



Town of Chatham
Department of Public Works
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TO: Honorable Select Board
Jill R. Goldsmith, Town Manager

FROM: Rob Faley, Director, Department of Public Works

DATE: January 8, 2025 (for the January 14, 2025 SB Meeting)

SUBJECT: Chatham Wells, PFAS, and Drinking Water Testing and Pumping Update

The following is a water supply update for the month of December 2024:

Training Field Wells 5 and 8 - Permanent Treatment Facility

1. Project Update:
 - First floor slab is fully cured and finished.
 - Site work: the watermain and hydrants have been installed; sewer main pipe materials have been delivered to the site.
 - HVAC and plumbing work is ongoing.
 - Winston Builders drained and removed the carbon for the GAC filter at Well 5.
 - Dig-It installed a new 3-gate cluster on Training Field Road for the new treatment plant.
 - Masonry blocks have been delivered to the site. Preparation work continues for masons to begin setting concrete block walls.



Mill Pond Wells 10 and 11 - Pumping & Treatment Update

1. The Conservation Restriction for Well #10 is still under review by the Secretary of Energy and Environmental Affairs Office to activate Well #10. The Office was contacted again just after the new year and we are waiting for a response.

Chatham Water Pumping Status:

For the month of December, wells have been running 3 - 8 hours a day.

The Water Storage Tanks did not hit the low-level alarm this month:

Water Sampling

- 10 bacteria samples were taken in the month of December from the distribution system and the results reported to DEP. All samples were free of bacteria.
- Monthly and quarterly samples were taken for alkalinity and orthophosphates.

Station Maintenance

- Routine and annual maintenance and housekeeping was performed at all stations.
- Static and dynamic (drawdowns) water level readings were recorded for each well.
- Aqueous continued pressure washing the storage tanks.
- Maher replaced the head shaft and installed a packing gland on one of Morton Road's raw water pumps.
- Hach performed probe maintenance at all stations.

System Maintenance

- Painting of the hydrants was completed.
- Testing of second round of reduced pressure zone devices was completed.
- Veolia employees continued to inspect numerous customer residences in response to the water service material data that is needed to complete the lead and copper data base.
- Bortolotti repaired a water main break on Shore Road.
- Bortolotti repaired a water main leak at Cove Hill Circle.

Meter Reading

- Water meter readings were completed for the month of December.

