT: Chair Gary Carreiro, Vice Chair Judith Underwood, Clerk Allin Thompson

OTHERS PRESENT: Superintendent Dan Pelletier, Comptroller Sandra Sieger, Billing Administrator Wellesley Marsh, Secretary Tracey Alves, Russ Kleekamp

CALL TO ORDER

Chair Carreiro called the meeting to order 1:00 p.m.

CONSENT AGENDA

A. Minutes

1. **March 4, 2021**
2. **March 19, 2021**
3. **April 8, 2021**

Clerk Thompson motioned to adopt the consent agenda as presented. Vice Chair Underwood seconded the motion. All in favor; 3-0-0.

OLD/UNFINISHED BUSINESS

A. Water Rules & Regulations

The Board is ready to move forward with the Water Rules and Regulations. Superintendent Pelletier will proceed with advertising for the Public Hearing.

NEW BUSINESS

A. Coastal Resiliency Grant Program

Superintendent Pelletier updated the Board on the Coastal Resiliency Grant Program. Russ Kleekamp of GHD also attended the meeting to join in on the discussion. Superintendent Pelletier provided the Board with some background as to how this came up. With the Capital plan and the pandemic, tight budgets, etc. Russ and Dan were discussing potential funding options for other projects. The capital plan covers major capital infrastructure projects that the Department has to handle but for other projects that should still be considered, other funding opportunities should be explored while budgets are becoming tighter and tighter.

This project on Lothrop Ave is not on the Capital plan but would be a great improvement to Harwich's water system. Russ Kleekamp provided an overview of the scope of work that would be involved in replacing the area of above-grade water main that runs through the salt marsh,

through the estuary and next to the bridge on Lothrop Ave. The Coastal Resiliency Program targets to improve upon vulnerable infrastructure as well as clean up salt marshes. The town would be responsible to come up with a 25% cost match and it is about an \$80,000-90,000 project. It looks like a great opportunity. The first grant application would be for the survey and design work and then a second grant application would need to be done for the construction work.

The Board was in favor of moving forward with pursuing the grant opportunity.

B. Water Restrictions

Superintendent Pelletier informed the Board that the DEP has issued the Cape Cod Basin a Level 1, mild drought declaration. Superintendent Pelletier has been coordinating with every water supplier that draws water from the Monomoy Lens such as Brewster, Dennis, Chatham, Orleans and part of Yarmouth. Each of these towns will be implementing mandatory water restrictions.

Clerk Thompson moved to adopt the odd/even watering schedule as mandatory for the upcoming months. Vice Chair Underwood seconded the motion. All Board members were in favor; 3-0-0.

C. 42 John Joseph Rd

The Board reviewed pictures of fallen trees and brush behind the property 42 John Joseph Rd. The homeowner is seeking the Board's permission to remove the brush and fallen trees, that had fallen behind his land on Water Department property. Two-thirds of the trees were already on the ground.

Clerk Thompson motioned to allow the homeowner to remove the brush and fallen trees. Vice Chair Underwood seconded the motion. All Board members were in favor; 3-0-0.

SUPERINTENDENT'S REPORT

The gas main will need to be extended down to where the generator will be at the sewer pump station on Harden Lane.

Harwich had been negotiating with Chatham with respect to the IMA and the cost sharing for the operation of the treatment plant for Chatham and the Harwich collection system operations. One thing that the IMA didn't clearly identify, was that Harwich 23% cost share for Chatham's contract operations encompassed both their treatment and their collection system. Superintendent Pelletier has requested a breakdown from Weston & Sampson of the \$621,000 that they spend on contract operations to see how much of that was for the treatment plant and how much was for collection operations. Harwich is only supposed to be paying for collection operations. The breakdown is about 60/40 so ultimately there will be a net reduction in the FY22 wastewater budget of about \$50,000.

Superintendent Pelletier received a preliminary draft scope of Harwich's collection system. DEP requires daily inspections of pump stations with design flow of 100,000 gallons or greater per day. Harwich's stations will most likely only pump 80,000 gallons per day. Superintendent Pelletier will seek relief from DEP due to Harwich only generating 80,000 gallons through 4

pump stations daily. This relief could scale back the budget where if they don't provide relief the budget could go up.

Superintendent Pelletier has had several meetings with GHD who oversees Chatham's sewer design. Discussions have started regarding creating a connection between Harwich's SCADA system and Chatham's SCADA system so that Chatham can see and interact with Harwich's sewer pump stations.

The interconnection between Harwich and Chatham's water supply is in a vault on Route 28. Chatham has a lot of shallow wells and are looking to reinforce the interconnection. Superintendent Pelletier relayed that if the connection is opened, depending on who is pumping and who is not the water could go one way or another without a check valve or without a pump in place. One way to ensure water only goes one way would be to pump from hydrant to hydrant. A tow behind pump would be placed in between two hydrants so water could be pumped from Harwich to Chatham if they needed water in an emergency situation.

Regarding the Land Acquisition Grant through DRI funds, KP Law has started their initial due diligence to acquire properties.

The SewerCAD model is currently underway. The next step is to review sewer pump station locations. Superintendent Pelletier would seek the Board's blessing prior to running the model on the 30-35 pump stations.

Regarding the CWMP revisions, talk with GHD has taken place to strategize about that and the plan right now is to have a discussion with MEPA to discuss what we are looking to amend and any requirements that may be associated with those.

The GIS server and ESRI GIS software upgrade is complete and the Elements software program upgrade will next.

On April 15, 2021 Superintendent Pelletier did a community water forum for a sustainable practices group. It was an hour-long presentation about Drinking Water Regulations and the Safe Drinking Water Act. There is a YouTube video available for those interested.

COMMISSIONER'S REPORT

Chair Carreiro asked for confirmation that everyone had completed their Ethics training.

Superintendent Pelletier provided an update on Periwinkle Way.

NEXT MEETING

The next Board meeting will be held on Thursday, May 6, 2021 at 1:30 p.m.

ADJOURNMENT

Chair Carreiro entertained a motion to adjourn at 1:47p.m. Clerk Thompson moved the motion with a second by Vice Chair Underwood. A roll call vote was taken, all in favor; 2-0-0.

Gary Carreiro, Chairman

Dan Pelletier, Superintendent

Judith Underwood, Vice Chair

Tracey Alves, Board Secretary

Allin P. Thompson, Clerk

Noreen Donahue

John Gough

**MINUTES
HARWICH WATER DEPARTMENT
BOARD OF WATER/WASTEWATER COMMISSIONERS
THURSDAY, MAY 6, 2021
1:30 P.M.**

WATER COMMISSIONER'S PRESENT: Chair Gary Carreiro, Vice Chair Judith Underwood, Clerk Allin Thompson

OTHERS PRESENT: Superintendent Dan Pelletier

CALL TO ORDER

Chair Carreiro called the meeting to order 1:30 p.m.

NEW BUSINESS

A. Town Meeting Articles

Superintendent Pelletier provided the Board with an overview of the town meeting articles. The Water budget, Wastewater budget, Land Acquisition for Protection of Water Supply, New Source Exploration for Water Supply, Route 28 Water Main Replacement Design and Station #8 Generator articles were reviewed.

B. Rules & Regulations Public Hearing Date

The Board set a date of Wednesday, May 26, 2021 to hold the remote Public Hearings for both the Water Rules and Regulations at 1:00 p.m. and the Wastewater Rules and Regulations at 1:30 p.m.

Clerk Thompson motioned to hold a Public Hearing for Water and Wastewater Rules and Regulations on May 26th beginning at 1:00p.m. for Water Regulations and 1:30p.m. for Wastewater Regulations. Vice Chair Underwood seconded the motion. A roll call vote was taken with all in favor; 3-0-0.

NEXT MEETING

The next Board meeting will be held on Wednesday, May 12, 2021 at 9:00 a.m.

ADJOURNMENT

Chair Carreiro entertained a motion to adjourn at 2:05p.m. Clerk Thompson moved the motion with a second by Vice Chair Underwood. A roll call vote was taken with all in favor; 3-0-0.

Gary Carreiro, Chairman

Dan Pelletier, Superintendent

Judith Underwood, Vice Chair

Tracey Alves, Board Secretary

Allin P. Thompson, Clerk

Noreen Donahue

John Gough

**MINUTES
HARWICH WATER DEPARTMENT
BOARD OF WATER/WASTEWATER COMMISSIONERS
WEDNESDAY, MAY 26, 2021
1:00 P.M.**

WATER COMMISSIONER'S PRESENT: Chair Gary Carreiro, Vice Chair Judith Underwood, Clerk Allin Thompson, Noreen Donahue, John Gough

OTHERS PRESENT: Superintendent Dan Pelletier, Comptroller Sandra Sieger, Billing Administrator Wellesley Marsh

CALL TO ORDER

Chair Carreiro called the meeting to order 1:00 p.m.

WELCOME

A. Newly elected members Noreen Donahue and John Gough

The newly elected Board of Water and Wastewater Commissioners Noreen Donahue and John Gough were welcomed to the Board.

CONSENT AGENDA

A. Minutes

- 1. April 28, 2021**
- 2. May 6, 2021**

The Minutes of April 28, 2021 and May 6, 2021 were not ready for approval and will be added to the next agenda.

PUBLIC HEARINGS/PRESENTATIONS

**A. Discussion and possible vote to approve updates to Water Rules & Regulations-
1:00 pm**

Chair Carreiro entertained a motion to open the Public Hearing for the Water Rules & Regulations. Vice Chair Underwood moved the motion. A roll call vote was taken with all Board members in favor; 5-0-0.

A lot of the work done to the Water Rules and Regulations was clean-up. Irrigation Meters for Sewer customers is a new addition to the Water Rules and Regulations.

Clerk Thompson motioned to adopt the Water Rules and Regulations for the Harwich Water Department on the copy as of May 6, 2021 to take effect July 1, 2021. Clerk Underwood seconded the motion, all in favor; 5-0-0.

Clerk Thompson motioned to close the Public Hearing. Vice Chair Underwood seconded the motion. A vote by role call was taken with all in favor; 5-0-0.

B. Discussion and possible vote to approve updates to Wastewater Rules & Regulations- 1:30 pm

Clerk Carreiro entertained a motion to open the Public Hearing for the Wastewater Rules & Regulations at 1:30 p.m. Clerk Thompson moved the motion with a second by Vice Chair Underwood. A role call vote was taken with all in favor; 5-0-0.

Superintendent Pelletier provided an overview of the entirely new Wastewater Rules & Regulations for the Town of Harwich. Harwich started by adopting the Town of Chatham's Rules & Regulations and then made a few modifications along the way.

The two biggest changes made were the excepting of an Engineer and a registered Sanitarian to do the design for the sewer services and the other big change was extending the hook-up timeline from one year to two years.

NEW BUSINESS

A. Board Reorganization- Discussion and possible vote

The Board would like to hold off until the new fiscal year to reorganize.

B. Capital Plan Review

Superintendent Pelletier provided an overview of the Seven Year Capital Plan.

NEXT MEETING

The next Board meeting will be held on Wednesday, June 9, 2021 at 1:00 p.m.

ADJOURNMENT

Clerk Thompson motioned to adjourn at 2:06 p.m. Vice Chair Underwood moved the motion. A roll call vote was taken with all in favor; 5-0-0.

Gary Carreiro, Chairman

Dan Pelletier, Superintendent

Judith Underwood, Vice Chair

Tracey Alves, Board Secretary

Allin P. Thompson, Clerk

Noreen Donahue

John Gough

V. NEW BUSINESS

A. Proposed Water Rate Increase

Harwich Water Department

WATER RATES AND FEES

Effective Dates: Rates & Fees 3/17/15 and Quarterly Billing Related 3/21/18, Transfer Request 4/14/16, Meter Pricing thru 6/30/21

WATER RATES ADJUSTED FOR QUARTERLY BILLING; 3/21/18			
	EFFECTIVE 3/17/15	PROPOSED 7/1/21	Notes
Base Rate	35.00	45.00	Quarterly
1,000 – 8,000 Gallons	1.29	1.35	Per 1,000 Gallons
8,001 – 15,000 Gallons	2.65	2.78	Per 1,000 Gallons
15,001 – 40,000 Gallons	3.95	4.15	Per 1,000 Gallons
40,001 + Remaining Gals	5.72	6.01	Per 1,000 Gallons

FIRE PROTECTION

Residential	40.00	Quarterly
Commercial	65.00	Quarterly

BACKFLOW PREVENTION TEST FEES FREQUENCY OF INSPECTION IS BASED ON DEVICE TYPE

First Device	70.00	Per Device, Annual or Semi-Annual Billing
Re-Test	45.00	Per Device
Backflow/Cross-Connection Survey	100.00	Hour

SERVICE TIGHT PROTECTION PLAN

Up to and Including 2" Water Service	68.00	Per Year, Billed Annually
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ADMINISTRATIVE & COLLECTION FEES

Notice Fee – Violation Collection	10.00	Per Violation Collection Notice
Copies/Computer Printout (950 CMR 32.06)	.05	Per Copy
Research Request	22.00	Per Hour
Return Check Fee	25.00	Per Item
Demand Charge	25.00	Per Demand Notice
Unauthorized Hydrant Use	1,000.00	Each Offense
Tampering Fee (MGL, Chapter 65, §11): Triple the amount of damages sustained thereby or \$1,000.00		

SERVICE FEES

Service Call During Working Hours	50.00	Per hour
Service Call After Working Hours (3:30 p.m.)	150.00	Fee for up to 4 hours
Missed Appointment	50.00	Fee
Electrician Labor/Water Services Only	50.00	Per hour
Transfer of Property Request EFFECTIVE 4/14/16	60.00	Per request
Seasonal Turn On/Off or Plumbing Test	50.00	Each
Out-of-Rotation On/Off	150.00	Fee
Reconnection Fee	50.00	Per hour (doesn't include cost for turn off)
Markout Request 1-2 requests	25.00	Per markout (1-2 requests; \$25 each request)
Markout Request more than 2	50.00	Per hour

Harwich Water Department

WATER RATES AND FEES

Effective Dates: Rates & Fees 3/17/15 and Quarterly Billing Related 3/21/18, Transfer Request 4/14/16, Meter Pricing thru 6/30/21

Inspection Fee	150.00	
Meter Test (MGL, Chapter 40, §39I)	3.00	Plus 1 hr. service call
Hydrant Use Setup	100.00	Setup and 1 st 1000 gals.
Hydrant Use Consumption	20.00	Per 1,000 gals., after 1 st 1000
Private Hydrant Inspection	50.00	Per Hour

SERVICE TAP INSTALLATION DOES NOT INCLUDE PRICE OF METER AND VALVE

Service Tap up to 1"	Quote	Subject to Quote
Service Renewal -Existing Tap Only	Quote	Subject to Quote
Larger Service Taps	Quote	Subject To Quote
2" Residential Fire Sprinkler Tap	350.00	Each
6" Commercial Fire Sprinkler Tap	600.00	Each

- Receipt for service installation charge must be presented to Building Inspector for Building permit.
- Service Tap installation includes labor, equipment and parts. Meter and valve priced separately.

WATER MAIN TAP OR TIE IN DOES NOT INCLUDE TRENCH PERMIT

6" Tap	600.00
8" Tap	700.00
10" Tap	800.00
12" Tap	900.00
Trench Permit	25.00

METERS SOLE SOURCE; **PRICING EXPIRES 6/30/21**

5/8" E-Coder	408.06
3/4" E-Coder	524.08
1" E-Coder	689.50
1-1/2" E-Coder	1,222.06
2" E-Coder	1,475.03
2" E-Coder Compound	3,403.17
3" E-Coder Compound	4,878.62
4" E-Coder Compound	6,142.25

METER REPLACEMENT DISCOUNT FROZEN/DAMAGED

Meter Age Less than 10 years old	No Discount (see meter prices)	
Meter Age 10 years	50%	Discount
Meter Age 11 years	55%	Discount
Meter Age 12 years	60%	Discount
Meter Age 13 years	65%	Discount
Meter Age 14 years	70%	Discount
Meter Age 15 years	75%	Discount
Meter Age 16 years	80%	Discount

Harwich Water Department

WATER RATES AND FEES

Effective Dates: Rates & Fees 3/17/15 and Quarterly Billing Related 3/21/18, Transfer Request 4/14/16, Meter Pricing thru 6/30/21

Meter Age 17 years	85%	Discount
Meter Age 18 years	90%	Discount
Meter Age 19 years	95%	Discount
Meter Age 20 years	No Charge	

- Discounts will not be given if customer or representative is negligent of meter tampering
- Replacement pricing does not include labor for service call

SPECIAL SERVICES HYDRANT/EMERGENCIES, ETC		Regular	Overtime	
Labor	PER HR PER TECH	50.00	150.00	} OT fee for up to 4 hours
One Man/One Truck	PER HR PER TECH	50.00	150.00	
Two Men/One Truck	PER HR PER TECH	100.00	300.00	
Compressor or Const. Trailer	PER HR PER TECH	70.00	n/a	
Dump Truck F-750	PER HR PER TECH	80.00	n/a	
Mini Excavator	PER HR PER TECH	80.00	n/a	
Backhoe	PER HR PER TECH	80.00	n/a	

DISCLOSURE: SERVICE CALLS AND LABOR FOR EMERGENCY CALLS ON A HOLIDAY IS ADDITIONAL AND APPROXIMATELY DOUBLE OVERTIME RATE PRICING.

