

Town of Harwich
BOARD OF WATER/WASTEWATER COMMISSIONER'S MEETING AGENDA*
Friday, September 11, 2020, 1:00 pm

REMOTE PARTICIPATION ONLY
OPEN PUBLIC FORUM

For those members of the public wishing to make comment you may do so by a combination of email and phone by;

1. First, send an email to: **dpelletier@harwichwater.com**
(Send emails at any time after the meeting agenda has been officially posted)
 - a. In the subject line enter "request to speak Jane Doe"
 - b. Replace Jane Doe with your name - No need to add any more detail to email
2. Please wait until the Chairman has opened this agenda item for Open Public Forum
3. **Dial: 1-312-757-3121**
4. **Enter Access Code: 621-511-509**
5. Please be patient and eliminate any background noise
6. Callers will be taken in the order the emails are received
7. When your name is called use *6 to unmute yourself

I. CALL TO ORDER

II. CONSENT AGENDA

A. Minutes

1. July 30, 2020
2. August 12, 2020

III. ABATEMENTS

IV. OLD/UNFINISHED BUSINESS

- A. Wastewater Discussion
- B. Water/Wastewater Commissioner's Role over Department Employees

V. NEW BUSINESS

- A. FY21 Wastewater Budget
- B. Laborer Hiring Update

VI. SUPERINTENDENT'S REPORT

VII. COMMISSIONER'S REPORT

VIII. CORRESPONDENCE/ANY OTHER BUSINESS

IX. NEXT MEETING: TBD

X. OPEN PUBLIC FORUM

- A. See dial in instructions above

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:

Tracey Alves

Tracey Alves, Board Secretary

Posted By: _____

Town Clerk

Date: _____

**MINUTES
HARWICH WATER DEPARTMENT
BOARD OF WATER COMMISSIONERS
FRIDAY, JULY 31, 2020
1:00 P.M.**

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

OTHERS PRESENT: Superintendent Dan Pelletier, Russ Kleekamp of GHD Consulting Services

CALL TO ORDER

Present for the meeting was Superintendent Pelletier, Chair Carreiro, Vice Chair Underwood, Clerk Thompson and Russ Kleekamp of GHD Consulting Services. Chair Carreiro called the meeting to order at 1:00 p.m.

CONSENT AGENDA

A. Minutes:

1. July 17, 2020

Vice Chair Underwood motioned to approve the minutes of July 17, 2020 with a second by Chair Carreiro, 3-0-0.

OLD UNFINISHED BUSINESS

B. Pleasant Lake Tank Upgrade Project Design Contracts

Superintendent Pelletier introduced Russ Kleekamp of GHD Consulting Services. An overview of the Pleasant Lake Tank Upgrade Project Design contract was provided. There are two firms involved in modifying the structural components of the elevated water storage tank. Tank Industry Consultants will handle the interior work that needs to be done and GHD Consulting Services will design and address the exterior work needed to connect the new fill pipe to the tank.

Clerk Thompson moved to authorize the Chair to sign the contract for the Commissioners to enter into the agreement. Vice Chair Underwood seconded the motion. A roll call vote was taken with all Board members in favor; 3-0-0.

A. Superintendent's Evaluation

The Board evaluated Superintendent Pelletier's performance as Superintendent and thanked him for his hard work! Clerk Thompson moved to approve the total evaluation as presented. Vice Chair Underwood seconded the motion. A roll call vote was taken with all Board members in favor; 3-0-0.

NEW BUSINESS

A. Water Commission’s Authority over Department Staff

The Board discussed the topic of the Town Administrator’s authority over Water Department staff. Superintendent Pelletier will research the history of this topic and it will be added onto the agenda at a later date for further discussion.

B. Capital Plan- Drinking Water Supply Protection Grant Funds

Superintendent Pelletier informed the Board of the steps necessary in order to apply for the Drinking Water Supply Protection Grant. The Board is interested in proceeding.

SUPERINTENDENT’S REPORT

A. Department Fleet

Superintendent Pelletier informed the Board that the Department has two trailers that have been compromised. The 1997 construction trailer is compromised and the estimated cost for repair is \$10,260 - \$11,260 to rewire, replace the deck, blast and paint. The major part of the repair is that 6 of the 8 brakes are not working. The 1991 Utility trailer is the other trailer that is compromised and DPW recommended replacement.

Chair Thompson moved that both trailers be replaced. Vice Chair Underwood seconded the motion. A roll call vote was taken and all Board members were in favor; 3-0-0.

Superintendent Pelletier also advised that the Board consider allowing the Department to consider purchasing a roller. The Department currently rents a roller each time one is needed. The estimated cost of a used 2018 roller is \$9,044. Vice Chair Underwood moved that the Department purchase a roller. Clerk Thompson seconded the motion. A roll call vote was taken to approve with all Board members in favor; 3-0-0.

COMMISSIONER’S REPORT

Vice Chair Underwood informed the Board that she will be sharing the link to a documentary she saw called “Water Systems Around the World.”

NEXT MEETING

The next Board meeting date will be Wednesday, August 12, 2020 at 1:00 p.m.

