



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: October 9, 2024 (for the October 15, 2024 SB Meeting)

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

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

Training Field Wells 5 and 8 - Permanent Treatment Facility

Temporary Treatment at Well 5:

- Well 5 continues in full operation using the temporary GAC filter with an anticipated shut down for just after Indigenous People's Day.

Permanent Treatment Facility at Wells 5 & 8:

1. Project Update:
 - Will the slab complete, reinforcing steel and concrete form work continued for the foundation walls. The first foundation wall concrete pour occurred around the middle of the month. The remaining foundation wall pour will occur in early October.



Mill Pond Wells 10 and 11 - Pumping & Treatment Update

Project Progress

1. Well #11 is on-line and contributing to Chatham's water supply needs.
2. We are still in the review queue from the Secretary of Energy and Environmental Affairs Office to activate Well #10. Recent communications have indicated the review will occur over the next few weeks.

Chatham Water Pumping Status:

For the month of September, wells have been running 10 -15 hours a day.

The Water Storage Tanks hit the low-level alarm 6 times this month:

- 9/4, 9/9, 9/11, 9/13, 9/16, and 9/18.

All the low-level alarms are still occurring on either a Monday, Wednesday, or Friday most likely due to irrigation systems.

Water Sampling

- 30 bacteria samples were taken in the month of September from the distribution system and the results reported to DEP. All samples were free of bacteria.
- PFAS6 samples were taken from Well 5 and the results submitted to DEP. The site was non-detect.

Station Maintenance

- Routine and annual maintenance and housekeeping was performed at all stations.
- Solicited quotes for the repair of the 1.25 MG fence.
- Signed an agreement with Maher Services to redevelop Well 6.

System Maintenance

- Dig-It relocated the water main on Honeysuckle Lane to accommodate new sewer line.
- Annual testing of registered irrigation systems continued.
- Painting of 1/5 of the hydrants continued.
- 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.

