

**BOARD OF WATER & WASTEWATER COMMISSIONER'S
MEETING AGENDA***
Harwich Water Department, 196 Chatham Road, Harwich MA
Friday, August 25, 2023
11:30 a.m.

**As required by Open Meeting Law, you are hereby informed that the Town will be video and audio taping as well as broadcasting this public meeting. In addition, anyone in the audience who plans to video or audio tape this meeting must notify the Chairman prior to the start of the meeting.*

- I. CALL TO ORDER
- II. EXECUTIVE SESSION
- III. PUBLIC COMMENTS / ANNOUNCEMENTS
- IV. CONSENT AGENDA
 - A. Minutes
 - 1. July 20, 2023
- V. ABATEMENTS
 - A. 602 Main St
 - B. 11 Lucy's Ln
 - C. 141 Belmont Rd
- VI. OLD BUSINESS
 - A. Capital Plan
 - B. Route 28 WM Replacement Project – Update
 - C. Water Management Act Permit - Update
- VII. NEW BUSINESS
 - A. Discussion regarding Joint Wastewater Workgroup Meeting with the Selectboard
 - B. Billing Update
 - C. Update on Well 1, Well 9, and Well 10
 - D. Approve contract with GZA GeoEnvironmental, Inc. for New Source Exploration in the amount of \$451,500
- VIII. SUPERINTENDENT'S REPORT
- IX. COMMISSIONER'S REPORT
- X. CORRESPONDENCE / ANY OTHER BUSINESS
- XI. NEXT MEETING: TBD
- XII. 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:

Town Posting Date: _____

Tracey Alves | Board Secretary

_____ | Town Clerk

IV. CONSENT AGENDA

A. Minutes

July 20, 2023

**MINUTES
HARWICH WATER DEPARTMENT
BOARD OF WATER/WASTEWATER COMMISSIONERS
MEETING**

Thursday, July 20, 2023

11:30 a.m.

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

OTHERS PRESENT: Superintendent Dan Pelletier, Administrative Assistant Tracey Alves, Selectman Michael MacAskill, Harwich resident

CALL TO ORDER

Chair Carreiro called the meeting to order at 11:30 a.m.

CONSENT AGENDA

A. Minutes

1. June 22, 2023

Chair Carreiro entertained a motion to approve the minutes of June 22, 2023. Clerk Thompson moved the motion with a second by Vice Chair Donahue. All in favor; 5-0-0.

ABATEMENTS

A. 13 Kendall Ln

Chair Carreiro motioned to remove the \$25.00 late fee. Clerk Thompson seconded the motion. All in favor; 5-0-0.

B. 20 Deer Meadow Rd

Chair Carreiro motioned to approve the abatement for \$50.00. Clerk Thompson moved the motion with a second by Commissioner Underwood. All in favor; 5-0-0.

C. FY23 Q4 Internal Adjustments

Vice Chair Donahue moved to approve the FY23 Q4 Internal Adjustments in the amount of \$13,793.26. Vice Chair Thompson seconded. All in favor; 5-0-0.

D. FY23 Q4 Water Department Usage

Vice Chair Donahue moved to approve the FY23 Q4 Internal Adjustments in the amount of \$3,200.25. Commissioner Underwood seconded. All in favor; 5-0-0.

OLD BUSINESS

A. Superintendent's Evaluation

The Board went over Dan's goals for FY24. Goal 2, Phase 3 Route 28 Collection System Design, Goal 4, Route 28 water main replacement project, Goal 5, Effluent Recharge site investigation and Goal 7, Acquire Easements for Phase 3 & Route 28 are in progress and are the main goals for next year.

B. Award Generator Bid

Superintendent Pelletier recommended the Board issue the bid award to FM Generator.

Clerk Thompson moved to award the bid for generator to FM Generator. Commissioner Underwood seconded the motion, All in favor; 5-0-0.

Superintendent Pelletier noted that we did have two separate town meeting appropriations in the amount of \$115,000 so to fully fund this project Dan is proposing to use \$8,150 from the Building and Grounds maintenance line item in the FY24 budget so the three funding sources makes up the total contract amount.

C. Drought Status- Update

The most recent drought declaration dated July 14th and they have returned the Cape Cod Region to a normal level.

Superintendent Pelletier has put off sending out the Healthy lawn happy summer flyer due to no longer being in a drought and because we've had an abundance of rain. The cost of the mailing will be between \$6,000-\$10,000. If not now, we could gear up to send it out next spring before people get their irrigation systems going.

NEW BUSINESS

A. Billing Update

Water consumption bills have gone out but we are holding off on issuing new miscellaneous file bills temporarily until the Tax Collector's office clears their backlog.

B. Capital Plan

The Board reviewed the Capital plan and the topic will be added to the next agenda as well.

COMMISSIONERS REPORT

Chair Carreiro asked about the lawn project at Lothrop. Superintendent Pelletier provided an update on the lawn project at Lothrop. The second rain barrel was delivered, the gutter is up, the plantings are in and the pump and valves are all set up for the irrigation.

NEXT MEETING

The next meeting is scheduled to take place on Thursday, August 3, 2023 at 11:30 a.m.

ADJOURN

Chair Carreiro entertained a motion to adjourn at 12:07 p.m. Clerk Thompson moved the motion with a second by Commissioner Underwood, All in favor; 5-0-0.

Gary Carreiro, Chairman

Dan Pelletier, Superintendent

Allin P. Thompson, Vice Chair

Tracey Alves, Board Secretary

Noreen Donahue, Clerk

Judith Underwood

John Gough

- V. ABATEMENTS
- A. 602 Main St

Abatement Application: 602 Main St

Date of Submission: Thu, 20 Jul 2023 09:45:19 -0400

Name of Applicant:

Mailing Address: 602 Main Street

City/Town: Harwich

State: Massachusetts

Zip/Postal Code: 02645

Phone Number:

Mobile Phone Number:

Email Address:

Date of Water Use Charge: 19 July 2023

Name of Person Assessed (Owner):

Location and Description of Property: 602 Main Street Meter Pit on the Road at end of driveway near the mailbox

Total Amount Assessed: 4,324.91

Total Amount Requested: 1,033.32 (would like to pay this much)

Reason For Abatement Request: This request is due to an underground leak that would have gone undetected if not for the water department alerting us to it. We are asking for a one time emergency rate of Tier 1 pricing plus the base rate.

SUBSCRIBED THIS DAY UNDER PENALTIES OF PERJURY: 19 July 2023

AGREE?: Checked

Office Use Only	
Board of Water & Wastewater Commissioners:	
Meeting Date: _____	
Approved / Denied	Approved Amount: _____
Signatures:	
x)	x)
x)	x)
x)	Notes:

To The Town of Harwich Water Department,

We are requesting an abatement due to an underground leak that would have gone undetected, if not for the water department alerting us to it. The meter pit is underground and far from the house near the road. This was undetected for some time. Fortunately, the water department noticed that there was an issue with the meter and came to address the issue and found a leak in the pit. We understand that this is a rare occurrence and that when finding out we had a plumber come immediately and fix the problem. We are asking for an abatement for a one time disaster rate at the Tier 1 pricing, plus the base rate for this event. We will keep an eye on the meter and estimated reads going forward now that we know that this can happen.