ADJOURNMENT

Chair Carreiro motioned to adjourn at 1:53pm. Clerk Thompson moved the motion with a second by Vice Chair Underwood. Roll call vote was taken, all in favor; 3-0-0.

Gary Carreiro, Chairman

Dan Pelletier, Superintendent

Judith Underwood, Vice Chair

Tracey Alves, Board Secretary

Allin P. Thompson, Clerk



Harwich Water Department

196 Chatham Road • Harwich, MA • 02645

FY21 Wastewater Budget

September 2020



Budget Category Breakdown

FY21 Wastewater Budget

Harwich Only Expenses

Salaries & Wages

To be consistent with enterprise fund guidance the FY21 budget includes funding for existing Water employees who, by virtue of their job, will support wastewater operations. (billing, meter reading, customer service, management and oversight)

O&M Expenses

Funding for the day-to-day operation of the Harwich Collections System. (Contract operations, electric, gas, postage)

IMA Expenses

Fixed O&M Expenses

Harwich shall pay Fixed O&M expenses (including but not limited to Contract Services, Plant Maintenance, 20% of Chatham DPW Director salary, SCADA contracts, etc.) based on the actual percentage (%) of wastewater flow capacity for East Harwich Service Area to Chatham WPCF Phase I design flow capacity (300,000 gpd/1,300,000 gpd = 23.08%).

Flow Variable Expenses

Flow Variable O&M expenses for the WPCF (including but not limited to chemicals, electricity, natural gas, diesel, sludge removal/disposal, testing, etc.) shall be paid based on the actual percentage (%) of wastewater flow from the East Harwich Service Area as measured at the Connection Point(s) to Total Flow. Flow Variable O&M payments shall begin once flow is measured at the Connection Point.

| | | FY 2021 | HARWICH FY21 BUDGET | | | | | | | | | | | |
|---------------------------|--------------------------------------|---------------------------------|---------------------------|----------------------------|---------------|---|--------------|--|---------------|---|---------------|---|-----------------------------|--------------|
| | | CHATHAM Request with Supplement | HARWICH Collection System | HARWICH Fixed O&M Expenses | Q3 % (48.92%) | Flow Variable Expenses Q3 0% (Jul - Sept) | Q4 % (16.28) | Flow Variable Expenses Q4 0% (Oct - Dec) | Q1 % (11.33%) | Flow Variable Expenses Q1 0.37% (Jan - Mar) | Q2 % (23.48%) | Flow Variable Expenses Q2 0.72% (Apr-Jun) | Harwich FY21 Budget Request | |
| Operating Expenses | | | | | | | | | | | | | | |
| A | Personal Services | | | | | | | | | | | | | |
| IMA | Regular Wages | 28,788 | | 23.08% | \$6,644.17 | | | | | \$1,661.04 | | \$1,661.04 | \$3,204.04 | |
| HAR | Superintendent | | 63,867 | | | | | | | | | | \$63,866.79 | |
| HAR | HWD Support (Admin & Meter Reading) | | 13,418 | | | | | | | | | | \$13,418.14 | |
| | | | | | | | | | | | | | | |
| A | Personal Services | | | | | | | | | | | | \$80,488.97 | |
| B | Expenses | | | | | | | | | | | | | |
| IMA | Testing | 18,500 | | | | \$9,050.20 | | \$3,011.80 | | \$2,096.05 | \$7.76 | \$4,343.80 | \$31.28 | \$39.03 |
| IMA | Electric WWFT | 137,000 | | | | \$67,020.40 | | \$22,303.60 | | \$15,522.10 | \$57.43 | \$32,167.60 | \$231.61 | \$289.04 |
| IMA | Gas Heat | 34,500 | | | | \$16,877.40 | | \$5,616.60 | | \$3,908.85 | \$14.46 | \$8,100.60 | \$58.32 | \$72.79 |
| IMA | Plant Maintenance | 145,000 | | 23.08% | \$33,466.00 | | | | | \$8,366.50 | | \$8,366.50 | \$8,366.50 | \$16,733.00 |
| IMA | Solid Waste Disposal | 75,000 | | | | \$36,690.00 | | \$12,210.00 | | \$8,497.50 | \$31.44 | \$17,610.00 | \$126.79 | \$158.23 |
| IMA | Contract Services | 584,000 | | 23.08% | \$134,787.20 | | | | | \$33,696.80 | | \$33,696.80 | \$33,696.80 | \$67,393.60 |
| IMA | Operational Supplies | 750 | | 23.08% | \$173.10 | | | | | \$43.28 | | \$43.28 | \$43.28 | \$86.55 |
| IMA | Building & Grounds Maintenance | 250 | | 23.08% | \$57.70 | | | | | \$14.43 | | \$14.43 | \$14.43 | \$28.85 |
| IMA | Chemicals | 40,000 | | | | \$19,568.00 | | \$6,512.00 | | \$4,532.00 | \$16.77 | \$9,392.00 | \$67.62 | \$84.39 |
| IMA | Ground Water Monitoring | 20,000 | | 23.08% | \$4,616.00 | | | | | \$1,154.00 | | \$1,154.00 | \$1,154.00 | \$2,308.00 |
| | | | | | | | | | | | | | | |
| HAR | Contract Operations | | 100,000 | | | | | | | | | | | \$100,000.00 |
| HAR | Generator Maintenance | | - | | | | | | | | | | | |
| HAR | Electric Utility | | 4,000 | | | | | | | | | | | \$4,000.00 |
| HAR | Nat Gas | | 600 | | | | | | | | | | | \$600.00 |
| HAR | Printing & Postage & Office Services | | 650 | | | | | | | | | | | \$650.00 |
| HAR | SCADA | | - | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| B | Expenses | | | | | | | | | | | | \$192,443.48 | |
| | Department Total | | | | | | | | | | | | | |
| TOTA | Operating Expense | | | | | | | | | | | | \$272,932.45 | |



