



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: September 5, 2024 (for the September 10, 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 August 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 until we take it off-line for winter.

Permanent Treatment Facility at Wells 5 & 8:

1. Project Update:
 - The 2' thick foundation slab was placed on August 15th. Over 60 concrete trucks and 2 pumper trucks poured 650 CY of concrete.
 - Concrete formwork and reinforcing steel continued to be installed in preparation of the foundation wall concrete placement.



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. We are still waiting for approval from the Secretary of Energy and Environmental Affairs Office to activate Well #10. Without all conservation easements in-place we cannot pump water from the well.

Chatham Water Pumping Status:

For the month of August, wells have been running 13-18 hours a day.

The Water Storage Tanks hit the low-level alarm 10 times this month:

- 8/2, 8/5, 8/12, 8/14, 8/16, 8/19, 8/21, 8/23, 8/26, and 8/30

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 for the month of August 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.

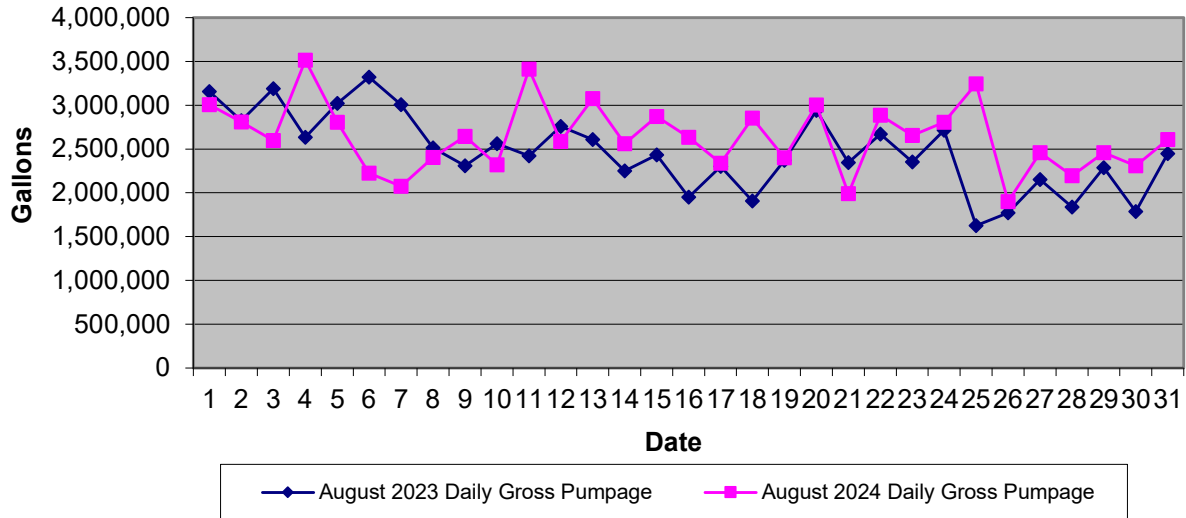
System Maintenance

- Annual testing of registered irrigation systems continued.
- Painting of 1/5 of the hydrants began.
- Veolia employees inspected numerous customer residences in response to the water service material data that is needed to complete the lead and copper database. As a reminder, we need to report all public and private water service lines to MassDEP by mid-October with a plan to come into compliance.