Thank you for your consideration,

Sent from my iPhone

TOWN OF HARWICH - LIVE DATA



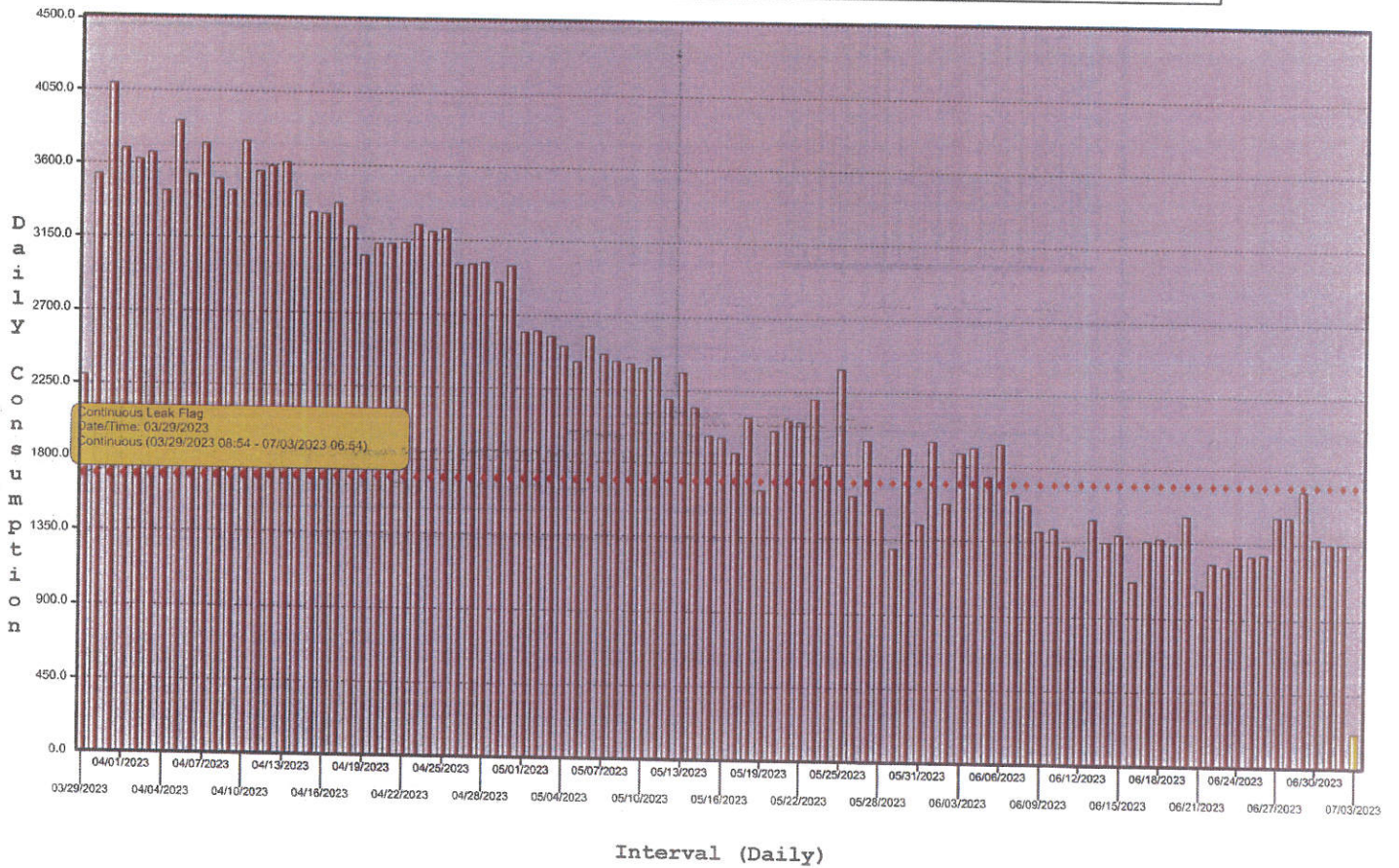
UB Consumption History Report

Account Number	Customer # Name	Mfr Meter Number	Cd	Read Date	Time	Parcel By	Bill #	Curr Read	Location Usage	Repl Usage	Charge Amt	Status	
06288	306021					40/A2-R			602 MAIN ST *PIT			Active	
I	WATER-1	WTR	USAGE	E	52698420	A	06/21/2023	495127	948,000	696,000	0	4,324.91	4,324.91
I	WATER-1	WTR	USAGE	E	52698420	E	04/04/2023	484688	252,000	10,000	0	62.20	62.20
I	WATER-1	WTR	USAGE	E	52698420	E	12/22/2022	474197	242,000	11,000	0	65.12	65.12
I	WATER-1	WTR	USAGE	E	52698420	A	09/13/2022	463779	231,000	16,000	0	81.15	81.15
I	WATER-1	WTR	USAGE	E	52698420	A	06/22/2022	453119	215,000	14,000	0	72.48	72.48
I	WATER-1	WTR	USAGE	E	52698420	A	03/21/2022	442518	201,000	10,000	0	61.36	61.36
I	WATER-1	WTR	USAGE	E	52698420	A	12/20/2021	432160	191,000	10,000	0	61.36	61.36
I	WATER-1	WTR	USAGE	E	52698420	A	09/22/2021	421709	181,000	13,000	0	69.70	69.70
I	WATER-1	WTR	USAGE	E	52698420	A	06/21/2021	411265	168,000	12,000	0	55.92	55.92
I	WATER-1	WTR	USAGE	E	52698420	A	03/22/2021	400715	156,000	11,000	0	53.27	53.27
I	WATER-1	WTR	USAGE	E	52698420	A	12/21/2020	390262	145,000	11,000	0	53.27	53.27
I	WATER-1	WTR	USAGE	E	52698420	A	09/24/2020	379364	134,000	12,000	0	55.92	55.92
I	WATER-1	WTR	USAGE	E	52698420	A	06/19/2020	368988	122,000	10,000	0	50.62	50.62
I	WATER-1	WTR	USAGE	E	52698420	A	03/30/2020	358681	112,000	8,000	0	45.32	45.32
I	WATER-1	WTR	USAGE	E	52698420	A	01/07/2020	348368	104,000	8,000	0	45.32	45.32
I	WATER-1	WTR	USAGE	E	52698420	A	10/01/2019	329112	96,000	15,000	0	63.87	63.87
I	WATER-1	WTR	USAGE	E	52698420	A	06/21/2019	327544	81,000	8,000	0	45.32	45.32
I	WATER-1	WTR	USAGE	E	52698420	A	04/01/2019	317019	73,000	8,000	0	45.32	45.32
I	WATER-1	WTR	USAGE	E	52698420	A	12/31/2018	306679	65,000	10,000	0	50.62	50.62
I	WATER-1	WTR	USAGE	E	52698420	A	10/01/2018	296191	55,000	12,000	0	55.92	55.92
I	WATER-1	WTR	USAGE	E	52698420	A	06/28/2018	285889	43,000	7,000	0	9.03	9.03
I	WATER-1	WTR	USAGE	E	52698420	A	03/08/2018	275247	36,000	10,000	0	82.90	82.90
I	WATER-1	WTR	USAGE	E	52698420	A	09/07/2017	264460	26,000	14,000	0	88.06	88.06
I	WATER-1	WTR	USAGE	E	52698420	A	03/06/2017	253592	12,000	11,000	0	84.19	84.19
I	WATER-1	WTR	USAGE	E	52698420	A	09/06/2016	242795	1,000	1,000	15,000	92.00	92.00
I	WATER-1	WTR	USAGE	N	49707572	I	08/25/2016	0	399,000	15,000	0	.00	.00
I	WATER-1	WTR	USAGE	N	49707572	A	03/01/2016	231891	384,000	11,000	0	84.19	84.19
I	WATER-1	WTR	USAGE	N	49707572	A	09/01/2015	221252	373,000	14,000	0	88.06	88.06
I	WATER-1	WTR	USAGE	N	49707572	E	03/09/2015	210377	359,000	15,000	0	83.30	83.30
I	WATER-1	WTR	USAGE	N	49707572	A	08/26/2014	199734	344,000	19,000	0	93.30	93.30
I	WATER-1	WTR	USAGE	N	49707572	A	02/28/2014	189120	325,000	15,000	0	83.30	83.30
I	WATER-1	WTR	USAGE	N	49707572	A	08/30/2013	178564	310,000	19,000	0	93.30	93.30
I	WATER-1	WTR	USAGE	N	49707572	A	02/27/2013	164298	291,000	14,000	0	81.24	81.24
I	WATER-1	WTR	USAGE	N	49707572	A	08/28/2012	153776	277,000	19,000	0	91.88	91.88
I	WATER-1	WTR	USAGE	N	49707572	A	03/01/2012	143213	258,000	12,000	0	78.20	78.20
I	WATER-1	WTR	USAGE	N	49707572	A	09/07/2011	132787	246,000	21,000	0	95.00	95.00
I	WATER-1	WTR	USAGE	N	49707572	A	03/03/2011	122159	225,000	13,000	0	74.30	74.30
I	WATER-1	WTR	USAGE	N	49707572	A	08/25/2010	111832	212,000	23,000	0	94.50	94.50
I	WATER-1	WTR	USAGE	N	49707572	A	03/05/2010	101503	189,000	13,000	0	60.00	60.00
I	WATER-1	WTR	USAGE	N	49707572	A	08/26/2009	91339	176,000	19,000	0	68.00	68.00
I	WATER-1	WTR	USAGE	N	49707572	A	02/25/2009	81210	157,000	18,000	0	66.00	66.00
I	WATER-1	WTR	USAGE	N	49707572	A	08/27/2008	71216	139,000	9,000	0	60.00	60.00
I	WATER-1	WTR	USAGE	N	49707572	A	02/29/2008	61415	130,000	30,000	0	76.25	76.25
I	WATER-1	WTR	USAGE	N	49707572	A	08/30/2007	51571	100,000	43,000	0	113.30	113.30
I	WATER-1	WTR	USAGE	N	49707572	A	03/06/2007	41794	57,000	21,000	0	60.50	60.50
I	WATER-1	WTR	USAGE	P	0049707572	A	09/08/2006	32024	36,000	36,000	0	93.35	93.35
I	WATER-1	WTR	USAGE	I	006288	I	04/06/2006	0	1817,000	0	0	.00	.00
I	WATER-1	WTR	USAGE	A	006288	A	03/15/2006	22348	1817,000	26,000	0	69.25	209.00
I	WATER-1	WTR	USAGE	A	006288	A	08/30/2005	12733	1791,000	25,000	0	67.50	67.50
I	WATER-1	WTR	USAGE	A	006288	A	03/16/2005	6288	1766,000	26,000	0	69.25	69.25
I	WATER-1	WTR	USAGE	A	006288	A	09/24/2004	9062696	1740,000	33,000	0	84.80	84.80

N_SIGHT R900 Report
E-Coder R900i Data Logging Report
MIU#: 1540622180 Acct: Unknown Mtr #: 1540622180 Addr: 602 MAIN ST *PIT for 03/29/2023 through 07/03/2023, WATER, 5/8" - 1" T-10, GALLONS

06288

Minor Reverse Flow Flag Major Reverse Flow Flag Intermittent Leak Flag Continuous Leak Flag



N_SIGHT R900 Report
Data Logging Report Daily
 MIU ID: 1540622180 Meter Combination: WATER, 5/8" - 1" T-10, GALLONS
 Interval Date Range: 03/29/2023 - 07/03/2023

Interval Read Date	Interval Reading	Interval Consumption	Minor Backflow	Major Backflow	Intermittent Leak	Continuous Leak
03/29/2023	744202.4	2291.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
03/30/2023	744631.5	3526.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
03/31/2023	751799.5	4078.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/01/2023	753133.3	3683.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/02/2023	759101.8	3611.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/03/2023	761413.6	3658.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/04/2023	766200.0	3424.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/05/2023	769579.1	3847.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/06/2023	773480.9	3526.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/07/2023	777283.4	3716.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/08/2023	777689.8	3493.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/09/2023	784205.5	3428.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/10/2023	785644.3	3729.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/11/2023	791475.1	3543.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/12/2023	793647.8	3579.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/13/2023	796642.3	3603.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/14/2023	801560.1	3428.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/15/2023	805334.9	3304.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/16/2023	808704.1	3293.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/17/2023	809058.4	3365.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/18/2023	815281.8	3220.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/19/2023	816465.0	3038.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/20/2023	821444.5	3119.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/21/2023	823307.7	3114.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/22/2023	827686.6	3125.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/23/2023	830553.8	3238.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/24/2023	834101.8	3195.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/25/2023	837305.9	3207.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/26/2023	837717.4	2994.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/27/2023	843314.5	2996.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/28/2023	844446.6	3008.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/29/2023	849237.6	2893.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
04/30/2023	851238.6	2995.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/01/2023	854767.0	2589.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/02/2023	857143.1	2592.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/03/2023	859966.2	2564.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/04/2023	862471.9	2498.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/05/2023	862795.6	2412.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/06/2023	867421.0	2573.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*All time intervals are represented in standard time.

N_SIGHT R900 Report
Data Logging Report Daily
 MIU ID: 1540622180 Meter Combination: WATER, 5/8" - 1" T-10, GALLONS
 Interval Date Range: 03/29/2023 - 07/03/2023

Interval Read Date	Interval Reading	Interval Consumption	Minor Backflow	Major Backflow	Intermittent Leak	Continuous Leak
05/07/2023	868439.2	2464.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/08/2023	872329.1	2420.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/09/2023	873817.0	2402.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/10/2023	877139.9	2379.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/11/2023	879156.6	2445.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/12/2023	881779.0	2190.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/13/2023	884108.6	2349.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/14/2023	884433.0	2141.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/15/2023	888231.2	1965.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/16/2023	888921.5	1952.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/17/2023	892056.3	1863.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/18/2023	893233.8	2078.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/19/2023	895760.4	1630.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/20/2023	897488.9	1994.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/21/2023	899820.3	2061.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/22/2023	901862.9	2052.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/23/2023	902198.9	2196.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/24/2023	905853.1	1790.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/25/2023	906711.5	2382.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/26/2023	908507.6	1609.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/27/2023	911793.0	1947.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/28/2023	912307.7	1534.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/29/2023	914596.0	1293.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/30/2023	915863.9	1907.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
05/31/2023	917974.4	1440.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/01/2023	919546.2	1947.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/02/2023	921519.2	1568.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/03/2023	923375.3	1881.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/04/2023	923680.0	1915.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/05/2023	926966.0	1737.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/06/2023	927793.0	1940.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/07/2023	930593.8	1626.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/08/2023	931366.0	1566.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/09/2023	933566.0	1403.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/10/2023	934764.0	1426.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/11/2023	936318.9	1316.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/12/2023	937569.3	1255.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/13/2023	937772.7	1484.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/14/2023	940414.6	1346.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*All time intervals are represented in standard time.

N_SIGHT R900 Report
Data Logging Report Daily
 MIU ID: 1540622180 Meter Combination: WATER, 5/8" - 1" T-10, GALLONS
 Interval Date Range: 03/29/2023 - 07/03/2023

Interval Read Date	Interval Reading	Interval Consumption	Minor Backflow	Major Backflow	Intermittent Leak	Continuous Leak
06/15/2023	940883.9	1389.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/16/2023	942907.0	1116.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/17/2023	943651.7	1355.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/18/2023	945676.0	1371.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/19/2023	946752.6	1343.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/20/2023	948483.9	1509.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/21/2023	949559.1	1063.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/22/2023	949731.6	1223.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/23/2023	951990.3	1206.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/24/2023	952332.4	1326.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/25/2023	954628.8	1273.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/26/2023	955210.6	1280.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/27/2023	957408.3	1508.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/28/2023	958678.8	1508.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/29/2023	960540.4	1671.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
06/30/2023	961931.1	1380.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
07/01/2023	962132.7	1345.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
07/02/2023	964624.2	1346.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
07/03/2023	964905.3	210.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Accounts

Account: 06288

602 MAIN ST. *** METER PIT ***

7/20/23 ABATEMENT REQUEST RECEIVED. BOWWC WILL REVIEW AT 8/3 MEETING. / MEETING DATE MOVED TO 8/25

7/5/23 EMAILED DATA LOG RECORD TO OWNER AND DISCUSSED ABATEMENT AND PAYMENT PLAN OPTIONS. WM

7/3/23 DATA LOG WORK ORDER CAME BACK: TECH NOTE: For most of April consumption was never lower than 100 gallons an hour, every hour, for the whole month. Consumption has lessened as of late for an average of about 30-40 gallons an hour, but never no usage. Current meter reading: 964905. / DISPATCHED ANOTHER TECH TO PROPERTY TO LOCATE METER PIT AND GET A VISUAL ON METER. TECH NOTE: There was a leak in the meter pit. Shut off in pit and told homeowner they needed a plumber. Plumber can turn water on when they are ready. / LEAK WAS SILENT AND OUT OF SIGHT UNDERGROUND.