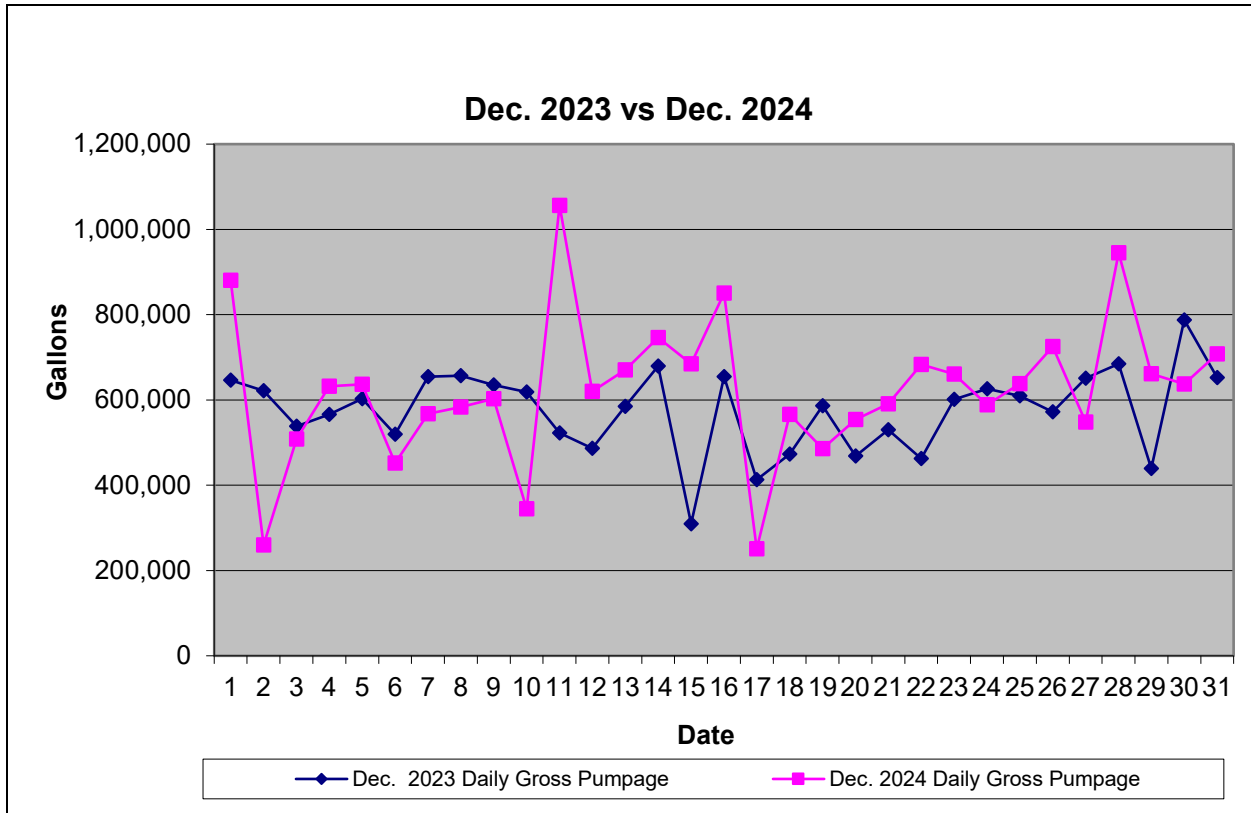
Meter Activities

Dig Safes	New	Final	Turn on/off	Repair	Replace & Install Radio	Inspections
218	9	15	78	16	46	48