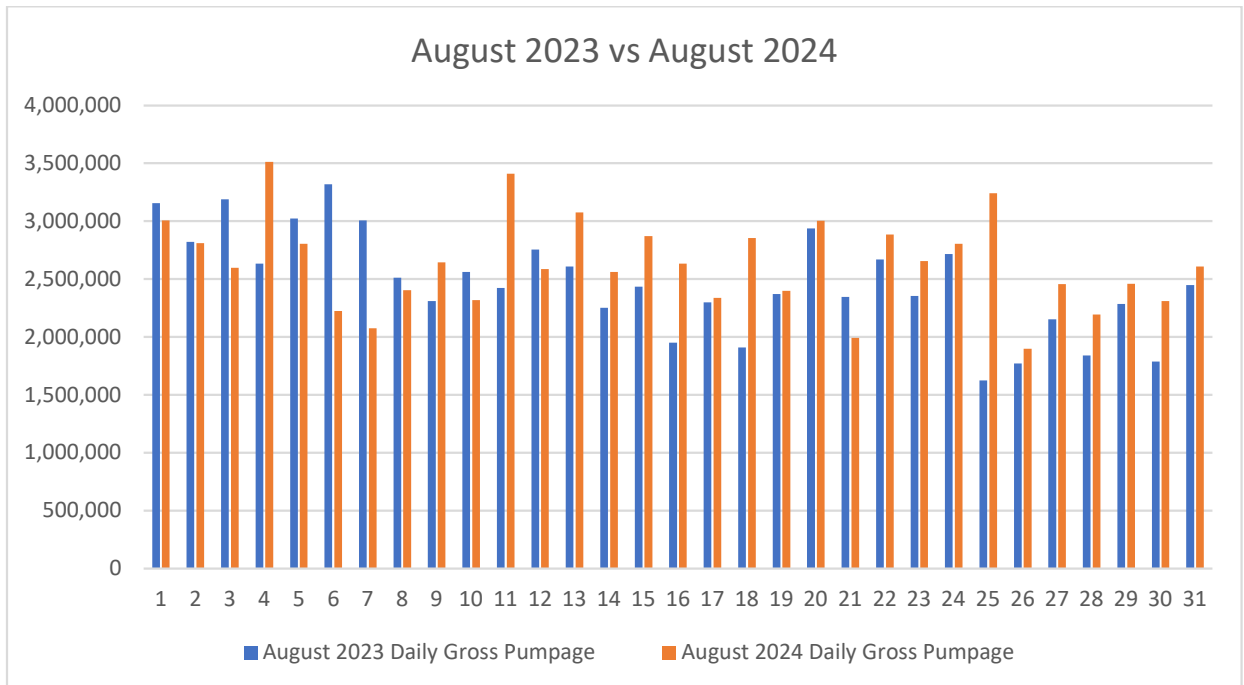
**Pumping Comparison
August 2023 vs 2024**

DATE	August 2023 Daily Gross Pumpage	August 2024 Daily Gross Pumpage	August 2023 vs. August 2024 Increase / Decrease (Gallons)	August 2023 vs August 2024 Increase / Decrease (Percent)
1	3,155,900	3,005,500	(150,400)	-5%
2	2,822,100	2,809,800	(12,300)	0%
3	3,188,400	2,598,200	(590,200)	-19%
4	2,634,400	3,511,400	877,000	33%
5	3,021,700	2,805,400	(216,300)	-7%
6	3,319,300	2,225,400	(1,093,900)	-33%
7	3,007,000	2,074,300	(932,700)	-31%
8	2,512,000	2,404,600	(107,400)	-4%
9	2,309,700	2,644,800	335,100	15%
10	2,561,700	2,318,000	(243,700)	-10%
11	2,423,300	3,410,100	986,800	41%
12	2,756,100	2,585,700	(170,400)	-6%
13	2,609,000	3,075,000	466,000	18%
14	2,251,400	2,561,100	309,700	14%
15	2,432,800	2,871,300	438,500	18%
16	1,949,300	2,634,300	685,000	35%
17	2,299,400	2,338,400	39,000	2%
18	1,908,100	2,854,100	946,000	50%
19	2,371,700	2,398,800	27,100	1%
20	2,938,200	3,002,500	64,300	2%
21	2,344,500	1,991,900	(352,600)	-15%
22	2,668,800	2,885,800	217,000	8%
23	2,353,100	2,654,600	301,500	13%
24	2,715,300	2,803,600	88,300	3%
25	1,624,500	3,241,600	1,617,100	100%
26	1,770,000	1,898,100	128,100	7%
27	2,153,100	2,457,100	304,000	14%
28	1,839,200	2,194,400	355,200	19%
29	2,285,500	2,458,200	172,700	8%
30	1,787,800	2,308,500	520,700	29%
31	2,446,800	2,608,500	161,700	7%
Total	76,460,100	81,631,000	5,170,900	6.8%