Flow Variable Expenses

Connections & Flow

Phase 2 Sewer Service Connections

| Gallons Per Day Per Connection (EST) | Total Water Usage | Phase 2 Sewerage Customers | Annual Water Usage | Avg. Daily Water Usage |
|---|--------------------------|-----------------------------------|------------------------------|-------------------------------|
| FY17 Water Consumption Phase 2 | 86,490,000 | 1,049 | 82,450 | 226 |
| FY18 Water Consumption Phase 2 | 102,365,000 | 1,049 | 97,583 | 267 |
| | | | | |
| | | | AVG Daily Water Usage | 247 |
| | | | | |
| | Total Connections | FY21 Est Connection % | FY21 Connections | GPD |
| Contract 1 | 275 | 15% | 41 | 10,173 |
| Contract 2 | 115 | 5% | 6 | 1,418 |
| | | | | |
| | | | FY21 Est Daily Flow | 11,591 |



Flow Variable Expenses

Harwich Flows as % of Chatham

| | | | Chatham Monthly Flows | Harwich Monthly Flows | Quarterly Flow % Har/Cha | Chatham Quarterly Flow % vs. Annual |
|------------------|--------|------------|--------------------------|--------------------------|-----------------------------|--|
| Fiscal Year 2020 | Q3 | Jul-19 | 88,401,900 | | | 48.92% |
| | | Aug-19 | 91,455,600 | | | |
| | | Sep-19 | 60,378,200 | | | |
| | Q4 | Oct-19 | 36,459,500 | | | 16.28% |
| | | Nov-19 | 22,679,600 | | | |
| | | Dec-19 | 20,798,900 | | | |
| | Q1 | Jan-20 | 19,611,100 | | | 11.33% |
| | | Feb-20 | 16,853,900 | | | |
| | | Mar-20 | 19,187,000 | | | |
| Q2 | Apr-20 | 22,450,900 | | | 23.48% | |
| | May-20 | 36,166,500 | | | | |
| | Jun-20 | 56,673,100 | | | | |
| Fiscal Year 2021 | Q3 | Jul-20 | 88,401,900 | | | 48.92% |
| | | Aug-20 | 91,455,600 | | | |
| | | Sep-20 | 60,378,200 | | | |
| | Q4 | Oct-20 | 36,459,500 | | - | 16.28% |
| | | Nov-20 | 22,679,600 | | | |
| | | Dec-20 | 20,798,900 | | 0.00% | |
| | Q1 | Jan-21 | 19,611,100 | | | 11.33% |
| | | Feb-21 | 16,853,900 | 69,547 | | |
| | | Mar-21 | 19,187,000 | 139,094 | 0.37% | |
| Q2 | Apr-21 | 22,450,900 | 208,641 | | 23.48% | |
| | May-21 | 36,166,500 | 278,189 | | | |
| | Jun-21 | 56,673,100 | 347,736 | 0.72% | | |



Harwich Only Expenses

| | |
|---|-------------------|
| Total Annual Contract Sum @ Buildout w/ 5 Stations | \$ 375,000 |
| Annual Cost Per Station | \$ 75,000 |
| Monthly Cost Per Station | \$ 6,250 |

| | | Con-Ops | Electric Util. | | |
|------------------|----|----------------------------|-----------------|----------|--|
| Fiscal Year 2021 | Q3 | Jul-20 Aug-20 Sep-20 | | | |
| | Q4 | Oct-20 Nov-20 Dec-20 | | | |
| | Q1 | Jan-21 | | | RBO Contract (2 Pump Stations) |
| | | Feb-21 | \$ 12,500 | \$ 500 | |
| | Q2 | Mar-21 | \$ 12,500 | \$ 500 | RJV & RBO Contracts (4 Pump Stations) |
| | | Apr-21 | \$ 25,000 | \$ 1,000 | |
| | | May-21 | \$ 25,000 | \$ 1,000 | |
| | | Jun-21 | \$ 25,000 | \$ 1,000 | |
| Total | | \$ 100,000 | \$ 4,000 | | |