3. Rates

Current Rate Structure (Do Nothing)

Description	Type	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Base Fee	Quarterly Fee	\$70.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00	\$35.00
Tier 1 Usage	Usage	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29
Tier 2 Usage	Usage	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65
Tier 3 Usage	Usage	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95
Tier 4 Usage	Usage	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72

Alternative A

+\$8 Base & +2.5% Annual All Tiers

Description	Type	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Base Fee	Quarterly Fee	\$70.00	\$35.00	\$35.00	\$35.00	\$35.00	\$43.00	\$43.00	\$43.00	\$43.00	\$43.00	\$43.00	\$43.00
Tier 1 Usage	Usage	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.32	\$1.36	\$1.39	\$1.42	\$1.46	\$1.50	\$1.53
Tier 2 Usage	Usage	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.72	\$2.78	\$2.85	\$2.93	\$3.00	\$3.07	\$3.15
Tier 3 Usage	Usage	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$4.05	\$4.15	\$4.25	\$4.36	\$4.47	\$4.58	\$4.70
Tier 4 Usage	Usage	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.86	\$6.01	\$6.16	\$6.31	\$6.47	\$6.63	\$6.80

Alternative G

+\$10 Base & +5% All Tiers FY22 & FY23

Description	Type	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Base Fee	Quarterly Fee	\$70.00	\$35.00	\$35.00	\$35.00	\$35.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00
Tier 1 Usage	Usage	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.35	\$1.42	\$1.42	\$1.42	\$1.42	\$1.42	\$1.42
Tier 2 Usage	Usage	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.78	\$2.92	\$2.92	\$2.92	\$2.92	\$2.92	\$2.92
Tier 3 Usage	Usage	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$4.15	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35
Tier 4 Usage	Usage	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$6.01	\$6.31	\$6.31	\$6.31	\$6.31	\$6.31	\$6.31

Alternative H

+\$10 Base & +3% All Tiers FY22 - FY24

Description	Type	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Base Fee	Quarterly Fee	\$70.00	\$35.00	\$35.00	\$35.00	\$35.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00
Tier 1 Usage	Usage	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.33	\$1.37	\$1.41	\$1.41	\$1.41	\$1.41	\$1.41
Tier 2 Usage	Usage	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.73	\$2.81	\$2.90	\$2.90	\$2.90	\$2.90	\$2.90
Tier 3 Usage	Usage	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$4.07	\$4.19	\$4.32	\$4.32	\$4.32	\$4.32	\$4.32
Tier 4 Usage	Usage	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.89	\$6.07	\$6.25	\$6.25	\$6.25	\$6.25	\$6.25

Alternative J

+\$10 Base & +5% Tiers 2 & 3 and +4% Tier 4 FY22 - FY24

Description	Type	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Base Fee	Quarterly Fee	\$70.00	\$35.00	\$35.00	\$35.00	\$35.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00	\$45.00
Tier 1 Usage	Usage	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29
Tier 2 Usage	Usage	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.78	\$2.92	\$2.92	\$2.92	\$2.92	\$2.92	\$2.92
Tier 3 Usage	Usage	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$4.15	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35	\$4.35
Tier 4 Usage	Usage	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.95	\$6.19	\$6.19	\$6.19	\$6.19	\$6.19	\$6.19

Alternative K

+\$8 Base & +3% All Tiers Annually

Description	Type	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Base Fee	Quarterly Fee	\$70.00	\$35.00	\$35.00	\$35.00	\$35.00	\$43.00	\$43.00	\$43.00	\$43.00	\$43.00	\$43.00	\$43.00
Tier 1 Usage	Usage	\$1.29	\$1.29	\$1.29	\$1.29	\$1.29	\$1.33	\$1.37	\$1.41	\$1.45	\$1.50	\$1.54	\$1.59
Tier 2 Usage	Usage	\$2.65	\$2.65	\$2.65	\$2.65	\$2.65	\$2.73	\$2.81	\$2.90	\$2.98	\$3.07	\$3.16	\$3.26
Tier 3 Usage	Usage	\$3.95	\$3.95	\$3.95	\$3.95	\$3.95	\$4.07	\$4.19	\$4.32	\$4.45	\$4.58	\$4.72	\$4.86
Tier 4 Usage	Usage	\$5.72	\$5.72	\$5.72	\$5.72	\$5.72	\$5.89	\$6.07	\$6.25	\$6.44	\$6.63	\$6.83	\$7.03



Harwich Water Department

196 Chatham Road • Harwich, MA • 02645

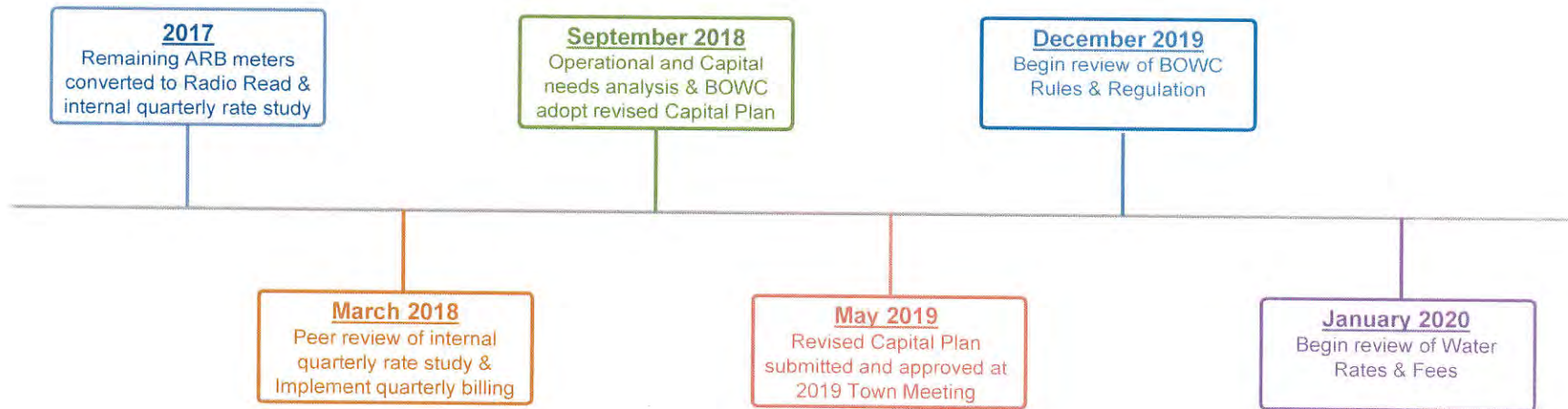
Rate Increase Analysis

August 2020



Introduction & Background

In 2018 the Board of Water Commissioners along with department staff began a comprehensive review of the Departments needs with respect to existing & future infrastructure upgrades, system redundancy, water production and operating expenses. This review prompted significant revisions to the departments Capital Plan which was voted and adopted by the Water Commission in September of 2018. Following the adoption of the new Capital Plan the department completed a thorough analysis of future water use, revenue projections and the Departments ability to fund future operational and capital expenses. The results of this analysis indicate that existing water rates are not sufficient to support department operations and capital needs beyond fiscal year 2021. Upon confirmation that a rate increase will be required the Water Commission has developed 11 unique rate structure scenarios for consideration, the details of which are included in this presentation.

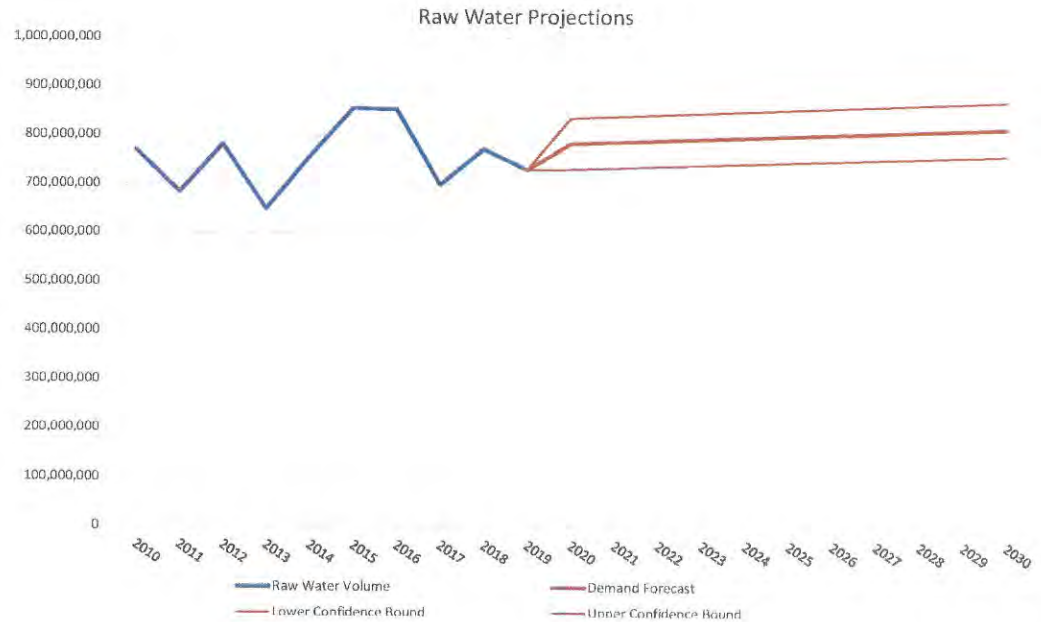




Demand Projection

Raw Water Projections:

Prior to evaluating the effectiveness of each rate increase scenario the department had to establish future demand projections. Raw water projections were forecast using linear regression to establish a line of best fit based on 10 years of historical water production. As can be seen easily on the chart, water production can fluctuate significantly from year-to-year. This is largely due to a corresponding increase or decrease in precipitation. To accommodate for the uncertainty of future weather patterns upper & lower confidence bounds were incorporated into the projections. For the purpose estimating future revenue the lower confidence annual raw water volumes were used for the basis of analysis.



Billed Consumption Projections:

Unfortunately due to treatment plant losses, fire protection, water theft and watermain breaks/leaks raw water projections cannot directly be used for projecting future revenues. To adjust for these losses raw water projections were multiplied by 92.63% which is the 10-year average of billed consumption vs. raw water production.



Demand Projection

Annual Quarterly Allocation:

Due to the seasonal nature of the community, water consumption and revenues vary significantly between quarters within a fiscal year. To accurately distribute annual volumes to the appropriate quarter daily finished water volumes from FY15-FY19 were consolidated to establish a 5-year average quarterly volume as a percentage of annual volume.

Quarterly Tier Allocation:

After determining the quarterly allocations these volumes must be further broken down into individual billing tiers to accurately estimate revenues. To accomplish this the department used historic actual data to establish an average % of quarterly usage per tier for each quarter in the fiscal year.

Tier	Usage				Total
	Q1	Q2	Q3	Q4	
1	61,998,945	35,200,670	41,763,030	75,987,925	214,950,570
2	40,800,817	23,233,149	12,731,646	35,264,365	112,029,976
3	93,565,428	25,039,615	7,784,354	42,078,525	168,467,924
4	139,148,615	15,148,905	7,668,984	20,542,849	182,509,353
Tot.	335,513,805	98,622,339	69,948,014	173,873,665	677,957,823

	FY15	FY16	FY17	FY18	FY19	5-Year AVG
Quarter 1	44.49%	49.44%	53.77%	48.07%	52.12%	49.58%
Quarter 2	14.01%	13.31%	15.35%	14.83%	15.36%	14.57%
Quarter 3	11.77%	9.56%	9.01%	11.12%	9.92%	10.28%
Quarter 4	29.73%	27.55%	21.87%	25.97%	22.60%	25.55%

Allocation			
Q1 Tier %	Q2 Tier %	Q3 Tier %	Q4 Tier %
18.48%	35.69%	59.71%	43.70%
12.16%	23.56%	18.20%	20.28%
27.89%	25.39%	11.13%	24.20%
41.47%	15.36%	10.96%	11.81%



Projected Expenses FY20 – FY28

2020 Water Rate Model

Harwich Water Department

Water Utility Rate Dashboard

Harwich Water Dept.

	\$4,583,865.00	\$4,516,677.00	Projected Expenses; 2% Increase -->>						
	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
EXPENSES									
Operating Expenses									
Budget									
Labor	\$1,337,473	\$1,398,335	\$1,426,302	\$1,454,828	\$1,483,924	\$1,513,603	\$1,543,875	\$1,574,752	\$1,606,247
Operating Expenses and Maintenance	\$1,534,995	\$1,468,390	\$1,497,758	\$1,527,713	\$1,558,267	\$1,589,433	\$1,621,221	\$1,653,646	\$1,686,719
Indirect Costs + OPEB	\$720,295	\$779,715	\$795,309	\$811,215	\$827,440	\$843,989	\$860,868	\$878,086	\$895,647
Subtotal	\$3,592,763	\$3,646,440	\$3,719,369	\$3,793,756	\$3,869,631	\$3,947,024	\$4,025,964	\$4,106,484	\$4,188,613
Delta previous (\$)	\$272,476	\$53,677	\$72,929	\$74,387	\$75,875	\$77,393	\$78,940	\$80,519	\$82,130
Delta previous (%)	8.21%	1.49%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Capital Expenses									
Retained Earnings Funded Capital	\$250,000	\$145,000	\$125,000	\$175,000	\$825,000	\$500,000	\$0	\$750,000	\$175,000
Existing Debt	\$741,102	\$721,345	\$704,376	\$536,648	\$528,266	\$515,008	\$506,417	\$492,533	\$483,516
New Debt Service	\$0	\$0	\$0	\$151,200	\$151,200	\$178,420	\$365,459	\$528,871	\$598,644
Subtotal	\$741,102	\$721,345	\$704,376	\$687,848	\$679,466	\$693,428	\$871,876	\$1,021,404	\$1,082,160
TOTAL EXPENSES	\$4,333,865	\$4,367,785	\$4,423,745	\$4,481,604	\$4,549,097	\$4,640,452	\$4,897,840	\$5,127,888	\$5,270,773
Delta previous (\$)	\$261,212	\$33,920	\$55,960	\$57,859	\$67,493	\$91,355	\$257,368	\$230,048	\$142,885
Delta previous (%)	6.41%	0.78%	1.28%	1.31%	1.51%	2.01%	5.65%	4.70%	2.79%
	\$4,333,865.00	\$4,222,785.00	\$4,298,744.80	\$4,306,604.18	\$3,724,097.30	\$4,140,451.93	\$4,897,840.29	\$4,377,887.81	\$5,095,773.06

*FY20 – FY28 expense projections include 2% annual increases to operating expenses, anticipated future capital projects and related debt.



