



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: November 5, 2024 (for the November 12, 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 October 2024:

Training Field Wells 5 and 8 - Permanent Treatment Facility

Temporary Treatment at Well 5:

- Well 5 has been shut down and drained for the winter. The contractor for the permanent treatment plant has taken possession of the Well 5 GAC temporary vessel to use in the new plant.

Permanent Treatment Facility at Wells 5 & 8:

1. Project Update:
 - The second foundation concrete pour took place. The foundation was leak tested and passed. Waterproofing and backfilling is continuing.
 - Concrete formwork for the first-floor slab is being formed with an expected concrete pour around mid-November.



Mill Pond Wells 10 and 11 - Pumping & Treatment Update

Project Progress

1. Well #11 is on-line and contributing up to 300,000 GPD.
2. The conservation easement for Well #10 is under review by the Secretary of Energy and Environmental Affairs Office. Until comments are received and/or approval given, we cannot draw water from Well #10.

Chatham Water Pumping Status:

For the month of October, wells have been running 8-12 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 October from the distribution system and the results reported to DEP. All samples were free of bacteria.
- PFAS6 samples were taken from Wells 4, 5 & Mill Hill Treatment Plant and the results submitted to DEP. The site was non-detect.
- Fourth quarter samples for Gross Alpha, Radium 226 & 228, Nitrate, SOCs, VOCs, Inorganics and Manganese were taken from the treatment plants.
- 10 distribution sampling sites were tested for alkalinity and orthophosphate.

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.
- The 1.25 MG storage tank fence was repaired.
- Maher Services redeveloped Well 6 with Pantomite. Motor has been installed. Waiting for sample results.
- Aqueous cleaned and inspected the raw water basin at the water treatment plant.
- Aqueous began pressure washing the storage tanks.

