

Town of Harwich
BOARD OF WATER/WASTEWATER COMMISSIONER'S MEETING AGENDA*
Conference Room, Harwich Water Department
196 Chatham Rd, Harwich, MA
Thursday, June 24, 2021, 8:30 a.m.

- I. CALL TO ORDER
- II. CONSENT AGENDA
 - A. Minutes
 - 1. June 9, 2021
- III. ABATEMENTS
- IV. OLD/UNFINISHED BUSINESS
 - A. Water/Wastewater Superintendent Evaluation
 - B. Sewer Rates
- V. NEW BUSINESS
 - A. Route 28 Water Main Replacement Design- *Russ Kleekamp of GHD will attend- Discussion*
 - B. New Source Exploration- *Tom Sexton of GZA will attend- Discussion*
 - C. Buck Slip(s) Inclusion with Q4 Water Bills- *Review and possible vote*
- VI. SUPERINTENDENT'S REPORT
- VII. COMMISSIONER'S REPORT
- VIII. CORRESPONDENCE/ANY OTHER BUSINESS
- IX. NEXT MEETING: Wednesday, June 30, 2021 at 1:00 p.m.
- 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: _____

IV. OLD/UNFINISHED BUSINESS


A. 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

<p>Department Head Evaluation – Water</p> <p>Department Head completes self-evaluation, BOWWC completes individually and then combined evaluation, and both are submitted to the Town Administrator.</p>

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:



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

	# of Inc.	Points		Points	Average	Points
Complaint Letters			Department Avg			
0 Letters (1 points)		1	(2 points)			
1 Letter (-1 point)			(1 point)			
2 Letters (-2 points)			(0 points)			1
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)

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

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

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

Empty rectangular box for providing copies of commendation letters.

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)

Large empty rectangular box for professional development plan or comments.

Signatures:

Employee Name _____

Employee Signature _____ Date _____

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

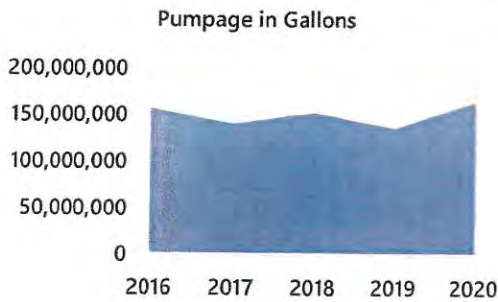
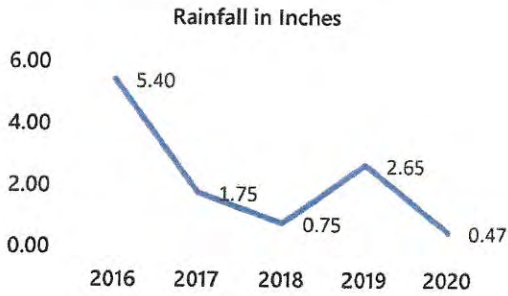
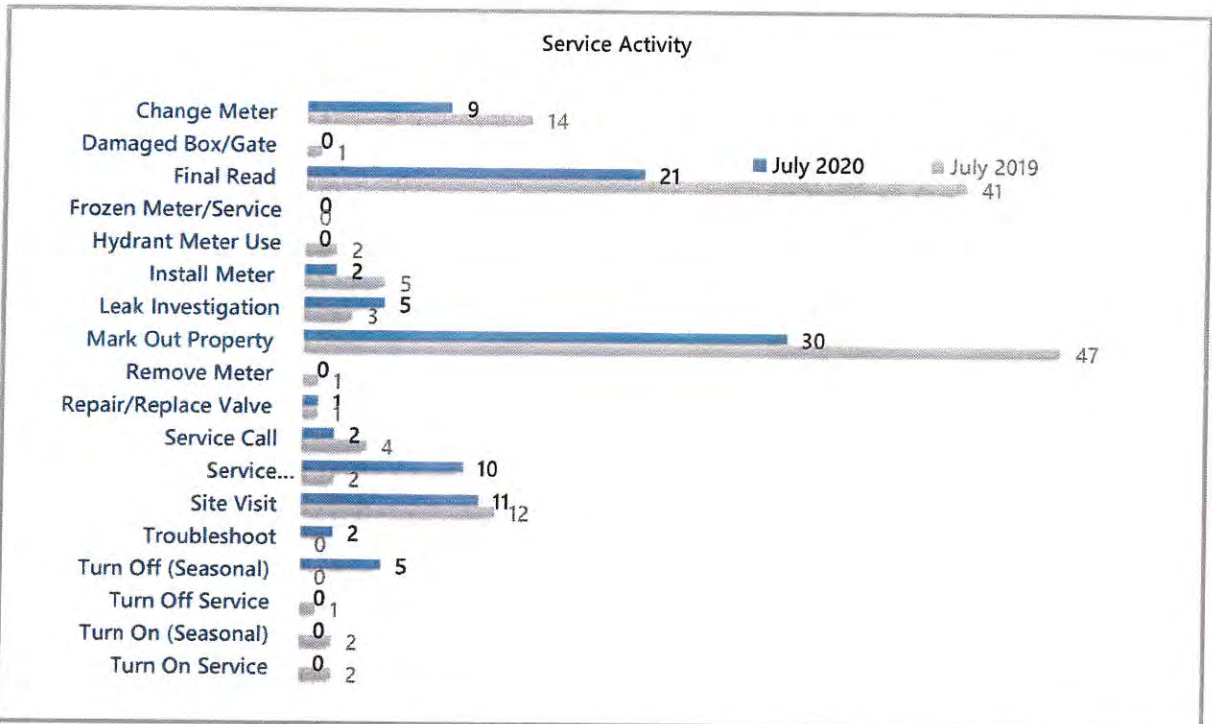
I will like to include comments regarding my evaluation.