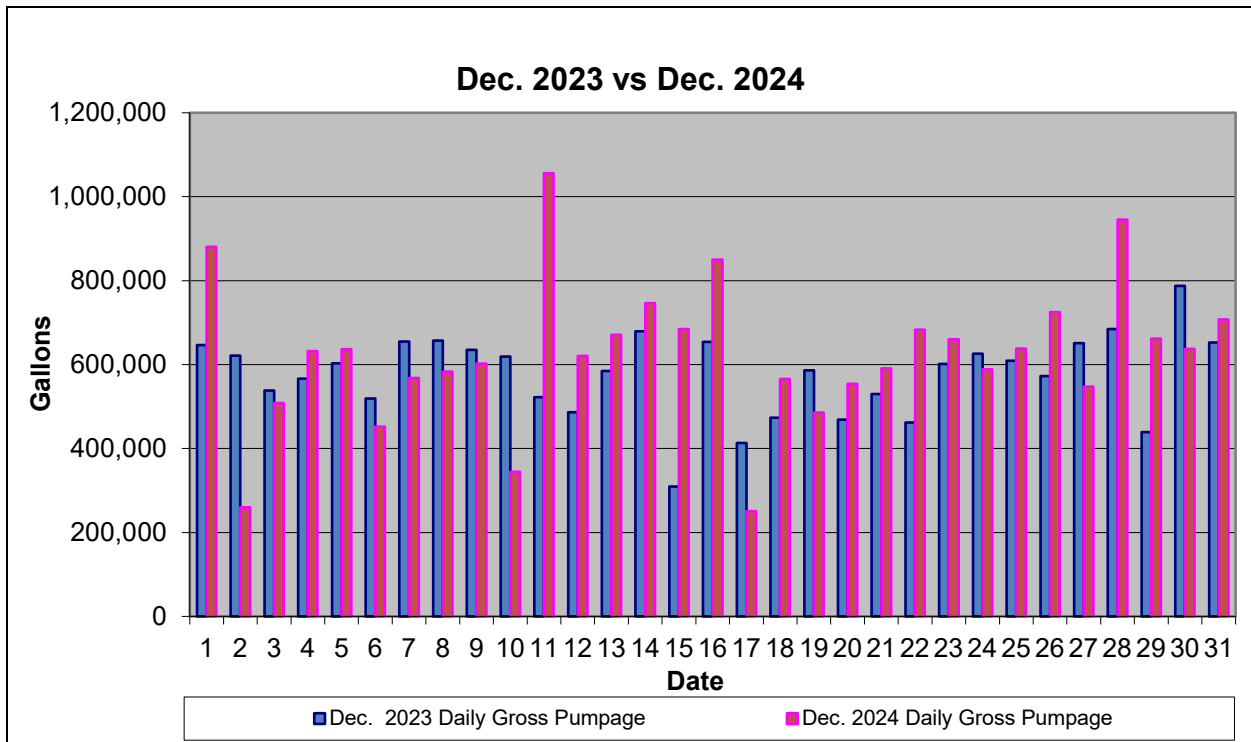
December 2023 vs December 2024

DATE	Dec. 2023 Daily Gross Pumpage	Dec. 2024 Daily Gross Pumpage	Dec. 2023 vs. Dec. 2024 Increase / Decrease (Gallons)	Dec. 2023vs Dec. 2024 Increase / Decrease (Percent)
1	646,500	880,300	233,800	36%
2	621,300	260,200	(361,100)	-58%
3	538,500	508,600	(29,900)	-6%
4	566,400	632,000	65,600	12%
5	603,100	636,900	33,800	6%
6	519,500	452,100	(67,400)	-13%
7	654,800	567,800	(87,000)	-13%
8	657,200	583,400	(73,800)	-11%
9	635,200	602,600	(32,600)	-5%
10	618,800	344,400	(274,400)	-44%
11	522,500	1,056,100	533,600	102%
12	486,300	620,300	134,000	28%
13	584,700	670,700	86,000	15%
14	679,000	746,400	67,400	10%
15	309,700	684,800	375,100	121%
16	654,300	850,400	196,100	30%
17	412,900	250,700	(162,200)	-39%
18	473,200	565,700	92,500	20%
19	586,400	485,900	(100,500)	-17%
20	468,700	553,900	85,200	18%
21	530,100	591,000	60,900	11%
22	462,200	683,300	221,100	48%
23	601,300	660,300	59,000	10%
24	626,000	588,800	(37,200)	-6%
25	609,200	637,800	28,600	5%
26	572,300	725,300	153,000	27%
27	651,200	547,700	(103,500)	-16%
28	684,700	945,200	260,500	38%
29	439,500	661,700	222,200	51%
30	787,700	637,300	(150,400)	-19%
31	652,400	707,800	55,400	8%
Total	17,855,600	19,339,400	1,483,800	8.3%