Projected Expenses

FY20 – FY28

Capital Plan FY20-FY31

Fiscal Year	Project	Estimated Cost	Notes
	Truck & Excavator	125,000	
FY20	Pleasant Lake Tank Fill Pipe	300,000	Undersized
	T1 Generator	60,000	Generator installed in 2001, problematic, provides power to SCADA, 3 wells, & office
FY21	New Source Exploration	250,000	
FY22	Rt.28 Water main Replacement- Design & Engineering	100,000	
	Station 8 Generator	45,000	
	2 Vehicles	125,000	
FY23	New Well Construction(BOND 0.5M PROJECT)	500,000	Price dependent on location of source & water quality
	Rt.28 Water main Replacement- Construction (BOND 2.0M PROJECT)	2,000,000	1.25 miles from Lothrop to Lower county
FY24	Pavement Management Plan	175,000	
FY25	Paint Pleasant Lake Ave Tank(Bond 1M Project)	1,750,000	Full engineered coating inspection recommended in 2018 -(spot repair significant savings)
	Vehicle Replacement	75,000	
FY26	Pipe Discontinuity Upgrade (Bond 1M)	1,500,000	5900 LF of discontinuity
FY27	No Project		
FY28	Relocate HWD HQ (Bond 750K)	1,500,000	
FY29	No Project		
FY30	Vehicle Replacement	175,000	
FY31	Construct new tank @ Rt.39 (Bond 3.0)	4,500,000	Replace spider leg tank W/ larger hydropillar
	Low Estimate	9,760,000	
	High Estimate	12,650,000	



Existing Water Rates

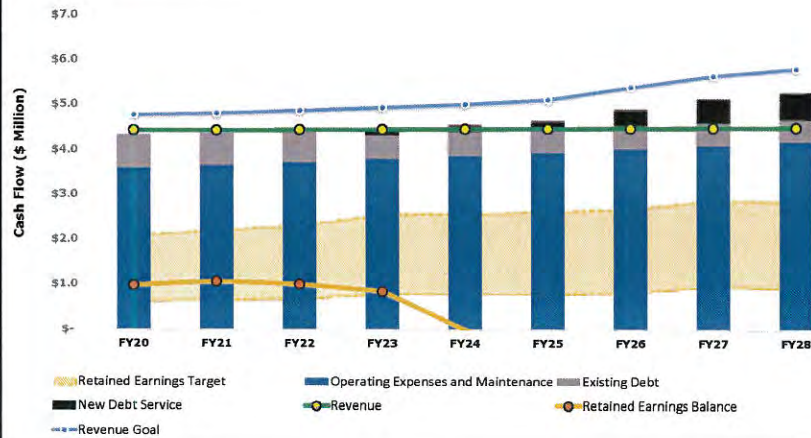
2020 Water Rate Model

Harwich Water Department

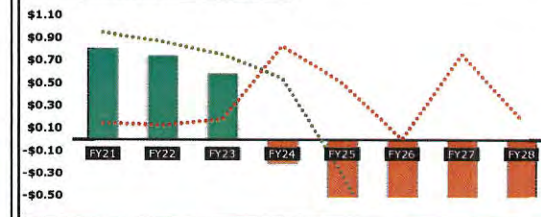
Current Rate Structure Do Nothing

REVENUE	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Existing Revenue	0%	0%	0%	0%	0%	0%	0%	0%	0%
Rate Revenue	\$3,679,913	\$3,693,059	\$3,702,334	\$3,711,596	\$3,720,846	\$3,730,084	\$3,739,310	\$3,748,523	\$3,757,725
Non-Rate Revenue	\$746,933	\$735,273	\$735,274	\$735,275	\$735,276	\$735,277	\$735,278	\$735,279	\$735,280
TOTAL REVENUE	\$4,426,846	\$4,428,333	\$4,437,608	\$4,446,872	\$4,456,123	\$4,465,362	\$4,474,588	\$4,483,803	\$4,493,005
Delta previous (Rate Revenue) (\$)	-\$16,641	\$13,146	\$5,275	\$9,252	\$9,250	\$9,238	\$9,226	\$9,214	\$9,201
Retained Earnings Contribution Goal	\$433,387	\$436,779	\$442,374	\$448,160	\$454,910	\$464,045	\$489,784	\$512,789	\$527,077
REVENUE GOAL	\$4,767,252	\$4,804,564	\$4,886,119	\$4,929,765	\$5,004,007	\$5,104,497	\$5,387,624	\$5,640,677	\$5,797,850
Surplus/Shortfall	-\$340,405	-\$376,231	-\$425,511	-\$482,893	-\$547,884	-\$639,136	-\$913,036	-\$1,166,674	-\$1,304,845
Net Revenue (Revenue-Expense)	\$230,000	\$60,548	\$13,964	-\$34,733	-\$92,975	-\$175,090	-\$423,252	-\$644,085	-\$777,768
Retained Earnings Expense	\$250,000	\$145,000	\$125,000	\$175,000	\$825,000	\$500,000	\$0	\$750,000	\$175,000
Retained Earnings Balance	\$976,576	\$1,061,576	\$997,124	\$835,987	-\$23,745	\$816,720	-\$791,810	-\$1,965,062	-\$2,784,148
Retained Earnings as Percent of Operating Expenses	27%	29%	27%	22%	-1%	-16%	-20%	-48%	-66%
Rate Funded Capital Analysis	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Shifted Retained Earnings (2 years)	\$968,833	\$948,833	\$864,381	\$753,244	\$543,512	-\$299,463	-\$1,299,553	-\$2,222,805	-\$2,866,890
Rate Funded Capital (from above)	\$250,000	\$145,000	\$125,000	\$175,000	\$750,000	\$825,000	\$500,000	\$0	\$750,000
Net Funding Available	\$718,833	\$803,833	\$739,381	\$578,244	-\$206,488	-\$1,124,463	-\$1,799,553	-\$2,222,805	-\$3,616,890

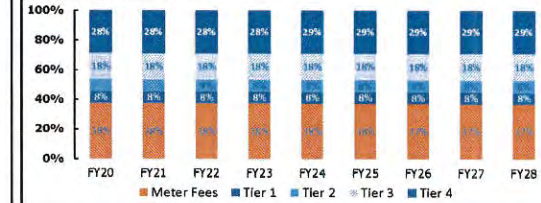
Proforma - Existing Conditions



Funding for Rate Funded Capital



Revenue Distribution





Proposed Rate Structures Summary

Scenario	Proposed Increases
Alternative A	8\$ base rate increase, 2.5% annual increase to all tiers
Alternative B	5\$ base rate increase, 3% tier increase in FY22 & FY23
Alternative C	5\$ base rate increase, 4% tier increase in FY22 & FY23
Alternative D	5\$ base rate increase, 5% tier increase in FY22 & FY23
Alternative E	8\$ base rate increase, 2% annual increase to all tiers
Alternative F	10\$ base rate increase, no increase to tiers
Alternative G	10\$ base rate increase, 5% tier increase in FY22 & FY23
Alternative H	10\$ base rate increase, 3% tier increase in FY22 – FY24
Alternative I	10\$ base rate increase, 10% tier increase in FY22
Alternative J	10\$ base rate increase, 5% increase tiers 2 & 3 and 4% tier 4 FY22-FY23
Alternative K	8\$ base rate increase, 3% annual increase to all tiers



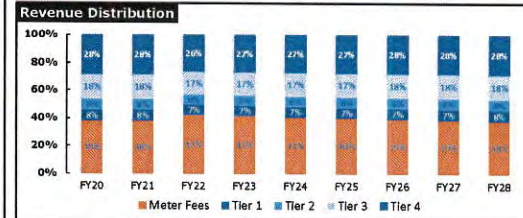
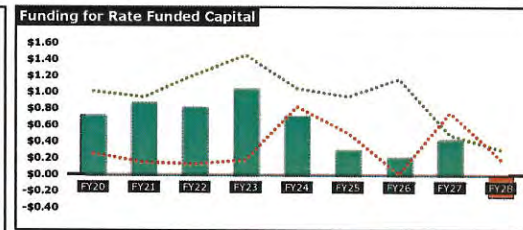
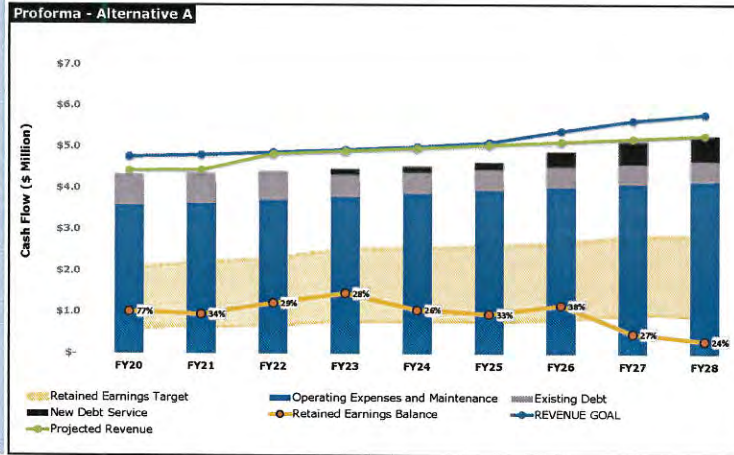
Alternative A

2020 Water Rate Model

Harwich Water Department

Proposed Rate Structure
Alternative A (\$8+ to Base Rate, 2.5% Annual Tier Increase)

	Actual & Proj		Projection						
	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
REVENUE Alternative A									
+ \$8 Base & +2.5% All Tiers	0.0%	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Rate Revenue	\$3,679,913	\$3,693,059	\$4,079,892	\$4,148,621	\$4,219,298	\$4,291,977	\$4,366,714	\$4,443,567	\$4,522,594
Non-Rate Revenue	\$746,933	\$746,933	\$746,933	\$746,933	\$746,933	\$746,933	\$746,933	\$746,933	\$746,933
TOTAL REVENUE Alternative A	\$4,426,846	\$4,439,992	\$4,826,825	\$4,895,554	\$4,966,231	\$5,038,910	\$5,113,647	\$5,190,500	\$5,269,527
Delta previous	-\$16,641	-\$19,146	-\$36,653	-\$68,726	-\$70,677	-\$72,679	-\$74,757	-\$76,855	-\$78,927
Retained Earnings Contribution Goal	\$433,387	\$436,779	\$442,374	\$449,555	\$456,623	\$463,691	\$470,757	\$477,824	\$484,891
REVENUE GOAL	\$4,767,252	\$4,804,664	\$4,868,119	\$4,929,795	\$5,004,007	\$5,104,497	\$5,237,624	\$5,404,677	\$5,797,880
Surplus/Shortfall	-\$340,405	-\$364,671	-\$39,294	-\$34,211	-\$37,776	-\$65,587	-\$273,977	-\$460,176	-\$528,324
Net Revenue (Revenue-Expense)	\$300,000	\$72,207	\$403,080	\$413,950	\$417,133	\$398,458	\$215,807	\$62,612	-\$1,246
Retained Earnings Expenses	\$250,000	\$145,000	\$125,000	\$175,000	\$825,000	\$500,000	\$0	\$750,000	\$175,000
Retained Earnings Balance	\$1,018,833	\$981,040	\$1,219,121	\$1,458,070	\$1,059,204	\$949,662	\$1,164,469	\$477,081	\$900,835
Retained Earnings as Percent of Operating Expenses	28%	26%	33%	38%	27%	24%	29%	12%	7%
Target retained earnings balance	\$768,963	\$758,128	\$768,814	\$758,791	\$938,926	\$689,406	\$826,193	\$911,297	
Rate Funded Capital Analysis	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Shifted Retained Earnings (2 years)	\$968,833	\$1,018,833	\$946,040	\$1,224,121	\$1,463,070	\$1,130,204	\$703,662	\$419,469	-\$462,081
Rate Funded Capital (from above)	\$250,000	\$145,000	\$125,000	\$175,000	\$175,000	\$825,000	\$500,000	\$0	\$750,000
Net Funding Available	\$718,833	\$873,833	\$821,040	\$1,049,121	\$713,070	\$305,204	\$203,662	\$419,469	-\$267,919





Alternative G

2020 Water Rate Model

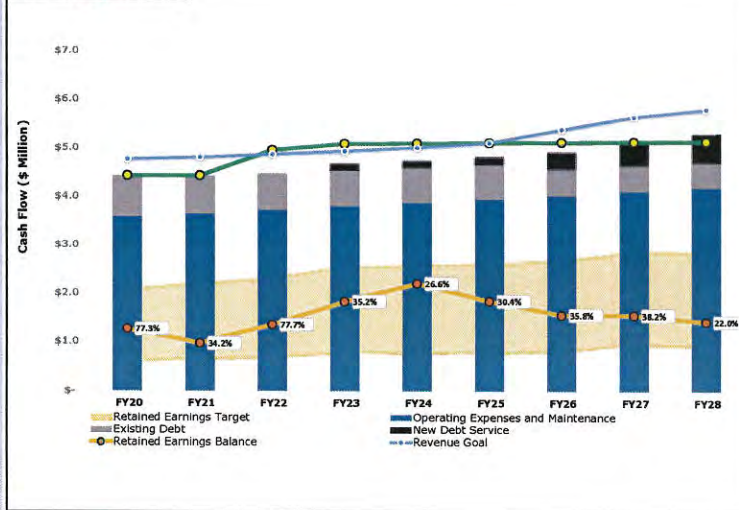
Harwich Water Department

Proposed Rate Structure Alternative G (+\$10 Base & 5% Increase all Tiers (FY22 & FY23))

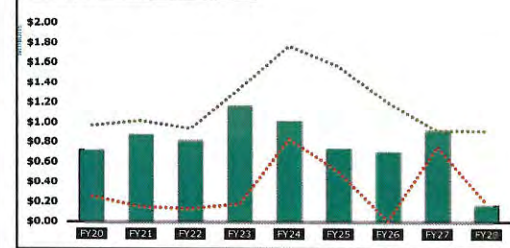
REVENUE Alternative F +\$10 Base & 5% Increase all Tiers (FY22 & FY23)

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
0%	0%	0%	5%	5%	0%	0%	0%	0%	0%
Total Rate Revenue	\$3,879,913	\$3,893,059	\$4,217,451	\$4,348,535	\$4,358,733	\$4,368,918	\$4,379,089	\$4,389,247	\$4,399,392
Non-Rate Revenue	\$746,933	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273
TOTAL REVENUE Alternative C	\$4,626,846	\$4,628,333	\$4,952,724	\$5,083,808	\$5,094,006	\$5,104,191	\$5,114,362	\$5,124,520	\$5,134,665
Delta previous (WALUCL)	\$10,143	\$524,391	\$131,084	\$10,185	\$10,185	\$10,171	\$10,185	\$10,143	
Retained Earnings Contribution Goal	\$433,397	\$436,779	\$442,374	\$448,160	\$454,910	\$464,045	\$469,784	\$512,789	\$527,077
REVENUE GOAL	\$4,767,252	\$4,804,564	\$4,898,119	\$4,928,765	\$5,004,007	\$5,104,497	\$5,387,624	\$5,840,677	\$5,797,850
Surplus/Shortfall	-\$340,406	-\$376,231	-\$60,825	-\$154,044	-\$39,999	-\$308	-\$273,261	-\$516,156	-\$663,185
Net Revenue (Revenue-Expense)	\$300,000	\$60,547.71	\$528,979.20	\$602,204.07	\$544,909.15	\$463,739.26	\$216,522.19	-\$3,367.42	-\$139,108.12
Retained Earnings Expense	\$250,000	\$145,000.00	\$125,000	\$175,000	\$925,000	\$600,000	\$0	\$750,000	\$175,000
Retained Earnings Balance	\$1,263,833	\$868,833	\$1,852,812	\$1,830,016	\$2,199,925	\$1,838,865	\$1,555,187	\$1,551,819	\$1,415,711
Retained Earnings as Percent of Operating Expenses	35.2%	26.6%	36.4%	48.2%	56.9%	46.8%	38.6%	37.8%	33.8%
Rate Funded Capital Analysis	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Shifted Retained Earnings (2 years)	\$968,833	\$1,018,833	\$934,381	\$1,338,360	\$1,765,564	\$1,560,473	\$1,199,212	\$915,735	\$912,367
Rate Funded Capital (from above)	\$250,000	\$145,000	\$125,000	\$175,000	\$750,000	\$825,000	\$500,000	\$0	\$750,000
Net Funding Available	\$718,833	\$873,833	\$809,381	\$1,163,360	\$1,015,564	\$735,473	\$699,212	\$915,735	\$162,367

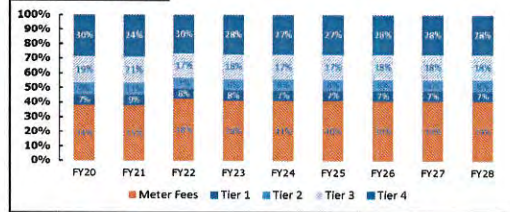
Proforma - Alternative C



Funding for Rate Funded Capital



Revenue Distribution





Alternative H

2020 Water Rate Model

Harwich Water Department

Proposed Rate Structure
Alternative H (+\$10 Base & 3% Increase FY22-FY24)