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

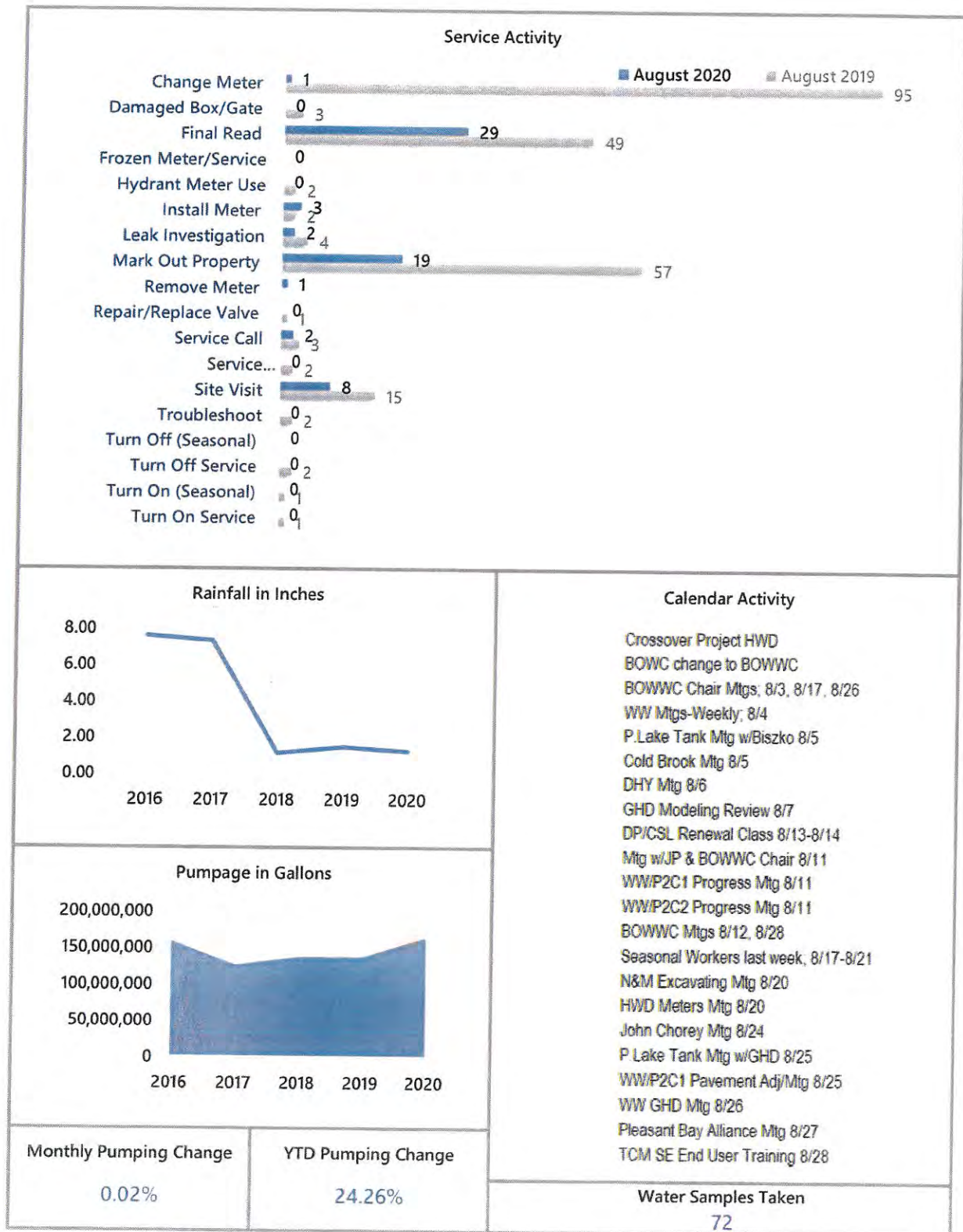
19.18%

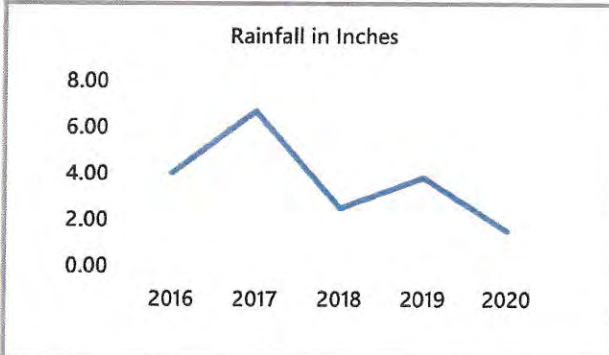
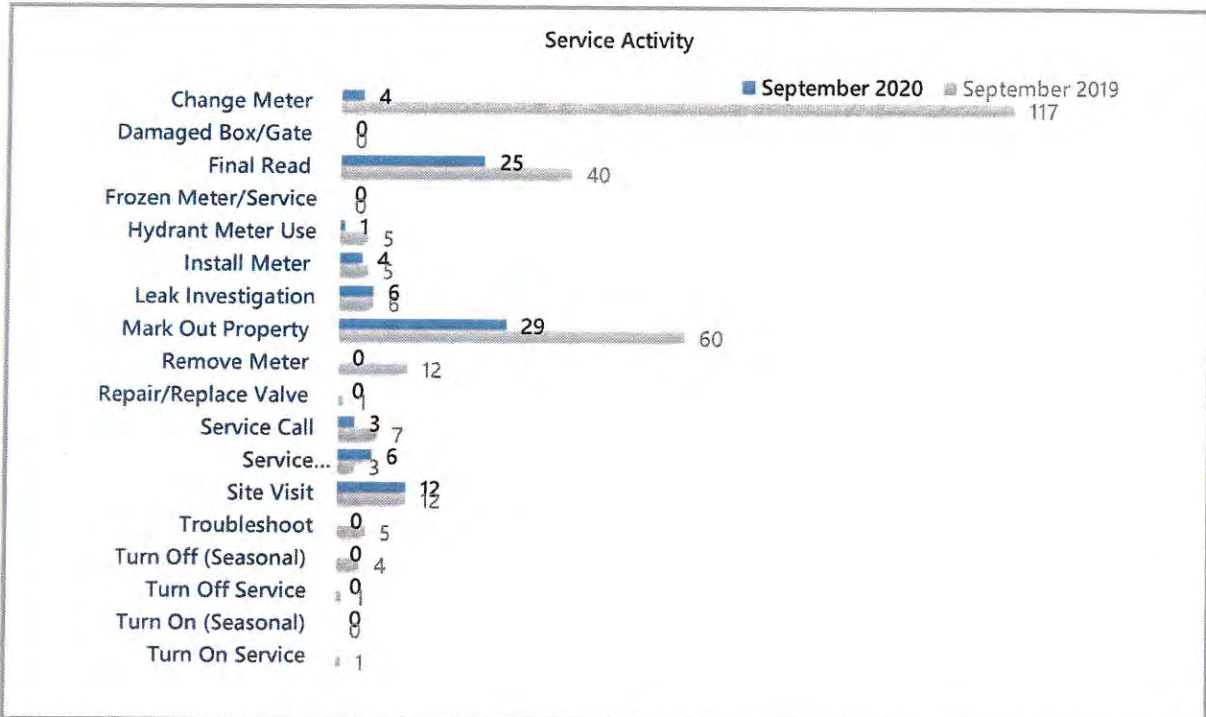
YTD Pumping Change