Pumping Comparison Graph August 2023 vs August 2024

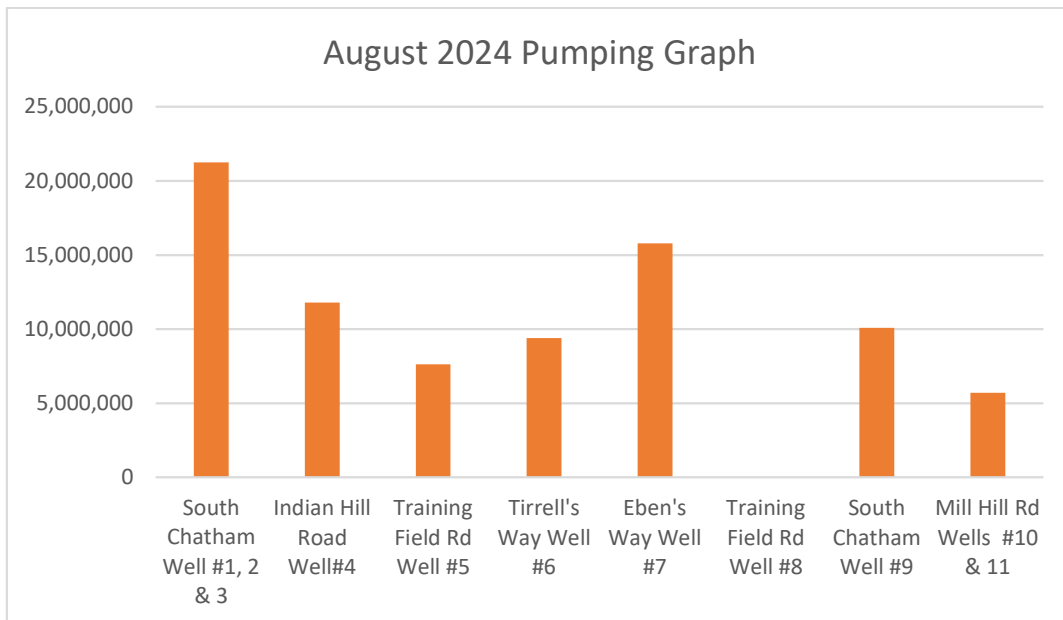


Pumping Comparison Chart



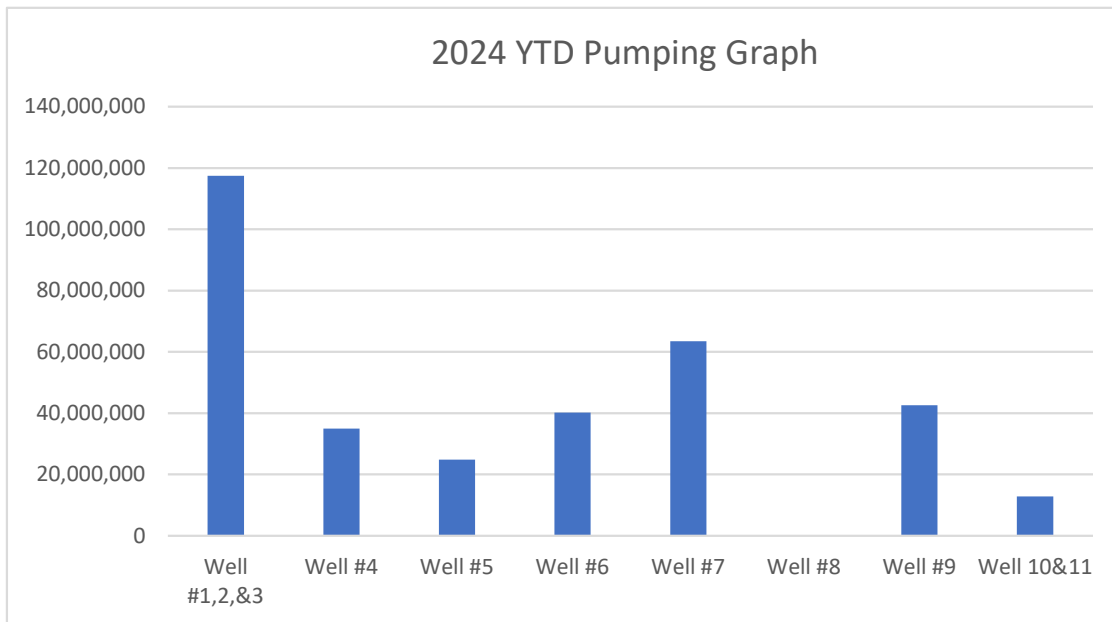
August 2024 Monthly Pumping Report

Chatham Water Department MONTHLY PUMPAGE REPORT						AUGUST 2024				
DATE	DAY	South Chatham Well #1, 2 & 3	Indian Hill Road Well#4	Traning Field Rd Well #5	Tirrell's Way Well #6	Eben's Way Well #7	Traning Field Rd Well #8	South Chatham Well #9	Mill Hill Rd Wells #10 & 11	Daily Gross Pumpage
1		989,600	491,100	349,500	240,900	375,300		222,800	336,300	3,005,500
2		1,049,500	621,800	435,000	199,500	297,500		191,400	15,100	2,809,800
3		791,100	414,500	278,500	295,500	496,300		322,300		2,598,200
4		1,009,900	485,000	362,900	426,000	708,600		463,900	55,100	3,511,400
5		827,600	422,500	249,500	273,800	473,300		298,200	260,500	2,805,400
6		582,700	343,000	212,800	233,500	397,000		242,400	214,000	2,225,400
7		527,700	311,600	187,600	234,900	406,000		218,300	188,200	2,074,300
8		646,500	348,600	239,400	234,500	389,900		315,400	230,300	2,404,600
9		692,700	400,600	251,800	265,800	459,700		291,000	283,200	2,644,800
10		651,000	303,500	192,100	247,200	426,200		266,600	231,400	2,318,000
11		928,000	496,300	324,900	359,200	598,900		395,600	307,200	3,410,100
12		678,700	357,000	234,200	285,400	488,100		302,800	239,500	2,585,700
13		708,700	393,500	315,400	365,000	617,500		405,800	269,100	3,075,000