REVENUE Alternative H +\$10 Base & 3% Increase FY22-FY24

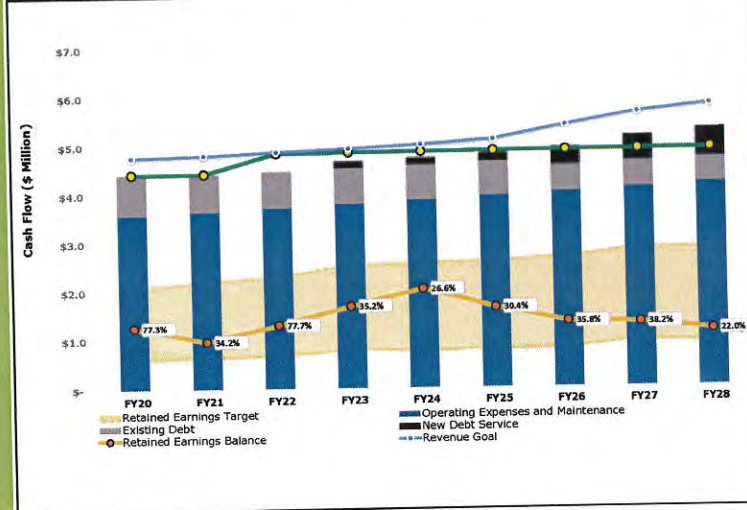
Total Rate Revenue	\$3,679,913	\$3,693,059	\$4,171,404	\$4,252,373	\$4,336,061	\$4,346,146	\$4,366,227	\$4,366,295	\$4,376,350
Non-Rate Revenue	\$746,933	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273
TOTAL REVENUE Alternative C	\$4,426,846	\$4,428,333	\$4,906,677	\$4,987,646	\$5,071,325	\$5,081,419	\$5,091,500	\$5,101,568	\$5,111,623
Delta previous	(N/A)	\$13,746	\$78,345	\$80,989	\$53,679	\$10,094	\$10,061	\$10,055	\$10,050
Retained Earnings Contribution Goal	\$433,367	\$436,779	\$442,374	\$448,160	\$454,910	\$464,045	\$469,784	\$512,789	\$527,077
REVENUE GOAL	\$4,787,252	\$4,804,564	\$4,866,119	\$4,929,765	\$5,004,007	\$5,104,497	\$5,387,624	\$5,640,677	\$5,787,850
Surplus/(shortfall)	-\$340,406	-\$376,231	\$40,556	\$57,601	\$67,316	\$23,078	-\$296,124	-\$536,106	-\$666,227

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
0%	0%	0%	3%	3%	0%	0%	0%	0%	
Total Rate Revenue	\$3,679,913	\$3,693,059	\$4,171,404	\$4,252,373	\$4,336,061	\$4,346,146	\$4,366,227	\$4,366,295	\$4,376,350
Non-Rate Revenue	\$746,933	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273
TOTAL REVENUE Alternative C	\$4,426,846	\$4,428,333	\$4,906,677	\$4,987,646	\$5,071,325	\$5,081,419	\$5,091,500	\$5,101,568	\$5,111,623
Delta previous	(N/A)	\$13,746	\$78,345	\$80,989	\$53,679	\$10,094	\$10,061	\$10,055	\$10,050
Retained Earnings Contribution Goal	\$433,367	\$436,779	\$442,374	\$448,160	\$454,910	\$464,045	\$469,784	\$512,789	\$527,077
REVENUE GOAL	\$4,787,252	\$4,804,564	\$4,866,119	\$4,929,765	\$5,004,007	\$5,104,497	\$5,387,624	\$5,640,677	\$5,787,850
Surplus/(shortfall)	-\$340,406	-\$376,231	\$40,556	\$57,601	\$67,316	\$23,078	-\$296,124	-\$536,106	-\$666,227

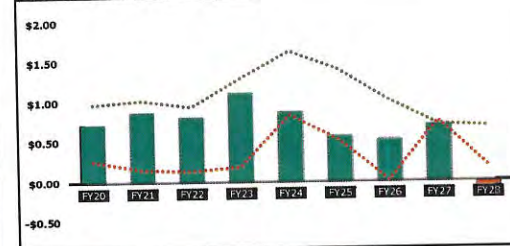
	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Net Revenue (Revenue-Expense)	\$300,000	\$60,547.71	\$482,932.52	\$506,041.66	\$522,227.52	\$440,967.34	\$193,660.12	-\$26,319.64	-\$159,160.17
Retained Earnings Expense	\$250,000	\$145,000.00	\$125,000	\$175,000	\$825,000	\$500,000	\$0	\$750,000	\$175,000
Retained Earnings Balance	\$1,263,833	\$988,833	\$1,306,766	\$1,887,907	\$2,035,036	\$1,861,092	\$1,344,662	\$1,318,343	\$1,169,192
Retained Earnings as Percent of Operating Expenses	35.2%	26.6%	35.1%	44.5%	52.6%	41.8%	33.4%	32.1%	27.7%

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Rate Funded Capital Analysis									
Shifted Retained Earnings (2 years)	\$968,833	\$1,018,833	\$934,381	\$1,292,313	\$1,623,355	\$1,395,582	\$1,011,550	\$705,210	\$678,690
Rate Funded Capital (from above)	\$250,000	\$145,000	\$125,000	\$175,000	\$750,000	\$825,000	\$500,000	\$0	\$750,000
Net Funding Available	\$718,833	\$873,833	\$809,381	\$1,117,313	\$873,355	\$570,582	\$511,550	\$705,210	-\$71,110

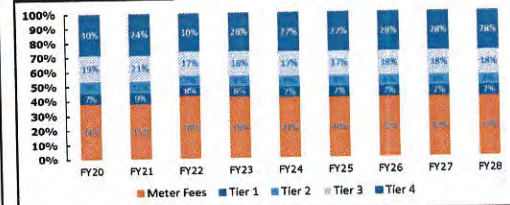
Proforma - Alternative C



Funding for Rate Funded Capital



Revenue Distribution





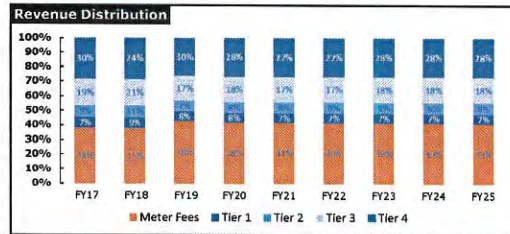
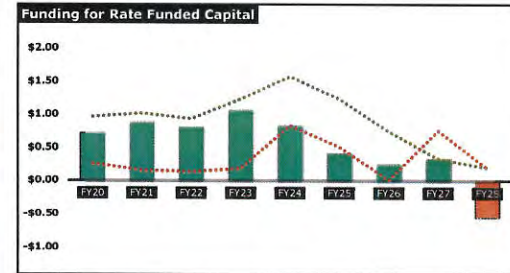
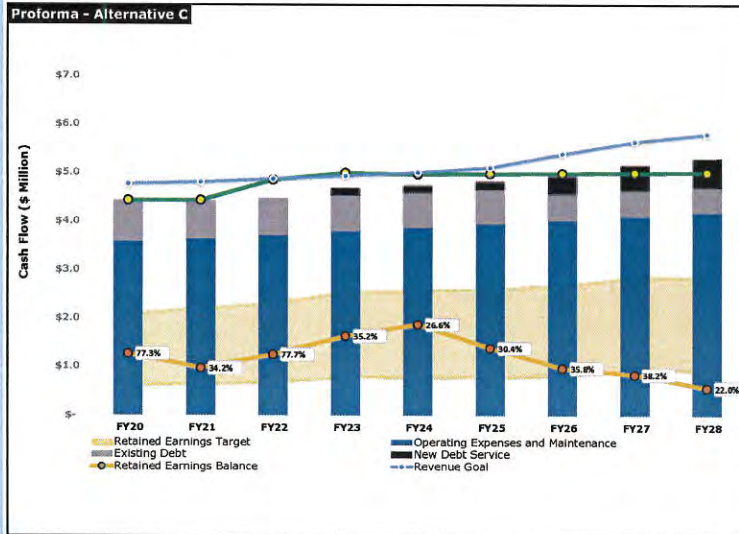
Alternative J

2020 Water Rate Model

Harwich Water Department

Proposed Rate Structure Alternative J (+\$10 Base Rate & +5% Tiers 2/3 and 4% Tier 4)

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
REVENUE Alternative F									
+\$10 Base Rate & +5% Tiers 2/3 and 4% Tier 4	0%	0%	0%	0%	0%	0%	0%	0%	0%
Total Rate Revenue	\$3,679,913	\$3,693,059	\$4,112,981	\$4,257,706	\$4,227,701	\$4,237,683	\$4,247,651	\$4,267,807	\$4,267,649
Non-Rate Revenue	\$746,933	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273
TOTAL REVENUE Alternative C	\$4,426,846	\$4,428,333	\$4,848,254	\$4,992,980	\$4,962,975	\$4,972,956	\$4,982,925	\$4,982,880	\$5,002,922
Delta previous #VALUE!		\$13,148	\$4,19,302	\$144,746	\$30,005	\$9,983	\$9,963	\$9,955	\$3,942
Retained Earnings Contribution Goal	\$433,387	\$436,779	\$442,374	\$446,160	\$454,910	\$464,045	\$469,784	\$512,789	\$527,077
REVENUE GOAL	\$4,767,252	\$4,804,564	\$4,866,119	\$4,928,765	\$5,004,007	\$5,104,497	\$5,387,624	\$5,640,677	\$5,797,850
Surplus/Deficit	-\$340,406	-\$376,231	-\$17,865	\$63,215	-\$41,033	-\$131,541	-\$404,700	-\$647,797	-\$795,023
Net Revenue (Revenue-Expense)	\$300,000	\$60,547.71	\$424,489.66	\$511,375.53	\$413,877.22	\$332,504.20	\$85,084.28	-\$135,007.93	-\$267,850.95
Retained Earnings Expense	\$250,000	\$145,000.00	\$125,000	\$175,000	\$825,000	\$500,000	\$0	\$750,000	\$175,000
Retained Earnings Balance	\$1,263,833	\$668,833	\$1,268,823	\$1,834,888	\$1,873,575	\$1,381,050	\$868,164	\$881,156	\$683,205
Retained Earnings as Percent of Operating Expenses	35.2%	26.6%	33.6%	43.1%	48.4%	35.0%	24.0%	20.2%	13.4%
Rate Funded Capital Analysis	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Shifted Retained Earnings (2 years)	\$968,833	\$1,018,833	\$934,381	\$1,233,870	\$1,570,246	\$1,234,123	\$741,627	\$326,712	\$191,704
Rate Funded Capital (from above)	\$250,000	\$145,000	\$125,000	\$175,000	\$750,000	\$825,000	\$0	\$0	\$750,000
Net Funding Available	\$718,833	\$873,833	\$809,381	\$1,058,870	\$820,246	\$409,123	\$241,627	\$326,712	-\$558,296





Alternative K

2020 Water Rate Model

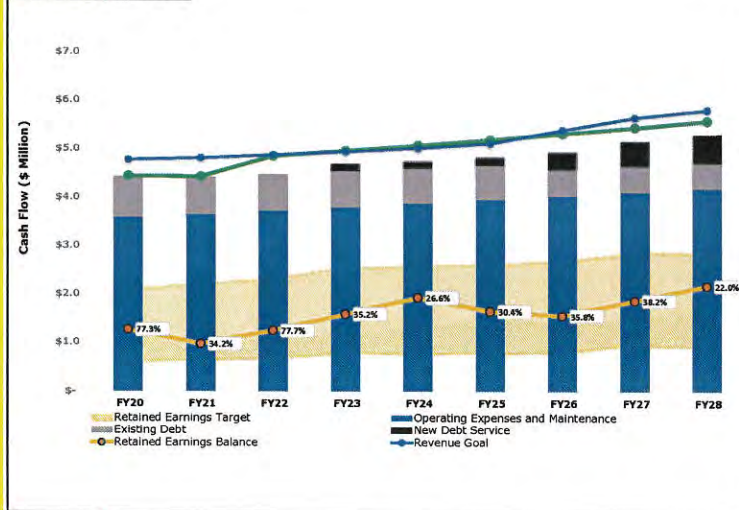
Harwich Water Department

Proposed Rate Structure
Alternative K (+\$8 Base Rate & 3% Tier Increase Annually)

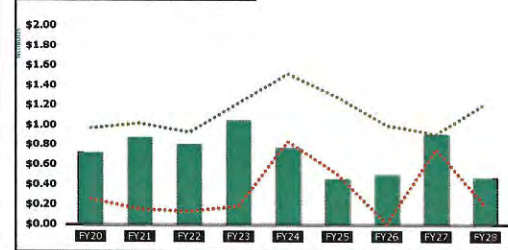
REVENUE Alternative F +\$8 Base Rate & +3% all Tiers Annually

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Total Rate Revenue	\$3,683,567	\$3,683,567	\$4,107,356	\$4,216,861	\$4,329,298	\$4,447,890	\$4,571,673	\$4,701,491	\$4,836,999
Non-Rate Revenue	\$746,933	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273	\$735,273
TOTAL REVENUE Alternative C	\$4,430,500	\$4,418,841	\$4,842,629	\$4,951,134	\$5,064,571	\$5,183,164	\$5,307,146	\$5,436,764	\$5,572,273
Delta previous	\$0,000,000	\$0	\$423,766	\$100,505	\$113,437	\$118,589	\$123,982	\$129,616	\$135,606
Retained Earnings Contribution Goal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
REVENUE GOAL	\$4,767,252	\$4,804,564	\$4,898,119	\$4,929,765	\$5,004,007	\$5,104,497	\$5,387,624	\$5,840,677	\$5,797,850
Surplus/Shortfall	-\$336,752	-\$385,723	-\$23,489	\$21,370	\$60,564	\$76,667	\$90,472	\$103,915	\$120,273
Net Revenue (Revenue-Expense)	\$300,000	\$51,056.79	\$418,884.13	\$469,530.07	\$515,473.82	\$542,711.78	\$409,306.04	\$308,876.15	\$301,499.65
Retained Earnings Expense	\$250,000	\$145,000.00	\$125,000	\$175,000	\$825,000	\$500,000	\$0	\$750,000	\$175,000
Retained Earnings Balance	\$1,263,833	\$688,833	\$1,242,717	\$1,587,247	\$1,827,721	\$1,685,433	\$1,554,739	\$1,863,815	\$2,186,115
Retained Earnings as Percent of Operating Expenses	35.2%	26.6%	33.4%	41.8%	49.8%	41.7%	38.6%	45.4%	51.7%
Rate Funded Capital Analysis	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Shifted Retained Earnings (2 years)	\$968,833	\$1,018,833	\$924,889	\$1,218,773	\$1,513,303	\$1,278,777	\$906,489	\$905,795	\$1,214,671
Rate Funded Capital (from above)	\$250,000	\$145,000	\$125,000	\$175,000	\$750,000	\$825,000	\$500,000	\$0	\$750,000
Net Funding Available	\$718,833	\$873,833	\$799,889	\$1,043,773	\$763,303	\$453,777	\$406,489	\$905,795	\$464,671

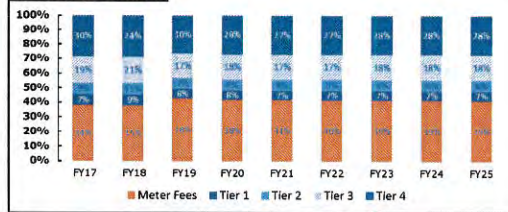
Proforma - Alternative C



Funding for Rate Funded Capital



Revenue Distribution





Alternative Evaluation

	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Revenue Goal	\$4,767,252	\$4,804,564	\$4,866,119	\$4,929,765	\$5,004,007	\$5,104,497	\$5,387,624	\$5,640,677	\$5,797,850
Alternative A	No	No	Yes	Yes	Yes	No	No	No	No
Alternative G	No	No	Yes	Yes	Yes	Yes	No	No	No
Alternative H	No	No	Yes	Yes	Yes	Yes	No	No	No
Alternative J	No	No	Yes	Yes	Yes	Yes	No	No	No
Alternative K	No	No	Yes	Yes	Yes	Yes	No	No	No

*Revenue Goal = Operating Expenses + 10%

Proposed Rate Structures +/- 1% Revenue Goal

Alternative A - \$8 Base Rate increase, 2.5% Tier increase annually

Alternative G - \$10 Base Rate increase, 5% Tier increase in FY22 & FY23

Alternative H - \$10 Base Rate increase, 3% Tier increase in FY22, FY23 and FY24

Alternative J - \$10 Base Rate increase, 5% Tier 2 & 3 and 4% Tier 4 FY22 & FY23

Alternative K - \$8 Base Rate increase, 3% Tier increase annually



Affordability Analysis

The US EPA recommends evaluating water rates against local benchmarks for household affordability. To accomplish this the annual cost of water in the community is evaluated as a percentage of the Median Household Income and lowest quintile income to determine the level of burden water rates may pose to the customers.

Harwich Stats:

Median Household Income - \$75,352

(<https://www.census.gov/quickfacts/fact/table/harwichtownbarnstablecountymassachusetts/INC910218#INC910218>)

Lowest Quintile Income- \$29,680

(https://censusreporter.org/data/table/?table=B19080&geo_ids=06000US2500129020&primary_geo_id=06000US2500129020)

Basis for Comparison:

Average Household- 2.15

(<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>)

RGPCD- 64 Gal

Average Quarterly Water Use- 12,384 Gallons

EPA's stated view on potable water- That it is affordable if it costs less than 2.5% of small community MHI.