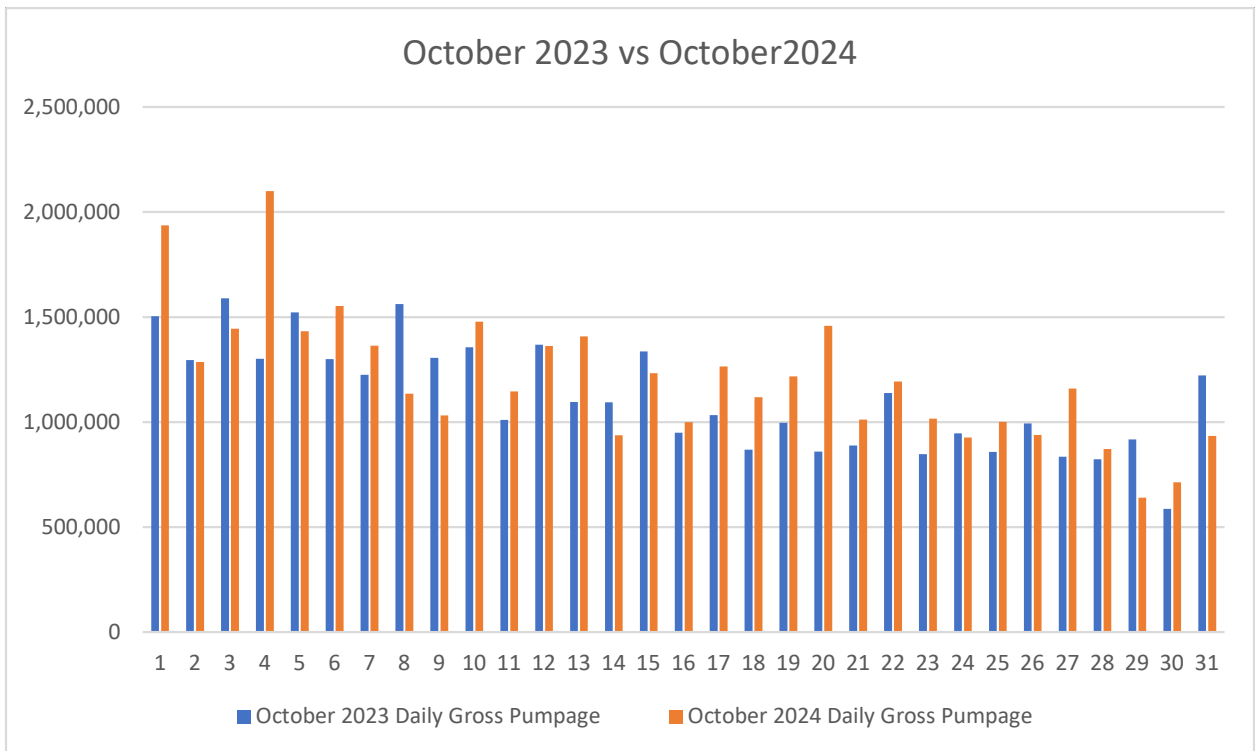