6/30/23 OWNER CALLED BACK AND WE DISCUSSED LEAK DETECTION. SHE WILL HAVE SOMEONE CHECK METER IN PIT AND SHE WILL DO DYE TABS FOR TOILETS. SHE IS AWARE OF ON CALL TECHS AND CHARGE. WM / WE WILL DATA LOG ON MONDAY. 6/21 READ FOR BILLING: 948000 (696,000 GALLONS).

6/23/23 HIGH READ FOR BILLING. LEFT MESSAGE. WM

3/27/23 NOT READING
12/21/22 DID NOT READ

3/30/22 "CONTINUOUS LEAK" ON ECODER REPORT. NO ANSWER FOR COURTESY CALL.

8/25/16 CHANGED 3/4" METER. 0399180. IT WAS A 3/4" METER NOT A 5/8". WRONG SIZE NOTED FOR ORIGINAL INSTALL. WM

8/24/16 SET APPT. AND UPDATED PHONE. OWNER DID NOT WANT TO GIVE EMAIL. WM
8/18/16 WE NEED TO CHANGE THE METER AND UPDATE PHONE AND EMAIL. SENT POST CARD. WM

4/10/16 SENT METER C/O LETTER. GET PHONE NUMBER

DATE	CODE	READING	USAGE	AMOUNT	BALANCE
03/31/2005	1			69.25-	.00
03/16/2005	10	1766000	26000	69.25	69.25
10/12/2004	1			84.80-	.00
09/24/2004	10	1740000	33000	84.80	84.80
03/17/2004	1			81.95-	.00
03/09/2004	10	1707000	32000	81.95	81.95
10/09/2003	1			76.25-	.00
09/26/2003	10	1675000	30000	76.25	76.25
04/07/2003	1			44.40-	.00
03/26/2003	10	1645000	26000	44.40	44.40
10/16/2002	1			191.05-	.00
10/04/2002	10	1619000	97000	191.05	191.05
05/14/2002	1			130.85-	.00
05/06/2002	10	1522000	69000	130.85	130.85
12/05/2001	1			191.05-	.00
11/28/2001	10	1453000	97000	191.05	191.05
03/23/2001	1			94.30-	.00
02/13/2001	10	1356000	52000	94.30	94.30
09/01/2000	1			82.40-	.00
08/03/2000	10	1304000	46000	82.40	82.40
05/04/2000	1			193.20-	.00
04/21/2000	10	1258000	98000	193.20	193.20
10/23/1999	100			.00	.00

TOWN OF HARWICH - LIVE DATA



ACCOUNT SUMMARY

AR Category: 60

Form Type: A ACCOUNT DETAIL

Account # Location	Customer Date	Name	Type	Parcel	Interest Due Curr Read # Usage	Ending Balance Amount	Total Due
06288 602	306021	MAIN ST *PIT			.00	4324.91	4324.91
	06/30/2023	495127	1WATER-001	HA MA 02645 40/A2-R		4324.91	
	05/11/2023	484688	1WATER-001		948000 696000	-62.20	
	04/10/2023	484688	1WATER-001		252000 10000	62.20	
	02/22/2023	474197	1WATER-001		242000 11000	-65.12	
	12/30/2022	474197	1WATER-001		242000 11000	65.12	
	10/31/2022	463779	1WATER-001		242000 11000	-81.15	
	09/26/2022	463779	1WATER-001		231000 16000	81.15	
	07/29/2022	453119	1WATER-001		231000 16000	-72.48	
	06/30/2022	453119	1WATER-001		215000 14000	72.48	

** END OF REPORT - Generated by Tracey **

V. ABATEMENTS
B. 11 Lucy's Ln



**APPLICATION FOR ABATEMENT
WATER / WASTEWATER DEPARTMENT**

196 Chatham Road, Harwich MA 02645
P: 508-432-0304 | customerservice@harwichwater.com

OFFICE USE ONLY

Fiscal Year: _____

Date Rec'd: _____

Account #: _____

To the Board of Water/Wastewater Commissioners:

Name of Applicant: [Signature] hereby applies for abatement.

Property Owner: _____

Property Location: 11 Lucy's Lane

Email Address: accounting@.com

Phone: _____ Mobile Phone: _____

Total Bill Amount: \$120 Water Bill #: 499083

Amount Requested: \$75

Reason for Abatement Request (attach additional sheet if necessary)

11 Lucy's Lane is still under construction and does not have a certificate of occupancy. No sewer is being used.

Signature of Applicant: [Signature] Date: 7/19/23

SUBMIT completed application and required documentation to customerservice@harwichwater.com or mail to Harwich Water Department, Attention: BOWWC 196 Chatham Rd., Harwich MA 02645

MUST BE FILED WITH THE HARWICH BOARD OF WATER/WASTEWATER COMMISSIONERS NO LATER THAN THE DUE DATE WHICH THE WATER CHARGE BECAME A PART

OFFICE USE ONLY

Board of Water/Wastewater Commissioners:

Meeting Date: _____ Approved Amount: _____ Denied

Signature(s):

X
X
X
X
X

Notes:

Accounts

Account: 10257

11 LUCY LN
<< SEWER ACTIVE >>

7/20/23 HOME IS HOOKED INTO BOTH TOWN WATER AND TOWN SEWER. PAYMENT RECEIVED FOR WATER BASE CHARGE BUT THEY HAVE SUBMITTED AN ABATEMENT FOR THE SEWER BASE CHARGE? BOWWC WILL REVIEW ON 8/3. MEETING MOVED TO 8/25

6/23/23 NOT READING. NOT YET 1000?

3/29/23 INSTALLED METER. WATER ON. TECH NOTE: Needed to dig and replace Erie box, ran over by construction vehicle

3/28/23 1" METER SET AND TURN ON REQUEST.

12/16/22 SINCE WATER IS NOT ON YET, WE WILL KEEP THIS ACCOUNT OUT OF BILLING UNTIL IT IS CONNECTED. PER CONVERSATION WITH DP. WM

12/13/22 INSTALLED 1 1/2" LINE FROM ROAD TO HOUSE. WATER IS OFF AT STREET. NO METER YET.

12/13/22 RELEASED CoC TO CONTRACTOR

12/2/22 SEWER INSPECTION AND TIE RECEIVED. NEW CONSTRUCTION. ADDED TO SEWER BILLING.

12/2/22 FINAL READ 0. SEWER INSTALLED BEFORE WATER

12/1/22 APPLICATION FOR SEWER RECEIVED ON 10/4/22. SENT TO W&S FOR REVIEW. SCP SENT TO BARROWS ON 10/17

11/9/22 RECEIVED APPLICATION



TOWN OF HARWICH
 HARWICH WATER & WASTEWATER DEPT.
 732 MAIN STREET
 HARWICH, MA 02645

WATER/SEWER BILL	
ACCOUNT NUMBER	10257
BILL NUMBER	499083
CURRENT CHARGES	\$120.00
TOTAL AMOUNT DUE	\$120.00
DUE DATE	08/14/2023

Customer Name: E
 Service Location: 11 LUCY LN

DESCRIPTION	PREVIOUS		CURRENT		METER		USAGE		CHARGE		
	READ DATE	READING	READ DATE	READING	TYPE	CODE	REPLACED	TOTAL	BASE	USAGE	TOTAL
SEWER BASE RATE									\$75.00	\$0.00	\$75.00
SEWER USAGE	03/29/2023	0	06/23/2023	0					\$0.00	\$0.00	\$0.00
WATER USAGE	03/29/2023	0	06/23/2023	0	E	ACTUAL			\$45.00	\$0.00	\$45.00

*IF READ IS ESTIMATED, PLEASE CALL 508-432-0304

Sign Up for Electronic Billing Today!

Convenience • Security • Savings • Accessibility

Scan this QR code or visit www.harwichwater.com and follow the links to view your invoice. You can make payments by check of credit card, opt for Auto Pay or paperless statements and view your statements. It's fast, easy and environmentally friendly.



BALANCE FORWARD	\$0.00
CURRENT CHARGES	\$120.00
TOTAL AMOUNT DUE	\$120.00

Payments received after the due date are subject to a \$25.00 delinquent penalty
 Need a Payment Plan? Call 508-432-0304 or email: billing@harwichwater.com

MESSAGE BOARD

THE 2022 HARWICH WATER QUALITY REPORT IS NOW AVAILABLE AT:

WWW.HARWICHWATER.COM/CCR

NEED A PAPER COPY?
 CALL 508-432-0304

ONLINE BANKING

Online banking payments should be remitted directly to:

Collector of Taxes
 732 Main Street
 Harwich, MA 02645

Please use the water account number as reference

SEE REVERSE SIDE FOR ADDITIONAL INFORMATION

RETURN THIS STUB WITH PAYMENT

TOWN OF HARWICH
 HARWICH WATER & WASTEWATER DEPT.
 732 MAIN STREET
 HARWICH, MA 02645



4-5

Service Location: 11 LUCY LN

WATER/SEWER BILL	
ACCOUNT NUMBER	10257
BILL NUMBER	499083
CURRENT CHARGES	\$120.00
TOTAL AMOUNT DUE	\$120.00
DUE DATE	08/14/2023

Service Tight Protection Plan
 REGISTRATION ON REVERSE SIDE

Make Checks Payable To:

*****SNGLP
 MBT LLC
 155 CROWELL RD
 CHATHAM MA 02633-1995

171

TOWN OF HARWICH
 DEPARTMENT 7530
 PO BOX 4110
 WOBURN, MA 01888-4110

22796042023000499083400000120006

TOWN OF HARWICH - LIVE DATA



ACCOUNT SUMMARY

AR Category: 60

Form Type: A ACCOUNT DETAIL

Account #	Customer	Name	Bill#	P	Service #	Type	Parcel	Interest Due	Ending Balance	Total Due
Location	Date							Curr Read # Usage	Amount	
10257	128080	MBT LLC						.00	.00	.00
11	LUCY LN				02645		106/H6/R			
	08/11/2023	499083			1WATER-001	Pmt Pr	CHECK	Chk/Ref # 54602	-45.00	
	08/11/2023	499083			1SBASE-001	Pmt Pr	CHECK	Chk/Ref # 54602	-75.00	
	06/30/2023	499083			1WATER-001	Charge			45.00	
	06/30/2023	499083			1SEWER-001	Charge			.00	
	06/30/2023	499083			1SBASE-001	Charge			75.00	
	05/15/2023	488639			1WATER-001	Pmt Pr	BANK XFER		-45.00	
	05/15/2023	488639			1SEWER-001	Pmt Pr	BANK XFER		-75.00	
	04/10/2023	488639			1WATER-001	Charge			45.00	
	04/10/2023	488639			1SEWER-001	Charge			75.00	
	02/21/2023	478164			SYSFEE-001	Pmt Pr	CHECK	Chk/Ref # 53572	-750.00	
	02/21/2023	478164			INSMAT-001	Pmt Pr	CHECK	Chk/Ref # 53572	-1908.94	
	02/21/2023	478164			INSLAB-001	Pmt Pr	CHECK	Chk/Ref # 53572	-740.00	
	02/21/2023	478164			APPFEE-001	Pmt Pr	CHECK	Chk/Ref # 53572	-50.00	
	01/09/2023	478164			SYSFEE-001	Charge			750.00	
	01/09/2023	478164			INSMAT-001	Charge			1908.94	
	01/09/2023	478164			INSLAB-001	Charge			740.00	
	01/09/2023	478164			APPFEE-001	Charge			50.00	

** END OF REPORT - Generated by Tracey **

V. ABATEMENTS
C. 141 Belmont Rd

Abatement Application: 141 Belmont Rd
Date of Submission: Tues, Jul 25, 2023

Name of Applicant:

Mailing Address: 141 Belmont Road

City/Town: West Harwich

State: Massachusetts

Zip/Postal Code: 02671

Phone Number:

Email Address:

Date of Water Use Charge: 16 February 2023

Name of Person Assessed (Owner):

Location and Description of Property: Single Family home located at 141 Belmont Road West Harwich, MA. Approximately 1700 Square Foot residence. Color Grey with Blue Shutters

Total Amount Assessed: 1,037.40

Total Amount Requested: 900.00

Reason For Abatement Request: On February 16, 2023, We discovered that a pipe had burst in our home and flooded the ceiling area for two weeks. Home sustained significant damage. Our account number is 01768 - Water bill # 480172 for \$1,037.40 was issued and was paid in full.