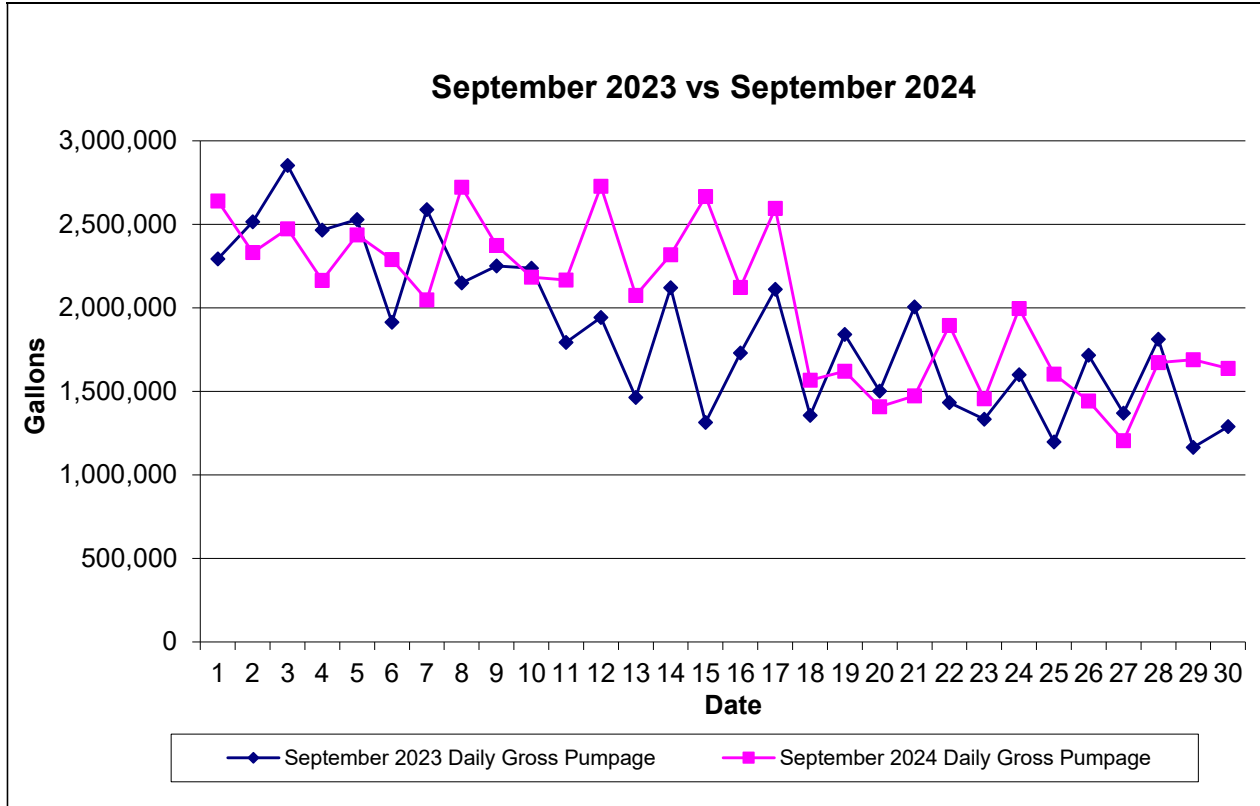
Water Supply Hydraulic Analysis Report

- On September 20th, Weston & Sampson provided an update to the SB regarding an overview of Chatham's existing water supply, population trends and water demands, and recommendations for the future.
- Recommendations included:
 - Maintain a tool of outdoor watering restrictions
 - Develop a town-wide water conservation plan
 - Explore additional water supply sources