25.96%

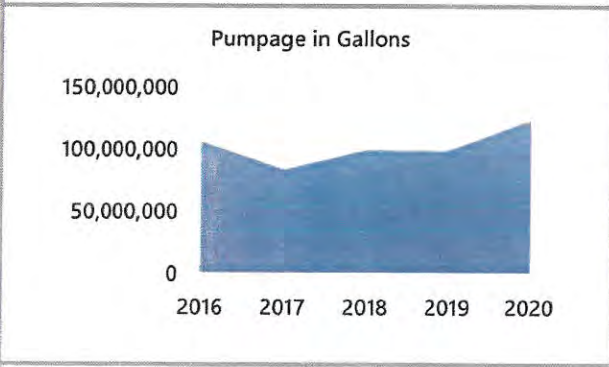
Water Samples Taken

62





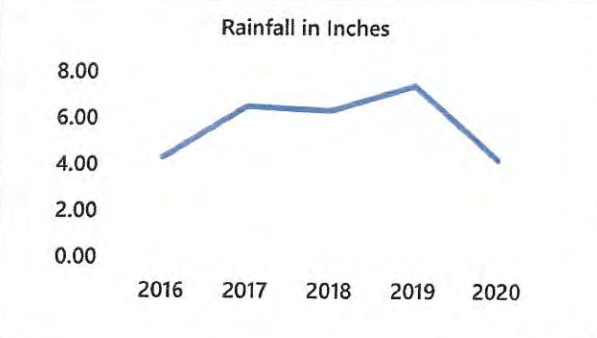
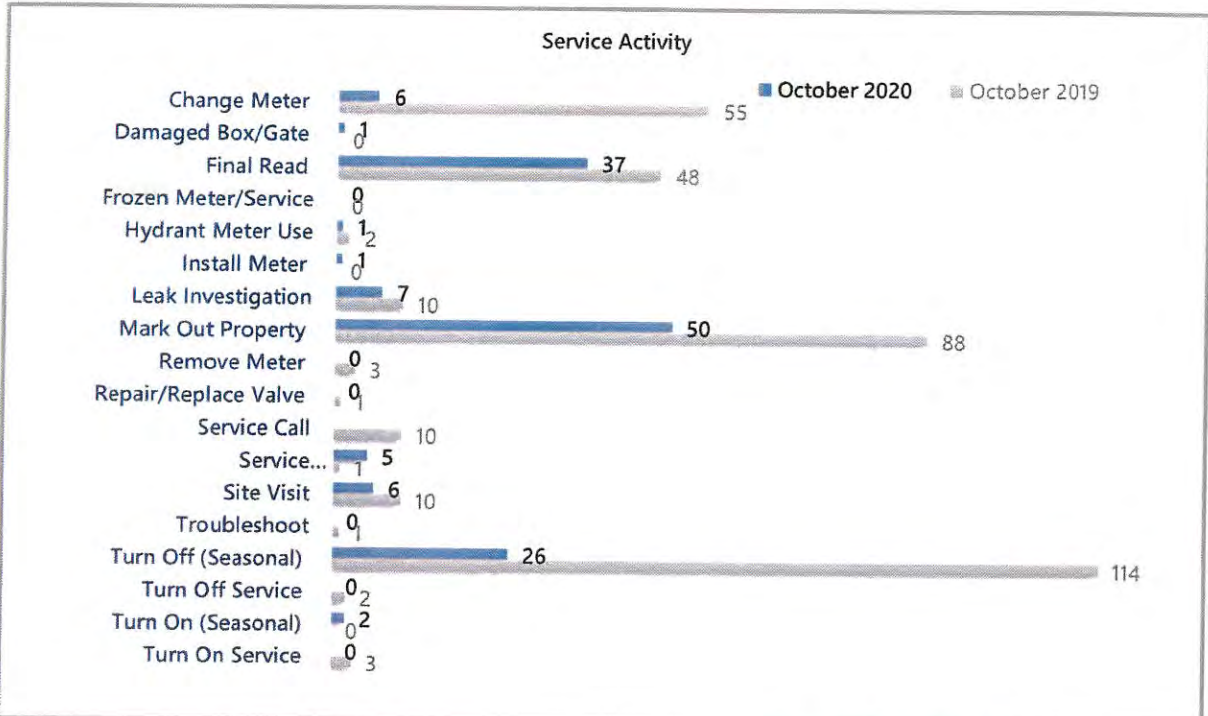
- ### Calendar Activity
- BOWWC Chair Mtgs 9/2, 9/10
 - Final Paving PCO Mtg 9/2
 - Mtg JP/Water Commissioner 9/2
 - ESRI Mtg 9/3/20
 - PB Stormwater Financing Mtg 9/10
 - Mtg Horsley/Witten/USEPA 9/10
 - BOWWC Mtgs, 9/11, 9/24
 - Joan Grey Interview 9/14
 - Mtg w/JP, 9/15
 - Mtg USEPA Cyber Security 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