Typical Bill Impacts

Typical Bill									
Scenario	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Existing	\$56.94	\$56.94	\$56.94	\$56.94	\$56.94	\$56.94	\$56.94	\$56.94	\$56.94
Scenario A	\$56.94	\$56.94	\$65.49	\$66.05	\$66.62	\$67.22	\$67.82	\$68.44	\$69.08
Scenario G	\$56.94	\$56.94	\$68.03	\$69.19	\$69.19	\$69.19	\$69.19	\$69.19	\$69.19
Scenario H	\$56.94	\$56.94	\$67.60	\$68.27	\$68.97	\$68.97	\$68.97	\$68.97	\$68.97
Scenario J	\$56.94	\$56.94	\$67.52	\$68.13	\$68.13	\$68.13	\$68.13	\$68.13	\$68.13
Scenario K	\$56.94	\$56.94	\$65.60	\$66.27	\$66.97	\$67.69	\$68.43	\$69.19	\$69.98

Change in Typical Bill									
Scenario	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Existing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Scenario A	\$ -	\$ -	\$ 8.55	\$ 0.56	\$ 0.58	\$ 0.59	\$ 0.61	\$ 0.62	\$ 0.64
Scenario G	\$ -	\$ -	\$ 11.10	\$ 1.15	\$ -	\$ -	\$ -	\$ -	\$ -
Scenario H	\$ -	\$ -	\$ 10.66	\$ 0.68	\$ 0.70	\$ -	\$ -	\$ -	\$ -
Scenario J	\$ -	\$ -	\$ 10.58	\$ 0.61	\$ -	\$ -	\$ -	\$ -	\$ -
Scenario K	\$ -	\$ -	\$ 8.66	\$ 0.68	\$ 0.70	\$ 0.72	\$ 0.74	\$ 0.76	\$ 0.79



Annual Cost of Water

Annual Cost										FY20-FY28
Scenario	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	Total
Existing	\$227.75	\$227.75	\$227.75	\$227.75	\$227.75	\$227.75	\$227.75	\$227.75	\$227.75	\$2,049.75
Scenario A	\$227.75	\$227.75	\$261.94	\$264.19	\$266.50	\$268.86	\$271.28	\$273.76	\$276.31	\$2,338.35
Scenario G	\$227.75	\$227.75	\$272.14	\$276.74	\$276.74	\$276.74	\$276.74	\$276.74	\$276.74	\$2,388.11
Scenario H	\$227.75	\$227.75	\$270.38	\$273.09	\$275.89	\$275.89	\$275.89	\$275.89	\$275.89	\$2,378.41
Scenario J	\$227.75	\$227.75	\$270.07	\$272.51	\$272.51	\$272.51	\$272.51	\$272.51	\$272.51	\$2,360.66
Scenario K	\$227.75	\$227.75	\$262.38	\$265.09	\$267.89	\$270.76	\$273.73	\$276.78	\$279.92	\$2,352.06

Change in Annual Cost									
Scenario	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Existing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Scenario A	\$ -	\$ -	\$ 34.19	\$ 2.25	\$ 2.30	\$ 2.36	\$ 2.42	\$ 2.48	\$ 2.54
Scenario G	\$ -	\$ -	\$ 44.39	\$ 4.61	\$ -	\$ -	\$ -	\$ -	\$ -
Scenario H	\$ -	\$ -	\$ 42.63	\$ 2.71	\$ 2.79	\$ -	\$ -	\$ -	\$ -
Scenario J	\$ -	\$ -	\$ 42.32	\$ 2.44	\$ -	\$ -	\$ -	\$ -	\$ -
Scenario K	\$ -	\$ -	\$ 34.63	\$ 2.71	\$ 2.79	\$ 2.88	\$ 2.96	\$ 3.05	\$ 3.14

FY20-FY28 Total Cost of Water (9 Years)

Existing Rates = \$2,049.75

Scenario A (*Low*) = \$2,338.35

Scenario G (*High*) = \$2,388.11

Total additional cost to consumer over 9-year projection: \$288.6 – \$341.43



User Impacts

Annual Cost as % MHI (City wide MHI from 2016 Census)

Scenario	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Existing	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%
Scenario A	0.30%	0.30%	0.35%	0.35%	0.35%	0.36%	0.36%	0.36%	0.37%
Scenario G	0.30%	0.30%	0.36%	0.37%	0.37%	0.37%	0.37%	0.37%	0.37%
Scenario H	0.30%	0.30%	0.36%	0.36%	0.37%	0.37%	0.37%	0.37%	0.37%
Scenario J	0.30%	0.30%	0.36%	0.36%	0.36%	0.36%	0.36%	0.36%	0.36%
Scenario K	0.30%	0.30%	0.35%	0.35%	0.36%	0.36%	0.36%	0.37%	0.37%
\$	75,352								

Annual Cost as % LQI (City wide MHI from 2016 Census)

Scenario	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Existing	0.77%	0.77%	0.77%	0.77%	0.77%	0.77%	0.77%	0.77%	0.77%
Scenario A	0.77%	0.77%	0.88%	0.89%	0.90%	0.91%	0.91%	0.92%	0.93%
Scenario G	0.77%	0.77%	0.92%	0.93%	0.93%	0.93%	0.93%	0.93%	0.93%
Scenario H	0.77%	0.77%	0.91%	0.92%	0.93%	0.93%	0.93%	0.93%	0.93%
Scenario J	0.77%	0.77%	0.91%	0.92%	0.92%	0.92%	0.92%	0.92%	0.92%
Scenario K	0.77%	0.77%	0.88%	0.89%	0.90%	0.91%	0.92%	0.93%	0.94%



Summary

- Of the 11 proposed rate structures 6 have been identified as viable options to sufficiently fund the departments future operational, maintenance and capital needs.
- The 5 proposed rate structures and future water costs have been evaluated for household affordability in line with American Waterworks “Framework for Household Affordability and Financial Capability Assessment in the Water Sector” published in April 2019. The resulting cost increase associated with the 5 proposed rate structures are all identified as “Low Impact” in comparison to Median Household Income and Lowest Quintile Income.

Alternative A	Alternative G	Alternative H	Alternative J	Alternative K
8\$ Base Rate 2.5% Annual All Tiers	10\$ Base Rate 5% All Tiers FY22 & FY23	10\$ Base Rate 3% All Tiers FY22 – FY24	10 Base Rate 5% Tiers 2 & 3 4% Tier 4	8\$ Base Rate 3% Annual All Tiers



Question & Comments

Thank You

I'd like to acknowledge and thank the Board of Water Commissioners and Department staff for the years of hard work and support that went into this process.

V. NEW BUSINESS

B. Sewer Rate

Town of Harwich
WATER DEPARTMENT

SEWER RATES DRAFT

Chatham Sewer Fees (Quarterly)				
*Chatham has different rates for summer/winter season (Harwich does not)				
	Winter	Summer	< Avg	
Base Rate	\$33.75	\$67.50	\$50.63	
Usage Rates	**Billing in Cubic Feet: 10 Units = 7480 Gals			
	***Chatham gives first 10 Units (7480 Gal) free			
	Winter	Summer	< Avg	Gal Equivalent
Tier 1 (10-30 Units)	\$4.15	\$6.70	\$5.43	7480-22440
Tier 2 (30-50 Units)	\$4.50	\$7.15	\$5.83	22440-37400
Tier 3 (over 50 Units)	\$4.75	\$7.35	\$6.05	37400+

Proposed Harwich Sewer Fees (Quarterly)	
Base Rate	\$50.00
Harwich Gallons per Tier	
<i>consistent with water billing rates</i>	
Tier 1 (0-8000)	\$5.03
Tier 2 (8000-15000)	\$5.43
Tier 3 (15000-40000)	\$5.83
Tier 4 (40000+)	\$6.05

Sub-Watershed	QTY. Parcels	2013-19 Average Annual Total Gallons Consumed In Watershed	2013-19 Average Gal./Parcel/Year	90% Consumptive Annual Usage	2013-19 Average Gal./Parcel/Day	90% Consumptive Use Gal./Day/Parcel	Estimated Annual Revenue
Mill Pond							
Contract 1	13	704,314	60,198	54,178	165	148	\$ 6,068.45
Upper Muddy Creek							
Contract 1	152	2,903,795	19,104	17,194	52	47	\$ 94,753.62
Contract 2	116	2,335,841	20,137	18,123	55	50	\$ 50,717.30
Lower Muddy Creek							
Contract 1	61	921,539	15,107	13,596	41	37	\$ 26,802.82
Contract 2	27	547,301	20,270	18,243	56	50	\$ 12,268.45
Muddy Creek Well							
Contract 1	35	403,815	11,538	10,384	32	28	\$ 19,941.02
Contract 2	36	1,025,760	28,493	25,644	78	70	\$ 15,861.97
Contract 1 Parcels	261					<i>Contract 1 Sub-total</i>	\$ 147,565.91
Contract 2 Parcels	179					<i>Contract 2 Sub-total</i>	\$ 78,847.72
						Total Estimated Sewer Rate Revenue	\$ 226,413.63

V. NEW BUSINESS

C. Water/Wastewater Superintendent Evaluation




Town of Harwich

Water Department

196 Chatham Road, Harwich, MA 02645 USA | www.harwichwater.com
P. 508-432-0304 | F. 888-774-3557 | customerservice@harwichwater.com

MEMORANDUM

TO: Board of Water/Wastewater Commissioners
FROM: Sandra Sieger, Water Comptroller 
DATE: June 7, 2021
RE: FY21 Water/Wastewater Superintendent

Superintendent Dan Pelletier's annual anniversary date is upcoming on July 1, 2021. This position falls under the Personnel Bylaw. Dan is currently a Grade MS, Step8; \$126,481 and a single step increase would move him to Step 9; \$129,644.

In preparation for this BOWWC task, I have attached a "draft" evaluation form that includes:

- Last Evaluation's Goals (p.1-2, Item A)
- Goals and Objectives for Following Year (p.4, Item B-10), taken from current the 7-Year Capital Plan for FY22 and FY23
- Cash Turned Back (p.4 Item, C.3) for FY20
- July-December 2020 Monthly Reports to the BOS (Jan-YTD will follow soon)

The process for that has been followed (more or less) is as follows:

- Employees are provided with the attached feedback form. Once completed, a copy is provided to each member via hard copy and/or e-copy.
- Each Board member completes an individual evaluation form.
- Superintendent provides completed self-evaluation form to the Board.
- At a schedule meeting, each member provides their verbal evaluation.
Note: Prior to this meeting, a hard copy for packet distribution is helpful
- BOWWC evaluations are combined into one evaluation where totals are combined and averaged.
Note: Comptroller task
- Combined and signed BOWWC evaluation form and Personnel Action Form for step increase is provided is provided to Town Administrator.
Note: Comptroller task
- Monthly reports to the BOS

Following the BOWWC June 7, 2021 meeting, a packet of everything mentioned above along with any other documentation that the Board would find helpful for Superintendent evaluation will be provided to each Board member.

Please also note that all of the above only includes Water Department operations. The only Wastewater tasks that are tracked by Water Administration is for calendar events/appointments. You will see these listed on the Monthly Reports to the BOS.

If I can assist further, please do not hesitate to reach out to me.



DEPARTMENT HEAD EVALUATION FORM – Water Department

Name	Daniel Pelletier	Completed By	BOWWC
Job Title	Water & Wastewater Supt.	Classification	M8
Supervisor(s)	Board of Water Commissioners	Current Step	8 (\$126,481)
Department	Water	New Step (if appl.)	9 (\$129,644)
Anniversary Date	7/1/21 (hire date 6/1)	Evaluation Date	TBD

Department Head Evaluation – Water

Department Head completes self-evaluation, BOWWC completes individually and then combined evaluation, and both are submitted to the Town Administrator.

Key for Performance Evaluations:

- EX Exceptional** Performance far exceeds expectations due to exceptionally high quality of work performed in all essential areas of responsibility.
- EE Exceeds Expectations** Performance consistently exceeded expectations in all essential areas of responsibility and the quality of work overall was excellent.
- ME Meets Expectations** Performance consistently met expectations in all essential areas of responsibility at times possible exceeding expectations and the quality of work overall was very good.
- IN Improvements Needed** Performance did not consistently meet expectations or performance to meet expectations in one or more essential areas of responsibility.
- UN Unsatisfactory** Performance was consistently below expectations in the most essential areas of responsibility and/or reasonable progress towards critical goals was not made. Significant improvement is needed in one or more important areas.

A. Last Evaluation’s Goals (if appl.) (20 points total)

Goals	Comments	Rating / Points Per Section					Points
		0 UN	1 IN	2 ME	3 EE	4 EX	
1. Design/Construct Pleasant Lake Tank upgrades							
2. Install new standby generator at T1 (main office)							
3. Re-design flushing program / new roads / address existing flow issues							



4.	DWSP Grant for land acquisition relative to water resource protection							
5.	5a. Capital Plan Amendment & 5b. Begin well exploration off North Westgate Rd.							

B. Job Success Factors; Items 1-8 (48 points total)

1. Problem Solving / Decision Making (6 points)

Anticipates, identifies and prevents problems, involves others in seeking solutions. Makes clear and consistent decisions, acts with integrity in all decision making and makes timely decisions.

Comments:

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	

2. Strategic Planning and Organizing (6 points)

Aligns priorities with broader goals, measures outcomes, uses feedback to change as needed, evaluates alternatives, solutions oriented, develops realistic plans, meets deadlines & follows through.

Comments:

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	

3. Communication (6 points)

Connects with peers, subordinates and public, actively listens, clearly and effectively shares information, demonstrates effective oral and written communication skills. Seeks to clarify and confirm the accuracy of understanding of vague terms and instructions.

Comments:

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	

4. Leadership (6 points)

Accepts responsibility for own work, develops trust and credibility, demonstrates honest and ethical behavior, engages the talents, experiences and capabilities of others. Results-oriented and desire to excel in job.

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	



Comments:

5. Teamwork (6 points)

Successfully works with others to achieve desired results, contributes to team projects, exchange ideas and opinions, helps prevent, resolve conflicts, develops positive working relationships and is flexible, open-minded promoting mutual respect for all.

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	

Comments:

6. Customer Orientation (6 points)

Listens, identifies, and responds quickly and effectively to internal and external customers' needs and sets work activities accordingly; goes beyond what is expected and follows up to ensure customer satisfaction.

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	

Comments:

7. Productivity (6 points)

Maintains fair work load; takes on additional responsibilities as needed; manages priorities; develops and follows work procedures; completes assignments on time and to specifications.

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	

Comments:

8. Quality (6 points)

Demonstrates accuracy, thoroughness, and reliability; manages time and priorities; develops and follows work procedures.

Ratings & Points

0-1	2-3	4	5	6	Points
UN	IN	ME	EE	EX	

Comments:



--

9. Department Specific Competency (if appl.) (1 point)

	# of Inc.	Points	Department Avg	Points	Average	Points
Complaint Letters		1				
0 Letters (1 points)			(2 points)			
1 Letter (-1 point)			(1 point)			1
2 Letters (-2 points)			(0 points)			
2+ Letters (-3 points)						
Accident Reports (Tracking Only) Vehicles & Buildings	# of Inc.					

10. Goals & Objectives for Following Year (12 points) 3 attainable (3 pts), 1 possible (1 point) and 1 "if time permits" (2 pts)

	Points
1. FY22 Capital Plan; New Source Exploration	
2. FY22 Capital Plan; Route 28 Water Main Replacement	
3. FY22 Capital Plan; Station 8 Generator	
4. FY23 Capital Plan; New Well Construction	
5. FY23 Capital Plan; Route 28 Water Main Construction	

C. Extra Credit (4 points total)

Points

1. **Has the employee come up with any cost saving ideas/solutions within the last fiscal year? (1 point)**

--	--

2. **Has the employee obtained any grants/performance incentives? (1 point)**

--	--

3. **Has the employee been able to "turn back" any funds in the prior fiscal year? How much (% or \$)? (1 point)**

FY20 \$465,865, FY21 TBD Calculation: Actual Revenue (-) Expenses (Indirects + S&W + O&M) = Funds turned back	
--	--



4. Has the employee obtained letters of commendation? (Include copies, no more than 2) (1 point)

Empty rectangular box for providing copies of letters of commendation.

Overall Rating (select one; UN, IN, ME, EE, EX)	Letter Rating _____
Total Points (Add all sections; Includes 1 point for Item 9. Department Specific Competency, 85 possible points)	Total Points _____

Professional Development Plan/Comments (below)

Empty rectangular box for providing professional development plan or comments.

Signatures:

Employee Name _____

Employee Signature _____ Date _____

Employee signature also indicates that I have received a copy of this evaluation.