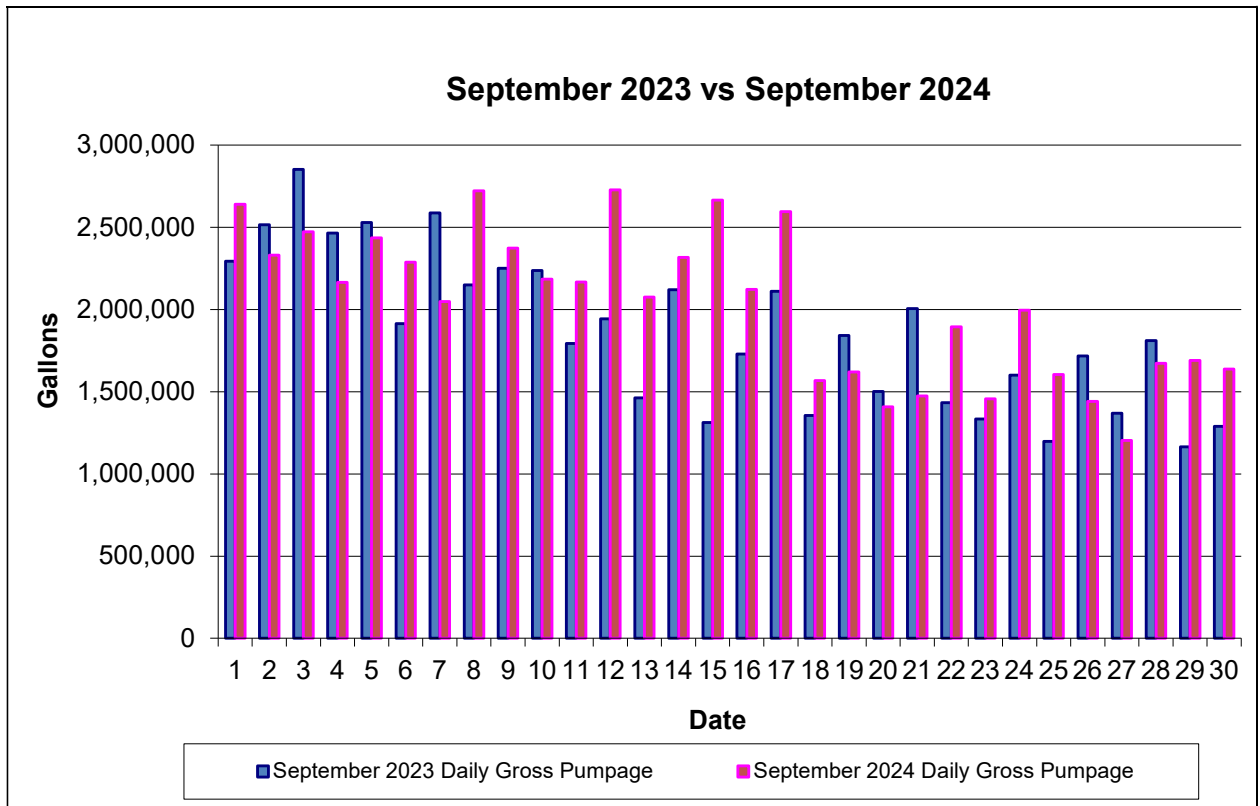
September 2023 vs September 2024

DATE	September 2023 Daily Gross Pumpage	September 2024 Daily Gross Pumpage	September 2023 vs. September 2024 Increase / Decrease (Gallons)	September 2023 vs September 2024 Increase / Decrease (Percent)
1	2,293,000	2,638,700	345,700	15%
2	2,514,200	2,330,700	(183,500)	-7%
3	2,850,900	2,472,000	(378,900)	-13%
4	2,465,300	2,164,500	(300,800)	-12%
5	2,528,700	2,435,800	(92,900)	-4%
6	1,913,300	2,288,000	374,700	20%
7	2,586,600	2,047,900	(538,700)	-21%
8	2,149,500	2,721,200	571,700	27%
9	2,251,000	2,372,100	121,100	5%
10	2,236,600	2,183,400	(53,200)	-2%
11	1,793,200	2,166,800	373,600	21%
12	1,942,200	2,726,400	784,200	40%
13	1,463,200	2,074,600	611,400	42%
14	2,119,600	2,316,700	197,100	9%
15	1,313,300	2,665,300	1,352,000	103%
16	1,729,800	2,122,100	392,300	23%
17	2,111,200	2,594,800	483,600	23%
18	1,355,200	1,566,800	211,600	16%
19	1,841,000	1,620,600	(220,400)	-12%
20	1,502,000	1,408,700	(93,300)	-6%
21	2,005,900	1,473,000	(532,900)	-27%
22	1,432,500	1,894,700	462,200	32%
23	1,333,400	1,455,800	122,400	9%
24	1,599,700	1,996,300	396,600	25%
25	1,197,800	1,603,700	405,900	34%
26	1,716,500	1,441,400	(275,100)	-16%
27	1,368,700	1,204,300	(164,400)	-12%
28	1,811,300	1,671,600	(139,700)	-8%
29	1,165,200	1,689,000	523,800	45%
30	1,290,000	1,637,300	347,300	27%
Total	55,880,800	60,984,200	5,103,400	9.1%