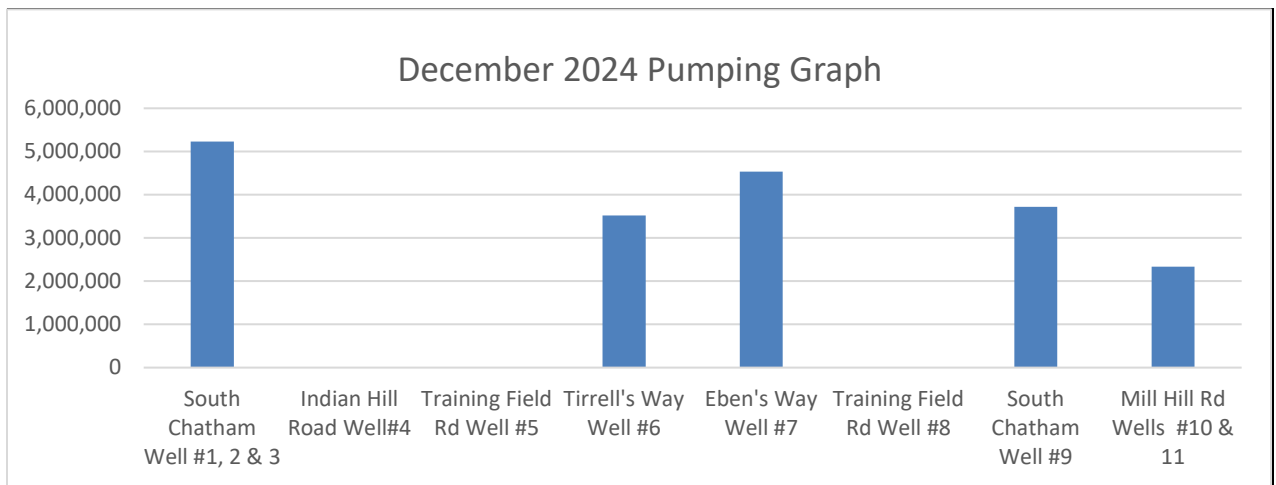
Pumping Comparison Graph



Pumping Comparison Bar Chart



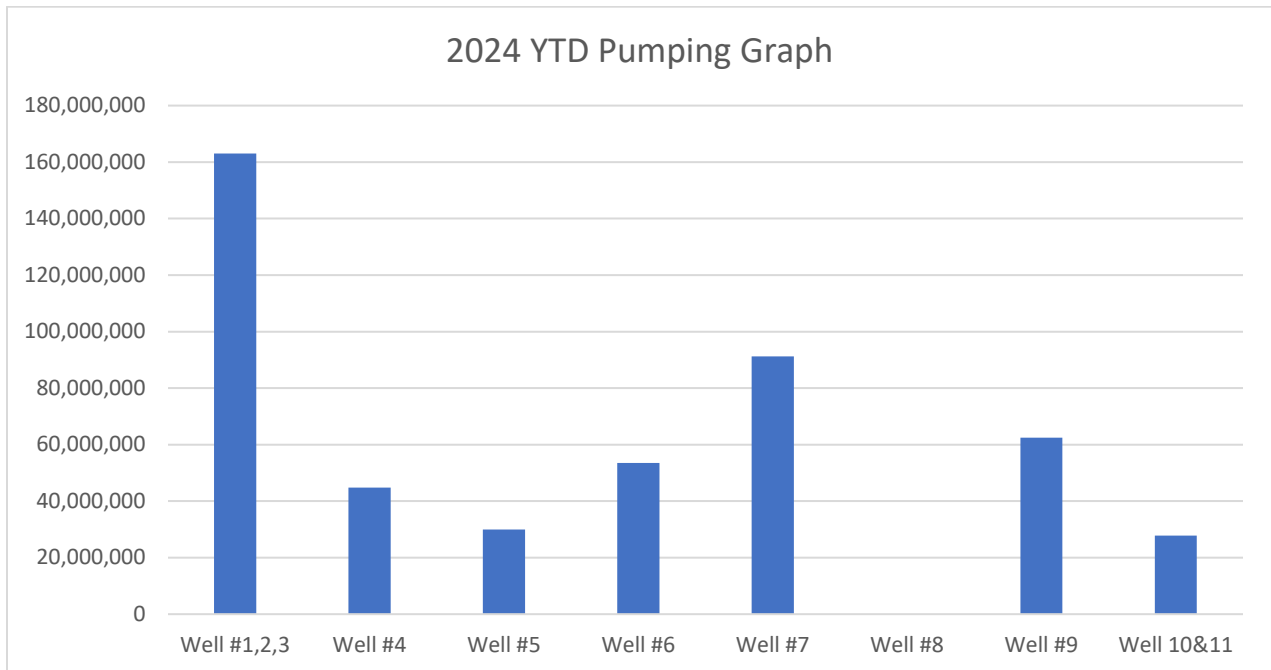
Chatham Water Department						MONTHLY PUMPAGE REPORT				DEC 2024	
DATE	DAY	South Chatham Well #1, 2 & 3	Indian Hill Road Well#4	Training Field Rd Well #5	Tirrell's Way Well #6	Eben's Way Well #7	Training Field Rd Well #8	South Chatham Well #9	Mill Hill Rd Wells #10 & 11	Daily Gross Pumpage	
1					263,100	331,900		285,300		880,300	
2					75,700	109,500		75,000		260,200	
3					151,500	180,400		164,200	12,500	508,600	
4					146,700	187,600		153,900	143,800	632,000	
5					156,600	205,200		155,800	119,300	636,900	
6					113,200	144,300		128,000	66,600	452,100	
7					127,900	162,100		135,200	142,600	567,800	
8					126,600	158,300		143,600	154,900	583,400	
9					163,100	219,100		152,900	67,500	602,600	
10					78,600	95,600		91,400	78,800	344,400	
11		458,300			140,600	202,300		129,700	125,200	1,056,100	
12		212,300			101,500	109,000		129,500	68,000	620,300	
13		307,400			79,900	100,100		84,500	98,800	670,700	
14		308,300			103,600	138,400		106,600	89,500	746,400	