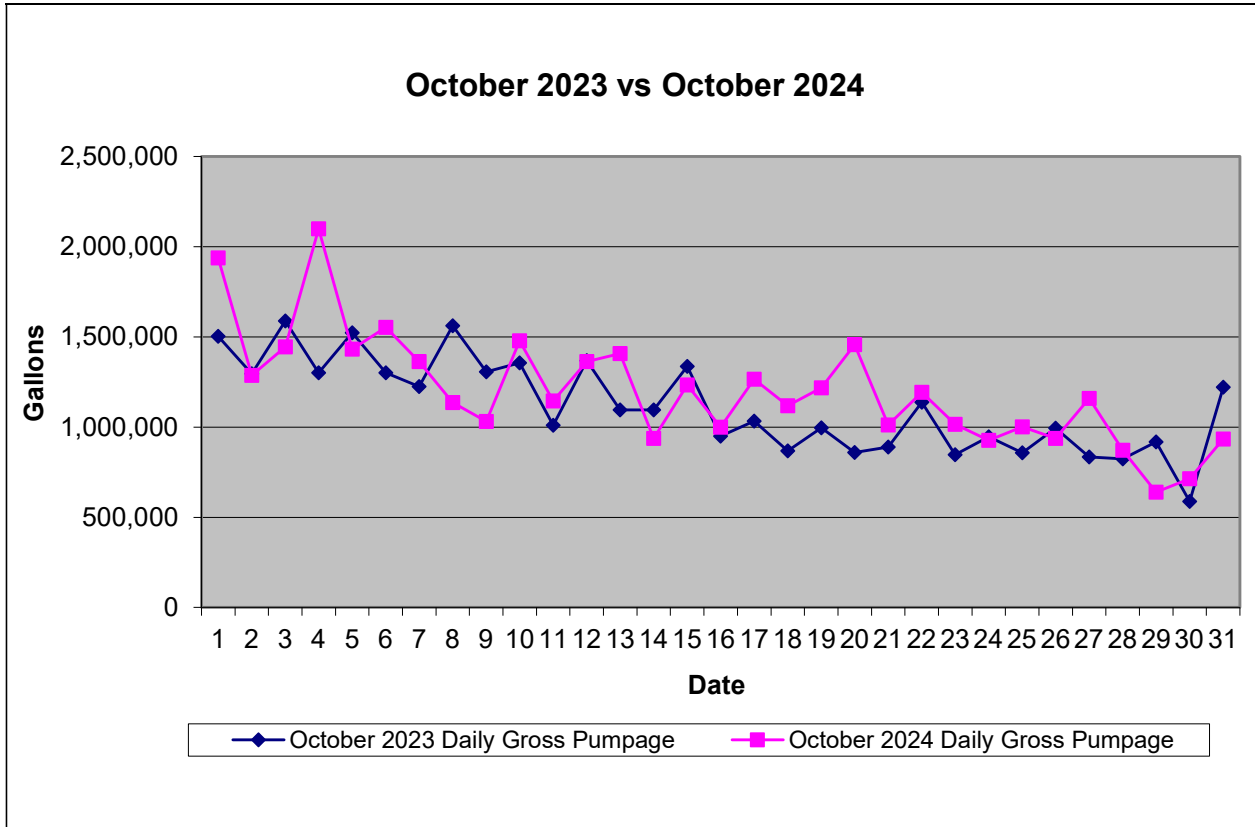
System Maintenance