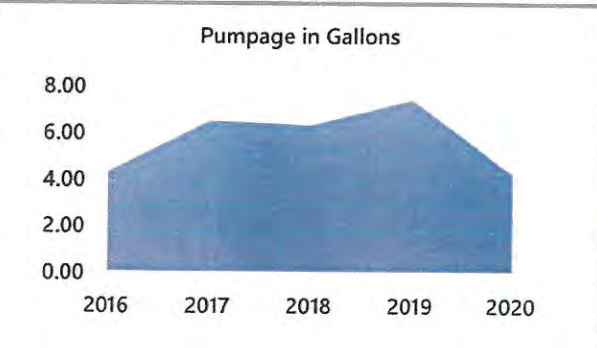
Monthly Pumping Change
 -24.37%

YTD Pumping Change
 24.41%

Water Samples Taken
 74



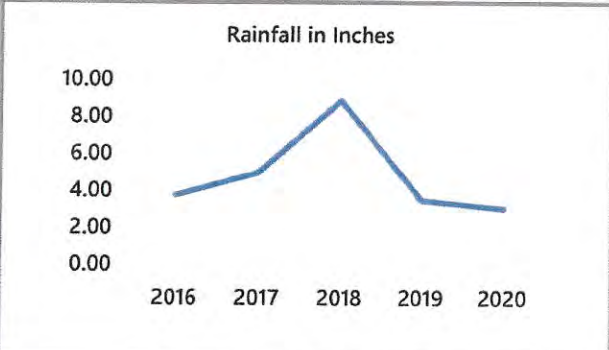
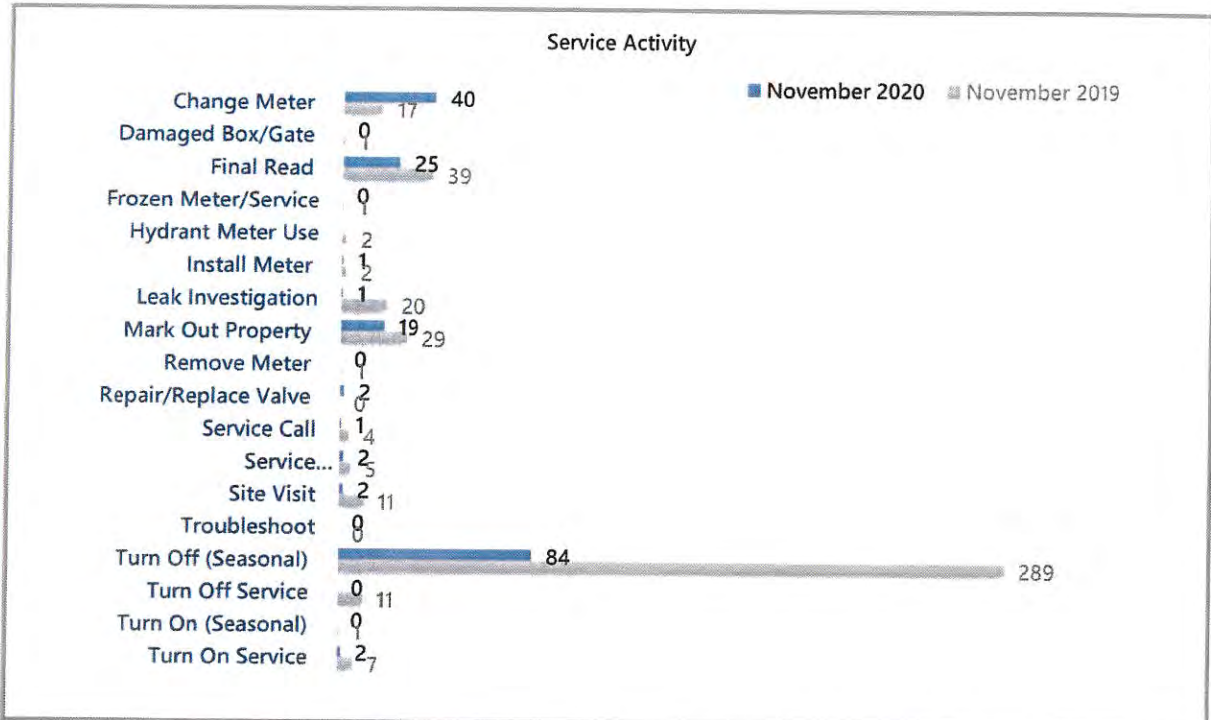
- ### Calendar Activity
- PBA Watershed Mtgs 10/1, 10/26, 10/29
 - GHD Sewer Modeling Mtg 10/1
 - Weston & Sampson Sewer Mtg 10/5
 - WW Mtg w/Val Peter 10/6
 - Cyber Security Mtg/Rich 10/7
 - Cold Brook Update Mtg 10/7
 - Meggan E WW Mtg 10/9
 - Williamson Pump Mtg 10/9
 - Columbus Day 10/12
 - BOWWC 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



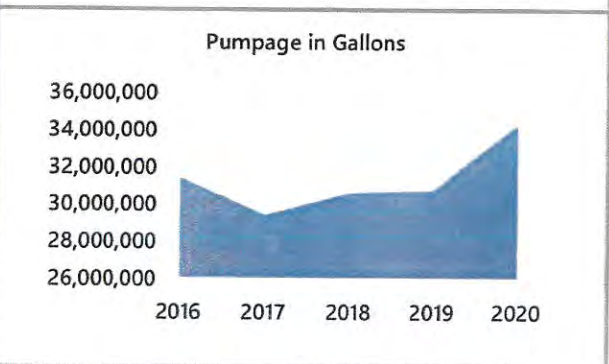
Monthly Pumping Change
 -77.34%

YTD Pumping Change
 18.27%

Water Samples Taken: 39



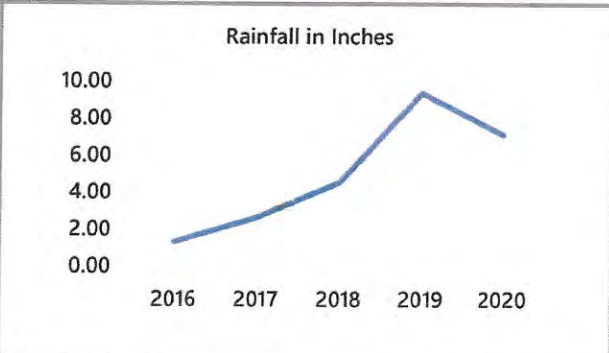
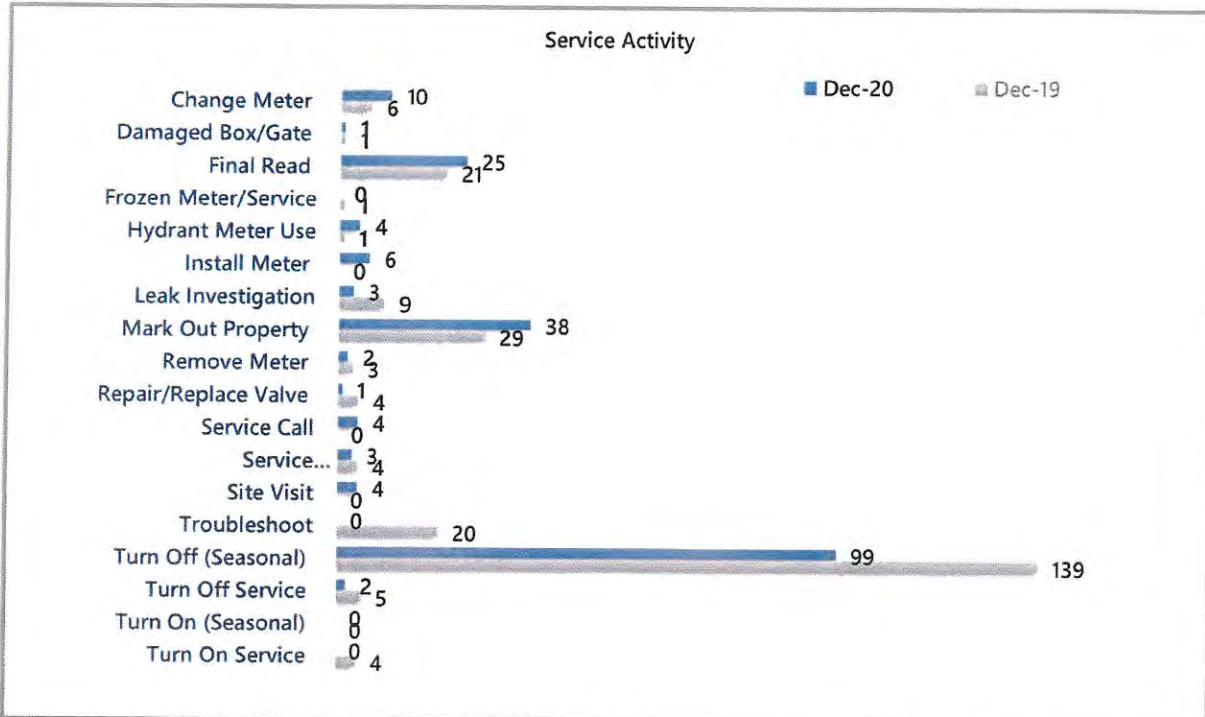
- ### Calendar Activity
- GHD Mtg 11/2
 - Dept Head Mtg 11/3, 11/16, 11/24
 - BOWWC Chair Mtg 11/4
 - GHD/P.Lake Tank Mtg 11/3, 11/4
 - Bill Marsh Mtg 11/6
 - BOWWC Mtgs 11/5, 11/19
 - Sewer Mtg w/Griffin 11/9
 - P2C1 Siding C/O Mtg 11/9
 - Health Dept Mtg 11/9
 - Harwich Owners Mtg Sewer Contracts 11/10
 - 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