15		210,600			118,100	154,200		126,200	75,700	684,800	
16		322,900			123,200	159,400		130,200	114,700	850,400	
17		90,700			37,700	49,100		40,100	33,100	250,700	
18		217,100			72,400	94,200		77,100	104,900	565,700	
19		183,800			78,400	102,200		83,200	38,300	485,900	
20		227,500			85,000	110,500		90,200	40,700	553,900	
21		275,200			93,000	120,600		102,200		591,000	
22		272,300			125,900	167,100		118,000		683,300	
23		248,000			99,000	125,600		117,300	70,400	660,300	
24		191,400			98,700	117,200		96,100	85,400	588,800	
25		203,200			112,200	140,900		85,500	96,000	637,800	
26		302,000			92,700	126,800		132,900	70,900	725,300	
27		191,900			82,200	107,500		87,700	78,400	547,700	
28		318,800			157,500	204,300		168,700	95,900	945,200	
29		206,500			110,700	144,000		115,000	85,500	661,700	
30		217,600			94,700	126,600		89,100	109,300	637,300	
31		267,800			107,500	137,300		126,000	69,200	707,800	
Total		5,233,600			3,517,500	4,531,300		3,721,100	2,335,900	19,339,400	
								Minimum		250,700	
								Maximum		1,056,100	
								Average		623,852	