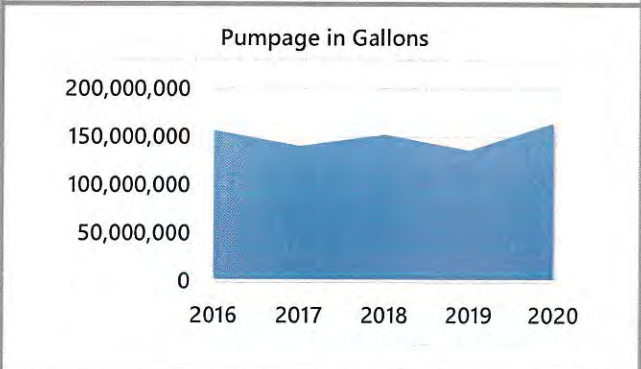
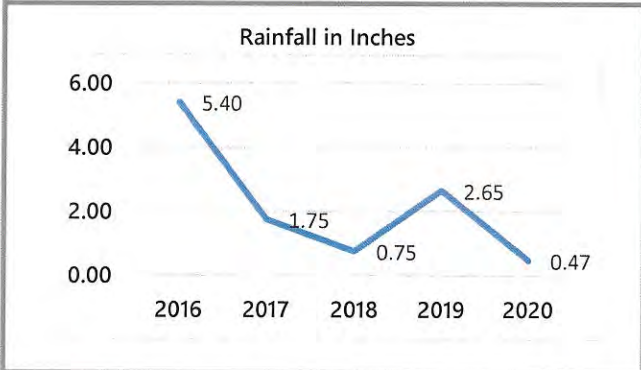
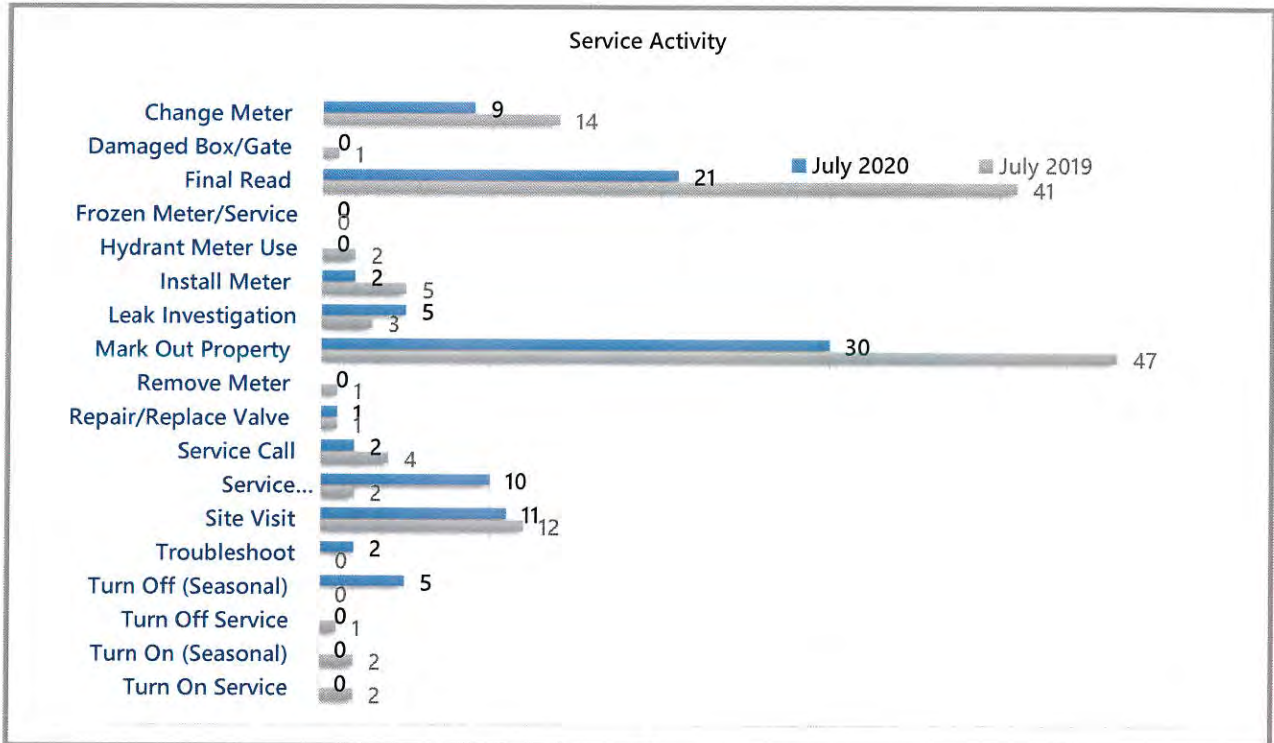
I will like to include comments regarding my evaluation.

Board of Water/Wastewater Commissioners:

Chair _____ Date _____

Vice Chair _____ Date _____

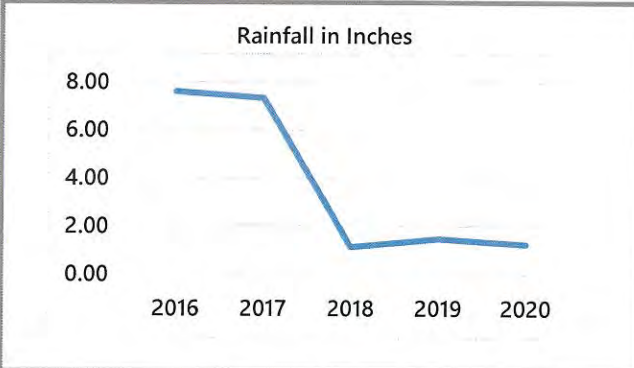
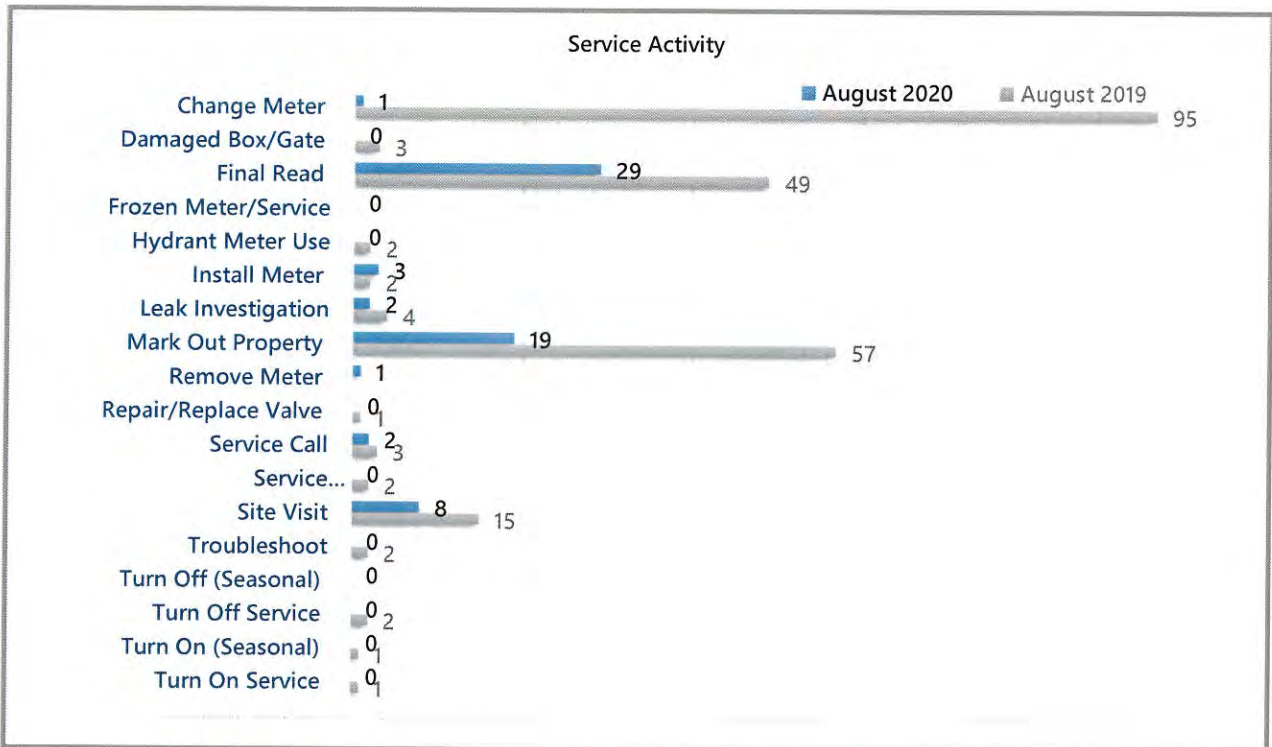
Clerk _____ Date _____



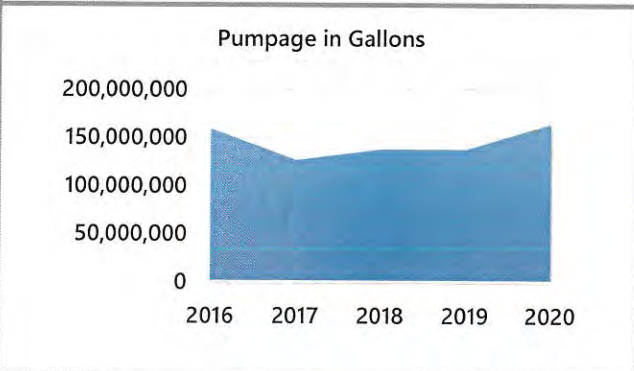
- ### Calendar Activity
- Seasonal Laborer Interviews 7/10
 - Weekly WW Meetings
 - Tank Industries Mtg 7/9
 - Cold Brook MOU Review 7/8, 7/9
 - Crossovers/Project (3)
 - BOWC Chair Mtg 7/16, 7/24, 7/28
 - WW Mtg w/JP & GR 7/15
 - Mtg w/GHD @ Oak St Tank 7/16
 - BOWC Mtg 7/17, 7/31
 - WW GHD Mtg 7/23
 - GHD/TIC Oak St Tank 7/27
 - WW Flows 7/28
 - WW/RJV Change Order Review 7/29
 - WW/Chatham 1D-1 Const. Mtg 7/29
 - Non-Resident Taxpayer Mtg
 - FY20 Q4 Billing
 - Harwich Sewer Contracts Owner's Mtg 7/7
 - Contract 1 PS Facades Mtg w/CDM 7/16
 - Sewer Modeling Kickoff Mtg w/GHD 7/23
 - GHD Flows for Modeling Mtg 7/28
 - Pleasant Bay Watershed Work Group 7/30

Monthly Pumping Change	YTD Pumping Change
19.18%	25.96%

Water Samples Taken
62



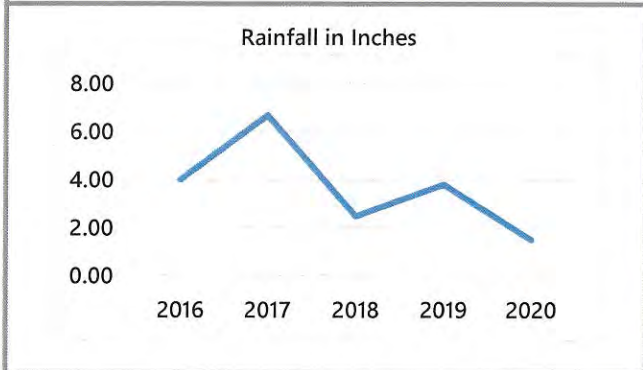
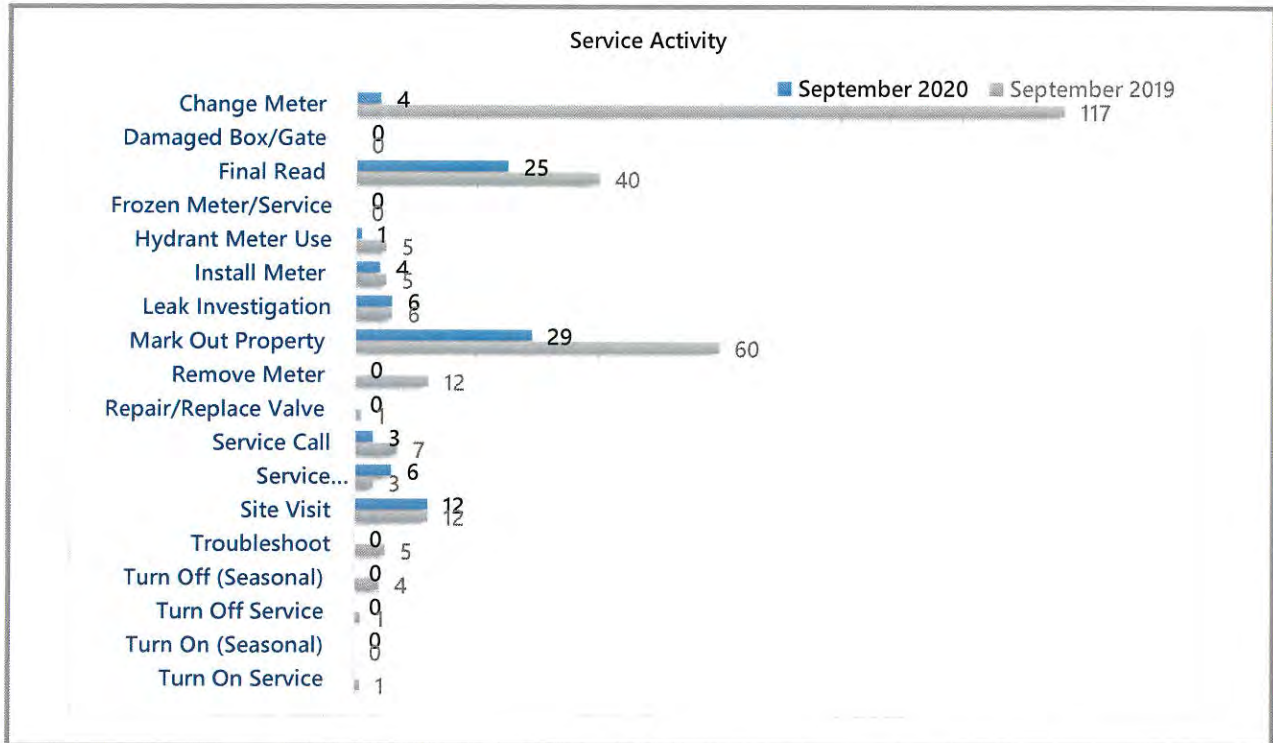
- ### Calendar Activity
- Crossover Project HWD
 - BOWC change to BOWWC
 - BOWWC Chair Mtgs; 8/3, 8/17, 8/26
 - WW Mtgs-Weekly; 8/4
 - P.Lake Tank Mtg w/Biszko 8/5
 - Cold Brook Mtg 8/5
 - DHY Mtg 8/6
 - GHD Modeling Review 8/7
 - DP/CSL Renewal Class 8/13-8/14
 - Mtg w/JP & BOWWC Chair 8/11
 - WW/P2C1 Progress Mtg 8/11
 - WW/P2C2 Progress Mtg 8/11
 - BOWWC Mtgs 8/12, 8/28
 - Seasonal Workers last week; 8/17-8/21
 - N&M Excavating Mtg 8/20
 - HWD Meters Mtg 8/20
 - John Chorey Mtg 8/24
 - P.Lake Tank Mtg w/GHD 8/25
 - WW/P2C1 Pavement Adj/Mtg 8/25
 - WW GHD Mtg 8/26
 - Pleasant Bay Alliance Mtg 8/27
 - TCM SE End User Training 8/28