SUBSCRIBED THIS DAY UNDER PENALTIES OF PERJURY: 25 July 2023

AGREE?: Checked

Office Use Only	
Board of Water & Wastewater Commissioners:	
Meeting Date: _____	
Approved / Denied	Approved Amount: _____
Signatures:	
x)	x)
x)	x)
x)	Notes:

Accounts

Account: 01768

141 BELMONT RD.

7/25/23 OWNER WILL FILL OUT ABATEMENT APP FOR PAST LEAK. / RECEIVED ABATEMENT REQUEST. BOWWC WILL REVIEW ON 8/3. / MEETING MOVED TO 8/25

3/2/23 OWNER HAD A LEAK AT PROPERTY DURING COLD SNAP. RELAYED THAT WE COULD SET UP A PAYMENT PLAN IF NEED BE WHEN APRIL INVOICE IS RECEIVED. HE MAY CALL BACK WITH METER READ TO FIND OUT EXACTLY HOW MANY GALLONS WENT THROUGH THE METER.

11/13/19 FINAL 092850

10/23/19 FINAL READ REQUEST. TA

DATE	CODE	READING	USAGE	AMOUNT	BALANCE
04/05/2005	1			50.00-	.00
03/16/2005	10	125000	8000	50.00	50.00
10/29/2004	1			90.50-	.00
09/24/2004	10	117000	35000	90.50	90.50
04/08/2004	1			50.00-	.00
03/09/2004	10	82000	1000	50.00	50.00
11/04/2003	1			133.25-	.00
09/26/2003	10	81000	50000	133.25	133.25
05/05/2003	1			25.00-	.00
03/26/2003	10	31000	2000	25.00	25.00
10/25/2002	1			48.20-	.00
10/04/2002	10	29000	28000	48.20	48.20
05/17/2002	1			25.00-	.00
05/06/2002	65			50.00	25.00
05/06/2002	10	1000	3000	25.00	25.00-
02/07/2002	1			50.00-	50.00-
12/12/2001	1			25.00-	.00
11/28/2001	10	301000	9000	25.00	25.00
02/13/2001	10	292000	14000	25.00	.00
02/05/2001	1			25.00-	25.00-
09/06/2000	1			25.00-	.00
08/03/2000	10	278000	1000	25.00	25.00
04/21/2000	10	277000	15000	25.00	.00
04/04/2000	1			25.00-	25.00-
10/23/1999	100			.00	.00

VI. OLD BUSINESS

A. Capital Plan

Capital Plan FY24-FY31 (OLD)			
Fiscal Year	Project	Estimated Cost	Notes
FY24	Pavement Management Plan	\$ 175,000	Depot Rd Wellfield
	New Well Construction (BOND 0.5M PROJECT)	\$ 500,000	Near Well 10
	Rt.28 Water main Replacement- Construction (BOND 2.0M PROJECT)	\$7,000,000	
FY25	Paint Pleasant Lake Ave Tank (Bond 1M Project)	\$1,750,000	
	Backhoe Replacement	\$ 125,000	Replace - 1998 Backhoe
	2 Vehicle Replacement	\$ 75,000	Replace - 2011 Ford F250, 2010 Ford F150
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 3M)	\$4,500,000	Replace spider leg tank w/ larger hydropillar

Capital Plan FY24-FY31 (NEW)			
Fiscal Year	Project	Estimated Cost	Notes
FY24	Pavement Management Plan	\$ 175,000	Depot Rd Wellfield
	New Well Exploration (Phase 2)	\$ 600,000	Prolonged pump Test
	Rt.28 Water main Replacement- Construction	\$14,000,000	
FY25	Paint Pleasant Lake Ave Tank (Bond 1M Project)	\$ 1,750,000	
	Backhoe Replacement	\$ 125,000	Replace - 1998 Backhoe w/ Small Loader
	2 Vehicle Replacement	\$ 125,000	Replace - 2011 Ford F250, 2010 Ford F150
	FY25 Distribution System Upgrades	\$10,000,000	TDB Pending Infrastructure Bill
FY26	Pipe Discontinuity Upgrade	\$ 1,500,000	5900 LF of discontinuity
FY27	No Project		
FY28	HWD HQ Upgrades	\$ 1,500,000	Space building/garage
FY29	No Project		
FY30	Vehicle Replacement	\$ 175,000	
FY31	Construct new tank @ Rt.39 (Bond 3M)	\$ 4,500,000	Replace spider leg tank w/ larger hydropillar

Draft Water Dept. Capital Plan FY25 - FY31							
	FY25	FY26	FY27	FY28	FY29	FY30	FY31
Paint Pleasant Lake Tank	\$ 1,750,000						
Backhoe Replacement (Purchase Loader)	\$ 210,000						
Truck 12 - 2011 Ford F-250 - Ford F-150 Ext. Cab	\$ 46,000						
Truck 11 - 2010 Ford F-150 - F-350 or F-450 Ext. Cab 4x4 w. onboard air & converter	\$ 120,000						
Vehicle 15 - 2013 Ford Explorer - Explorer or F-150 Crew Cab	\$ 48,000						
Pipe Discontinuity Upgrade		\$ 1,500,000					
Truck 7 Ford Ranger (sewer) - Replace w/ TBD		\$ 48,000					
Well 10 WTP Upgrades, New Well, Distribution System Connections			\$ 3,500,000				
HWD HQ Upgrades				\$ 1,500,000			
Vehicle Replacement - Peterbuilt						\$ 175,000	
Construct New RT39 Tank							\$ 4,500,000
Vehicle Replacement - Truck 3 F-350 Utility							\$ 75,000
	\$ 2,174,000	\$ 1,548,000	\$ 3,500,000	\$ 1,500,000	No Project	\$175,000.00	\$ 4,575,000

VII. NEW BUSINESS

- D. Approve contract with GZA GeoEnvironmental, Inc. for New Source Exploration in the amount of \$451,500

**AGREEMENT FOR PROFESSIONAL
ENGINEERING SERVICES
BETWEEN
THE TOWN OF HARWICH, MASSACHUSETTS
AND
GZA GeoEnvironmental Inc.**

THIS AGREEMENT made this 25th day of August, 2023 between GZA GeoEnvironmental, Inc, with a usual place of business at 249 Vanderbilt Avenue, Norwood, Massachusetts hereinafter called the "ENGINEER," and the Town of Harwich, MA, acting by its Board of Water/Wastewater Commissioners, with a usual place of business at 196 Chatham Road, Harwich, MA hereinafter called the "TOWN".

The ENGINEER and the TOWN, for the consideration hereinafter named, agree as follows:

1. Scope of Work

The ENGINEER shall perform the work set forth in the Scope of Services attached hereto as Exhibit A.

2. Contract Price

The TOWN shall pay the ENGINEER for services rendered in the performance of this Agreement a lump sum of \$501,500, subject to any additions and deductions provided for herein at the hourly rates set forth in Exhibit B. The amount to be paid to the ENGINEER shall not exceed \$501,500 without the prior written consent of the TOWN.

3. Commencement and Completion of Work

- A. This Agreement shall commence on August 25th, 2023, and shall expire on August 25th 2025, unless terminated sooner in accordance with this Agreement.
- B. Progress and Completion: ENGINEER shall commence work promptly upon execution of this Agreement and shall prosecute and complete the work regularly, diligently and uninterruptedly at such a rate of progress as will insure completion in a timely manner.

4. Performance of the Work

The ENGINEER shall supervise and direct the Work, using his best skills and attention, which shall not be less than such state of skill and attention generally rendered by the engineering/design profession for projects similar to the Project in scope, difficulty and location.

A. Responsibility for the Work:

- (1) The ENGINEER shall be responsible to the TOWN for the acts and omissions of his employees, subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the ENGINEER. Consistent with the standard of care referenced above, the ENGINEER shall be responsible for the professional and technical accuracy for all work or services furnished by him or his consultants and subcontractors. The ENGINEER shall perform his work under this Agreement in such a competent and professional manner that detail checking and reviewing by the TOWN shall not be necessary.
- (2) The ENGINEER shall not employ additional consultants, nor sublet, assign or transfer any part of his services or obligations under this Agreement without the prior approval and written consent of the TOWN. Such written consent shall not in any way relieve the ENGINEER from his responsibility for the professional and technical accuracy for the work or services furnished under this Agreement.
- (3) All consultants must be registered and licensed in their respective disciplines if registration and licensure are required under the applicable provisions of Massachusetts law.
- (4) The ENGINEER and all consultants and subcontractors shall conform their work and services to any guidelines, standards and regulations of any governmental authority applicable to the type of work or services covered by this Agreement.
- (5) The ENGINEER shall not be relieved from its obligations to perform the work in accordance with the requirements of this Agreement either by the activities or duties of the TOWN in its administration of the Agreement, or by inspections, tests or approvals required or performed by persons other than the ENGINEER.
- (6) Neither the TOWN's review, approval or acceptance of, nor payment for any of the work or services performed shall be construed to operate as a waiver of any rights under the Agreement or any cause of action arising out of the performance of the Agreement.

- B. Deliverables, Ownership of Documents: One (1) reproducible copy of all drawings, plans, specifications and other documents prepared by the ENGINEER shall become the property of the TOWN upon payment in full therefor to the ENGINEER. Ownership of stamped drawings and specifications shall not include the ENGINEER's certification or stamp. Any re-use of such documents without the ENGINEER's written verification of suitability for the specific purpose intended shall be without liability or legal exposure to the ENGINEER or to the ENGINEER's independent professional associates, subcontractors or

consultants. Distribution or submission to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as an act in derogation of the ENGINEER's rights under this Agreement.

- C. Compliance with Laws: In the performance of the Work, the ENGINEER shall comply with all applicable federal, state and local laws and regulations, including those relating to workplace and employee safety.

5. Site Information Not Guaranteed: Contractor's Investigation

The TOWN shall furnish to the ENGINEER available surveys, data and documents relating to the area which is the subject of the Scope of Work. All such information, including that relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the TOWN. All such information is furnished only for the information and convenience of the ENGINEER and is not guaranteed. It is agreed and understood that the TOWN does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures will be the same as those indicated in the information furnished, and the ENGINEER must satisfy himself as to the correctness of such information. If, in the opinion of the ENGINEER, such information is inadequate, the ENGINEER may request the TOWN's approval to verify such information through the use of consultants or additional exploration. In no case shall the ENGINEER commence such work without the TOWN's prior written consent. Such work shall be compensated as agreed upon by TOWN and ENGINEER.