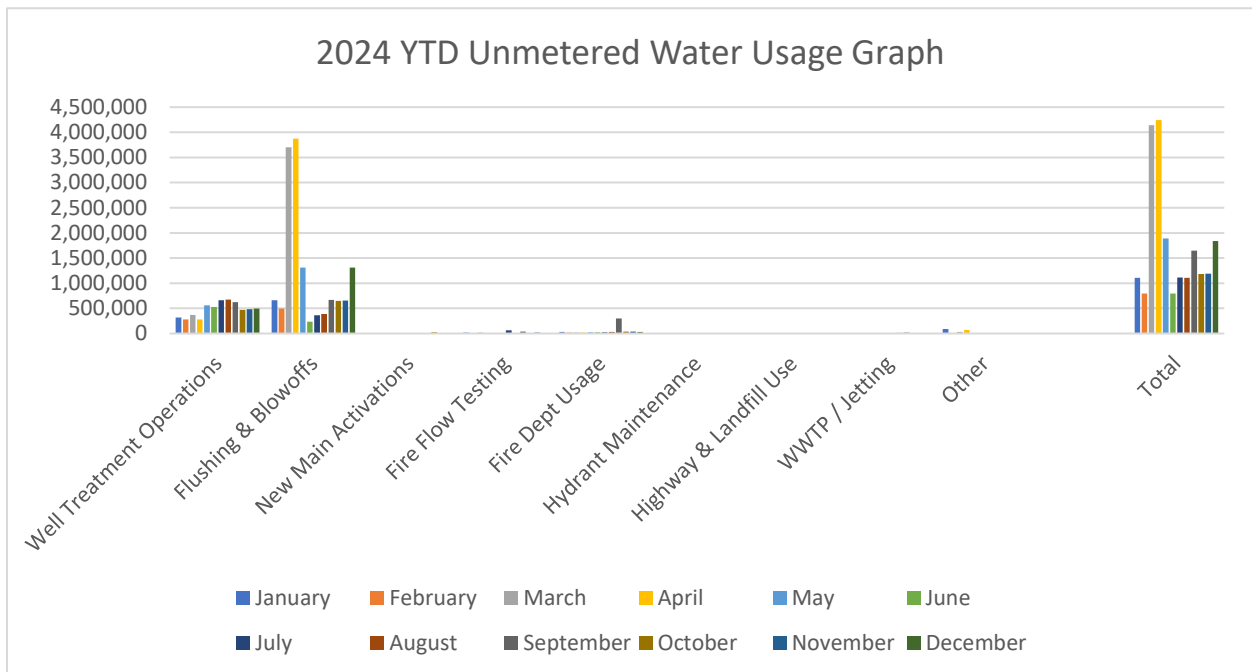
2024 YTD Pumping

	Well #1,2,&3	Well #4	Well #5	Well #6	Well #7	Well #8	Well #9	Well 10&11	Monthly Total	Last Years Pumping	Variance
January	13,524,300	198,400	0	1,076,200	988,300	0	788,400	0	16,575,600	17,179,500	-603,900
February	10,556,600	12,400	0	1,482,600	1,583,000	0	1,061,000	0	14,695,600	17,798,000	-3,102,400
March	5,107,800	55,000	0	3,571,000	4,877,400	0	3,321,700	0	16,932,900	17,807,500	-874,600
April	9,948,800	34,400	1,494,800	2,658,000	4,258,000	0	3,080,100	305,700	21,779,800	21,827,900	-48,100
May	15,017,600	1,666,000	3,970,600	4,242,600	6,460,900	0	4,615,500	1,277,200	37,250,400	49,497,500	-12,247,100
June	20,518,600	9,500,600	4,218,100	8,445,900	13,943,400	0	9,242,600	0	65,869,200	67,742,100	-1,872,900
July	21,545,000	11,693,400	7,537,100	9,266,100	15,624,600	0	10,406,000	5,582,500	81,654,700	81,682,800	-28,100
August	21,255,100	11,790,900	7,617,900	9,396,700	15,788,000	0	10,082,700	5,699,700	81,631,000	76,460,100	5,170,900
September	17,700,200	4,052,300	5,150,300	6,668,800	13,152,900	0	8,275,600	5,984,100	60,984,200	55,880,800	5,103,400
October	17,766,700	4,654,800	19,200	0	5,215,500	0	3,962,500	5,694,400	37,313,100	34,631,800	2,681,300
November	4,855,700	1,144,000	0	3,211,200	4,823,200	0	3,918,500	927,800	18,880,400	19,897,300	-1,016,900
December	5,233,600	0	0	3,517,500	4,531,300	0	3,721,100	2,335,900	19,339,400	17,855,600	1,483,800
Totals	163,030,000	44,802,200	30,008,000	53,536,600	91,246,500	0	62,475,700	27,807,300	472,906,300	478,260,900	-5,354,600