**Budget figures were based off a preliminary Con-Ops cost estimate from 2/5/2020*

| | | FY 2021 | HARWICH FY21 BUDGET | | | | | | | | | | | |
|---------------------------|--------------------------------------|---------------------------------|---------------------------|----------------------------|---------------|---|--------------|--|---------------|---|---------------|---|-----------------------------|-------------|
| | | CHATHAM Request with Supplement | HARWICH Collection System | HARWICH Fixed O&M Expenses | Q3 % (48.92%) | Flow Variable Expenses Q3 0% (Jul - Sept) | Q4 % (16.28) | Flow Variable Expenses Q4 0% (Oct - Dec) | Q1 % (11.33%) | Flow Variable Expenses Q1 0.37% (Jan - Mar) | Q2 % (23.48%) | Flow Variable Expenses Q2 0.72% (Apr-Jun) | Harwich FY21 Budget Request | |
| Operating Expenses | | | | | | | | | | | | | | |
| A | Personal Services | | | | | | | | | | | | | |
| IMA | Regular Wages | 28,788 | | 23.08% | \$6,644.17 | | | | | \$1,661.04 | | \$1,661.04 | \$3,204.04 | |
| HAR | Superintendent | | 63,867 | | | | | | | | | | \$63,866.79 | |
| HAR | HWD Support (Admin & Meter Reading) | | 13,418 | | | | | | | | | | \$13,418.14 | |
| | | | | | | | | | | | | | | |
| A | Personal Services | | | | | | | | | | | | \$80,488.97 | |
| B | Expenses | | | | | | | | | | | | | |
| IMA | Testing | 18,500 | | | | \$9,050.20 | | \$3,011.80 | | \$2,096.05 | \$7.76 | \$4,343.80 | \$31.28 | \$39.03 |
| IMA | Electric WWFT | 137,000 | | | | \$67,020.40 | | \$22,303.60 | | \$15,522.10 | \$57.43 | \$32,167.60 | \$231.61 | \$289.04 |
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| IMA | Contract Services | 584,000 | | 23.08% | \$134,787.20 | | | | | \$33,696.80 | | \$33,696.80 | \$33,696.80 | \$67,393.60 |
| IMA | Operational Supplies | 750 | | 23.08% | \$173.10 | | | | | \$43.28 | | \$43.28 | \$43.28 | \$86.55 |
| IMA | Building & Grounds Maintenance | 250 | | 23.08% | \$57.70 | | | | | \$14.43 | | \$14.43 | \$14.43 | \$28.85 |
| IMA | Chemicals | 40,000 | | | | \$19,568.00 | | \$6,512.00 | | \$4,532.00 | \$16.77 | \$9,392.00 | \$67.62 | \$84.39 |
| IMA | Ground Water Monitoring | 20,000 | | 23.08% | \$4,616.00 | | | | | \$1,154.00 | | \$1,154.00 | \$1,154.00 | \$2,308.00 |
| | | | | | | | | | | | | | | |
| HAR | Contract Operations | | 100,000 | | | | | | | | | | \$100,000.00 | |
| HAR | Generator Maintenance | | - | | | | | | | | | | | |
| HAR | Electric Utility | | 4,000 | | | | | | | | | | \$4,000.00 | |
| HAR | Nat Gas | | 600 | | | | | | | | | | \$600.00 | |
| HAR | Printing & Postage & Office Services | | 650 | | | | | | | | | | \$650.00 | |
| HAR | SCADA | | - | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| B | Expenses | | | | | | | | | | | | \$192,443.48 | |
| | Department Total | | | | | | | | | | | | | |
| TOTA | Operating Expense | | | | | | | | | | | | \$272,932.45 | |