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

**Pumping Comparison
October 2023 vs 2024**

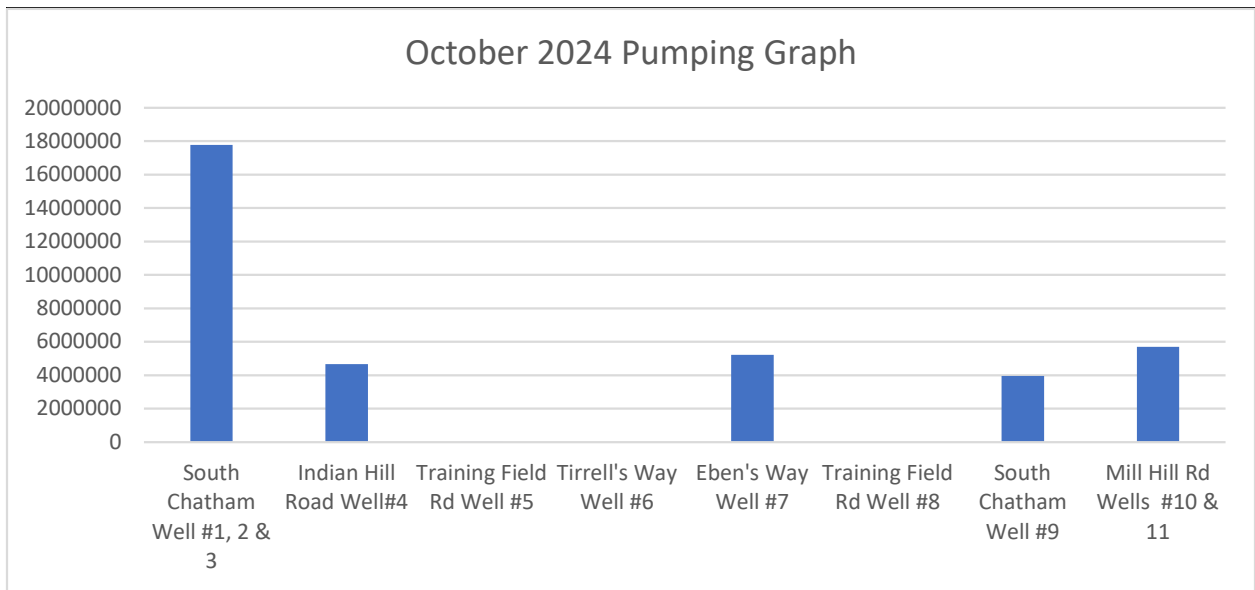
DATE	October 2023 Daily Gross Pumpage	October 2024 Daily Gross Pumpage	October 2023 vs. October 2024 Increase / Decrease (Gallons)	October 2023 vs October 2024 Increase / Decrease (Percent)
1	1,503,400	1,937,300	433,900	29%
2	1,295,400	1,286,400	(9,000)	-1%
3	1,589,200	1,444,100	(145,100)	-9%
4	1,301,100	2,100,300	799,200	61%
5	1,522,200	1,432,300	(89,900)	-6%
6	1,300,500	1,552,500	252,000	19%
7	1,225,300	1,364,100	138,800	11%
8	1,562,600	1,135,600	(427,000)	-27%
9	1,306,400	1,031,200	(275,200)	-21%
10	1,355,700	1,478,200	122,500	9%
11	1,010,800	1,145,900	135,100	13%
12	1,368,200	1,362,600	(5,600)	0%
13	1,095,700	1,407,700	312,000	28%
14	1,094,800	936,700	(158,100)	-14%
15	1,335,900	1,233,100	(102,800)	-8%
16	950,200	1,000,000	49,800	5%
17	1,034,000	1,265,200	231,200	22%
18	868,100	1,118,300	250,200	29%
19	996,200	1,217,700	221,500	22%
20	859,200	1,457,800	598,600	70%
21	888,800	1,012,100	123,300	14%
22	1,137,900	1,193,400	55,500	5%
23	847,600	1,015,900	168,300	20%
24	946,400	926,900	(19,500)	-2%
25	857,600	1,001,600	144,000	17%
26	994,100	938,300	(55,800)	-6%
27	834,500	1,159,100	324,600	39%
28	823,300	872,400	49,100	6%
29	917,800	639,800	(278,000)	-30%
30	587,500	713,100	125,600	21%
31	1,221,400	933,500	(287,900)	-24%
Total	34,631,800	37,313,100	2,681,300	7.7%