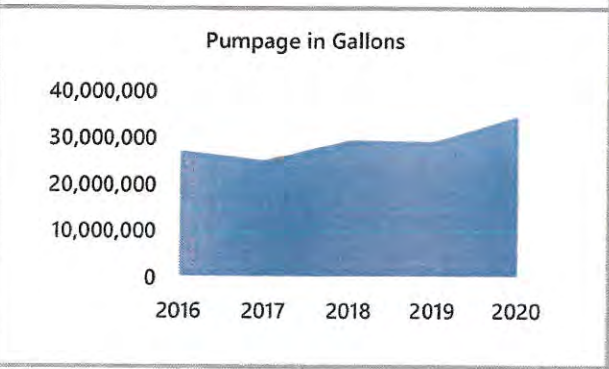
Monthly Pumping Change
 22.02%

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.

IV. OLD/UNFINISHED BUSINESS

B. Sewer Rates

MEMORANDUM



Harwich Water Department
 196 Chatham Road
 Harwich MA 02645
 P: 508-432-0304
 F: 888-774-3557
www.harwichwater.com

To: Board of Water & Wastewater Commissioners
From: Dan Pelletier, Water/Wastewater Superintendent
Date: June 22nd, 2021
RE: Sewer Rates Scenarios

To support the Board in establishing sewer rates I have prepared six different sewer rate scenarios and revenue projections for consideration. As the number of customers and actual wastewater flows are currently unknown, the revenues presented below were developed using 2013-2019 water use data and assumes all 440 parcels (Phase 2 Contract 1&2) are connected to the collections system. Where property owners will have 2-years to connect to the collection system it is not expected the revenues presented in this memo will be achieved until that time. Furthermore, due to the limited customer base and projected operating expenses it is not anticipated sewer rate revenue will be able to support department operations until a larger customer base is realized.

Sewer Rate Scenario "A"

The rate structure proposed in Scenario "A" was derived starting with Chatham's sewer rates and then converting them to the existing Harwich gal/tier billing structure. While it is not always appropriate to compare local rates with other communities due to differences in operation, funding or organizational structure, Chatham and Harwich are uniquely aligned in these respects. A recent evaluation of nitrogen removal cost (\$/LB) completed by the Pleasant Bay Alliance determined the Equivalent Annual Cost (EAC) for N removal in Harwich to be \$316/LB, and Chatham to be \$333/LB.

Scenario "A"	
Quarterly Base Rate	\$ 50.00
Tier 1 (0-8000)*	\$ 0.00
Tier 2 (8000-15000)	\$ 5.43
Tier 3 (15000-40000)	\$ 5.83
Tier 4 (40000+)	\$ 6.05

Scenario "A" Revenue	
Est. Revenue	\$ 170,535.36
FY22 Expenses	\$ 403,360.76
(+/-)	\$ (232,825.40)

*Scenario "A" includes Tier 1 usage in the base rate

Sewer Rate Scenario "B"

The rate structure proposed for Scenario "B" is similar to "A" but also captures Tier 1 revenue.

Scenario "B"	
Quarterly Base Rate	\$ 50.00
Tier 1 (0-8000)	\$ 5.03
Tier 2 (8000-15000)	\$ 5.43
Tier 3 (15000-40000)	\$ 5.83
Tier 4 (40000+)	\$ 6.05

Scenario "B" Revenue	
Est. Revenue	\$ 226,413.63
FY22 Expenses	\$ 403,360.76
(+/-)	\$ (176,947.13)

Sewer Rate Scenario "C"

The rate structure proposed for Scenario "C" is similar to "A" but includes a quarterly base rate of \$65.

Scenario "C"	
Quarterly Base Rate	\$ 65.00
Tier 1 (0-8000)*	\$ -
Tier 2 (8000-15000)	\$ 5.43
Tier 3 (15000-40000)	\$ 5.83
Tier 4 (40000+)	\$ 6.05

Scenario "C" Revenue	
Est. Revenue	\$ 196,155.36
FY22 Expenses	\$ 403,360.76
(+/-)	\$ (207,205.40)

*Scenario "C" includes Tier 1 usage in the base rate

Sewer Rate Scenario "D", "E", and "F"

The remaining rate structures are intended to demonstrate scenarios with lower-cost usage tiers and greater dependence on quarterly base rate revenue. The benefits of this structure is that revenues are more consistent, predictable, and less susceptible to variations in flow. The downside to relying more heavily on quarterly base rate revenue is that it shifts more cost to conservative and lower income customers.