Pumping Comparison Graph

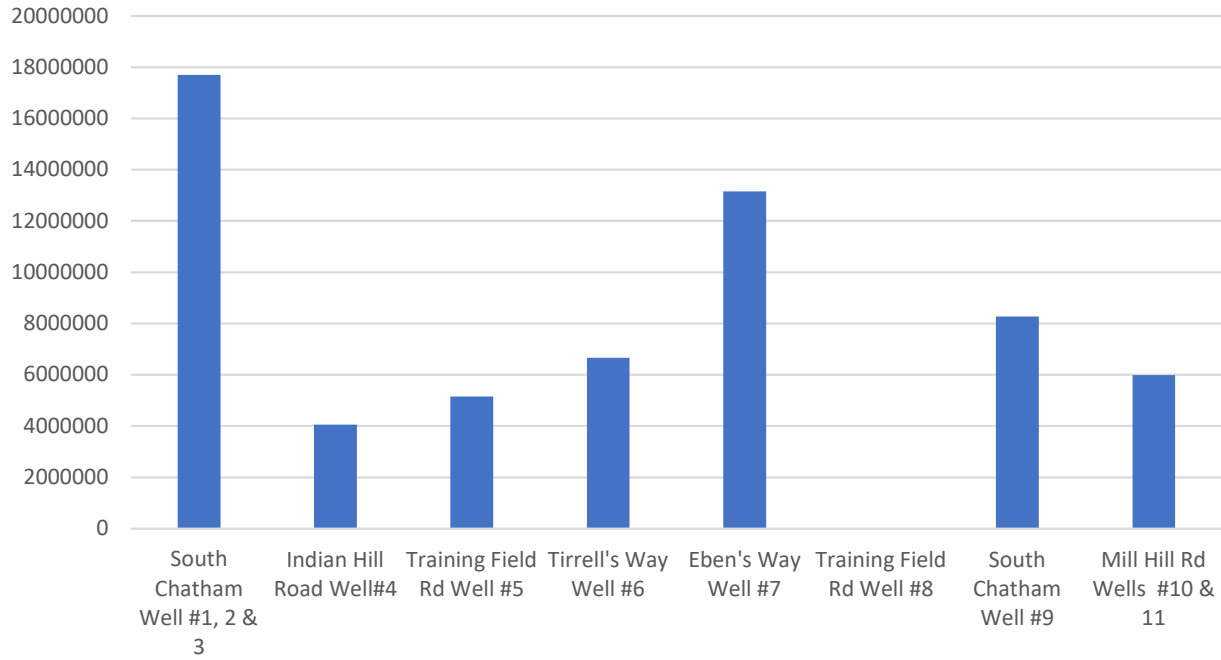


Pumping Comparison Bar Chart



Chatham Water Department MONTHLY PUMPAGE REPORT							SEPT 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		756,900	324,300	242,100	284,100	480,200		302,100	249,000	2,638,700
2		668,800	353,000	227,100	258,600	439,300		276,800	107,100	2,330,700
3		696,600	369,400	18,600	308,300	523,000		297,600	258,500	2,472,000
4		566,000	325,900	209,300	228,600	391,500		251,300	191,900	2,164,500
5		644,200	396,500	258,500	229,600	394,000		260,300	252,700	2,435,800
6		582,900	347,900	190,300	261,200	435,200		289,400	181,100	2,288,000
7		218,900	344,500	233,700	260,200	454,700		271,400	264,500	2,047,900
8		7,100	632,700	263,100	426,500	712,600		314,700	364,500	2,721,200
9		804,900	256,000	247,800	194,400	328,600		358,100	182,300	2,372,100
10		679,200	50,700	257,400	255,800	425,200		271,800	243,300	2,183,400
11		673,800	26,800	210,800	280,700	479,800		283,200	211,700	2,166,800
12		794,300	2,000	296,100	361,800	599,900		389,300	283,000	2,726,400
13		586,000	177,100	210,500	233,300	396,200		250,100	221,400	2,074,600
14		781,100		255,400	307,400	554,400		313,000	105,400	2,316,700
15		841,500		273,900	432,500	571,500		452,400	93,500	2,665,300
16		654,500		237,900	253,400	530,800		273,400	172,100	2,122,100
17		1,032,300		114,100	364,800	609,000		387,800	86,800	2,594,800
18		357,000	270,500	10,700	198,800	277,400		235,000	217,400	1,566,800
19		372,900	139,800	171,000	207,700	409,000		188,700	131,500	1,620,600
20		439,100	35,200	58,400	190,200	321,900		201,500	162,400	1,408,700
21		504,600			210,000	354,200		211,300	192,900	1,473,000
22		602,700		8,600	292,200	497,100		306,700	187,400	1,894,700
23		395,800		154,000	204,100	328,200		224,700	149,000	1,455,800
24		644,300		225,900	241,000	413,100		253,200	218,800	1,996,300
25		509,200		188,500	183,600	305,700		195,300	221,400	1,603,700
26		514,400		193,600		348,500		216,500	168,400	1,441,400
27		431,900		132,500		282,900		179,800	177,200	1,204,300
28		557,500		195,500		392,000		249,200	277,400	1,671,600
29		683,700		56,100		448,300		281,100	219,800	1,689,000
30		698,100		8,900		448,700		289,900	191,700	1,637,300
31										
Total		17,700,200	4,052,300	5,150,300	6,668,800	13,152,900		8,275,600	5,984,100	60,984,200
								Minimum		
								Maximum		2,726,400
								Average		1,967,232