Month/Year August 2020

Monthly Pumpage Report Harwich Water Department

PWS No. 4126000

| Date | T1 | | | | T2 | | | | T3 | | T10 | T11 | | |
|------------|-------------|-----------|-----------|------------|------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|
| | Main 1 | Main 2 | Main 3 | Well 1 | Well 2 | Well 3 | Well 4 | Well 5 | Well 6 | Well 7 | Well 8 | Well 9 | Pump 10 | Pump 11 |
| 1 | 225,122 | 225,166 | 163,130 | 392,694 | 262,837 | 320,667 | 493,924 | 451,748 | 476,549 | 452,170 | 473,824 | 488,479 | 542,465 | 497,025 |
| 2 | 249,870 | 249,933 | 181,121 | 431,393 | 289,929 | 353,031 | 548,953 | 501,563 | 529,355 | 502,308 | 526,260 | 542,521 | 601,945 | 552,049 |
| 3 | 248,450 | 246,669 | 178,341 | 431,093 | 287,894 | 354,881 | 540,907 | 494,254 | 521,526 | 494,437 | 549,721 | 570,049 | 589,069 | 583,939 |
| 4 | 222,748 | 224,406 | 162,779 | 389,389 | 261,207 | 319,668 | 493,846 | 438,181 | 462,001 | 439,632 | 442,055 | 452,620 | 545,974 | 457,430 |
| 5 | 240,303 | 240,005 | 173,735 | 415,686 | 279,219 | 342,969 | 527,286 | 482,044 | 508,684 | 482,675 | 505,602 | 523,169 | 578,797 | 530,823 |
| 6 | 224,917 | 224,890 | 163,092 | 385,186 | 259,454 | 314,616 | 494,081 | 451,864 | 476,750 | 452,380 | 473,528 | 488,262 | 542,394 | 497,172 |
| 7 | 247,144 | 245,410 | 177,539 | 428,813 | 286,952 | 352,674 | 538,188 | 491,915 | 519,245 | 491,978 | 537,920 | 555,928 | 586,370 | 564,370 |
| 8 | 231,834 | 234,430 | 169,436 | 406,484 | 272,457 | 333,334 | 513,616 | 469,746 | 495,541 | 470,860 | 470,178 | 484,789 | 568,231 | 493,797 |
| 9 | 252,592 | 251,111 | 181,877 | 433,858 | 291,720 | 356,815 | 551,753 | 504,205 | 532,179 | 504,410 | 547,631 | 565,608 | 600,680 | 575,045 |
| 10 | 252,448 | 252,322 | 182,806 | 434,143 | 291,730 | 357,720 | 554,023 | 506,446 | 534,376 | 507,160 | 543,035 | 563,468 | 608,026 | 577,027 |
| 11 | 250,791 | 252,491 | 183,355 | 429,118 | 289,667 | 350,983 | 554,919 | 507,237 | 535,304 | 508,282 | 501,489 | 514,393 | 613,339 | 518,702 |
| 12 | 257,025 | 256,073 | 186,251 | 438,286 | 295,938 | 361,337 | 563,756 | 514,424 | 542,577 | 514,937 | 538,103 | 555,714 | 614,449 | 567,481 |
| 13 | 224,822 | 224,811 | 163,035 | 385,210 | 259,289 | 314,957 | 493,924 | 451,930 | 476,881 | 452,746 | 471,720 | 486,152 | 546,663 | 497,252 |
| 14 | 245,781 | 244,371 | 176,625 | 426,962 | 285,440 | 352,166 | 535,389 | 489,275 | 516,333 | 489,412 | 544,785 | 564,782 | 583,176 | 578,220 |
| 15 | 232,434 | 234,390 | 169,619 | 402,869 | 271,390 | 331,268 | 514,377 | 470,482 | 496,314 | 471,780 | 462,296 | 473,505 | 568,842 | 478,199 |
| 16 | 186,131 | 185,830 | 134,643 | 318,914 | 215,812 | 262,533 | 408,846 | 373,361 | 393,973 | 373,785 | 391,663 | 403,929 | 448,243 | 410,801 |
| 17 | 175,572 | 175,418 | 127,211 | 302,840 | 203,971 | 248,162 | 385,322 | 351,801 | 218,736 | 352,087 | 373,972 | 385,660 | 422,621 | 399,181 |
| 18 | 163,253 | 163,574 | 118,740 | 279,357 | 188,363 | 226,010 | 357,149 | 328,346 | 346,025 | 328,869 | 354,360 | 360,267 | 431,746 | 371,577 |
| 19 | 198,478 | 199,043 | 144,344 | 341,652 | 229,998 | 281,180 | 434,107 | 402,453 | 424,411 | 402,826 | 408,958 | 418,601 | 483,222 | 421,559 |
| 20 | 197,530 | 197,486 | 143,234 | 336,525 | 227,183 | 273,747 | 432,584 | 387,620 | 408,858 | 388,030 | 406,809 | 415,264 | 465,221 | 438,898 |
| 21 | 238,668 | 238,677 | 172,824 | 413,618 | 277,747 | 340,811 | 523,688 | 478,737 | 505,168 | 479,356 | 502,165 | 517,312 | 574,534 | 526,750 |
| 22 | 215,871 | 216,036 | 156,475 | 375,262 | 251,958 | 308,602 | 474,598 | 434,045 | 458,023 | 434,581 | 455,312 | 468,504 | 521,035 | 477,635 |
| 23 | 228,129 | 227,743 | 165,689 | 392,736 | 264,468 | 323,148 | 501,102 | 458,267 | 483,510 | 458,768 | 480,594 | 495,042 | 549,884 | 503,951 |
| 24 | 235,125 | 234,779 | 170,182 | 408,219 | 273,948 | 337,443 | 515,692 | 471,428 | 497,436 | 471,945 | 494,518 | 510,131 | 562,841 | 516,523 |
| 25 | 203,753 | 203,308 | 147,533 | 352,388 | 236,560 | 289,772 | 446,793 | 407,097 | 428,068 | 408,147 | 429,043 | 440,762 | 490,982 | 450,047 |
| 26 | 218,390 | 218,133 | 158,092 | 357,299 | 252,892 | 308,651 | 479,089 | 438,577 | 462,698 | 439,173 | 459,916 | 473,375 | 526,531 | 482,633 |
| 27 | 163,333 | 163,088 | 118,447 | 279,129 | 188,556 | 228,115 | 358,667 | 327,835 | 345,749 | 328,100 | 341,129 | 350,579 | 393,417 | 360,624 |
| 28 | 181,511 | 181,505 | 131,799 | 308,932 | 208,679 | 251,042 | 398,231 | 364,734 | 384,875 | 364,987 | 382,973 | 390,142 | 437,908 | 401,300 |
| 29 | 171,374 | 171,476 | 124,387 | 295,155 | 198,536 | 239,710 | 375,695 | 344,297 | 363,218 | 344,751 | 361,502 | 368,150 | 413,283 | 378,810 |
| 30 | 176,535 | 176,503 | 127,892 | 304,979 | 205,150 | 248,972 | 387,495 | 354,032 | 373,534 | 354,668 | 387,484 | 399,068 | 424,841 | 413,587 |
| 31 | 213,325 | 212,515 | 154,931 | 360,957 | 245,261 | 297,853 | 468,776 | 428,828 | 452,426 | 429,303 | 434,030 | 444,458 | 514,640 | 449,123 |
| Pumps : | 6,773,260 | 6,771,594 | 4,909,161 | 11,659,141 | 7,854,205 | 9,582,834 | 14,866,774 | 13,576,771 | 14,170,322 | 13,594,541 | 14,252,575 | 14,670,683 | 16,351,369 | 14,971,530 |
| MIN : | 163,253 | 163,088 | 118,447 | 279,129 | 188,363 | 226,010 | 357,149 | 327,835 | 218,736 | 328,100 | 341,129 | 350,579 | 393,417 | 360,624 |
| MAX : | 257,025 | 256,073 | 186,251 | 438,286 | 295,938 | 361,337 | 563,756 | 514,424 | 542,577 | 514,937 | 549,721 | 570,049 | 614,449 | 583,939 |
| STATIONS : | 62,416,969 | | | | 41,341,633 | | | | 28,923,258 | | 16,351,369 | | 14,971,530 | |
| TOTAL : | 164,004,759 | | | | | | | | | | | | | |