Scenario "D"	
Quarterly Base Rate	\$ 65.00
Tier 1 (0-8000)	\$ 4.75
Tier 2 (8000-15000)	\$ 5.35
Tier 3 (15000-40000)	\$ 5.85
Tier 4 (40000+)	\$ 6.35

Scenario "D" Revenue	
Est. Revenue	\$ 249,553.15
FY22 Expenses	\$ 403,360.76
(+/-)	\$ (153,807.61)

Scenario "E"	
Quarterly Base Rate	\$ 85.00
Tier 1 (0-8000)	\$ 4.50
Tier 2 (8000-15000)	\$ 5.00
Tier 3 (15000-40000)	\$ 5.50
Tier 4 (40000+)	\$ 6.00

Scenario "E" Revenue	
Est. Revenue	\$ 275,740.50
FY22 Expenses	\$ 403,360.76
(+/-)	\$ (127,620.26)

Scenario "F"	
Quarterly Base Rate	\$ 100.00
Tier 1 (0-8000)	\$ 4.00
Tier 2 (8000-15000)	\$ 4.25
Tier 3 (15000-40000)	\$ 4.75
Tier 4 (40000+)	\$ 5.25

Scenario "F" Revenue	
Est. Revenue	\$ 284,673.33
FY22 Expenses	\$ 403,360.76
(+/-)	\$ (118,687.76)

Master Worksheets Location: [..Wastewater Budget](#) and [X:\Wastewater\BUDGET](#)

		HARWICH FY22 WASTEWATER BUDGET (2-Year Order to Connect)											Harwich FY22 Budget Request
FY 2022		Quarterly Flow Variable Expenses *Per IMA Based on Actual % of WW Flow from East Harwich to Total Flow											
CHATHAM Request with Supplement	HARWICH Only Expenses	IMA Fixed O&M Expenses	Quarterly Flow	Har. Quarterly	Quarterly Flow	Har. Quarterly	Quarterly Flow	Har. Quarterly	Quarterly Flow	Har. Quarterly	Quarterly Flow	Har. Quarterly	
			as % of Annual (Chatham)	Flow as % of Chatham	as % of Annual (Chatham)	Flow as % of Chatham	as % of Annual (Chatham)	Flow as % of Chatham	as % of Annual (Chatham)	Flow as % of Chatham	as % of Annual (Chatham)	Flow as % of Chatham	
		23.08%	48.92%	0.65%	16.28%	3.14%	11.33%	6.07%	23.48%	3.77%			
Operating Expenses													
Contracts													
					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
HAR	OFUS	\$31,446.00			13%		12%						
												\$31,446.00	
Personal Services													
HAR	Superintendent	\$64,822.00										\$64,822.00	
HAR	HWD Support (Admin/Mtr Reading)	\$13,277.00										\$13,277.00	
A	Personal Services											\$78,099.00	
Expenses													
IMA	Regular Wages	28,788	23.08%	\$6,644.17								\$6,644.17	
IMA	Testing	18,500			\$9,050.20	\$58.96	\$3,011.80	\$580.83	\$2,096.05	\$127.15	\$4,343.80	\$163.68	\$930.63
IMA	Electric WWFT	140,000			\$68,488.00	\$446.21	\$22,792.00	\$4,395.49	\$15,862.00	\$962.20	\$32,872.00	\$1,238.67	\$7,042.58
IMA	Gas Heat	34,500			\$16,877.40	\$109.96	\$5,616.60	\$1,083.17	\$3,908.85	\$237.11	\$8,100.60	\$305.24	\$1,735.49
IMA	Plant Maintenance	174,000	23.08%	\$40,159.20									\$40,159.20
IMA	Solid Waste Disposal	132,000			\$64,574.40	\$420.72	\$21,489.60	\$4,144.32	\$14,955.60	\$907.22	\$30,993.60	\$1,167.89	\$6,640.14
IMA	Contract Services	621,500	23.08%	\$90,612.58									\$90,612.58
IMA	Operational Supplies	750	23.08%	\$173.10									\$173.10
IMA	Building & Grounds Maintenance	250	23.08%	\$57.70									\$57.70
IMA	Chemicals	40,000			\$19,568.00	\$127.49	\$6,512.00	\$1,255.85	\$4,532.00	\$274.92	\$9,392.00	\$353.91	\$2,012.16
IMA	Ground Water Monitoring	10,000	23.08%	\$2,308.00									\$2,308.00
HAR	Contract Operations	\$125,000.00											\$125,000.00
HAR	Generator Maintenance (450*5)	\$2,250.00											\$2,250.00
HAR	Electric Utility	\$4,000.00											\$4,000.00
HAR	Nat Gas	\$600.00											\$600.00
HAR	Printing & Postage & Office Services	\$650.00											\$650.00
HAR	SCADA	\$3,000.00											\$3,000.00
B	Expenses												\$293,815.76
Department Total													
TOTAL	Operating Expense	\$213,599.00		\$139,954.75		\$1,163.35		\$11,459.66		\$2,508.60		\$3,229.40	\$403,360.76

ATM Approved budget carried 143,442.20 for Contract Services with Chatham, Revised figure of 90,612.58 received 4/26/21

\$ 184,141 Harwich Only Contract Operation estimate - reduction required after revised proposal is received from W&S

V. NEW BUSINESS

A. Route 28 Water Main Replacement Design

This is **EXHIBIT A**, consisting of two pages, referred to in and part of the **Agreement between Town of Harwich and GHD for Professional Services**.

GHD's Services

GHD shall provide Basic Services as set forth below.

PART 1 – BASIC SERVICES

A1.01 Specific Project Data

Title: FINAL DESIGN OF ROUTE 28 WATER MAIN REPLACEMENT

Description: To develop final design plans suitable for public bidding for a new water main on Route 28. Project boundaries shall be from the Harwich/Dennis town line to the intersection of Route 28 and Lower County Road in Harwich, approximately 2.4 miles.

The following items shall be considered as part of the final design:

- The design shall consider removal and replacement of the existing 10-inch cast iron water main with a new 10-inch ductile iron water main.
- Temporary water mains will be required for the removal and replacement of the existing main. Temporary water main plans will be provided as part of the final design.
- New water main will be designed with stubs (approximately 20-feet) on intersecting roads with sizing to be determined by the client.
- Required utility relocation(s) as part of the new water main will be included as part of the final design, but additional utilities (drainage, sewer, or other) beyond the water main will not be designed as part of this agreement.
- Final design plans shall include construction plans, bypass plans, required MassDOT traffic management plans, and standard construction details.

The following scope of services identifies the tasks as part of this Agreement:

Task 1 – Survey. Perform a topographic survey (including spot elevations and surface features) at the project sites listed above suitable for final design. Survey will include property line information with abutters based on Town of Harwich assessor's information.

Task 2 – Develop Preliminary (50%) Plans and Specifications. Develop 50% plans. Design shall incorporate current Town of Harwich regulations for water works materials. Develop 50% project specifications including front end and technical sections for the above scope of work.

Task 3 – Progress Meeting No. 1. Prepare for and attend a progress meeting with project partners to discuss the 50% design. Prepare and distribute minutes.

Task 4 – Develop Permit (75%) Plans, Cost Estimate, and Specifications. Develop 75% plans based on the results of Progress Meeting No. 1. Develop 75% project specifications including front end and technical sections for proposed work. Develop 75% construction cost estimates.

Task 5 – Progress Meeting No. 2. Prepare for and attend a progress meeting with project partners to discuss the 75% design. Prepare and distribute minutes.

Task 6 – Permitting. Develop and submit a MassDEP WS 32: Distribution Modifications for Systems that serve more than 3,300 people.