14		597,900	424,600	228,500	281,800	474,500		299,900	253,900	2,561,100
15		775,900	435,900	255,500	302,800	507,400		333,400	260,400	2,871,300
16		684,300	398,500	83,900	327,700	554,700		361,400	223,800	2,634,300
17		506,600	265,900	385,700	263,500	445,200		282,300	189,200	2,338,400
18		520,100	281,000	210,800	486,100	801,700		522,200	32,200	2,854,100
19		377,000	382,900	234,700	312,700	535,500		309,900	246,100	2,398,800
20		706,000	483,500	238,400	319,900	574,300		366,200	314,200	3,002,500
21		501,500	243,700	180,900	244,100	383,200		260,200	178,300	1,991,900
22		702,400	420,200	219,500	398,000	670,300		408,800	66,600	2,885,800
23		807,000	378,400	226,500	294,300	479,400		339,900	129,100	2,654,600
24		446,200	296,600	200,800	511,600	851,500		496,900		2,803,600
25		952,500	431,100	301,200	407,100	685,600		457,700	6,400	3,241,600
26		437,700	280,600	177,700	245,600	420,600		273,300	62,600	1,898,100
27		699,400	369,500	238,300	248,000	404,900		273,800	223,200	2,457,100
28		418,100	254,000	162,600	322,300	555,700		335,800	145,900	2,194,400
29		681,700	365,700	240,900	254,300	434,000		264,700	216,900	2,458,200
30		640,600	311,200	195,900	237,600	399,400		264,500	259,300	2,308,500
31		716,500	378,600	202,500	278,100	475,800		295,300	261,700	2,608,500
Total		21,255,100	11,790,900	7,617,900	9,396,700	15,788,000		10,082,700	5,699,700	81,631,000
								Minimum		1,898,100
								Maximum		3,511,400
								Average		2,633,258