Pumping Comparison Chart



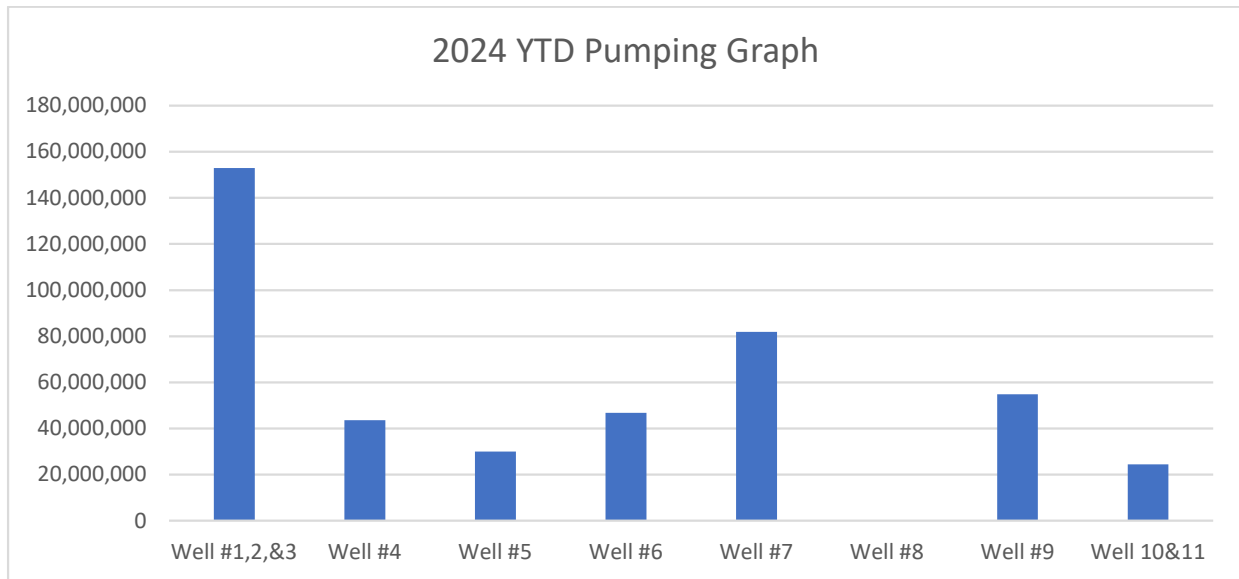
October 2024 Monthly Pumping Report

Chatham Water Department		MONTHLY PUMPAGE REPORT					OCTOBER 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		817,900				518,300		330,700	270,400	1,937,300
2		502,100	24,600			448,100		285,400	26,200	1,286,400
3		763,000				276,200		167,100	237,800	1,444,100
4		796,600				569,600		510,200	223,900	2,100,300
5		572,100				421,600		312,000	126,600	1,432,300
6		616,100				393,300		323,400	219,700	1,552,500
7		586,100				287,500		288,500	202,000	1,364,100
8		459,400				329,000		212,700	134,500	1,135,600
9		428,600				253,400		203,300	145,900	1,031,200
10		564,800	428,100	8,400		153,200		122,100	201,600	1,478,200
11		376,300	56,000			361,600		234,000	118,000	1,145,900
12		315,400				527,000		395,000	125,200	1,362,600
13		620,200				315,800		288,100	183,600	1,407,700
14		404,200		10,800		210,600		169,200	141,900	936,700
15		528,700	264,400			150,300		120,800	168,900	1,233,100
16		539,000	277,500						183,500	1,000,000
17		681,800	363,900						219,500	1,265,200
18		558,900	247,000						312,400	1,118,300
19		631,400	311,200						275,100	1,217,700
20		828,000	380,700						249,100	1,457,800
21		562,300	283,200						166,600	1,012,100
22		713,300	234,300						245,800	1,193,400
23		615,800	248,700						151,400	1,015,900
24		507,500	178,800						240,600	926,900
25		592,100	235,800						173,700	1,001,600
26		590,100	187,600						160,600	938,300
27		707,800	249,700						201,600	1,159,100
28		574,300	162,100						136,000	872,400
29		347,000	160,200						132,600	639,800
30		411,300	162,700						139,100	713,100
31		554,600	198,300						180,600	933,500
Total		17,766,700	4,654,800	19,200		5,215,500		3,962,500	5,694,400	37,313,100
								Minimum		639,800
								Maximum		2,100,300
								Average		1,203,648