6. Payments to the Contractor

- A. Cost incurred on this project shall be billed monthly on an hourly basis as outlined in the attached Scope of Services. Payment shall be due 30 days after receipt of an invoice by the TOWN.
- B. If there is a material change in the scope of work, the TOWN and the ENGINEER shall mutually agree to an adjustment in the Contract Price.
- C. If the TOWN authorizes the ENGINEER to perform additional services, the ENGINEER shall be compensated in an amount mutually agreed upon, in advance, in writing. Except in the case of an emergency, the ENGINEER shall not perform any additional services until such compensation has been so established.

7. Reimbursement

Except as otherwise included in the Contract Price or otherwise provided for under this Agreement, the ENGINEER shall be reimbursed by the TOWN: (a) at 1.0 times the actual cost to the ENGINEER of consultants retained to obtain information pursuant to Article 5 hereof or otherwise. No such reimbursement shall be made unless the rates of compensation have been approved, in advance, by the TOWN; (b) at 1.0 times the actual cost of additional or specially authorized expense items, as approved by the TOWN.

8. Final Payment. Effect

The acceptance of final payment by the ENGINEER shall constitute a waiver of all claims by the ENGINEER arising under the Agreement.

9. Terms Required By Law

This Agreement shall be considered to include all terms required to be included in it by the Massachusetts General Laws, and all other laws, as though such terms were set forth in full herein.

10. Indemnification

- A. General Liability: The ENGINEER shall indemnify and hold harmless the TOWN from and against any and all claims, damages, losses, and expenses, including attorney's fees, to the extent arising out of the performance of this Agreement and to the extent the same relate to matters of general commercial liability, when such claims, damages, losses, and expenses are caused, in whole or in part, by the negligent or wrongful acts or omissions of the ENGINEER or his employees, agents, subcontractors or representatives.
- B. Professional Liability: The ENGINEER shall indemnify and hold harmless the TOWN from and against any and all claims, damages, losses, and expenses, including attorney's fees, arising out of the performance of this Agreement and to the extent the same relate to the professional competence of the ENGINEER's services, when such claims, damages, losses, and expenses are caused, in whole or in part, by the negligent acts, negligent errors or omissions of the ENGINEER or his employees, agents, subcontractors or representatives.

11. Insurance

- A. The ENGINEER shall at his own expense obtain and maintain a Professional Liability Insurance policy for errors, omissions or negligent acts arising out of the performance of this Agreement in a minimum amount of \$1,000,000.00.
- B. The coverage shall be in force from the time of the agreement to the date when all construction work for the Project is completed and accepted by the TOWN. If, however, the policy is a claims made policy, it shall remain in force for a period of six (6) years after completion.

Since this insurance is normally written on a year-to-year basis, the ENGINEER shall notify the TOWN should coverage become unavailable.

- C. The ENGINEER shall, before commencing performance of this Agreement, provide by insurance for the payment of compensation and the furnishing of other benefits in accordance with M.G.L. c.152, as amended, to all its employees and shall continue such insurance in full force and effect during the term of the Agreement.

- D. The ENGINEER shall carry insurance in a sufficient amount to assure the restoration of any plans, drawings, computations, field notes or other similar data relating to the work covered by this Agreement in the event of loss or destruction until the final fee payment is made or all data are turned over to the TOWN.
- E. The ENGINEER shall also maintain public liability insurance, including property damage, bodily injury or death, and personal injury and motor vehicle liability insurance against claims for damages because of bodily injury or death of any person or damage to property.
- F. Evidence of insurance coverage and any and all renewals substantiating that required insurance coverage is in effect shall be filed with the Agreement. Any cancellation of insurance, whether by the insurers or by the insured, shall not be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the TOWN at least fifteen days prior to the intended effective date thereof, which date shall be expressed in said notice.
- G. Upon request of the ENGINEER, the TOWN reserves the right to modify any conditions of this Article.

12. Notice

All notices required to be given hereunder shall be in writing and delivered to, or mailed first class to, the parties' respective addresses stated above. In the event that immediate notice is required, it may be given by telephone or facsimile, but shall, to the extent possible, be followed by notice in writing in the manner set forth above.

13. Termination

- A. Each party shall have the right to terminate this Agreement in the event of a failure of the other party to comply with the terms of the Agreement. Such termination shall be effective upon seven days' notice to the party in default and the failure within that time of said party to cure its default.
- B. The TOWN shall have the right to terminate the Agreement without cause, upon ten (10) days' written notice to the ENGINEER. In the event that the Agreement is terminated pursuant to this subparagraph, the ENGINEER shall be reimbursed in accordance with the Agreement for all work performed up to the termination date.

14. Miscellaneous

- A. Assignment: The ENGINEER shall not assign or transfer any of its rights, duties or obligations under this Agreement without the written approval of the TOWN.
- B. Governing Law: This Agreement shall be governed by and construed in accordance with the law of the Commonwealth of Massachusetts.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals, the TOWN by its authorized representative who, however, incurs no personal liability by reason of the execution hereof or of anything herein contained, as of the day and year first above written.

ENGINEER:

TOWN OF HARWICH:

By: 

By: _____

Name:

James M. Emery, P.G.

Gary Carreiro – Chairman

Type or Print

Title:

Principal

Allin Thompson – Vice Chairman

Noreen Donahue - Clerk

Judith Underwood– Commissioner

John Gough – Commissioner

Approved as to Availability of Funds:

Finance Director (\$ _____)
Contract Sum



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VIA EMAIL: dpelletier@harwichwater.com

March 15, 2023 (Revised August 24, 2023)
File No. 01.P000921.23

Mr. Daniel Pelletier, Superintendent
Harwich Water & Sewer Department
P.O. Box 185
Harwich, Massachusetts 02645

Re: Professional Engineering Services for New Source Approval Permitting
Future Well Supply at GPW #10 Area
Harwich, Massachusetts

Dear Mr. Pelletier:

In response to your request, GZA GeoEnvironmental, Inc. (GZA) is pleased to offer the Harwich Water & Sewer Department (Harwich) this Technical Proposal and Fee Proposal for professional engineering services associated with the development and testing of a new groundwater supply well source at the Groundwater Production Well (GPW) #10 Area. The scope of work presented in this proposal, which follows previous groundwater test well investigations, is to further develop and test the proposed new groundwater supply source with the goal of obtaining Massachusetts Department of Environmental Protection (MassDEP) new source approval to develop a production well supply, GPW #12.

BACKGROUND

The Town of Harwich has identified a need to increase its water system resiliency to maintain supply capacity and meet peak summer water demands. The GPW#10 property currently includes a groundwater well supply operated by Harwich consisting of a gravel-packed production well referred to as GPW #10, or Well 10. Harwich has previously engaged GZA to perform exploratory test drilling and identify a potential location for a new water supply at the property, which was completed during 2021 and 2022. The test well exploration program was intended to identify the location of a new supply well location on the property.

The site exploratory work included the installation of two-inch-diameter test wells¹ (GZ-3-21 and GZ-4-21), both installed with screened depth intervals of 150-160 feet. The wells were developed and rated using a jet pump for a duration of 8 hours of surging and pumping. GZ-3-21 produced 62 gallons per minute (gpm) with 2 feet of drawdown, and GZ-4-21 produced 45 gpm with 4 feet of drawdown. Based on these observations, an observation well cluster consisting of shallow (above the confining unit) and deep observation wells was installed 4.5 feet away from GZ-3-21 (GZ-3-OB-S-21 and GZ-3-OB-D-21, respectively). A 6-hour pumping test was then performed at GZ-3-21 while measuring drawdown in the observation wells. After pumping at a continuous rate of 67 gpm for 6 hours, there was no measurable drawdown observed in observation well GZ-3-OB-S-21 and 0.43 feet of drawdown observed in observation well GZ-3-OB-D-21. The pumping test results provided early indication that additional groundwater supply capacity may be sustainable at the GPW #10 Site. The results of the exploratory testing and pumping test analysis is included in the November 11, 2022 *BRP WS 17 Permit Application for Site Examination*

¹ A total of four locations were investigated during test explorations performed in 2021 (GZ-1-21 through GZ-4-21). A 2-inch test well was installed at GZ-1-21 and was screened at a depth interval of 68-78 feet bgs. A boring to a depth of 100 feet was completed at GZ-2-21, however a test well was not installed.



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and Prolonged Pumping Test Proposal which was submitted to MassDEP. The BRP WS 17 Permit application was approved by MassDEP letter dated January 10, 2023.

WORK PLAN

The next phase of work includes a pumping test at the proposed new source well location (site of GZ-3-21) for a minimum duration of five days (120-hour). The purpose of the longer duration test will be to confirm aquifer properties and determine the safe yield of a new production well. The pumping test program will also evaluate other potential factors associated with the development of the new water source development, such as groundwater quality, potential water quality treatment needs, infrastructure conditions, watershed development issues, and interference with potential receptors and water users.

Our overall work plan for the project is as follows:

1. Conduct MESA consultations to allow the test work in mapped areas of endangered species, related to the previously-submitted filing. This does not include a future filing that will be required for the production well and pumping station construction.
2. Direct the well driller to install and develop an 8-inch-diameter, naturally-developed test well at the location of exploratory test well GZ-3-21. The driller is also to install and develop two new 2-inch-diameter observation wells to supplement the existing monitoring wells located near the proposed production well.
3. Complete a step-drawdown test at the well to confirm, and adjust if needed, the final rate to be used during the prolonged pumping test.
4. Complete a prolonged pumping test with a minimum duration of five days. Groundwater level monitoring will be completed before, during, and after the testing period using automated water level dataloggers in the test well and in several selected nearby monitoring wells to measure water levels under non-pumping and pumping conditions. The observation wells to be instrumented are selected to provide spatial coverage in the area surrounding the production well, as well as vertical coverage of hydrogeologic units: the upper unconfined aquifer, the confining layer and the lower confined aquifer (water supply aquifer). These data will be used to: a) evaluate the potential interference that might be occurring from off-site wells or the onsite existing water supply production well; b) evaluate the efficiency of the aquifer relative to the possible production rate; and c) provide an estimate of the maximum production rate from the aquifer based upon physical site conditions and the watershed.
5. Water quality samples will also be collected during the pumping test at selected intervals to characterize the chemical characteristics of the groundwater and to ensure it meets all regulatory requirements for a community supply well.
6. Conduct a preliminary GPS survey of the 8-inch test well and observation well locations and elevations (note that this does not include services of a professional land surveyor which will be required for final submittal, and GZA's survey will not include property line layout).
7. Submit a Source Final Report to MassDEP along with the associated permit application (BRPW19, Approval of Pump Test Report for Source Greater than 70 GPM). A draft version of the summary report will be circulated to Harwich for review and comment, prior to the final MassDEP submission.



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8. Prepare and submit MEPA filing described below (no EIR assuming yield of less than 1.5 million gallons per day [mgd]).
9. Prepare and submit complete WMA Filing.

SCOPE OF SERVICES

GZA's more specific scope of services is as follows:

TASK 1 – MESA/NHESP FILING

The Massachusetts Endangered Species Act (MESA) and its implementing regulations (321 CMR 10.00) establish procedures for the listing and protection of rare plants and animals. As such, MESA plays an important role in maintaining biological diversity, preventing species extinctions, and contributing to rare species recovery in Massachusetts. The well site is located within a Natural Heritage and Endangered Species Program (NHESP) Estimated and Priority Habitats for Rare Species, due to potential habitat, or proximal habitat, for the eastern box turtle.

The MESA filing (Checklist Review) was previously submitted in the previous phase of this project, which included a provision for the second phase of work. As an outcome of the initial MESA review, a Turtle Protection Plan (TPP) was prepared for the first phase of this project. This proposal assumes that additional MESA consultations and monitoring will be required for work to resume. Budget has been included to update the work restriction plan accordance with the new scope of work. The proposal also includes costs associated with one site inspection performed by a qualified biologist to train the well drillers in turtle siting and protection. Following consultations with the NHESP, should additional filings, habitat assessments, and/or site inspections be required, GZA will advise Harwich that additional budget may be required.