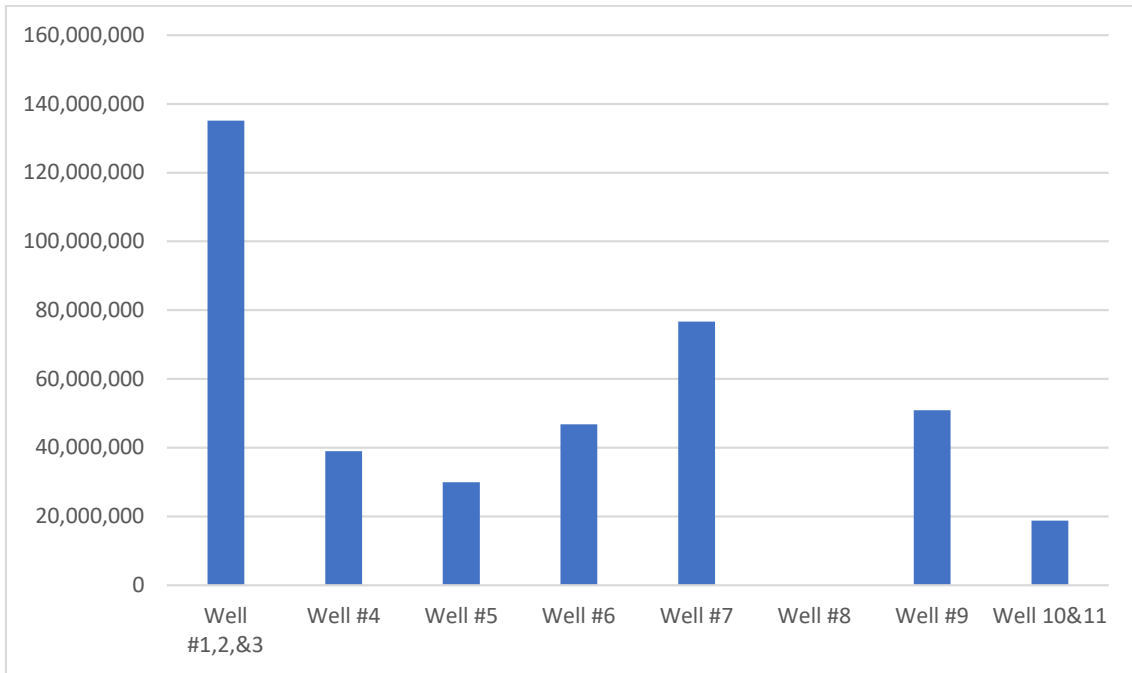
September 2024 Pumping Graph



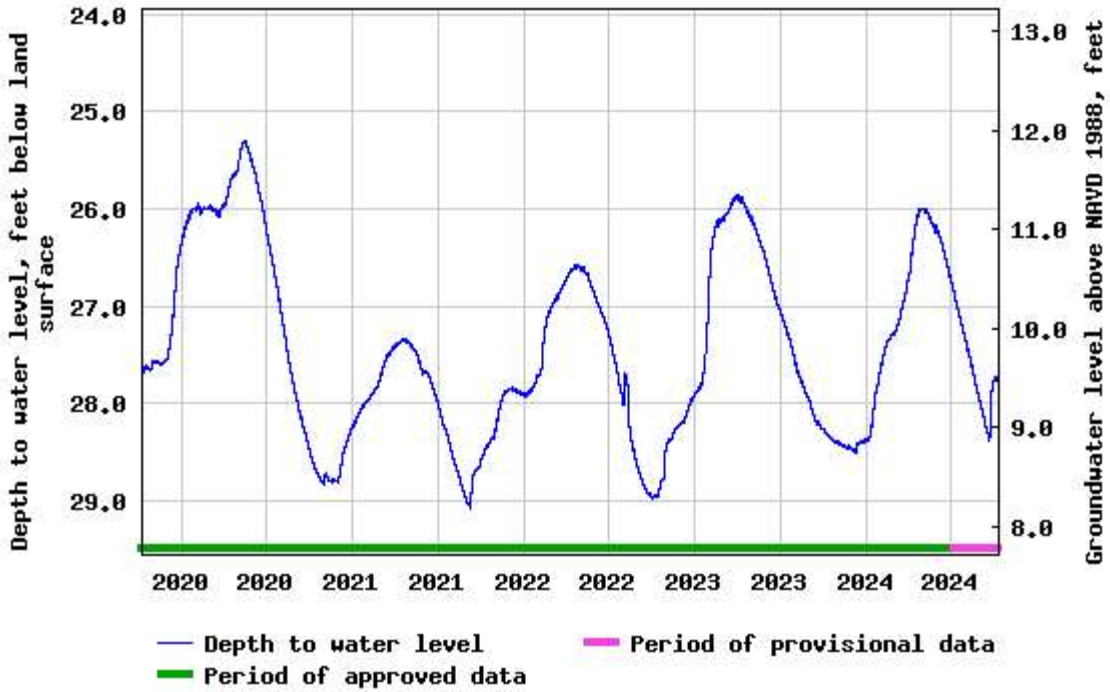
2024 YTD Pumping

	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									0		0
November									0		0
December									0		0
Totals	135,174,000	39,003,400	29,988,800	46,807,900	