Task 7 – Develop Final (100%) Plans, Cost Estimate, and Specifications. Develop 100% plans. Develop 100% project specifications including front end and technical sections for proposed work. Develop 100% construction cost estimates. All bid documents to be stamped by a registered Massachusetts Professional Engineer.

Task 8 – Additional Meetings. Prepare for and attend up to eight (8) additional project meetings that may include Harwich Water Commissioner's meetings, site meetings, or miscellaneous design meetings with project stakeholders.

PART 2 - TOWN RESPONSIBILITIES

A2.01 Services Required by TOWN

- A. Design Criteria: Town shall provide standard material specifications.
- B. Record Drawings of the existing water system, if available.
- C. Comments: Town shall provide comments on submittals within five (5) days of receipt.

PART 3 - OUT OF SCOPE WORK

A3.01 The following is considered out of scope work:

- A. Permitting beyond what is included in the project scope.
- B. Any SRF related materials including applications for the Intended Use Plan or State Revolving Fund loan applications.
- C. Bid phase services.
- D. Construction phase services.
- E. Resident project representative services.

PART 4 – PAYMENTS TO GHD FOR SERVICES

TOWN shall pay GHD for Basic Services set forth in Exhibit A as follows:

- A. Client shall pay Engineer for Basic Services set forth herein, as follows:
 - 1. An amount equal to Engineer's Salary Costs times a factor of 2.40 for all Basic Services by principals and employees engaged directly on the Project, plus Reimbursable Expenses.
 - 2. Engineer's Reimbursable Expenses Schedule (mileage, printing, production, etc.).
 - 3. The total compensation is based on the distribution of labor effort shown in Exhibit B.
 - 4. The total compensation for services is estimated to be Four Hundred Eighty Five Thousand One Hundred and Ninety Eight Dollars (\$485,198.00) based on the tasks shown in Exhibit B.
- B. GHD shall submit invoices on a monthly basis.
- C. The terms for payment are as identified in Part 4 of Exhibit A of this Agreement.
- D. It is understood and agreed that the costs shown in Exhibit B are estimates of the level of effort for each phase. It is understood and agreed that GHD may adjust the values of individual phases or tasks without exceeding the total value of this Agreement.

PART 5 - PERIOD OF SERVICE

The compensation amount stipulated above for all project tasks is anticipated to be completed within 365 calendar days of authorization.

Exhibit B
Proposed Budget for
Route 28 Water Main
Town of Harwich, Massachusetts

TASK	Project Director Marc Drainville, P.E., BCEE	QA/QC Sandy Tripp, P.E., BCEE	Sr. Project Manager Russell Kleekamp	Project Engineers Craig Curtin	Managing Designer James Fosdick	Admin	Total Hours	GHD Labor Cost	GHD Expenses	GHD Total Cost
1 Survey	0	0	16	60	60	0	136	\$21,060	\$60,508	\$81,568
2 50% Design, Specifications	16	24	120	240	500	32	932	\$153,288	\$250	\$153,538
3 Progress Meeting #1	0	0	4	4	4	2	14	\$2,188	\$100	\$2,288
4 Develop 75% Permit Level Plans, Specifications, Cost Estimate	16	24	100	200	400	24	764	\$126,416	\$250	\$126,666
5 Progress Meeting #2	0	0	4	4	4	2	14	\$2,188	\$100	\$2,288
6 Permitting	2	0	2	8	0	1	13	\$2,024	\$0	\$2,024
7 Develop 100% Plans, Specifications, Cost Estimate	16	24	80	160	300	16	596	\$99,544	\$250	\$99,794
8 Meetings	0	0	32	32	32	8	104	\$16,832	\$200	\$17,032
TOTAL	50	72	358	708	1300	85	2573	\$423,540	\$61,658	\$485,198

Notes:

1. Mileage based on \$0.61 per mile
2. Hourly rates are as follows:

<i>Project Director / QA/QC</i>	\$240 - \$275
<i>Sr. Project Manager</i>	\$190 - \$220
<i>Project Manager</i>	\$150 - \$200
<i>Staff Engineer</i>	\$110 - \$150
<i>Managing Designer</i>	\$150 - \$170
<i>Designer</i>	\$130 - \$150
<i>Admin</i>	\$84

V. NEW BUSINESS

B. New Source Exploration



Well Replacement to Restore Well Yield and Decrease Operation Costs

Replace Existing Water Supply Wells to Increase Well Efficiency & Yield and Decrease Operations Costs

Existing high-capacity water supply wells installed in overburden (sand and gravel) aquifers commonly decrease in yield and efficiency through time as mineral buildup occurs on the well screen and / or the well screens or risers physically corrode and fail. Rehabilitation of the well through mechanical and chemical methods typically become less effective as the well ages, resulting in the need for more frequent attempts to rehabilitate the well.

To help reduce operation costs, EGGI has spearheaded the replacement of numerous overburden production wells to restore the yield capacity of the well and reduce the need for redeveloping the well in the future. For example, EGGI was contracted by the Town of Raymond to replace their Well #1 production well, two replacement wells have been installed for the City of Dover, and a new replacement well was constructed in the City of Portsmouth's Madbury Well Field. Due to EGGI's construction supervision, well design, and permitting expertise, these replacement wells (and others not mentioned) are currently being used to provide improved potable groundwater supply yields in a cost-effective manner.



Increase Existing Source Capacity through the use of Artificial Recharge

EGGI Developed Artificial Recharge Basins to Enhance Aquifer Productivity and Protect Local Environmental Habitats – EGGI's Artificial Recharge Project Wins NHDES 2017 Water Sustainability Award

Artificial recharge is a process that involves enhancing the natural replenishment of groundwater and has widespread global applicability. Projects are designed to actively introduce incremental surface water into groundwater aquifers during periods of excess flow in rivers or streams. When properly implemented, artificial recharge offers the unique ability to reverse aquifer depletion while storing vast new quantities of freshwater for later use.

Additionally, projects can be designed so that the aquifer materials provide natural filtration and enhancement of the quality of the recharge water. In this way, surface water supplies can be naturally treated to safe drinking water standards, eliminating the need for costly and energy intensive surface water treatment plants.

Example: UNH/Durham Water System, Durham, New Hampshire

Analytical and numerical models of the Spruce Hole Aquifer indicate that 725 gpm (1,044,000 gpd) of groundwater can be withdrawn during two months of the year from a new well developed by EGGI. The Artificial Recharge of water from the Lamprey River into two basins increased the yield capacity of the well by an additional 1,440,000 gpd and reduced the water treatment costs incurred by the water utility on the direct withdrawals of surface water from the Lamprey River. This project won the 2017 Water Sustainability Award issued by the New Hampshire Department of Environmental Services.