TASK 2 – PROLONGED PUMPING TEST – ON-SITE FIELD WORK

1. Prepare a Health & Safety Plan for conducting field work. Prepare standard forms for record keeping and reporting.
2. Provide coordination with the well contractor for the drilling and installation of a naturally-developed 8-inch diameter test production well, using a dual-rotary drill rig (or other), at the location of exploratory test well GZ-3-21, installed with a 20-foot #20 slot-size well screen installed at an anticipated well depth of 165 ft bgs. The test well will be developed and rated, using a submersible or jet pump to extract groundwater (our understanding is that the depth to water is about 30 feet below grade).
3. Provide coordination for the drilling and installation of two 2-inch-diameter observation wells, to be used for monitoring water level drawdown during the 120-hour prolonged pumping test. Proposed new observation well OW-1-23 should be located within 5 feet of the new test production well and screened at a depth interval of 110-130 ft bgs, targeting the confining unit above the lower confined aquifer (to be used as an intermediate well for the nested observation wells GZ-3-OBS-S-21 and GZ-3-OBS-D-21). Proposed new observation well OW-2-23 should be located approximately 100 feet east of the new test production well, and screened at a depth interval of 150-160 ft bgs, targeting the lower confined aquifer. The observation wells will be developed using a submersible pump or by jetting with air.
4. Provide field oversight of drilling activities, construction and well development to review the work in progress. GZA site personnel will monitor and record the labor, equipment, and materials utilized by the well driller.



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10. Direct the well driller, and provide field oversight, for a step-drawdown test on the 8-inch test well to estimate the constant-rate well yield to be maintained during the pumping test. The step-drawdown test is to be completed for four rated steps, each with a minimum sustained duration of 1 hour, at estimated pumping rates of 125 gpm, 250 gpm, 375 gpm and 500 gpm.
11. Provide direction and oversight for completing the driller's 120-hour (i.e., minimum duration) pumping test at the production well site. Work associated with the pumping tests will include measurement of drawdown and recovery readings in observation wells, staff gauges and piezometer well installations, as detailed in the *BRP WS17 Permit for Site Examination and Prolonged Pumping Test Proposal* which was approved by MassDEP. The proposed monitoring program includes the following:
 - a. Coordinate with Harwich to allow for the active production well GPW#10 to be shut down for several days prior to the pumping test, during the pumping period, and the 5-day post-test recovery for the prolonged pumping test.
 - b. Install vented, electronic water level pressure transducers and dataloggers in the production test well at GZ-3-21 and in the selected observation well locations (GZ-3-OBS-S-21, GZ-3-OBS-D-21, OW-1-23, OW-2-23, 1-03, GZ-4-21, 4-03, GZ-1-21, 3-03, 2-03, 2-73, 3-73, 1-73 and 16-87) to measure static and stabilized drawdowns. The dataloggers will be deployed at least 10-15 days prior to start of testing to allow for the collection of ambient baseline water levels. This proposal also assumes that active production well GPW#10 is already instrumented with water level logging equipment and that this data will be available to GZA. The frequency of readings from the dataloggers will be set to: six readings within the first minute after the start of the test, and at least ten per log cycle for the next three log cycles to 100 minutes, then every 30 minutes for the remainder of the test (at a minimum). This procedure will be repeated during the first 1,000 minutes of recovery after shutdown.
 - c. Install surface water staff gauges to measure surface water levels at the nearest surface water features, including two in Herring's River (one upgradient and one downgradient), one at Robbins Pond and one at Hinckley's River. Piezometer well pairs will also be installed next to each staff gauge location to measure vertical groundwater gradient. The piezometers and surface water level gauges will be instrumented with electronic water level pressure transducers and dataloggers, to record water levels prior to, during and following the pumping test. The data from these locations will be used to identify any potential seepage from nearby surface features as a result of pumping at the production well.
 - d. Install a rain gauge on-site to record precipitation prior to, throughout and during test recovery. The station will be installed near the location of the production well GZ-3-21 and will be installed at least 10-15 days prior to the start of the 120-hour pumping test.
 - e. Assist driller with collection of water quality samples at test production well GZ-3-21, completed in accordance with Federal and State Safe Drinking Water Standards. Field testing for carbon dioxide, pH, specific conductance and temperature will be completed one hour after start of test, every 24 hours thereafter and one hour before the end of the test. The analytical sample collection schedule at minimum will consist of:
 - i. Sampling 1 hour after start of the test (iron, manganese and secondary contaminants);
 - ii. Sampling 48 hours after start of the test (secondary contaminants);



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- iii. Sampling at midpoint of the test, or 60 hours after start of the test (coliform bacteria, iron and manganese);
 - iv. Sampling 96 hours after start of the test (secondary contaminants);
 - v. Sampling just prior to the end of the test (coliform bacteria, iron, manganese, nitrate/nitrite, lead, perchlorate, inorganic compounds, secondary contaminants, volatile organic compounds, synthetic organic compounds, radionuclides, PFAS, 1,4-dioxane, MtBE, total fluorine and lithium).
12. Provide instrument survey of location and elevation of observation wells, piezometers, staff gauges and the production wells. Establish temporary benchmarks in the wellfield. Prepare a site plan showing the survey points and incorporating town and MA GIS information as appropriate. Prepare a plan of local static water table elevations and use the data to support a preliminary groundwater contour map. This would not be a survey by a professional land surveyor.
 13. Coordinate well installation and test pumping work with the well driller, Harwich, MassDEP, and other agencies. This includes responding to driller and Harwich questions that arise, as well as providing interpretation of contract specification for well installation.
 14. Prepare a brief letter report to Harwich summarizing the findings of above testing tasks. Provide tabular summaries of results as appropriate. Provide conclusions from the aforementioned data gathered including a summary of results of field data and analyses, including aquifer characteristics and profiles, aquifer thickness, estimate of approvable yield, and preliminary water quality analyses.

TASK 3 – WELL DRILLER’S WORK (subcontract for drilling and pumping test)

GZA will subcontract with a qualified water supply well driller to install the 8-inch-diameter test production well and 2-inch-diameter observation wells, provide development of wells, provide groundwater sampling and sample transportation during the pumping test, provide test pumping equipment including generator and discharge piping and provide environmental protections and mitigation. Laboratory costs for analytical water quality testing were assumed to be paid directly by Harwich and are not included within this Task.

Split spoon soil samples will be collected during the advancement of borings, to allow for the soil identification, logging and sampling. The target 8-inch-diameter test production well, located at GZ-3-21 is anticipated to be installed with a 20-foot #20 slot-size well screen and at a well depth of 165 ft bgs. The anticipated depths for the two proposed 2-inch-diameter observation wells are 130 ft and 160 ft, and these wells will be installed with a 10-foot length well screen. The new wells will be developed, and the test production well will be rated, using a centrifugal or submersible pump to extract groundwater. The well contractor will also be providing test pumping equipment and will be responsible for operation of the equipment during the stepped rate pumping test and prolonged pumping test. A minimum of 400 ft of discharge hosing is assumed to be required to direct pump test discharge and temporary discharge stilling basins will be installed in the western portion of the property for use during well testing.



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TASK 4 – SOURCE FINAL HYDROGEOLOGICAL REPORT TO MASSDEP

1. Following the prolonged pumping test, a notice will be published in the Environmental Monitor, indicating the location and volume of the planned withdrawal for the new source. A copy of the published notice will be submitted with the Source Final Report.
2. Review water quality information for samples collected during pumping tests for compliance with drinking water standards. Review water quality information for samples collected before, and during pumping tests for compliance with drinking water standards.
3. Following the completion of the prolonged pumping test, groundwater sampling, and laboratory analytical work, GZA will prepare and submit a Source Final Report to MassDEP along with the associated permit application (BRP W19 – Approval of Pump Test Report for Source Greater than 70 GPM). The Source Final Report shall include the following information:
 - a. As-built construction diagrams;
 - b. Discussion of findings;
 - c. Pumping test data and analysis;
 - d. An estimate of approvable yield;
 - e. A plot plan of the Zone I for the existing and new proposed production wells²;
 - f. Final Zone II delineation; including an evaluation of the consequences of the proposed Zone II redelineation (i.e., impacts on Water Supply Protection Zoning District, etc.), discussion of the proposed methods of Zoning and other regulatory and non-regulatory controls for wellhead protection to demonstrate compliance with the DEP water supply regulations;
 - g. Discussion of water quality results and recommended treatment based on the water quality data gathered from the prolonged pumping test samples;
 - h. Status of source protection bylaw;
 - i. Demonstration that the well has acceptable water quality and is capable of producing the desired yield with no additional impacts;
 - j. Pumping test data and analyses of approvable yield;
 - k. Geographic coordinates of the well;
 - l. Characterization of land uses within the updated Zone II of the wellfield, including a 1:6,000 scale or larger map depicting the proposed well site and the area located within the existing Zone II of the proposed production wells. The submittal will include existing and potential sources of contamination, including any landfills and hazardous waste sites located within the Zone II for the wellfield.

² Using existing property line plans from others, and GPS well coordinates. To be in DEP Standard 11 by 17 template, with professional stamp.



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- m. A proposed groundwater monitoring plan for source protection purposes.
 - n. The conceptual preliminary layout for connection to the existing pumping/treatment facility and opinion on the probable construction cost to complete the connection and other facility changes that would be required.
 - o. Copies, or reference to, relevant correspondence.
4. The Zone II delineation portion of the Source Final Report shall include the following:
- a. A static water table map based on available hydrologic information and test well data.
 - b. Surficial geology and stratigraphy, water quality and hydrology of the aquifer.
 - c. Geologic cross-sections through the wellfield site using conceptual model-generated graphics.
 - d. Discussion of the hydrogeologic system and likely sources of recharge.
 - e. Discussion of projected long-term effect of increased withdrawal on nearby sensitive receptors.
 - f. Analysis of aquifer characteristics based on pumping test results. This will include distance-drawdown analysis, time-drawdown analysis, and time-recovery analyses; and
 - g. A description of the numerical groundwater data used to map the Zone II areas. If a model is generated, it will be used to evaluate potential relationships between the groundwater supply withdrawal and nearby existing wells and sources of contamination.
 - h. Statistical and graphical analysis of actual-vs. model-predicted drawdowns for each observation well.
 - i. Discussion of the proposed methods and other regulatory and non-regulatory controls for wellhead protection to demonstrate compliance with the MassDEP water supply regulations.
5. The BRP WS 19 permit application and transmittal shall be submitted with the Source Final Report through the eDEP online system. Up to two paper copies of the Source Final Report may be produced for Harwich's use, should they request it.
6. Prepare an exemption application that the production well is not under the influence of surface water (EPA Surface Water Treatment Rule).

TASK 5 – MEPA ENF FILING

MEPA Environmental Notification Form (ENF) filing, associated notifications and meetings, may occur in this phase of the work. Cost is provided as an optional additional service in such situation. The Massachusetts Environmental Policy Act (MEPA) 301 CMR 11.03 (4)(b)1 states that an ENF is required for "New withdrawal or expansion in withdrawal of 100,000 or more gpd from a water source that requires new construction for the withdrawal". This proposal includes an optional MEPA ENF filing, assuming this will be required on the basis that this expansion is for a new well source well. We assume that Harwich intends to file a Water Management Act permit amendment concurrently with the Source Final Report. An Environmental Impact Report (EIR) is assumed not to be required for the project scope.



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1. Prepare and submit a public notice of the expanded Environmental Notification Form to the MEPA Unit for publication in the Environmental Monitor. File the expanded ENF with MEPA. Present the conceptual plan and calculate the impact area, vehicle trips, tree loss, water use, environmental justice compliance and other aspects on the ENF form. Distribute electronic copies to the appropriate agencies as required by 301 CMR 11S.
2. Attend a virtual meeting with MEPA officials and Harwich representatives to address questions on the project scope.
3. Prepare an addendum to the expanded ENF to address any minor project modifications requested by MEPA.