76,676,500	0	50,873,600	18,849,200	397,373,400	405,876,200	-8,502,800

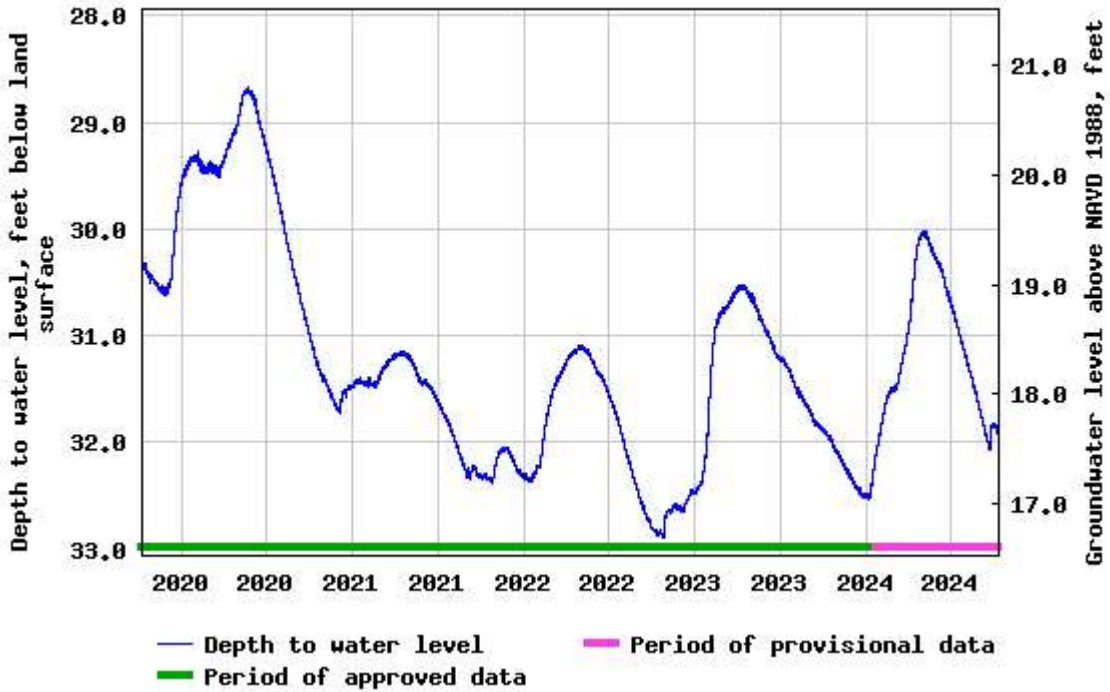
2024 YTD Pumping Graph



USGS 414181070011001 MA-CGM 138R CHATHAM, MA



USGS 414632070014901 MA-BMW 22R BREWSTER, MA



Chatham 5-year Pumping Comparison (Month of September)