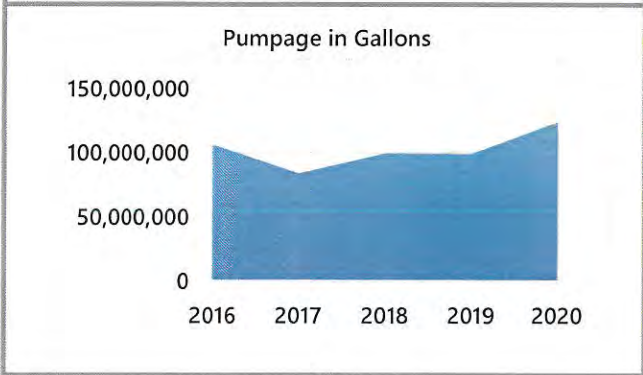
Monthly Pumping Change
0.02%

YTD Pumping Change
24.26%

Water Samples Taken
72



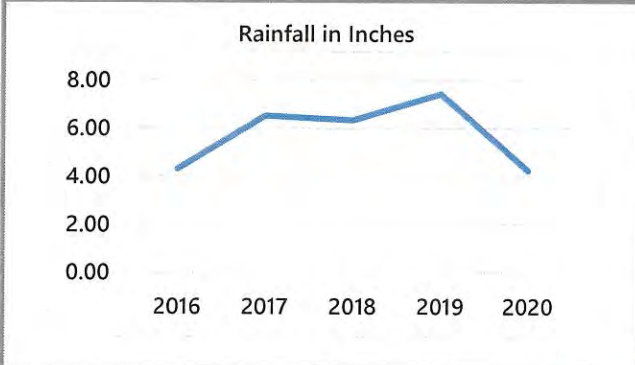
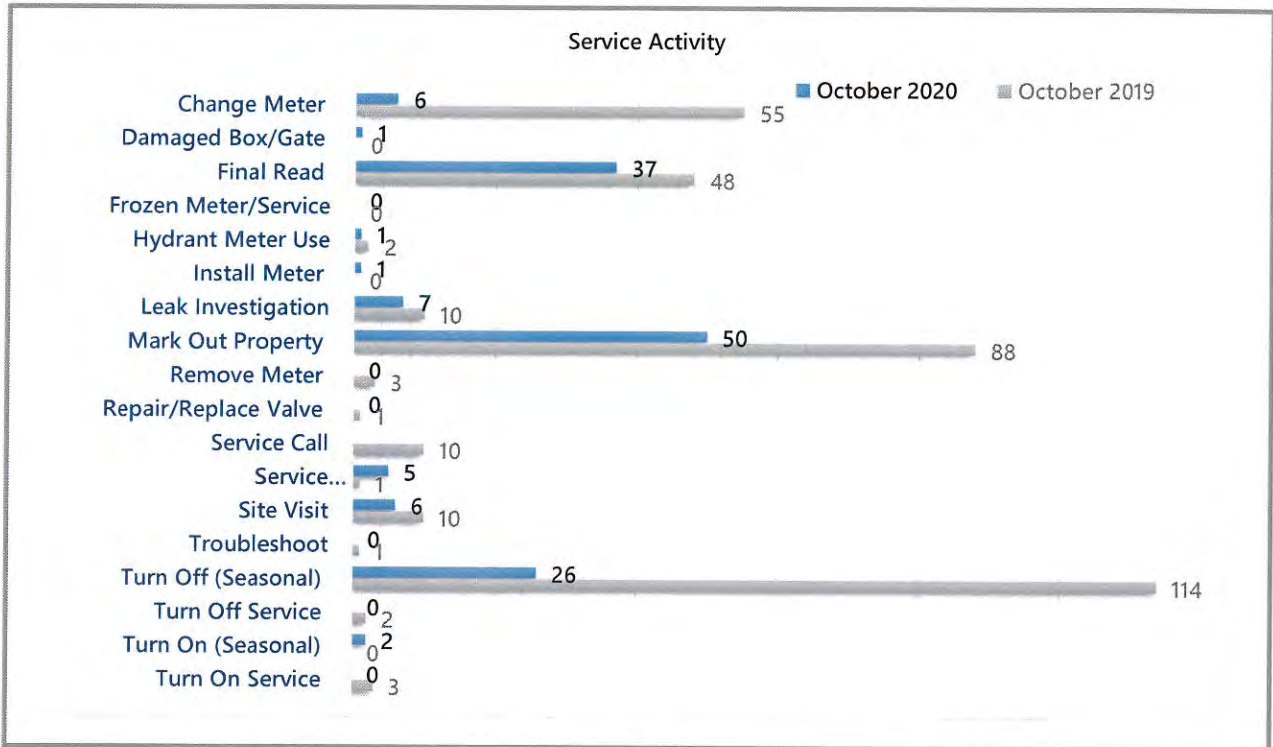
- ### Calendar Activity
- BOWWC Chair Mtgs 9/2, 9/10
 - Final Paving PCO Mtg 9/2
 - Mtg JP/Water Commissioner 9/2
 - ESRI Mtg 9/3/20
 - PB Stormwater Financing Mtg 9/10
 - Mtg HorsleyWitten/USEPA 9/10
 - BOWWC Mtgs, 9/11, 9/24
 - Joan Grey Interview 9/14
 - Mtg w/JP; 9/15
 - Mtg USEPA Cyber Security 9/15
 - Interviews/HWD position 9/16
 - DHY Mtg 9/18
 - Mtg w/Mike Giggey 9/22
 - Mtg 4-Log Removal 9/22
 - Har/Cha WW Mtg 9/23
 - Dept Head Mtg ATM 9/24
 - CDM/Sewer Mtg 9/24
 - Utility Cloud Screen Share 9/24
 - Town Meeting 9/26
 - RBO Paving Mtg 9/25
 - Q1 Meter Reading 9/24...
 - Hiring Interview 9/30
 - Civic Ready Mtg 9/30



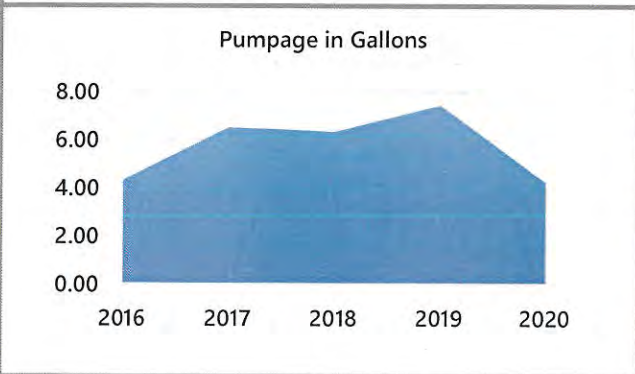
Monthly Pumping Change
-24.37%

YTD Pumping Change
24.41%

Water Samples Taken
74



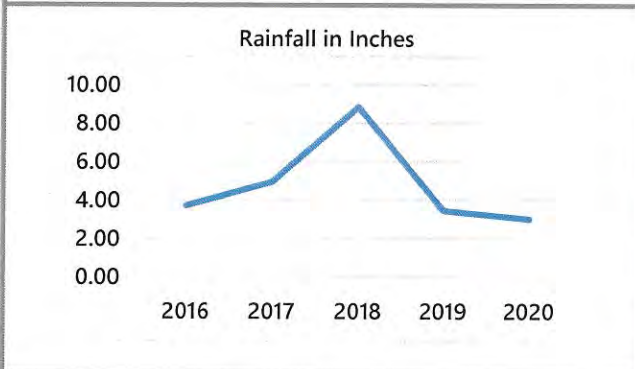
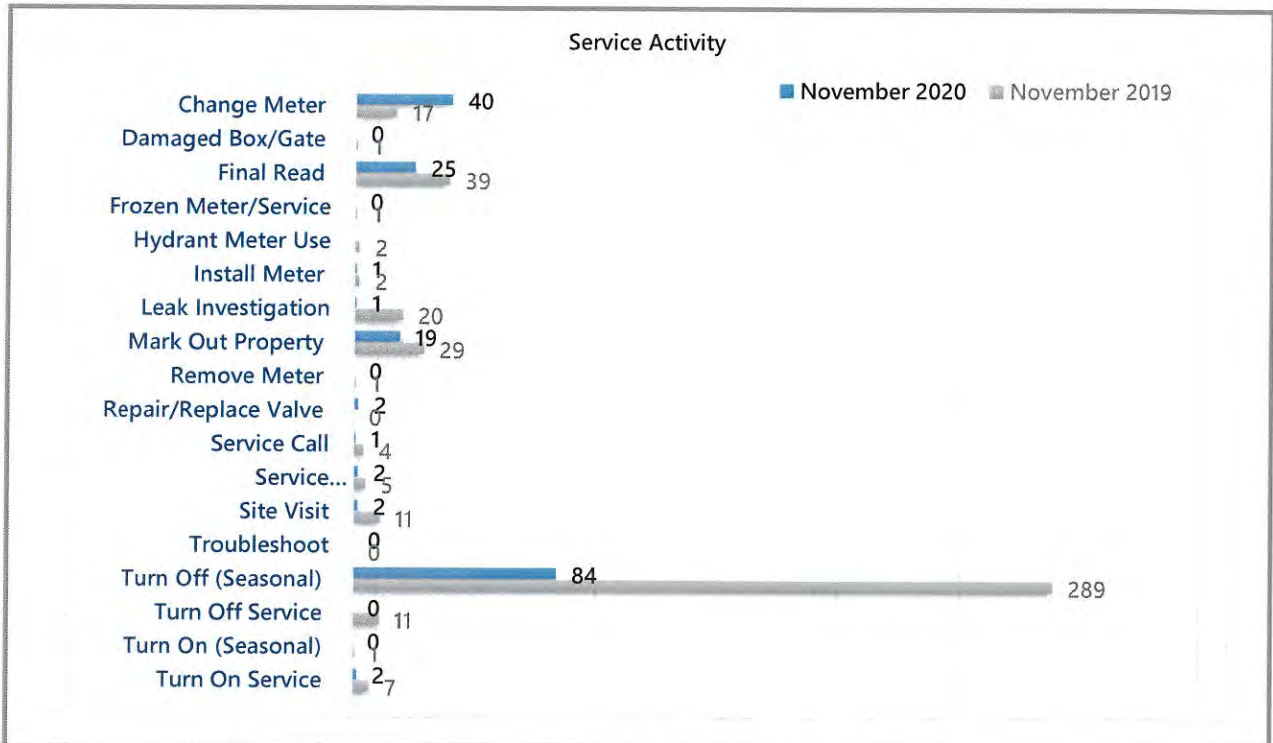
- ### Calendar Activity
- PBA Watershed Mtgs 10/1, 10/26, 10/29
 - GHD Sewer Modeling Mtg 10/1
 - Weston & Sampson Sewer Mtg 10/5
 - WW Mtg w/Val Peter 10/6
 - Cyber Security Mtg/Rich 10/7
 - Cold Brook Update Mtg 10/7
 - Meggan E WW Mtg 10/9
 - Williamson Pump Mtg 10/9
 - Columbus Day 10/12
 - BOWWC Chair Mtgs 10/13, 10/21
 - Phase 2 Construction Mtg 10/13
 - Sewer Regs Mtg/JP 10/13
 - Con Ops Mtg/W&S 10/15
 - WW IMA Regs Mtg w/JP 10/15
 - DHY Mtg 10/16
 - BOWWC Mtgs 10/16, 10/27
 - New Hire Orientation 10/19
 - WW Mtg 10/19, 10/20, 10/23, 10/26
 - CPC Mtg 10/19
 - P2C1 Mtg 10/20
 - EPA Cyber Security/Krista 10/20
 - Sewer CAD Mtg 10/20
 - BOWWC/Allin Mtg 10/27
 - Har-Cha Interconnection Mtg 10/28
 - Meter Replacement Plan Mtg 10/28
 - Turbine Bldg Mtg 10/28
 - Dept Head Mtg 10/29
 - MWWA Roundtable Call 10/29
 - Q1 Billing
 - Hydrant Install & Hydrant Repair



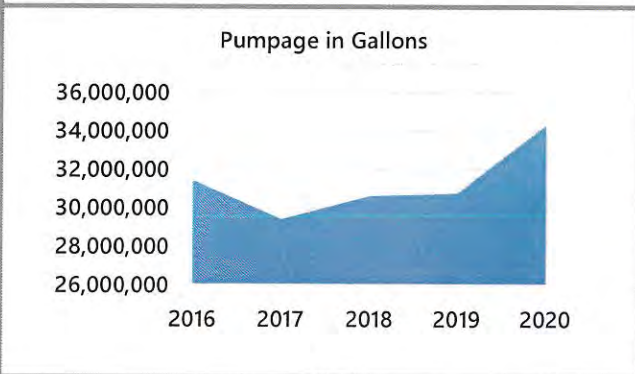
Monthly Pumping Change
-77.34%

YTD Pumping Change
18.27%

Water Samples Taken: **39**



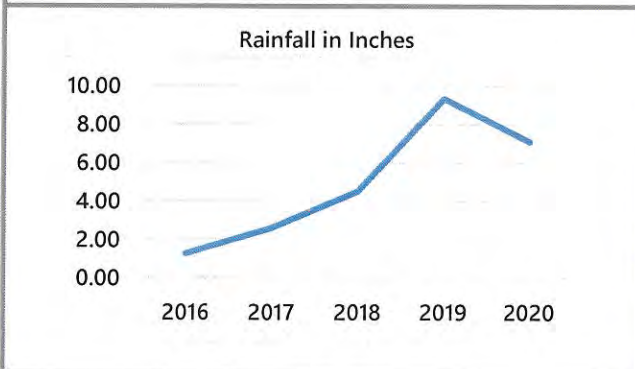
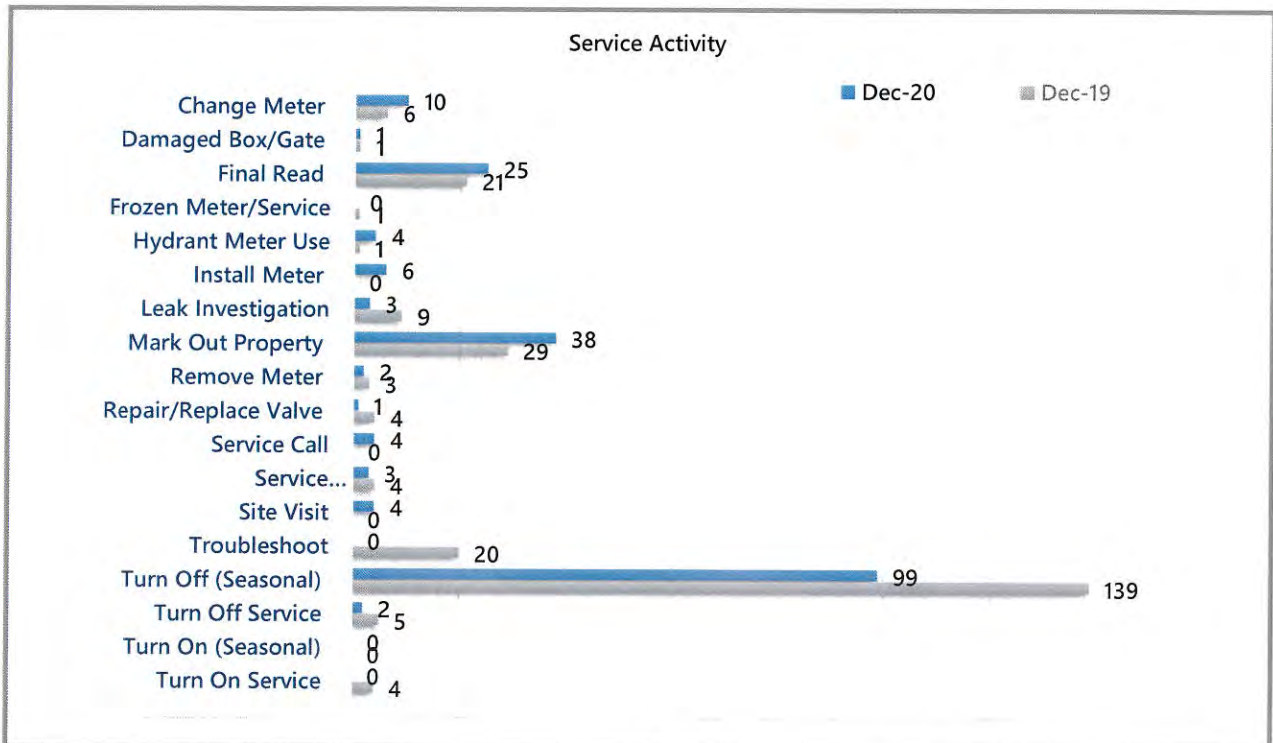
- ### Calendar Activity
- GHD Mtg 11/2
 - Dept Head Mtg 11/3, 11/16, 11/24
 - BOWWC Chair Mtg 11/4,
 - GHD/P.Lake Tank Mtg 11/3, 11/4
 - Bill Marsh Mtg 11/6
 - BOWWC Mtgs 11/5, 11/19
 - Sewer Mtg w/Griffin 11/9
 - P2C1 Siding C/O Mtg 11/9
 - Health Dept Mtg 11/9
 - Harwich Owners Mtg Sewer Contracts 11/10
 - Master Meter Calibrations 11/9-10
 - Veterans Day 11/11
 - Sewer Progress Mtg 11/10, 11/20
 - FY22 Budget Prep DP/SS 11/12
 - AWIA 2018 Mtg 11/13
 - FY22 Lien Processing 11/20
 - Mtg w/JP 11/16
 - WW Budget Review/Prep 11/16
 - EPA/CDX User Training 11/18
 - GIS Discussion Presentation 11/19
 - DHY Mtg 11/20
 - Sewer Project & Financing Mtg 11/20
 - WW Mtg 11/23, 11/30
 - Thanksgiving Holiday 11/26-11/27
 - CPC Rail Trail Location Review 11/30
 - WW Rules & Regs/JP Mtg 11/30