TASK 6 – WATER MANAGEMENT ACT (WMA) PERMIT AMENDMENT APPLICATION (BUDGET FOR THIS TASK WILL BE DETERMINED BASED UPON THE RESULTS OF TASKS 1-5 and 7)

Due to the addition of the proposed new production well, Harwich must seek to amend its existing withdrawal permit. WMA Permit / DEP Water Management Program amendment permitting has not been included in our proposal (310 CMR 36.00). *The cost for this task will need to be based upon whether the prolonged pumping test investigations showed minimal effect on sensitive receptors. Following the completion of Tasks 1-5, GZA will advise the client of the scope of work that will be needed to satisfy Water Management Act permitting and provide a budget estimate to complete this work.* This could include additional field data and monitoring, hydrologic analyses, detailed 3-dimensional numerical modeling, reporting and permitting associated with local impact analysis on sensitive receptors. The scope of work presented under Task 6.1 below lists the typical requirements for these submissions, but not all of the items listed may be required.

Permit amendment will be based on estimated approvable yield, anticipated on the order of 1.0 to 1.3 mgd for the new source. MassDEP requires a permit amendment for the reallocation of withdrawal volume to a new well, as well an increase in volume sought above the previously-permitted volume. The intent would be to utilize the 10% buffer allowance for seasonal communities' demand variability, as permitted by MassDEP. It is assumed that a mitigation plan for the forecasted water would not be required since the submission is expected to be a Tier 1 application.

6.1 WMA PERMIT AMENDMENT

1. Prepare BRPWM02 Water Management Act Withdrawal Amendment Permit application, along with transmittal letter, supporting documentation, graphics and transmittals. Submit permit renewal and new permit applications for Owner's review. Upon the Owner's approval with any revisions, submit the Permit Amendment application package to MassDEP on behalf of the Water Division, including:
 - a. Form A – General Information
 - b. Form B – Groundwater Withdrawal Point (data for New Well)
 - c. Forms D1 and D2 – Historic and Future Water Needs for New Well, and the overall water system;
 - d. Form F – Evaluation of Potential Effects of Proposed Withdrawal. Information may be provided regarding the impact of the proposed withdrawal(s) on the following parameters:
 - I. Water quality
 - II. Effects of the withdrawal(s) on water-based recreation, fish, wildlife, floral habitat and agriculture.



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- III. Effects on the floodplain in the area (NA).
 - IV. The water available within the subbasin.
 - V. Other previously allowable withdrawals, and their uses within the subbasin.
- e. Form G – Alternatives to the Proposed Withdrawal
 - f. A cost analysis of the withdrawal versus 2 or 3 alternatives: Additional supply from an existing well site area; additional supply from an alternative well site area.
 - g. A feasibility study that evaluates environmental alternatives such as:
 - I. Leak detection and repairs to the water system, using data from Harwich's most recent permit renewal.
 - II. Water conservation and demand management evaluations using data from most recent Cape Cod Basin permit renewal.
 - III. Additional supply development.
 - h. Form H – Groundwater Hydraulic Analysis (numerical MODFLOW model discussion and Zone II delineation from Source Final Report).
 - i. Submit DEP Bylaw Summary Form, Wellhead Protection Questionnaire (resubmitting same document from previous permit application).
2. Provide quality control review of the permit application and adjust the application accordingly.
 3. Submit the permit application to MassDEP. Distribute copies of the permit application to local officials as required by the permit process.
 4. Consult with the Owner and MassDEP staff to discuss permit application and potential permit conditions (1 virtual meeting assumed).
 5. Address questions on the application from MassDEP that are within our scope of work (the scope of the comments cannot be anticipated with confidence at this time).
 6. Review Draft Permit by MassDEP and offer comments on permit conditions to MassDEP on behalf of the Owner (the scope of the reviewer comments cannot be anticipated with confidence at this time).
 7. Conduct a virtual meeting with outside stakeholders (conservation or citizens groups) to discuss the draft permit issued by MassDEP. Prepare visual aids needed for presentation.
 8. Provide a follow-up response to stakeholder groups (the scope of the stakeholder/public comments cannot be anticipated with confidence at this time).



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TASK 7 – EXTERNAL MEETINGS (OPTIONAL)

External meetings included in the scope of work for Tasks 1 through 6 include:

1. A preconstruction and testing site meeting with the well driller and Harwich, to discuss any project constraints, scheduling and other logistics associated with the prolonged pumping test. The site meeting should be used to identify the locations of the new wells to be installed and the test discharge location. The proposed discharge location is a minimum of 400 feet to the west of the production well, releasing to stilling basins flowing onto the land surface. While on-site, GZA will also inspect and confirm that the proposed existing observation wells and monitoring locations are acceptable and in good condition for monitoring use (Task 2; 1 meeting assumed).
2. Attendance to MEPA Unit meetings, if required (Task 5; 1 meeting assumed).
3. A site construction supervision and inspection visit performed by a GZA qualified biologist during the construction phase of the work, should it be required as part of the protection measures in the Turtle Protection Plan (TPP), in accordance with NHESP requirements. This was included considering the site is located within a Priority Habitat for Rare Species and Estimated Habitat of Rare Wildlife (Task 1; 1 site visit assumed).
4. Virtual meetings associated with the WMA permit amendment submission, including: two meetings with Harwich to discuss permit content and requirements; attendance to two MassDEP meetings; and one meeting with Harwich to discuss outside stakeholders (conservation or citizens groups) to discuss the draft WMA permit issued by MassDEP, if required (Task 6).

This proposal task (Task 7), is also available for GZA's attendance at additional external meetings, should they become required throughout the course of the project. These meetings could include the following:

1. Virtual meeting with Harwich officials to discuss project scope and plan for proceeding.
2. Virtual consultation meeting with Harwich and MassDEP staff to discuss the permit application (BRP WS 19) and potential approval conditions.
3. Attendance to a final site meeting with Harwich officials and the well driller.

The proposed budget includes attendance to an additional four (4) external project meetings attended by two GZA project team members.

ASSUMPTIONS AND/OR CONDITIONS OF ENGAGEMENT

For the investigation, we have made the following assumptions as a basis for GZA's costs:

1. GZA's proposal assumes that: 1) the installation of observation wells and the pumping test will be exempt from the Massachusetts Wetlands Protection Act, 2) delineation of wetlands areas will not be required, and 3) a Notice of Intent filing and resource area delineation with the Conservation Commission or other agency will not be required for this phase of the work. Based on the proposed production well location, which is more than 100 feet from a wetlands buffer zone, it is assumed that access through wetlands buffer zones for production well construction and testing would not be required.
2. Based on available mapping through MassGIS, the property is located within a Priority Habitat for Rare Species (PH#359) and Estimated Habitat of Rare Wildlife (EH#324). This area was identified as a potential habitat, or



proximal habitat, for the eastern box turtle, and as such this proposal assumes that the project is subject to Natural Heritage and Endangered Species Program (NHESP) filing requirements.

3. MEPA Environmental Notification Form (ENF) filing is assumed to be required on the basis that this expansion is for a new well source well. Harwich intends to file a Water Management Act permit amendment concurrently with the Source Final Report. An Environmental Impact Report (EIR) is assumed not be required, assuming the new source yield will be less than 1.5 mgd. We assumed that there will be no environmental justice concerns associated with the testing and proposed well site development.
4. Based on the distance between the proposed production well location and the nearest surface water feature (Robbins Pond to the south), this project meets the exemption criteria for Groundwater Under Direct Influence of Surface Water (GWUDI), as indicated in the MassDEP letter dated January 10, 2023. This source is therefore assumed to not be subject to Microparticulate Analysis testing (MPA) or the Surface Water Treatment Rule.
5. WMA Permit / DEP Water Management Program permitting has not been included in our proposal (310 CMR 36.00). *The cost for this task (Task 6 in this proposal) will need to be based upon whether the prolonged pumping test investigations showed minimal effect on sensitive receptors. Following the completion of Tasks 1-5, GZA will advise the client of the scope of work that will be needed to satisfy Water Management Act permitting and provide a budget estimate to complete this work.*
6. For the overall purpose of the Cape Cod Basin 20-year Permit Renewal, Harwich will be a Tier 1 applicant – no increase above baseline volume³ is sought and no increase in Groundwater and/or Biological Categories are expected. The presented scope of work also assumes that the final requested withdrawal volumes meet the requirements for a Tier 1 permit application and does not require a Mitigation Plan to offset forecasted water needs.
7. Harwich will pay for all water quality analyses directly.
8. The site work will be limited to Town of Harwich property.
9. This proposal assumes that a wetlands and water bodies monitoring plan will not be required by MassDEP.

This proposal **does not** include the following:

1. Services of a professional land surveyor (GZA will conduct a field survey for the new production well and observation well locations and elevations as conditions permit. GZA's survey will not include property line layout);
2. Reviewing zoning and non-zoning controls for wellhead protection, and reporting same to MassDEP;
3. Obtaining of construction easements, or Zone 1 easements, if applicable;
4. Wetlands or sensitive receptor (surface water features) field delineation or impact analysis;
5. Notice of Intent filing with the local conservation commission(s), meetings and communications;
6. More allowance than stated for meetings;

³ Harwich Water Department Baseline Volume is reported to be 2.16 mgd according to the Cape Cod Basin 20-Year Renewal Permit Meeting Update dated January 20, 2015.



7. Design/permitting of permanent infrastructure including transmission piping and pumping/treatment facilities;
8. Water Conservation Plan or other new source threshold permits, other than WMA permitting;
9. Treatment system design;
10. Well disinfection, wellhead repairs, pumping unit replacements or piping modifications;
11. Any long-term monitoring of production well water quality and quantity;
12. Permanent wellhead access design/construction/permitting; and
13. Any other services not specifically described herein.

ASSISTANCE FROM THE DEPARTMENT

Where certain aspects of the work can be performed effectively by the Harwich, resulting in cost and/or time savings, GZA assumed assistance will be provided from the Department. Specifically, GZA assumes that the Department will:

1. Provide available plans and data for the existing facility, production well and observation wells;
2. Following the installation of new site well, provide the services of a professional surveyor to prepared surveyed site plans including property line layout and well locations. The site survey should also provide the elevations of the site observation wells surveyed to a USGS benchmark relative to mean sea level. Provide a Zone I plot plan with public land surveyor stamp. Provide available information on existing utilities.
3. Provide available water supply data, reports, permits, conservation measures, water restrictions and statistics as needed relative to permitting;
4. Provide location for drainage/disposal of discharge water during the pumping test;
5. Pay any project-related permitting, recording and advertising fees;
6. Pay for any laboratory and all water quality analyses directly;
7. Provide available information on existing utilities around the well sites;
8. Provide legal and practical access to well sites and any monitoring locations. Clear vegetation as needed for foot or equipment access to well sites;
9. Operate the existing pumping station as needed for avoiding influencing the pumping test. Ideally, the existing production well should be shut down a minimum of 10 to 15 days prior to the test, and remain off for duration of the prolonged pumping test and the 5-day post-test recovery. This proposal also assumes that active production well GPW#10 is already instrumented with water level logging equipment and that this data will be made available to GZA.
10. Provide a water operator, to assist with water level measurements prior to, during and following production well pumping test(s), particularly for the existing production well.



FEE SCHEDULE

Billings for Tasks 1 through 5 and Task 7 will be based on a lump-sum basis, payable monthly and in accordance with the percentage complete. For additional work, GZA fees shall be in accordance with the attached Standard Schedule of Fees (MB-GOV 2023) under Appendix A.