Date August 2020
 PWS No. 4126000

Monthly Weather Report
Harwich Water Department

| Day | Snow Fall (in.) (Gallons) | Rain Fall (in.) | Temperature High (°F) | Temperature Low (°F) | Temperature AVG (°F) | Weather Comments | Operator |
|----------------|------------------------------|-----------------|--------------------------|-------------------------|-------------------------|------------------|----------|
| 1 | | 0.00 | 87 | 67 | 77 | | |
| 2 | | 0.00 | 81 | 74 | 78 | | |
| 3 | | 0.00 | 88 | 75 | 82 | | |
| 4 | | 0.00 | 81 | 72 | 77 | | |
| 5 | | 0.00 | 83 | 75 | 79 | | |
| 6 | | 0.00 | 82 | 69 | 76 | | |
| 7 | | 0.00 | 76 | 66 | 71 | | |
| 8 | | 0.00 | 75 | 69 | 72 | | |
| 9 | | 0.00 | 82 | 67 | 74 | | |
| 10 | | 0.00 | 84 | 74 | 79 | | |
| 11 | | 0.00 | 85 | 76 | 81 | | |
| 12 | | 0.00 | 84 | 77 | 81 | | |
| 13 | | 0.00 | 85 | 74 | 80 | | |
| 14 | | 0.00 | 86 | 71 | 78 | | |
| 15 | | 0.00 | 75 | 69 | 72 | | |
| 16 | | 0.44 | 70 | 63 | 66 | | |
| 17 | | 0.32 | 70 | 60 | 65 | | |
| 18 | | 0.10 | 78 | 60 | 69 | | |
| 19 | | 0.00 | 77 | 63 | 70 | | |
| 20 | | 0.00 | 76 | 61 | 69 | | |
| 21 | | 0.00 | 78 | 63 | 71 | | |
| 22 | | 0.00 | 82 | 68 | 75 | | |
| 23 | | 0.00 | 81 | 66 | 73 | | |
| 24 | | 0.00 | 81 | 74 | 77 | | |
| 25 | | 0.00 | 85 | 74 | 80 | | |
| 26 | | 0.02 | 74 | 64 | 69 | | |
| 27 | | 0.35 | 72 | 63 | 67 | | |
| 28 | | 0.00 | 77 | 63 | 70 | | |
| 29 | | 0.00 | 76 | 67 | 71 | | |
| 30 | | 0.00 | 80 | 63 | 71 | | |
| 31 | | 0.00 | 72 | 57 | 65 | | |
| Total | | 1.23 | | | | | |
| Average | | 0.04 | 79.5 | 67.9 | | | |
| Max | | 0.44 | 88.0 | 77.4 | | | |
| Min | | 0.0 | 69.6 | 57.2 | | | |