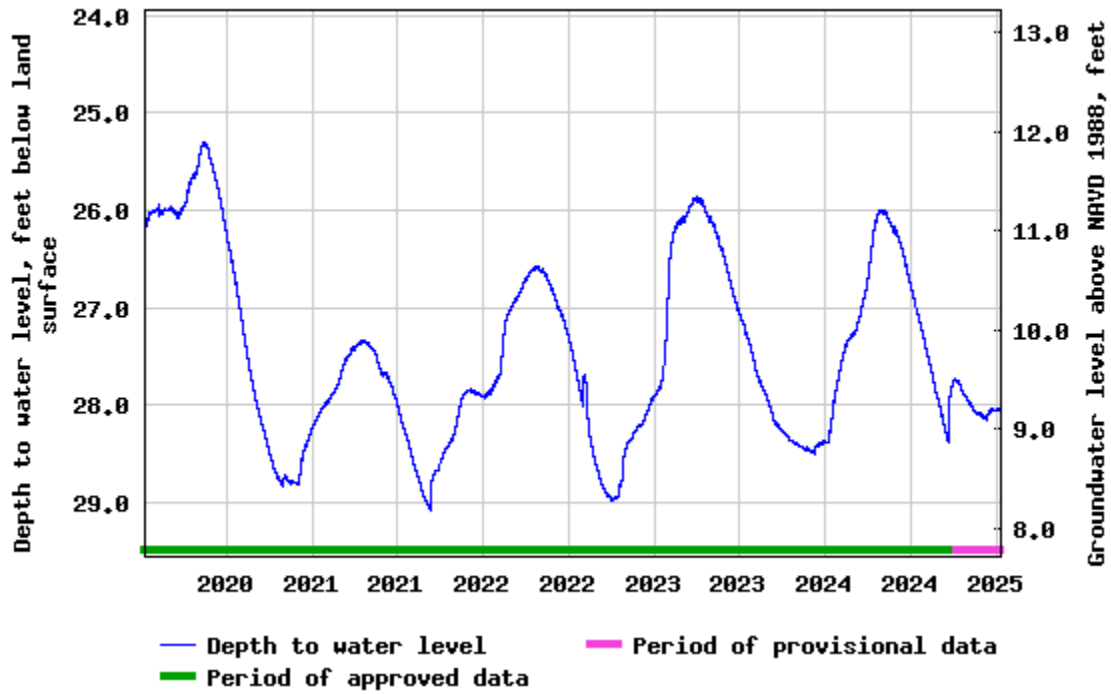
2024 YTD Pumping Graph



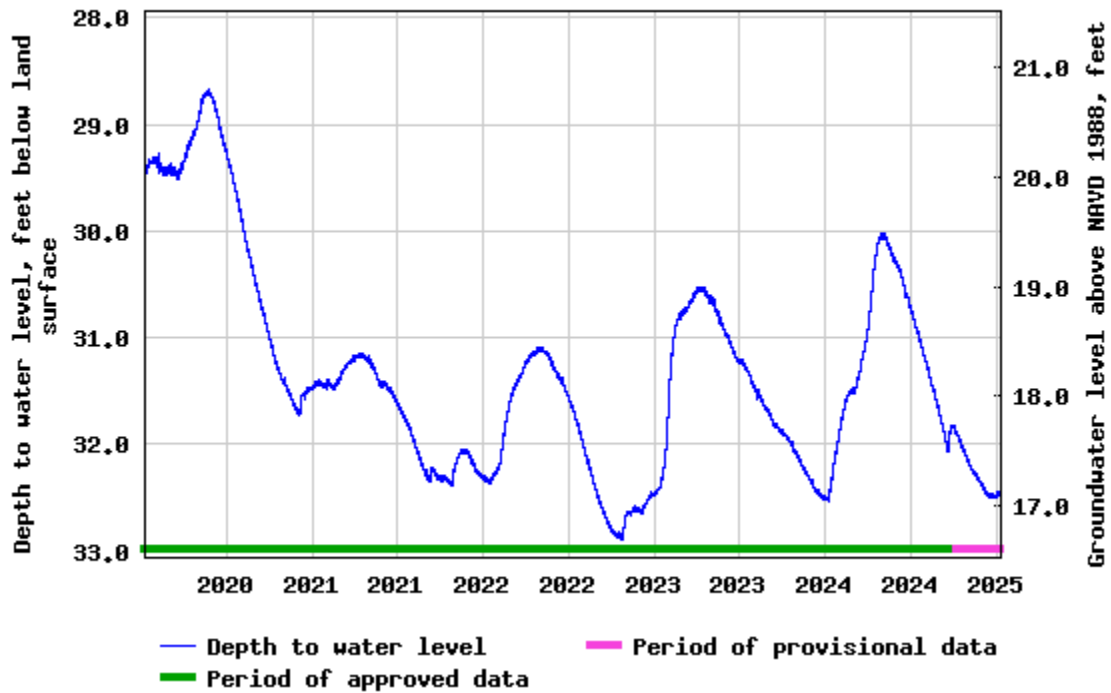
Monthly Unmetered or (Unbilled) Water Usage						2024
Type of use	January	February	March	April	May	June
Well Treatment Operations	317,077	277,848	368,445	277,487	557,480	530,482
Flushing & Blowoffs	658,527	493,500	3,704,420	3,873,243	1,310,350	238,000
New Main Activations	0	0	0	0	0	0
Fire Flow Testing	15,915	0	15,915	0	0	0
Fire Dept Usage	28,750	21,250	20,275	21,250	23,750	25,750
Hydrant Maintenance	0	0	0	0	0	0
Highway & Landfill Use	0	0	0	0	0	0
WWTP / Jetting	0	2,250	0	0	0	0
Other known use			0	69,395		0
	87,500		30,000			0
Total	1,107,769	794,848	4,139,055	4,241,375	1,891,580	794,232
Type of use	July	August	September	October	November	December
Well Treatment Operations	659,240	677,461	620,624	472,583	484,604	495,862
Flushing & Blowoffs	363,800	389,100	667,475	648,785	654,870	1,309,440
New Main Activations	0	0	0	25,000	0	0
Fire Flow Testing	63,375	0	39,465	0	15,915	0
Fire Dept Usage	26,750	28,750	300,000	35,795	35,750	34,750
Hydrant Maintenance	1,000	1,000	1,000	1,000	1,000	1,000
Highway & Landfill Use	0	0	0	0	0	0
WWTP / Jetting	0	10,000	17,475	0	0	0
Other known use						
Total	1,114,165	1,106,311	1,646,039	1,183,163	1,192,139	1,841,052
Year To Date Usage	21,051,728					