TASK DESCRIPTION	COST
TASK 1: MESA/NHESP FILING	\$10,000
TASK 2: PROLONGED PUMPING TEST - ON-SITE FIELD WORK	
1A – Well Installations	\$26,000
1B – Pumping Test	\$74,000
TASK 3: WELL DRILLER’S WORK AND EQUIPMENT ⁴ (SUBCONTRACT) (based upon estimated quantities)	\$225,000*
TASK 4: SOURCE FINAL HYDROGEOLOGICAL REPORT TO MASSDEP	
3A – Zone II Delineation	\$38,000
3B – Reporting	\$48,000
TASK 5: MEPA ENF FILING	\$15,000
TASK 6: WATER MANAGEMENT ACT (WMA) PERMITTING (Budget to be submitted after Tasks 1-5 are completed))	TBD
TASK 7: MEETINGS	\$15,500
Contingency: To cover any additional drilling costs or additional/unforeseen issues/work tasks	\$50,000
TOTAL FEE (With Contingency):	\$501,500

⁴ Based estimated quantities and costs associated with the well driller’s work and rental/purchase of required pumping/monitoring equipment. This estimate is based on the anticipated scope of drilling work in the scope of work section of this proposal, which represents our best judgment at this time as to the efforts required to achieve the stated objectives.



This budget is based on the anticipated scope of work outlined above which represents our best judgment at this time as to the efforts required to achieve the stated objectives. It must be recognized, however, that unforeseen conditions which become evident during the course of the project which may alter or increase the scope of work required. Actual charges may vary, either upward or downward, depending upon the execution of the work. You will be notified of any conditions requiring an increase in scope and budget for approval prior to GZA proceeding. GZA considers a substantial budget variance to be 12% and we will not exceed this variance without notifying the Department.

Tasks 1-5 and task 7 will be charged on a lump sum basis. The rates for technical and support personnel will be charged for professional services work that are not part of Tasks 1-7 will be in accordance with GZA's Standard Schedule of Fees (MB-NS GOV 2023). For work requiring out-of-town overnight stay, the minimum charge for work on the project will be eight (8) hours per day.

The above-listed rates and fees are valid for 60 days from the date the work begins. GZA reserves the right to modify the fee and rate schedule on an annual basis to reflect changes in employee compensation and the Department acknowledges that labor rates may change during the execution of this project.

PROJECT SCHEDULE

GZA is prepared to initiate the proposed Scope of Services within 4 weeks of receipt of a signed contract. Duration of services will depend on Harwich's schedule, well drilling conditions, driller's schedules, permitting response time, and weather conditions, which are beyond our direct control. GZA is prepared to devote the resources required to support Harwich's goal of having the production well permitted as quickly as possible.

The following is a summary of activities, timeframes, and regulatory requirements typical for the development of new sources of municipal groundwater supply in Massachusetts. However, all new source approvals present a unique set of circumstances. The summary is not intended to cover all eventualities.

Activity	Time Frame	Regulatory Requirements
Initial 4-inch Test Wells and Observation Well Installations and Short-Duration Initial Pumping Tests	1.5 Years	Completed – Request for Site Examination, Prolonged Pumping Test Proposal, MassWildlife Notification, DEP approval of RFSE/PPTP
8-inch Test Well, 2-inch Observation Well Installations and Prolonged Pumping Test	2-4 Months	MassWildlife Notification
New Source Final Report	3-4 Months	MassDEP Approval
Total New Source Approval Process	2-3 Years	
Regulatory Approvals:		
MEPA ENF Filing	2 Months	MEPA Approval
MESA Filing (NHESP)	3 Months	Mass Wildlife
WMA Permit/Amendment	3-12 Months	MassDEP Approval
Design/Bid/Construct Permanent Well (if test well is sufficient, then substantial time can be saved on this project)	9-12 Months	MassDEP Approval



Design/Bid/Construct Pumping & Treatment Facilities (assumed expansion/connection of existing facilities which will save on time)	12-18 Months	DEP Approval
Totals	2-4 Years	

INVOICES

GZA will submit invoices periodically on a monthly basis for our services and reimbursable expenses. The above financial arrangements are on the basis of prompt payment within 30 days of our invoices and the orderly and continuous progress of the Project. GZA may terminate its services upon 10 days' written notice any time payment is overdue on this project. GZA services will be performed as expeditiously as is consistent with professional skill and care and with the orderly progress of the work.

QUALIFICATIONS

GZA GeoEnvironmental, Inc. (GZA) is an employee-owned, multi-disciplinary consulting firm offering services in the fields of geotechnical, water resources and environmental engineering, hazardous waste assessment and remediation, water and wastewater engineering, and construction management-related services. Headquartered in Norwood, Massachusetts, GZA employs over 700 engineers, scientists, and technical support staff in 30 offices.

Technical expertise, innovation, and responsiveness are the trademarks of GZA, which have earned us national recognition. GZA's technically sophisticated approach, extensive knowledge of geo/civil engineering and environmental services, and pragmatic focus on practical solutions for project evaluation, design, and construction has historically provided our clients with cost-effective solutions to their problems. Throughout GZA's over 50+ years of operation, we have developed several special areas of expertise including:

- Hydrology and Water Resources Management
- Natural Resource Impact and Mitigation Services
- Environmental Monitoring Services
- Pollution Prevention
- Environmental Chemistry Laboratory
- Soil and Groundwater Treatability Laboratory
- Regulatory Training and Compliance Division

GZA's long-standing capabilities in water resource sciences and management combined with our geo-civil engineering experience are perfectly suited water supply planning and implementation projects. We have taken our traditional expertise and have successfully adapted our multi-disciplinary capabilities to meet the changing environmental challenges of the new millennium. GZA's water resources-related disciplines include:

- New Drinking Water Source Approval
- Municipal and Commercial Water Supply Investigations
- Aquifer Protection Plans
- Aquatic Chemistry
- Surface Water Hydrology & Hydraulics



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- Hydrogeology
- Groundwater Flow Modeling
- Civil & Geotechnical Engineering
- Environmental Permitting Support
- Wetlands & Soil Sciences
- Limnology
- GIS / Information Management
- Pumping and Treatment Facilities Design/Permitting/Construction Services

Our professional services are ideal to assist states and municipalities, local stakeholders, and developers in properly designing a site to accommodate protection of environmental resources. Unlike many firms, GZA has the ability to offer a full suite of relevant in-house services such as geotechnical, hydrogeologic, wetlands, and biohabitat assessment services. We have a project team of engineers, hydrologists, and wetland ecologists with the practical experience and academic training to take tough site conditions and provide design solutions sensitive to environmental concerns.

GZA has extensive experience with water supply development within regulatory programs. We have provided consulting services for large groundwater withdrawal permit applications at many stages of projects. GZA's work has included completion of numerous hydrogeologic investigations focused on evaluating aquifer properties, identifying groundwater supply sources, and designing groundwater pumping systems. GZA's hydrologists and water resource engineers are experienced in developing watershed water budgets and reservoir modeling, performing inflow/outflow analyses, estimating seasonal in-stream flows, and evaluating the safe yield of water supply reservoirs. We also have extensive experience with addressing a variety of contamination issues at many sites throughout the state, including source protection. All GZA staff assigned to the project have extensive personal professional experience in groundwater supply development, water supply engineering, groundwater modeling, water quality analysis, permitting and/or construction management.

Our multi-disciplinary project team has experience with advancing a potential source through the exploration, testing, and permitting phases to design and construction of a new active water supply source. Further, we bring experience to provide guidance to the project that will be important in subsequent phases such as evaluating water quality issues, emerging contaminant threats, and potentially delivering treatment solutions. The depth and breadth of our experience will allow our project team to cost effectively execute the current project scope, while proactively addressing potential future steps in the development of the resource. This facilitates expeditious resolution of potential project issues that could impact development and permitting of a new well supply.

GZA will provide the technical leadership required to perform exceptional project execution. The work will be managed primarily by GZA's James Emery, Daniel Tinkham and Sarah Dignard, P.E. Ms. Dignard has over 15 years of consulting experience in the Northeast U.S. and Canada, supporting well supply development projects, New Source Approvals, water withdrawal permitting and compliance studies, drinking water source protection studies, groundwater dewatering systems and assorted hydrogeological assessments. Mr. Emery has been responsible for the successful completion of more than 2,000 groundwater investigations throughout the Northeast and eastern United States over his nearly 40-year career. He founded Emery & Garrett Groundwater Investigations (EGGI) in 1989 which for nearly 30 years performed such groundwater services throughout the eastern seaboard. In 2018 GZA acquired EGGI as a Division of GZA. Mr. Tinkham has worked with EGGI for the past 30+ years and has been involved in more than 1,000 successful groundwater investigations



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and development projects in his career. He is a senior hydrogeologist who is highly skilled in groundwater testing and analyses, groundwater modeling and groundwater safe yield assessments.

GZA appreciates this opportunity to assist the Department. We look forward to the opportunity to discuss our services with you personally. In the meantime, please feel free to contact Sarah Dignard at 781-364-5088 with any questions or requests for additional information.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Sarah Dignard, P.E., P.G.
Senior Project Manager

Daniel J. Tinkham, P.G.
Consultant/Reviewer

James M. Emery, P.G.
Principal-in-Charge
Senior Hydrogeologist

SD/DJT/JME:rlk

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Attachment: Schedule of Fees (2023)



**GZA GEOENVIRONMENTAL, INC.
METRO BOSTON OFFICES**

**MUNICIPAL GOVERNMENT SERVICES
SCHEDULE OF FEES - CALENDAR YEAR 2023**

FOR PROPOSAL FOR SERVICES DATED March 15, 2023

FILE NO. 01.P000921.23

LABOR

	<u>Per Hour</u>
CAD/Technical Designer	\$120
Field Technician II	\$105
Field Technician I	\$110
Technical/Administrative Support	\$115
Engineer/Scientist/Geologist II	\$125
Engineer/Scientist/Geologist I	\$135
Assistant Project Manager	\$160
Senior CAD/Technical Designer	\$160
Project Manager/Technical Specialist	\$190
Senior Project Manager/Technical Specialist	\$200
Senior Consultant	\$230
Associate Principal	\$230
Principal	\$255
Senior Principal	\$280
Outside Services and Subcontractors	Cost Plus 10%
Expenses	Cost Plus 10%

The above rates for technical and support personnel will be charged for actual time worked on the project, including time required for travel from company office to job or meeting site and return. For work requiring out-of-town overnight stay, the minimum charge for work on the project will be eight (8) hours per day.

Overtime work by "Non-Exempt" personnel will be billed at 1.5 times the standard rate.

A fifty percent (50%) premium will be added to the above rates for expert witness and other special services.

The above-listed rates are valid for the calendar year in which the work is performed. GZA reserves the right to modify this rate schedule on an annual basis to reflect changes in employee compensation and Client acknowledges that labor rates may change during the execution of this project.

EXPENSES

- Rental of specialized field or monitoring equipment and vehicle charges based on standard unit prices
- Transportation, lodging and subsistence for out-of-town travel
- Printing, reproduction, plotting, and wide-format scanning
- Express mail and shipping charges
- Personal vehicle travel for projects at IRS rates
- Long distance, local and cellular telephone, facsimile and postage (via U.S. Postal Service) are included in a flat rate Communication Fee of 3 percent per invoice on labor only

INVOICES

GZA will submit invoices periodically and payment will be due within 20 days from invoice date. GZA may terminate its services upon 10 days' written notice any time your payment is overdue on this or any other project.



**GZA GEOENVIRONMENTAL, INC.
METRO BOSTON OFFICES**

**MUNICIPAL GOVERNMENT SERVICES
SCHEDULE OF FEES - CALENDAR YEAR 2023**

BUDGETS

The Budget contained within GZA's Proposal represents our estimate of the work involved. Actual charges can vary either upward or downward depending upon many factors. GZA considers a substantial budget variance to be 15% and we will not exceed this variance without notifying Client.

RETAINER

Any retainer specified in GZA's Proposal shall be due prior to the start of services and will be applied to the final invoice for services.