Month/Year August 2019

Monthly Pumpage Report Harwich Water Department

PWS No. 4126000

| Date | T1 | | | | T2 | | | | T3 | | T10 | T11 | | |
|------------|-------------|-----------|-----------|------------|------------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|
| | Main 1 | Main 2 | Main 3 | Well 1 | Well 2 | Well 3 | Well 4 | Well 5 | Well 6 | Well 7 | Well 8 | Well 9 | Pump 10 | Pump 11 |
| 1 | 207,857 | 207,563 | 149,620 | 372,956 | 246,919 | 323,993 | 3 | 416,141 | 439,038 | 416,662 | 436,568 | 444,306 | 422,668 | 441,789 |
| 2 | 220,972 | 219,583 | 158,383 | 393,592 | 260,202 | 342,203 | 0 | 461,091 | 485,894 | 461,631 | 514,302 | 527,947 | 551,620 | 545,044 |
| 3 | 242,446 | 243,776 | 175,096 | 437,890 | 287,586 | 376,523 | 0 | 488,925 | 515,848 | 489,878 | 481,263 | 488,911 | 589,101 | 501,106 |
| 4 | 231,878 | 231,620 | 166,776 | 416,040 | 272,942 | 357,129 | 151 | 464,968 | 490,816 | 465,602 | 486,978 | 497,228 | 558,342 | 511,693 |
| 5 | 243,544 | 241,601 | 174,168 | 434,139 | 287,572 | 378,548 | 7,280 | 484,228 | 511,169 | 484,078 | 524,032 | 536,457 | 574,787 | 549,617 |
| 6 | 182,405 | 183,627 | 132,146 | 329,845 | 217,227 | 284,727 | 5,867 | 368,625 | 388,889 | 369,454 | 370,714 | 376,519 | 444,899 | 389,144 |
| 7 | 183,255 | 183,178 | 132,063 | 329,000 | 216,559 | 283,477 | 0 | 367,467 | 387,672 | 367,909 | 385,209 | 392,044 | 441,409 | 404,770 |
| 8 | 142,280 | 142,340 | 103,019 | 245,364 | 158,553 | 202,140 | 261,983 | 285,306 | 300,980 | 285,577 | 299,073 | 302,085 | 342,625 | 314,326 |
| 9 | 213,557 | 213,697 | 154,610 | 364,584 | 236,336 | 299,161 | 469,383 | 428,387 | 452,231 | 428,938 | 449,467 | 457,293 | 514,285 | 471,567 |
| 10 | 197,573 | 197,757 | 143,159 | 338,399 | 217,652 | 275,388 | 434,015 | 396,249 | 418,300 | 396,657 | 415,831 | 422,099 | 475,582 | 435,886 |
| 11 | 191,977 | 192,237 | 138,939 | 333,030 | 213,610 | 271,110 | 421,739 | 385,170 | 406,582 | 385,493 | 404,338 | 410,465 | 462,375 | 423,987 |
| 12 | 217,603 | 218,443 | 157,523 | 373,754 | 242,758 | 309,143 | 478,707 | 436,832 | 461,031 | 437,444 | 458,901 | 468,021 | 524,643 | 481,085 |
| 13 | 160,753 | 161,028 | 116,470 | 270,362 | 175,443 | 220,649 | 353,656 | 323,302 | 341,269 | 323,654 | 339,278 | 343,616 | 388,185 | 355,890 |
| 14 | 144,863 | 145,187 | 105,139 | 248,467 | 159,610 | 201,472 | 317,885 | 290,767 | 306,504 | 291,386 | 305,186 | 308,504 | 349,073 | 320,086 |
| 15 | 134,260 | 134,517 | 97,268 | 233,177 | 149,490 | 189,228 | 294,342 | 269,442 | 284,061 | 269,672 | 288,566 | 290,942 | 352,956 | 303,821 |
| 16 | 203,867 | 204,027 | 147,968 | 349,976 | 225,059 | 284,299 | 447,322 | 408,358 | 430,993 | 408,886 | 428,658 | 432,553 | 583,780 | 449,434 |
| 17 | 190,166 | 190,667 | 138,018 | 323,413 | 209,320 | 263,851 | 418,451 | 382,043 | 403,130 | 382,267 | 401,291 | 407,182 | 458,864 | 420,609 |
| 18 | 185,056 | 185,346 | 134,205 | 309,460 | 201,493 | 252,890 | 407,640 | 372,287 | 392,995 | 372,818 | 390,377 | 396,408 | 446,783 | 409,628 |
| 19 | 214,439 | 215,064 | 156,103 | 353,916 | 233,108 | 292,283 | 473,623 | 432,144 | 455,993 | 432,642 | 452,911 | 462,881 | 518,635 | 475,408 |
| 20 | 176,029 | 176,587 | 127,870 | 296,102 | 191,996 | 241,542 | 387,385 | 353,922 | 373,283 | 354,276 | 371,394 | 376,715 | 424,853 | 389,734 |
| 21 | 198,058 | 198,187 | 143,630 | 343,220 | 223,052 | 284,698 | 435,840 | 398,130 | 420,066 | 398,682 | 416,209 | 425,194 | 477,962 | 438,320 |
| 22 | 176,924 | 177,394 | 128,326 | 303,286 | 196,151 | 248,203 | 389,145 | 355,563 | 374,972 | 355,934 | 318,844 | 322,874 | 426,929 | 391,197 |
| 23 | 199,057 | 198,960 | 143,951 | 342,463 | 222,139 | 281,550 | 437,207 | 399,312 | 421,435 | 399,856 | 418,814 | 427,104 | 479,307 | 439,513 |
| 24 | 183,762 | 184,144 | 133,432 | 319,041 | 206,412 | 261,739 | 404,291 | 369,583 | 390,110 | 369,854 | 387,431 | 393,883 | 443,794 | 406,635 |
| 25 | 178,981 | 179,335 | 129,891 | 305,057 | 197,962 | 249,808 | 393,338 | 359,357 | 379,037 | 359,711 | 377,136 | 382,798 | 431,411 | 395,462 |
| 26 | 198,393 | 198,765 | 143,762 | 337,834 | 220,380 | 278,895 | 436,294 | 398,414 | 420,406 | 398,892 | 417,896 | 425,988 | 478,056 | 438,324 |
| 27 | 166,898 | 167,625 | 121,633 | 278,711 | 181,667 | 227,811 | 365,206 | 339,573 | 358,248 | 339,953 | 356,268 | 361,320 | 407,857 | 374,021 |
| 28 | 172,936 | 173,285 | 125,362 | 297,199 | 192,506 | 243,160 | 372,723 | 345,452 | 364,157 | 346,227 | 364,210 | 369,738 | 416,362 | 381,741 |
| 29 | 107,831 | 107,973 | 78,342 | 185,952 | 119,737 | 151,112 | 236,715 | 217,136 | 228,749 | 217,407 | 227,727 | 228,744 | 260,626 | 254,024 |
| 30 | 151,698 | 152,121 | 110,092 | 261,311 | 168,791 | 212,883 | 333,416 | 304,808 | 321,822 | 305,140 | 320,025 | 322,976 | 365,773 | 335,475 |
| 31 | 178,368 | 178,854 | 129,604 | 300,023 | 194,350 | 243,789 | 391,597 | 358,619 | 378,341 | 358,953 | 376,680 | 378,012 | 430,519 | 394,786 |
| Pumps : | 5,797,686 | 5,804,485 | 4,196,568 | 10,027,563 | 6,526,581 | 8,333,404 | 9,375,207 | 11,661,601 | 12,303,819 | 11,675,532 | 12,185,577 | 12,380,807 | 14,044,061 | 12,844,122 |
| MIN : | 107,831 | 107,973 | 78,342 | 185,952 | 119,737 | 151,112 | 0 | 217,136 | 228,749 | 217,407 | 227,727 | 228,744 | 260,626 | 254,024 |
| MAX : | 243,544 | 243,776 | 175,096 | 437,890 | 287,586 | 378,548 | 478,707 | 488,925 | 515,848 | 489,878 | 524,032 | 536,457 | 589,101 | 549,617 |
| STATIONS : | 50,061,493 | | | | 35,640,952 | | | | 24,566,384 | | 14,044,061 | 12,844,122 | | |
| TOTAL : | 137,157,012 | | | | | | | | | | | | | |