WATER

SERVICES SPOTLIGHT

We are recognized industry-leaders in the following core areas:

- Regional Groundwater Availability Assessments
- Advanced Groundwater Exploration & Development
- Artificial Recharge of Groundwater Resources
- Groundwater Protection
- Regulatory Policy Making & Groundwater Permitting
- Expert Testimony & Third-party Technical Review



Leaders in Groundwater Exploration, Development and Protection

- Do you need to explore for and develop additional groundwater supplies?
- Do you want to better protect the groundwater supplies you currently depend upon? Do you need to increase the sustainable yield of your existing well(s) and well field(s)?
- Would you benefit from the development of a groundwater monitoring plan? (Drought management, contaminant threats, etc.)
- Do you want to know more about emerging contaminants like PFAS (PFOA and PFOS)?
- Do you need to replace or redevelop existing well(s) that have diminished in yield? Do you need to increase the sustainable yield of your existing well(s) and well field(s)?
- Could the use of Artificial Recharge serve to increase your annual groundwater production?



Emery & Garrett Groundwater Investigations, A Division of GZA, can help you in all of your groundwater needs and potentially obtain funding from the NH Drinking Water and Groundwater Trust Fund to accomplish some of these efforts.



Known for excellence.
Built on trust.

WATER



Exploration and Development of New Groundwater Resources

Groundwater Exploration Program Eliminates "Wildcatting"

Over two and half decades, EGGI has developed and refined a unique exploration and development program to predictably identify and develop previously overlooked groundwater supplies throughout many complex hydrogeologic terrains. Our proprietary program includes the use of satellite imagery, multiple platforms of aerial photography, digital elevation models, geologic mapping, bedrock fracture fabric data, geophysical analyses (including aerial, ground surface, and borehole methods), existing well data, statistical analysis, and in-situ hydrogeologic testing. The "continual focusing process", narrowing initially large study areas down to favorable zones suitable for developing new, sustainable groundwater resources, eliminates the "wildcatting" aspects of groundwater development and has proven highly successful over the years.

To our knowledge, no other firm has conducted more successful groundwater exploration and development programs in crystalline and sedimentary rocks, limestone regions, and unconsolidated deposits. Since 1989, we have successfully developed over 100 million gallons per day (MGD) from high-yield groundwater wells in very challenging geologic terrains.

Example: Cobb County, Georgia

EGGI synthesized hydrogeologic parameters based on detailed field investigations to locate 11 primary groundwater development areas within the 325 square mile County study area. A total of 10-15 million gallons per day (MGD) was estimated to be available for groundwater supply development from a series of bedrock aquifers.

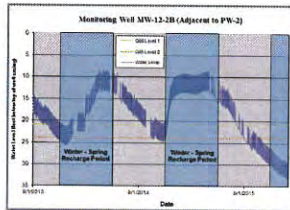


Management of Water Resources to Maximize Resource Utilization

Institute a Groundwater Monitoring Program to Ensure Sustainable Operation of Well Fields

A robust groundwater monitoring program for public water supplies provides many benefits to water utilities, including: early warning of drought impacts, identification of the migration of potential groundwater contaminants toward pumping wells, and ongoing assessment of well/well field performance. Long-term groundwater level and quality data are crucial pieces of information that can guide data-driven decisions by utility managers about aquifer and well field management to ensure long-term sustainable use of groundwater resources.

For example, an aquifer-specific drought monitoring system not only provides early warning and management tools to a utility, but it also provides a scientific basis for effectively communicating to the public (as well as government officials) why water restrictions are necessary to ensure ongoing availability of water resources.



Delineation of the Wellhead Protection Areas to High Yielding Municipal Production Wells

Protecting Lyndhurst Production Well, Augusta County Service Authority, Augusta County, VA

Challenge: The Lyndhurst Well provides the Augusta County Service Authority (ACSA) with an average of over 760,000 gallons per day (gpd) of potable water. The well, however, is capable of yielding up to 2,000,000 gpd. Due to potential contaminant concerns associated with existing land uses located in close proximity to the Lyndhurst Production Well, Emery & Garrett Groundwater Investigations, LLC (EGGI) was contracted by the ACSA to determine if additional water could be pumped from the well and to identify the Wellhead Protection Area (WHPA) (the contributing groundwater recharge area) to the Well.

Solution: EGGI collected extensive hydrogeologic data and inventoried contaminant threats to groundwater quality. Integral aspects of this project included karst feature mapping, bedrock mapping, remote sensing, and geophysical surveys to characterize the local geologic setting. EGGI installed numerous monitoring wells and set up automated water level recording data loggers in monitoring wells, existing domestic wells, and local surface water sites. All observation wells were monitored to assess where water level changes in the local bedrock aquifer occurred as a result of pumping the Production Well. Water samples were also collected and analyzed for potential contaminants from numerous locations.

Results: The technical data collected during this study allowed EGGI to accurately delineate the specific groundwater recharge area to this critical potable supply well. It was determined that a chemical landfill and auto salvage yard are located just beyond the edge of the recharge area under current pumping rates. Additional withdrawals from the well would put the well at risk for introducing contaminant migration.

These data were used to develop a strategic groundwater monitoring and protection plan and ultimately a source water protection ordinance was adopted by the Board of Supervisors for the County. This ordinance serves the ACSA as a critical water supply planning and protection tool for the current community and will continue for future generations.

The delineation of this WHPA also received the two highest Source Water Protection awards from the EPA Region III for its forward thinking approach to protecting groundwater resources. These included both the EPA SWPA and Pisces Awards which recognizes leadership and innovation in protecting existing groundwater drinking sources.



"In this day and time it seems that most of the focus is directed toward negative issues rather than the positive ones. I feel that it is important that you be made aware of the exceptional effort that EGGI put forth during our recent groundwater investigation program. EGGI was charged with a schedule that would have been considered ambitious under the best of conditions. EGGI should be commended for their poise and professionalism under extremely arduous conditions. It has been a pleasure working with EGGI on this very successful project."

Augusta County Service Authority



For More Information, please contact us at 603.279.4425

V. NEW BUSINESS

B. Buck Slip(s) Inclusion with Q4 Water Bills



TOWN OF HARWICH

**Fertilizer and Nutrient Control
Regulation**

Effective January 22, 2021

The complete Regulation is available
on the Town of Harwich website:

[https://www.harwich-
ma.gov/health/pages/town-of-
harwich-fertilizer-and-nutrient-
control-regulation](https://www.harwich-ma.gov/health/pages/town-of-harwich-fertilizer-and-nutrient-control-regulation)

Copies can be obtained by emailing
or calling the Health Department

Harwich Health Department

732 Main Street

Harwich, MA 02645

508-430-7509

health@town.harwich.ma.us



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