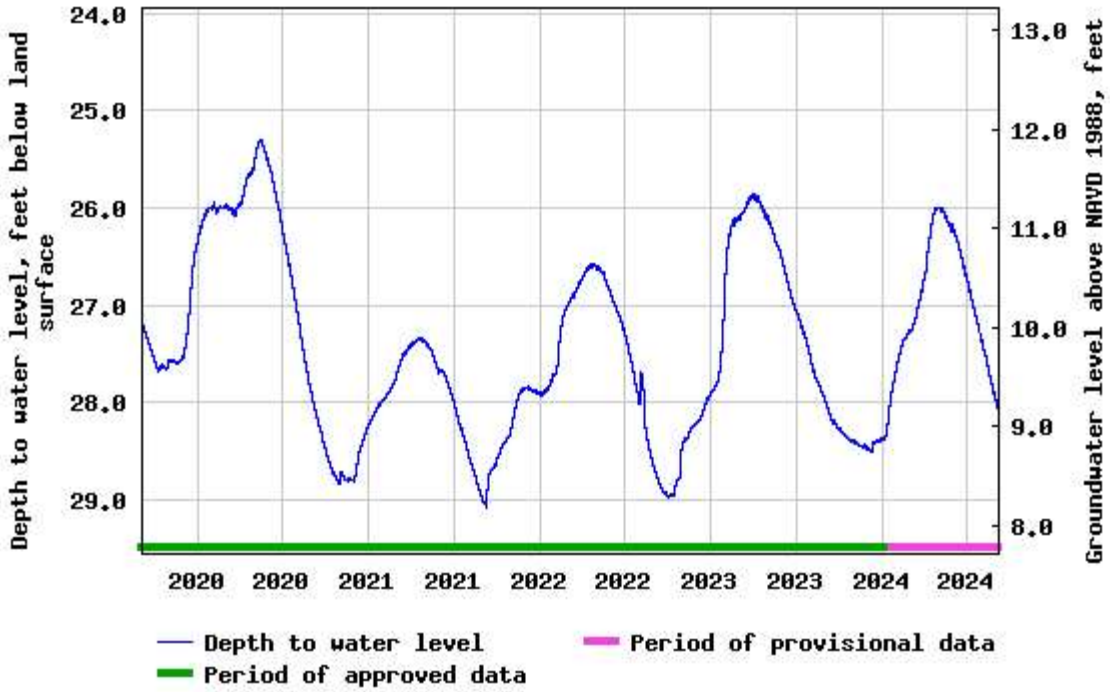


2024 YTD Pumping

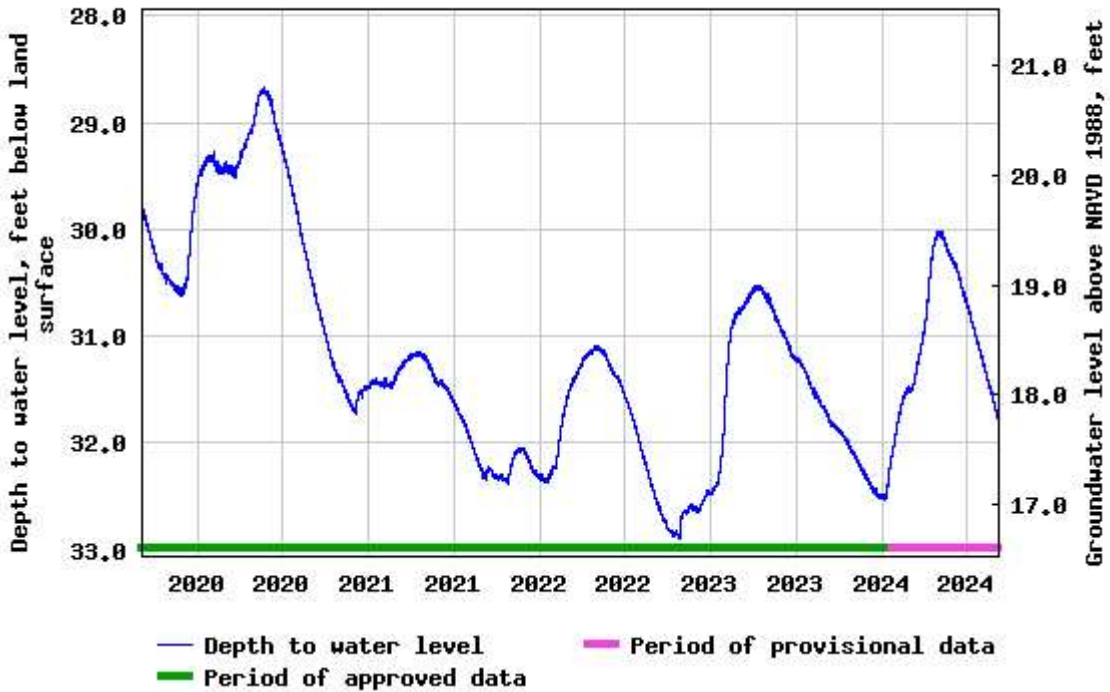
	Well #1,2,&3	Well #4	Well #5	Well #6	Well #7	Well #8	Well #9	Well 10&11	Monthly Total	Last Years Pumping	Variance
January	13,524,300	198,400	0	1,076,200	988,300	0	788,400	0	16,575,600	17,179,500	-603,900
February	10,556,600	12,400	0	1,482,600	1,583,000	0	1,061,000	0	14,695,600	17,798,000	-3,102,400
March	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									0		0
October									0		0
November									0		0
December									0		0
Totals	117,473,800	34,951,100	24,838,500	40,139,100	63,523,600	0	42,598,000	12,865,100	336,389,200	349,995,400	-13,606,200



USGS 414181070011801 MA-CGM 138R CHATHAM, MA



USGS 414632070014901 MA-BMW 22R BREWSTER, MA



Chatham 5-year Pumping Comparison (Month of August)