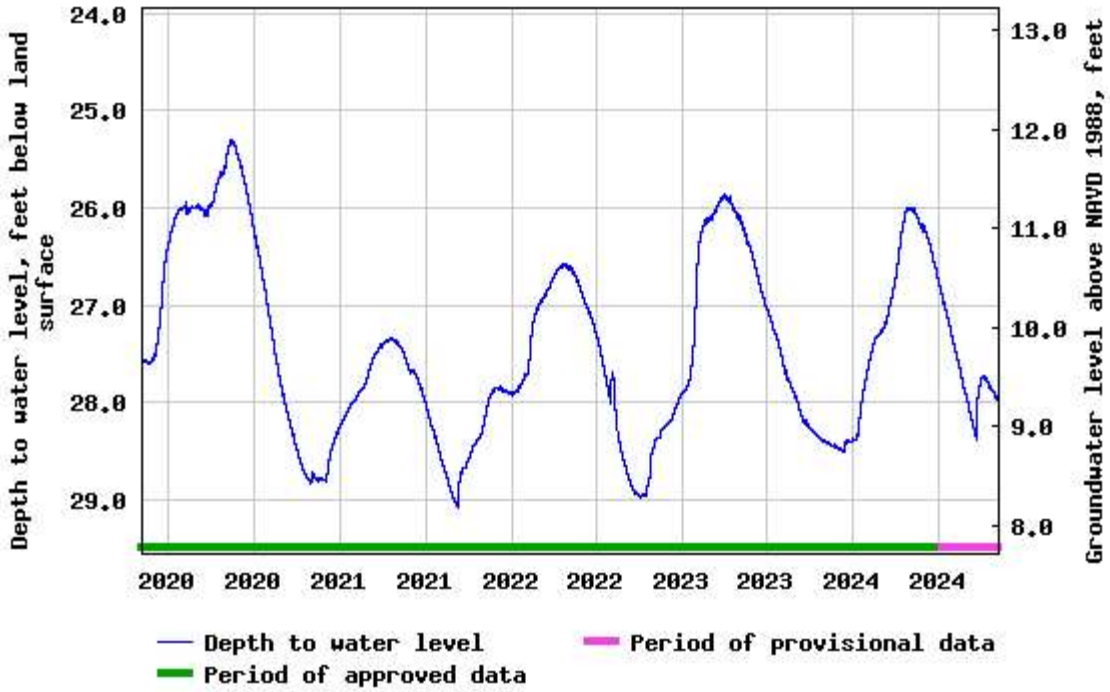


2024 YTD Pumping

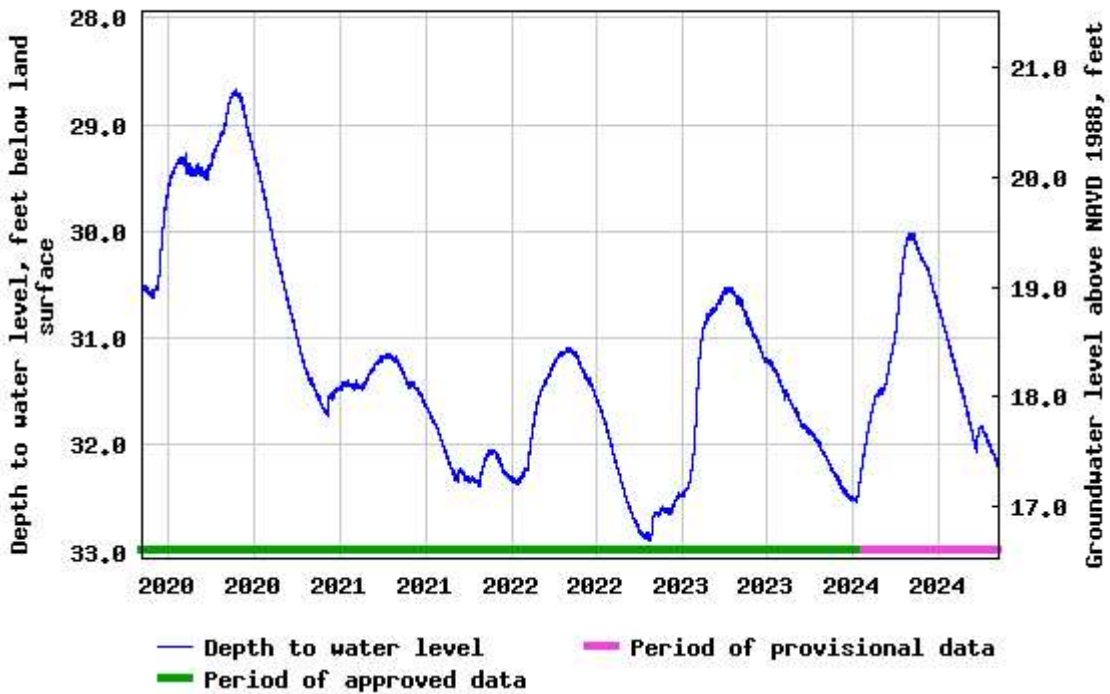
	Well #1,2,&3	Well #4	Well #5	Well #6	Well #7	Well #8	Well #9	Well 10&11	Monthly Total	Last Years Pumping	Variance
January	13,524,300	198,400	0	1,076,200	988,300	0	788,400	0	16,575,600	17,179,500	-603,900
February	10,556,600	12,400	0	1,482,600	1,583,000	0	1,061,000	0	14,695,600	17,798,000	-3,102,400
March	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									0		0
December									0		0
Totals	152,940,700	43,658,200	30,008,000	46,807,900	81,892,000	0	54,836,100	24,543,600	434,686,500	440,508,000	-5,821,500



USGS 414181070011801 MA-CGM 138R CHATHAM, MA



USGS 414632070014901 MA-BMW 22R BREWSTER, MA



Chatham 5-year Pumping Comparison (Month of October)