Date	September 2021		September 2022		September 2023		September 2024		Average Daily Pumpage (gallons)	Average Daily Pumpage (hours)		
	Gross Pumpage	Hours	Gross Pumpage	Hours	Gross Pumpage	Hours	Gross Pumpage	Hours				
1	2,569,700	11.25	2,109,100	12.75	2,016,600	9.75	2,293,000	11	2,638,700	12		
2	2,485,700	12.75	1,910,200	11	2,068,300	10.5	2,514,200	12.5	2,330,700	11.25		
3	2,210,300	12	2,240,800	13.5	1,995,100	9.75	2,850,900	14.5	2,472,000	13.25		
4	2,394,900	11.75	2,398,700	13.5	2,290,100	11.5	2,465,300	11.75	2,164,500	9		
5	2,713,600	13.5	2,527,000	14.75	1,667,400	8.5	2,528,700	12	2,435,800	12.75		
6	3,083,900	15.25	2,109,100	12	1,526,100	7.5	1,913,300	9.5	2,288,000	13		
7	3,026,300	16	2,405,700	14	1,477,500	7.25	2,586,600	12.5	2,047,900	11		
8	2,618,000	12.5	2,110,300	12.5	1,794,400	9	2,149,500	10.5	2,721,200	17.5		
9	2,414,000	13.25	1,816,500	11	1,568,300	8.25	2,251,000	11.5	2,372,100	14		
10	2,323,800	11	1,491,200	10.5	1,761,400	9	2,236,600	10	2,183,400	9		
11	2,182,400	10.5	1,887,300	14.25	1,996,800	10.5	1,793,200	11.5	2,166,800	13		
12	2,397,600	12.25	2,194,700	14.75	1,125,800	5.75	1,942,200	10	2,726,400	14.5		
13	2,327,800	11	2,185,400	15.75	1,415,200	7.25	1,463,200	9.5	2,074,600	10		
14	2,659,300	11.5	1,977,100	14.25	1,358,000	7	2,119,600	9.25	2,316,700	13.75		
15	2,497,300	11	2,009,000	15	1,504,500	7.5	1,313,300	7.25	2,665,300	14.5		
16	2,486,200	12.5	1,374,600	10.25	1,591,600	7.5	1,729,800	10.5	2,122,100	14.75		
17	2,062,000	10	1,254,000	10.25	1,476,000	7.25	2,111,200	6.75	2,594,800	14.5		
18	2,002,600	12	1,521,800	11.5	1,680,900	9	1,355,200	8.75	1,566,800	7.5		
19	2,240,900	12	1,853,700	12.75	1,494,200	7.25	1,841,000	10.5	1,620,600	10		
20	2,162,400	10.75	1,488,400	11.75	1,530,600	7.5	1,502,000	6.5	1,408,700	9		
21	2,505,400	11.5	1,490,400	10.25	1,348,100	5.5	2,005,900	11	1,477,800	10		
22	2,358,000	11.75	1,456,200	11.25	1,228,400	5.75	1,432,500	7.25	1,894,900	13		
23	2,127,200	7.75	1,510,100	19.5	1,188,600	5.25	1,333,400	9.5	1,455,800	10		
24	2,221,100	10	1,341,000	8.75	1,376,400	7	1,599,700	7	1,996,300	9		
25	2,285,000	12	1,182,500	9.25	1,463,600	8	1,197,800	7.25	1,603,700	7.75		
26	2,692,500	13	1,384,600	9.75	1,172,000	6	1,716,500	9.5	1,441,400	9		
27	2,321,200	10.5	1,220,900	9	1,493,600	7	1,368,700	7.25	1,204,300	9		
28	1,728,100	6.5	1,169,800	8.5	1,233,700	6	1,811,300	9.5	1,671,600	8		
29	2,039,000	9.5	1,074,400	9	1,339,000	7	1,165,200	6	1,689,000	11		
30	1,881,600	7	1,163,100	9	1,127,800	5.5	1,290,000	6.5	1,637,300	10.5		
Total	71,017,800	342	51,857,600	360	46,310,000	231	55,880,800	287	60,989,200	342		
											57,211,080	312.3