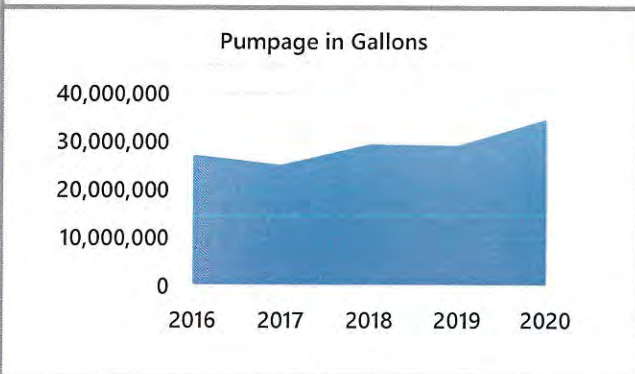
Monthly Pumping Change
22.02%

YTD Pumping Change
17.97%

Water Samples Taken: **38**



- ### Calendar Activity
- FY22 Water Budget submitted
 - FY22 Wastewater Budget submitted
 - P.Lake Tank Pre-Bid Mtg 12/1
 - ArcGIS & Elements Mtg 12/2
 - Pleasant Bay Watershed Mtg 12/3
 - WW Mtg 12/1, 12/7, 12/14
 - Elements Conf Call DP/SS 12/2
 - BOWWC Chair Mtg 12/3, 12/15
 - CPC Water Filling Stations Mtg 12/3
 - GIS Follow Up Mtg 12/8, 12/15, 12/18
 - Presentation Review 12/8
 - P.Lake Tank Bid Opening 12/10
 - WW Mtg 12/14
 - FY22 Capital Plan Rt 28 WM Proj 12/14
 - P2 Progress Mtg 12/15
 - P. Lake Tank Intro Mtg 12/15
 - Dept Head Mtg/Storm 12/16
 - DHY Mtg 12/18
 - Rt 28 Project/GHD Mtg 12/18
 - Q2 Meter Reading 12/21...
 - Hydrant Flushing Program
 - Vacation DP 2wks
 - Christmas Holiday 12/25
 - Install New Water Main/Harden Ln
 - Gate Valve Replacement



Monthly Pumping Change
1.10%

YTD Pumping Change
18.00%

Water Samples Taken: **45**

Board of Water & Wastewater Commissioners
2021 Request for *Anonymous Water Employee Feedback*
for Superintendent Evaluation

	Clear Strength	Capable and Effective Performance	Could Benefit from Development	Needs Significant Improvement	N/A Not Observed or Cannot Comment on
Interpersonal					
1. Treats employees with respect.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Behaves in a fair and trustworthy manner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Handles tough employee issues fairly and effectively; works well to resolve conflicts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Handles job-related stress effectively (does not blame others, become hostile or overly moody); keeps in control of his/her feelings and behavior. Doesn't let personal problems affect work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Keeps employees informed of information they need to do their jobs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leadership					
6. Provides the necessary training, guidance, and motivation to help employees meet and exceed their job responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Creates an open and trusting environment where people feel safe to discuss concerns, ideas and opinions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Provides appropriate recognition to employees for good performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Systematically works to improve the department.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Results Orientation/Leading Change					
10. Holds all employees accountable for their performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Skills					
11. Communicates effectively with all levels of the department.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Board of Water & Wastewater Commissioners
2021 Request for *Anonymous* Water Employee Feedback
for Superintendent Evaluation

	Clear Strength	Capable and Effective Performance	Could Benefit from Development	Needs Significant Improvement	N/A Not Observed or Cannot Comment on
Continual Improvement					
12. Looks for ways to improve work processes and procedures.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teamwork					
13. Uses his/her Assistant Superintendent's and Foreman's knowledge to help make informed decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Embraces safety procedures and makes employees work within safety policies, takes immediate action when unsafe acts are observed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Works well with the unions and their representatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other General Comments

Note: If you decide to add additional comments, please focus your comments on work behaviors and styles that you believe are relative to their development. The comments that you write/enter, will not be viewed by the individual receiving feedback.

Month/Year May 2021

PWS No. 4126000

Monthly Pumpage Report Harwich Water Department

Date	T1							T2			T3		T10	T11
	Main 1	Main 2	Main 3	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7	Well 8	Well 9	Pump 10	Pump 11
1	47,625	43,048	35,811	79,591	56,069	69,442	108,579	133,516	140,723	133,785	139,984	136,122	119,508	147,209
2	51,215	46,298	38,857	85,105	60,176	74,522	117,458	152,260	160,816	152,556	159,568	155,509	129,274	167,729
3	79,596	71,885	60,295	131,925	93,114	115,793	182,080	127,549	134,505	127,779	130,305	127,349	152,930	140,418
4	57,954	52,288	43,686	96,442	67,660	84,361	131,291	112,963	119,050	113,154	109,485	105,904	133,495	104,885
5	14,313	14,869	12,762	26,720	19,229	23,554	39,143	235,913	248,676	235,695	249,378	241,568	89,567	241,982
6	66,481	59,864	48,716	113,888	78,884	99,318	147,703	108,348	114,076	108,553	115,669	112,160	161,996	121,357
7	137,750	121,394	99,707	232,444	161,122	202,887	302,880	4,118	4,340	4,616	0	0	326,578	0
8	50,534	45,480	37,606	85,768	59,529	74,762	113,073	161,887	170,875	162,134	169,813	165,441	111,488	178,317
9	52,767	47,393	39,545	89,059	62,210	77,875	119,252	174,898	184,640	175,416	183,428	178,909	131,278	192,529
10	60,106	53,935	44,878	101,732	71,025	88,834	135,956	141,998	149,872	142,252	148,760	144,636	149,348	156,291
11	58,958	53,007	44,182	99,423	69,675	87,045	133,813	140,123	147,799	140,327	147,252	142,694	146,918	154,145
12	108,171	97,311	80,185	183,763	128,084	160,758	243,795	124,033	130,817	124,472	129,739	125,918	267,761	117,099
13	95,660	85,685	71,326	160,906	112,656	141,008	215,787	119,737	126,380	119,974	125,208	121,631	237,504	131,806
14	64,845	58,305	48,825	108,519	76,502	95,056	148,291	238,964	252,316	239,415	250,628	245,231	162,853	263,394
15	56,783	50,994	42,640	95,003	66,903	83,344	129,641	283,327	299,264	283,833	297,322	290,959	142,358	311,734
16	70,550	65,486	55,962	119,125	84,865	105,298	169,551	290,258	306,046	291,170	304,643	295,451	189,124	319,784
17	134,275	120,624	101,135	225,228	158,321	197,719	306,348	191,918	200,006	192,184	200,125	193,550	336,254	209,088
18	157,674	141,691	117,303	267,167	186,287	234,320	355,989	139,406	146,516	139,868	146,404	141,870	390,054	153,028
19	131,489	118,322	99,171	220,477	154,794	193,838	300,730	250,567	263,696	250,863	262,373	255,146	405,636	274,076
20	76,349	68,663	58,341	125,595	88,972	110,654	176,330	264,487	278,810	264,908	278,469	270,224	364,819	320,467
21	192,438	173,085	146,153	321,176	226,276	282,706	442,684	178,260	187,725	178,674	187,006	180,643	526,958	257,589
22	79,958	71,854	61,466	131,755	93,605	116,221	186,277	301,093	317,696	301,900	312,302	303,517	252,590	331,851
23	172,298	154,809	129,286	291,812	203,695	255,234	391,789	228,543	237,120	228,195	268,140	261,529	429,225	284,353
24	156,206	139,980	116,927	264,946	184,297	231,432	355,319	313,398	330,589	314,598	298,311	289,146	389,521	308,835
25	127,889	114,918	96,364	216,706	150,874	189,486	291,805	247,909	261,512	248,405	259,864	252,665	344,905	273,022
26	210,060	187,205	155,521	361,627	250,129	315,659	476,171	252,483	266,393	252,666	264,803	260,276	419,917	258,616
27	70,716	64,767	53,632	123,311	85,185	107,926	163,423	437,695	462,017	438,615	458,932	447,115	185,001	481,883
28	84,367	75,713	63,035	143,844	99,899	125,402	191,919	364,178	384,338	364,847	382,358	373,343	406,498	400,674
29	30,652	27,579	23,241	51,337	35,937	44,784	70,233	327,873	346,027	328,069	344,041	333,277	393,770	360,645
30	22,191	19,895	16,376	38,213	26,240	32,986	49,402	359,547	379,144	360,059	378,031	364,662	448,227	395,627
31	58,165	52,094	42,548	101,071	69,242	87,505	129,467	231,295	243,872	231,643	242,376	236,331	277,662	364,796
Pumps :	2,778,035	2,498,441	2,085,484	4,693,675	3,281,455	4,109,728	6,326,179	6,638,542	6,995,656	6,650,625	6,944,717	6,752,776	8,223,017	7,423,229
MIN :	14,313	14,869	12,762	26,720	19,229	23,554	39,143	4,118	4,340	4,616	0	0	89,567	0
MAX :	210,060	187,205	155,521	361,627	250,129	315,659	476,171	437,695	462,017	438,615	458,932	447,115	526,958	481,883
STATIONS :	25,772,998							20,284,823			13,697,493		8,223,017	7,423,229
TOTAL :	75,401,560													

Month/Year May 2020

PWS No. 4126000

Monthly Pumpage Report Harwich Water Department

Date	T1							T2			T3		T10	T11
	Main 1	Main 2	Main 3	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6	Well 7	Well 8	Well 9	Pump 10	Pump 11
1	27,727	27,775	20,253	49,282	33,164	40,105	60,741	177,874	187,499	178,093	186,482	192,015	67,520	195,710
2	66,703	66,666	48,347	117,856	79,234	96,821	146,495	0	0	0	0	0	161,009	0
3	45,777	45,910	33,508	79,820	54,152	65,033	100,541	115,491	121,861	115,642	120,949	126,444	110,865	133,237
4	62,846	62,749	45,285	111,724	74,938	92,088	137,898	84,155	88,584	84,268	88,509	89,348	183,005	86,755
5	48,686	48,722	35,544	86,745	58,206	70,453	106,878	106,581	112,074	106,739	111,560	115,012	125,539	116,002
6	60,862	60,865	43,990	108,927	72,885	90,939	133,791	97,415	102,409	97,539	102,178	105,102	146,997	107,533
7	50,130	50,241	36,514	90,274	59,907	74,050	110,447	94,656	99,826	94,630	99,344	102,363	121,656	104,292
8	57,650	57,630	41,581	103,263	68,956	86,289	126,768	101,448	106,911	101,538	106,214	109,267	139,412	111,683
9	38,060	38,093	27,644	68,190	45,562	56,517	83,564	124,220	130,862	124,245	130,190	134,140	92,316	136,737
10	61,643	61,487	44,466	110,001	73,430	91,446	135,323	95,210	100,237	95,288	99,773	102,375	148,796	104,656
11	59,273	59,287	43,289	106,567	70,925	87,464	130,198	111,018	115,624	111,728	115,868	119,662	143,240	124,321
12	88,368	88,141	64,056	158,256	105,457	130,488	193,914	107,882	113,751	108,117	113,235	116,983	187,423	105,955
13	0	0	0	0	0	0	0	244,022	257,397	243,806	266,957	276,336	0	280,849
14	126,690	125,103	90,771	220,969	147,930	181,717	272,546	11,010	11,592	11,498	0	0	301,632	0
15	19,465	21,208	15,428	37,378	24,969	30,709	45,969	251,874	265,568	252,024	263,244	271,985	55,879	277,129
16	145,535	145,374	105,482	257,884	173,313	211,371	320,348	0	0	0	0	0	351,744	0
17	25,261	25,153	18,457	45,286	30,323	37,059	55,367	263,060	277,387	263,347	275,171	285,119	61,893	289,511
18	148,513	148,259	107,520	259,943	175,449	212,060	325,950	47,291	49,743	47,405	49,760	52,236	357,714	52,426
19	0	0	0	0	0	0	0	301,925	318,547	302,365	316,139	327,785	31	332,461
20	182,892	183,451	132,469	327,620	218,871	269,740	402,292	53,160	56,031	53,398	55,887	58,830	441,028	58,879
21	0	0	0	0	0	0	0	358,063	377,892	358,446	375,271	389,462	0	394,356
22	158,193	157,532	114,248	281,005	188,150	232,961	347,085	159,217	167,968	159,576	167,195	173,246	380,493	175,358
23	26,039	26,130	18,936	46,664	31,010	40,037	56,930	361,159	381,099	361,524	377,974	392,683	63,558	397,627
24	181,474	179,065	129,172	322,296	214,098	271,386	394,635	26,656	27,974	26,739	28,139	29,638	428,314	29,623
25	89,910	91,844	66,476	164,987	110,342	136,796	201,699	376,991	397,862	377,179	394,748	409,718	224,258	414,538
26	81,058	80,929	58,595	138,777	94,133	113,521	177,844	245,567	259,129	245,977	257,588	267,468	196,507	270,447
27	131,369	131,537	95,506	221,755	151,775	181,392	288,174	263,909	278,338	264,277	277,122	286,397	316,878	290,601
28	132,786	132,733	96,821	222,137	152,680	181,949	291,418	267,851	282,324	268,122	281,391	288,020	321,739	295,044
29	138,378	138,404	100,422	235,966	160,676	192,704	303,002	278,349	293,497	278,706	291,889	299,270	334,021	306,390
30	92,172	91,929	66,938	158,413	107,468	129,167	202,005	185,424	195,444	185,619	194,564	199,583	222,661	204,211
31	135,910	135,704	99,014	231,193	157,489	188,797	297,950	273,776	288,675	274,160	287,244	294,195	328,551	301,275
Pumps :	2,483,371	2,481,921	1,800,732	4,363,177	2,935,490	3,593,062	5,449,774	5,185,253	5,466,102	5,191,993	5,434,585	5,614,682	6,014,679	5,697,606
MIN :	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAX :	182,892	183,451	132,469	327,620	218,871	271,386	402,292	376,991	397,862	377,179	394,748	409,718	441,028	414,538
STATIONS :	23,107,527							15,843,348			11,049,267		6,014,679	5,697,606
TOTAL:	61,712,427													

Date May 2021
PWS No. 4126000

Monthly Weather Report
Harwich Water Department

Day	Snow Fall (in.) (Gallons)	Rain Fall (in.)	Temperature High (°F)	Temperature Low (°F)	Temperature AVG (°F)	Weather Comments	Operator
1		0.19	60	45	52		
2		0.00	62	45	54		
3		0.00	64	50	57		
4		0.53	52	48	50		
5		0.18	51	48	49		
6		0.00	62	47	55		
7		0.00	60	44	52		
8		0.00	53	46	50		
9		0.00	62	47	54		
10		0.87	56	47	51		
11		0.00	63	46	54		
12		0.00	63	47	55		
13		0.00	66	44	55		
14		0.00	71	46	58		
15		0.00	70	50	60		
16		0.00	76	54	65		
17		0.00	73	50	61		
18		0.00	74	52	63		
19		0.00	73	53	63		
20		0.00	66	50	58		
21		0.00	64	47	56		
22		0.00	65	56	60		
23		0.00	82	59	70		
24		0.00	63	52	57		
25		0.00	66	52	59		
26		0.00	70	60	65		
27		0.00	79	63	71		
28		0.00	65	49	57		
29		1.60	49	45	47		
30		0.56	52	48	50		
31		0.42	58	52	55		
Total		4.35					
Average		0.14	64.2	49.6			
Max		1.60	81.8	62.8			
Min		0.0	49.3	44.1			

Date May 2020
 PWS No. 4126000

Monthly Weather Report
Harwich Water Department

Day	Snow Fall (in.) (Gallons)	Rain Fall (in.)	Temperature High (°F)	Temperature Low (°F)	Temperature AVG (°F)	Weather Comments	Operator
1		0.79	54	49	52		
2		0.10	64	48	56		
3		0.00	59	49	54		
4		0.00	70	50	60		
5		0.00	59	42	50		
6		0.35	55	38	46		
7		0.11	56	41	48		
8		0.00	75	48	61		
9		0.23	50	40	45		
10		0.00	55	37	46		
11		0.00	58	47	52		
12		0.00	59	45	52		
13		0.00	59	42	50		
14		0.00	63	39	51		
15		0.00	65	52	59		
16		0.16	69	48	58		
17		0.00	58	44	51		
18		0.00	60	51	55		
19		0.00	58	45	52		
20		0.00	59	41	50		
21		0.00	60	38	49		
22		0.00	71	53	62		
23		0.00	66	49	58		
24		0.00	58	49	53		
25		0.00	61	51	56		
26		0.00	66	55	61		
27		0.00	70	58	64		
28		0.00	72	60	66		
29		0.00	65	62	63		
30		0.15	65	59	62		
31		0.00	68	56	62		
Total		1.89					
Average		0.06	62.2	47.9			
Max		0.79	74.6	62.3			
Min		0.0	50.3	37.3			