August Date	August 2020 Daily Gross Pumpage Pumpage Hours	August 2021 Daily Gross Pumpage Pumpage Hours	August 2022 Daily Gross Pumpage Pumpage Hours	August 2023 Daily Gross Pumpage Pumpage Hours	August 2024 Daily Gross Pumpage Pumpage Hours	Average Daily Pumpage (gallons)	Average Daily Pumpage (hours)
1	3,533,100 17	3,445,100 19	2,809,800 16	3,155,900 13	3,005,500 10	3,189,880	14.9
2	3,230,100 16	2,956,700 17	3,099,700 12	2,822,100 16	2,809,800 10	2,983,680	14.1
3	3,805,200 18	2,875,800 16	3,182,800 17	3,188,400 13	2,598,200 12	3,130,080	15.2
4	3,185,700 15	2,259,300 15	3,268,900 14	2,634,400 16	3,511,400 14	2,971,940	14.85
5	3,426,100 18	2,160,700 12	3,362,000 18	3,021,700 14	2,805,400 14	2,955,180	15.15
6	3,346,900 16	2,388,500 15	2,949,400 14	3,319,300 14	2,225,400 10	2,845,900	13.7
7	2,665,500 18	2,336,900 14	3,208,700 15	3,007,000 12	2,074,300 11	2,658,480	13.85
8	3,377,000 16	3,099,500 16	3,807,300 18	2,512,000 12	2,404,600 12	3,040,080	14.8
9	3,922,300 17	2,714,700 15	3,197,100 14	2,309,700 12	2,644,800 13	2,957,720	14.2
10	3,611,200 18	2,538,100 14	3,126,500 14	2,561,700 13	2,318,000 11	2,831,100	14
11	3,282,400 17	2,859,500 16	2,708,600 14	2,423,300 13	3,410,100 16	2,936,780	15.05
12	4,001,600 17	2,654,000 15	2,568,500 12	2,756,100 13	2,585,700 12	2,913,180	13.75
13	3,128,100 16	2,948,700 17	2,418,500 12	2,609,000 13	3,075,000 12	2,835,860	14
14	3,577,200 18	2,470,300 16	2,937,100 12	2,251,400 13	2,561,100 14	2,759,420	14.5
15	3,016,800 15	3,313,600 18	2,557,800 14	2,432,800 11	2,871,300 17	2,838,460	14.9
16	2,937,600 14	3,282,100 19	2,525,100 11	1,949,300 12	2,634,300 13	2,665,680	13.55
17	2,441,400 14	2,649,000 16	1,826,400 12	2,299,400 8	2,338,400 12	2,310,920	12.35
18	2,622,300 12	2,957,700 17	2,556,900 10	1,908,100 12	2,854,100 20	2,579,820	14.1
19	2,862,700 14	2,695,000 16	2,142,000 17	2,371,700 12	2,398,800 15	2,494,040	14.7
20	2,862,700 14	2,822,600 16	2,120,900 14	2,938,200 13	3,002,500 14	2,749,380	14.2
21	3,068,200 16	2,580,100 15	2,628,100 12	2,344,500 14	1,991,900 10	2,522,560	13.4
22	3,093,700 15	2,576,700 15	1,675,300 12	2,668,800 11	2,885,200 15	2,579,940	13.5
23	3,486,300 16	2,215,300 14	2,037,800 8	2,353,100 14	2,654,600 14	2,549,420	13.1
24	3,514,100 16	2,252,300 13	1,754,400 8	2,715,300 11	2,803,600 20	2,607,940	13.5
25	2,964,900 15	2,470,000 15	2,410,400 10	1,624,500 6	3,241,600 15	2,542,280	12.2
26	3,037,000 16	2,676,600 15	1,955,800 13	1,770,000 9	1,898,100 13	2,267,500	13.1
27	2,506,900 13	2,657,200 15	1,931,300 10	2,153,100 10	2,457,100 14	2,341,120	12.4
28	2,429,800 13	2,724,000 16	2,303,300 10	1,839,200 13	2,194,400 12	2,298,140	12.65
29	2,740,000 12	2,949,200 17	1,913,500 11	2,285,500 10	2,458,200 10	2,469,280	11.9
30	2,834,500 13	2,651,000 15	2,043,700 9	1,787,800 12	2,308,500 14	2,325,100	12.5
31	2,766,100 15	2,425,100 15	1,782,300 10	2,436,800 9	2,608,500 11	3,046,100	11.9
Total	97,277,400 480	83,605,300 478	78,809,900 393	76,450,100 374	81,630,400 406	79,103,900	426

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