Date August 2019
 PWS No. 4126000

Monthly Weather Report
Harwich Water Department

| Day | Snow Fall (in.) (Gallons) | Rain Fall (in.) | Temperature High (°F) | Temperature Low (°F) | Temperature AVG (°F) | Weather Comments | Operator |
|----------------|------------------------------|-----------------|--------------------------|-------------------------|-------------------------|------------------|----------|
| 1 | | 0.00 | 84 | 66 | 76 | | |
| 2 | | 0.00 | 81 | 66 | 74 | | |
| 3 | | 0.00 | 83 | 65 | 74 | | |
| 4 | | 0.00 | 84 | 71 | 78 | | |
| 5 | | 0.00 | 79 | 68 | 73 | | |
| 6 | | 0.13 | 74 | 65 | 70 | | |
| 7 | | 0.00 | 80 | 65 | 73 | | |
| 8 | | 0.15 | 81 | 71 | 76 | | |
| 9 | | 0.00 | 84 | 70 | 77 | | |
| 10 | | 0.00 | 82 | 63 | 73 | | |
| 11 | | 0.00 | 77 | 59 | 68 | | |
| 12 | | 0.00 | 83 | 63 | 73 | | |
| 13 | | 0.51 | 79 | 70 | 75 | | |
| 14 | | 0.00 | 74 | 67 | 70 | | |
| 15 | | 0.00 | 75 | 65 | 70 | | |
| 16 | | 0.01 | 76 | 62 | 69 | | |
| 17 | | 0.00 | 75 | 65 | 70 | | |
| 18 | | 0.00 | 81 | 70 | 75 | | |
| 19 | | 0.00 | 84 | 74 | 79 | | |
| 20 | | 0.00 | 84 | 70 | 77 | | |
| 21 | | 0.00 | 80 | 69 | 74 | | |
| 22 | | 0.00 | 85 | 76 | 80 | | |
| 23 | | 0.00 | 77 | 67 | 72 | | |
| 24 | | 0.00 | 75 | 62 | 69 | | |
| 25 | | 0.00 | 71 | 64 | 68 | | |
| 26 | | 0.00 | 72 | 58 | 65 | | |
| 27 | | 0.00 | 70 | 53 | 62 | | |
| 28 | | 0.42 | 73 | 62 | 68 | | |
| 29 | | 0.25 | 72 | 64 | 68 | | |
| 30 | | 0.00 | 78 | 59 | 69 | | |
| 31 | | 0.00 | 78 | 63 | 70 | | |
| Total | | 1.47 | | | | | |
| Average | | 0.05 | 78.4 | 65.6 | | | |
| Max | | 0.51 | 85.0 | 75.8 | | | |
| Min | | 0.0 | 70.4 | 53.4 | | | |