USGS 414101070011001 MA-CGM 138R CHATHAM, MA



USGS 414632070014901 MA-BMW 22R BREWSTER, MA



Chatham 5-year Pumping Comparison (Month of December)

December Date	December 2020 Daily Gross Pumpage	Hours	December 2021 Daily Gross Pumpage	Hours	December 2022 Daily Gross Pumpage	Hours	December 2023 Daily Gross Pumpage	Hours	December 2024 Daily Gross Pumpage	Hours	Average Daily Pumpage (gallons)	Average Daily Pumpage (hours)
1	532,100	4	456,600	3.5	498,800	4	646,500	6	880,300	6.75	602,860	4.75
2	599,500	5	486,700	3.75	594,400	5	621,300	5.25	260,200	7	512,420	5.2
3	527,700	4	459,800	3.5	578,400	4.75	538,500	4.25	508,600	5	522,600	4.3
4	833,200	7.25	439,300	3.25	532,000	4.25	566,400	4.5	632,000	8.5	600,580	5.55
5	648,600	5.5	612,800	5	552,200	4.5	603,100	5	636,900	12	610,720	6.4
6	748,600	6.5	464,300	5.5	490,800	4	519,500	4	452,100	4.75	535,060	4.95
7	1,488,800	9.5	525,000	4.25	466,100	3.5	654,800	5.5	567,800	5	740,500	5.55
8	859,900	5.75	471,200	3.75	575,500	4.75	657,200	5.5	583,400	6.75	629,440	5.3
9	528,000	4.25	498,300	4	520,200	4.25	635,200	5.25	602,600	5.5	556,860	4.65
10	545,900	4.5	436,500	4.25	581,400	4.75	618,800	5	344,400	4.75	505,400	4.65
11	591,800	5	435,600	4.25	609,300	5	522,500	4.25	1,056,100	4	643,060	4.5
12	507,200	4	637,000	5.5	497,700	4	486,300	3.75	620,300	3	549,700	4.05
13	600,200	6	509,900	4	530,700	4.25	584,700	4.75	670,700	4	579,240	4.6
14	699,700	7	458,900	3.5	670,800	5.75	679,000	5.75	746,400	4	650,960	5.2
15	534,100	4.25	462,300	3.5	518,200	4	309,700	2.25	684,800	4.5	501,820	3.7
16	441,400	3.5	416,200	3	549,100	4.5	654,300	5.5	850,400	4.5	582,280	4.2
17	594,600	5	528,100	4.25	551,700	4.5	412,900	3.25	250,700	3	467,600	4
18	534,200	4.25	433,300	3.25	684,500	5.75	473,200	3.75	565,700	4	538,180	4.2
19	620,900	5.5	445,300	3.5	471,500	3.75	586,400	4.75	485,900	3	522,000	4.1
20	517,900	4	541,000	4.5	563,800	4.5	468,700	3.75	553,900	4	529,060	4.15
21	689,600	6	525,300	4.25	592,000	5	530,100	4.25	591,000	4	585,600	4.7
22	496,200	4	542,000	4.5	603,400	5	462,200	3.5	683,300	3	557,420	4
23	631,100	5.5	766,100	6.5	478,900	3.75	601,300	5	660,300	3	627,540	4.75
24	547,100	4.5	322,300	2.5	574,700	4.75	626,000	5.25	588,800	4	531,780	4.2
25	468,800	3.5	603,300	5	729,700	6.25	609,200	5	637,800	3.75	609,760	4.7
26	639,900	5.5	616,500	5	812,300	7	572,300	4.75	725,300	6	673,260	5.65
27	690,300	6	540,900	4.5	804,300	7	651,200	5.5	547,700	3	646,880	5.2
28	609,000	5	641,600	5.5	790,100	7	684,700	5.75	945,200	6.25	734,120	5.9
29	642,200	5.5	595,200	5	728,400	6.25	439,500	3.5	661,700	4.5	613,400	4.95
30	725,600	6.25	617,200	5	585,500	4.75	787,700	6.75	637,300	4.25	670,660	5.4
31	652,000	5.5	722,400	6.25	856,400	7.5	652,400	5.5	707,800	3.5	785,080	5.65
Total	19,746,100	162	16,210,900	134	18,592,800	154	17,855,600	146	19,339,400	149	18,415,840	149.1