Oct. Date	October 2020 Daily Gross Pumpage	Hours	October 2021 Daily Gross Pumpage	Hours	October 2022 Daily Gross Pumpage	Hours	October 2023 Daily Gross Pumpage	Hours	October 2024 Daily Gross Pumpage	Hours	Average Daily Pumpage (gallons)	Average Daily Pumpage (hours)
1	2,026,800	10	1,401,600	11	1,042,600	5.75	1,503,400	8	1,939,000	13.5	1,582,680	9.6
2	1,826,700	11	1,516,800	10.75	1,201,800	6	1,295,400	7	1,286,500	8.5	1,425,440	8.65
3	2,012,600	11	1,182,900	9.25	1,105,500	6.5	1,589,200	8.25	1,444,200	12.75	1,466,880	9.55
4	2,288,400	12.25	1,057,200	8	1,027,100	5.25	1,301,100	6.5	2,100,400	13.25	1,554,840	9.05
5	1,705,000	9	984,500	7	870,300	4.5	1,522,200	8	1,432,300	9.5	1,302,860	7.6
6	2,123,500	11.25	1,073,500	7.75	996,500	5.5	1,300,500	6.5	1,552,600	9.75	1,409,320	8.15
7	1,808,100	10.5	912,400	7	1,010,700	5.75	1,225,300	6.5	1,364,200	9.5	1,264,140	7.85
8	1,907,100	8.5	1,203,200	8.5	1,024,800	5	1,562,600	7.75	1,135,700	7.75	1,366,680	7.5
9	2,049,200	11	1,248,000	10	1,236,700	6.25	1,306,400	7.5	1,031,800	6.75	1,374,420	8.3
10	1,926,600	10	1,196,900	8	1,267,100	6.5	1,355,700	7.25	1,409,800	9.5	1,431,220	8.25
11	1,884,700	10	1,148,600	8	1,027,700	5.75	1,010,800	5	1,146,000	6	1,243,560	6.95
12	1,650,600	8.5	1,126,400	8.75	930,600	5.5	1,368,200	7.75	1,362,600	5	1,287,680	7.1
13	1,487,100	8.5	937,300	6.75	1,060,500	4.25	1,095,700	5.75	1,407,700	10.5	1,197,660	7.15
14	1,396,000	8	1,118,700	7.5	878,500	5	1,094,800	6.75	925,900	6.75	1,082,780	6.8
15	1,488,900	8.25	973,200	6.5	843,800	5	1,335,900	8	1,233,100	8.75	1,174,980	7.3
16	1,341,700	7.75	923,400	7	922,400	5.5	950,200	5.5	1,000,000	9	1,027,540	6.95
17	1,279,000	6.75	1,035,400	7.5	749,200	3.5	1,034,000	5.5	1,265,200	10.5	1,072,560	6.75
18	1,399,700	7	1,110,000	6.5	890,300	5.5	868,100	4.5	1,117,500	8.5	1,077,120	6.4
19	1,443,200	8.25	1,004,600	6	721,800	4	996,200	5	1,217,700	9.75	1,076,700	6.6
20	1,174,200	6.25	971,100	7	923,500	4	859,200	5.5	1,457,800	13.75	1,077,160	7.3
21	972,200	5.5	969,600	6	916,300	5.75	888,800	4.5	1,012,100	9.5	951,800	6.25
22	1,155,400	7.5	860,500	7	850,100	4.5	1,137,900	6.75	1,193,400	12	1,039,460	7.55
23	1,179,100	6.5	971,500	7	874,900	5.25	847,600	4.5	1,015,900	10.25	977,800	6.7
24	1,202,900	6	1,064,600	5	697,200	3.5	946,400	5.5	926,900	9	967,600	5.8
25	1,359,900	6.5	728,800	4.25	814,100	5	857,600	6	1,001,600	9.75	952,400	6.3
26	1,016,700	5.5	665,300	4	613,700	3.5	994,100	6	938,900	11.75	845,740	6.15
27	1,065,300	4.75	516,800	6	746,000	4.25	834,500	4.25	1,159,100	9.5	864,340	5.75
28	896,600	4	604,800	4.5	807,700	4.5	823,300	4.5	872,400	5.75	800,960	4.65
29	812,600	5	786,000	4.5	760,200	4.5	917,800	5.25	639,800	9	783,280	5.65
30	732,500	6.5	629,100	5.5	779,200	4.5	587,500	3.5	713,100	6.75	688,280	5.35
31	830,300	5.75	758,500	4.25	748,900	4	1,221,400	6	933,500	9.25	898,520	5.85
Total	45,442,600	247	30,681,200	217	28,339,700	154	34,631,800	189	37,236,700	292	35,266,400	219.8

Well Status	Well 4 Offline	Well 4 Offline	Well 4, 5 & 8 Offline	Well 8 Offline	Well 5 & 8 Offline
					Well 11 Online