

**SHELTER ISLAND WATER ADVISORY COMMITTEE –
FEBRUARY 2024, Height data report DRAFT**

Summary/Conclusion - “Guarded”

The aquifer has received a significant recharge this month, the WAC recommends that Islanders may now follow normal *voluntary water conservation measures*.

Discussion:

Section 1A and 1B - National Drought Monitoring and Outlook Forecasting:

Shelter Island is currently not in and is not forecast to return to drought conditions.

Section 2 – Chart showing “ranking of monthly well heights by percentile of historic values.” *The chart is a graphic of the data for the Big Four feeder wells showing the percentile rank for the current month versus history for each month.*

The mid-December to end of January precipitation continues to improve the aquifer height.

Section 3 - Table of well readings compared to historic and median values.

Table “Well readings compared to the month’s Median for each well.” Current month readings compared to the month history for each well in the month. All thirteen wells are above their Median value for February, even with the relatively low precipitation in February. The Deer Park Lane well report (at 7.18 feet) is unlikely, and may be due to sediment clogging the screen – USGS will investigate in March.

Section 4 - “Comparison of the size of the change in current well readings compared to the historic Median change for that month.” *Table showing the current month’s change in well height from previous and comparison to change history. The Big 4 wells had a very strong height increase, the impact of the mid-December to end of January heavy precipitation . The shallower wells have started to recede from the prior months extreme increase.*

Section 5 – Raw well height readings for the Big 4 wells

Raw well height graph is independent of the median history. It presents a direct comparison of aquifer heights. All four wells continued to gain in height, even though the February rainfall was low (1.25 inches). The recharge of the deeper Big 4 continued from the heavy precipitaiotn from mid-December to end of Janaury.

Rainfall Status: Ken Reports:

Precipitation Report – February 2024						
Year	2024	2023	2022	2021	2020	2019
Month to date		1.25	4.11	3.63	3.59	2.84
Year to date		7.53	8.06	6.61	5.71	8.68

February precipitation was relativity low.

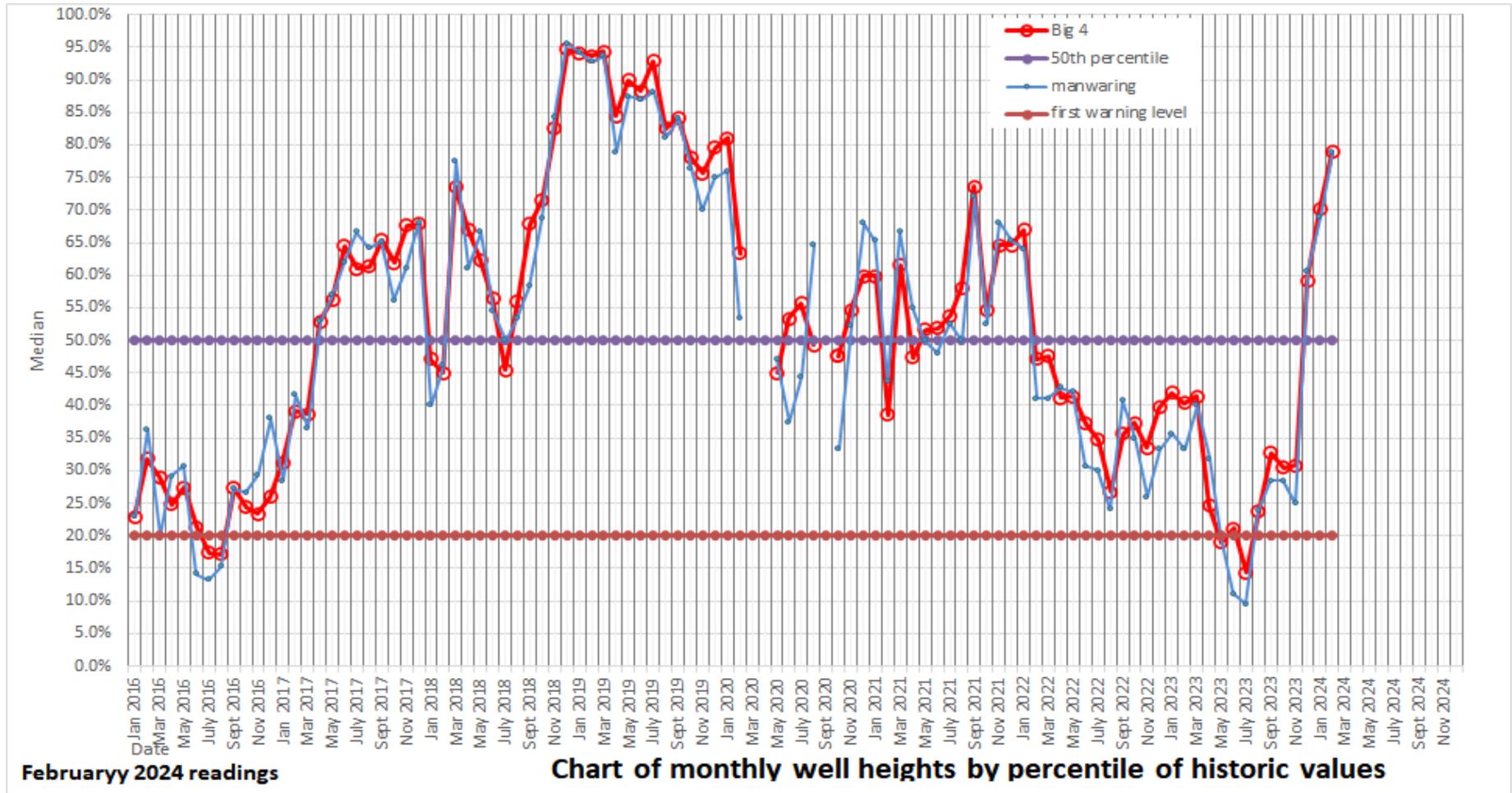
Shelter Island Water Advisory Committee issue date March 6, 2024.

Section 1 National Drought Monitoring

The regional drought monitoring and forecast for Shelter Island is we are currently not in and not forecast to return to drought conditions. The only dry area near Long Island is southern and central New Jersey.

Section 2 - Ranking of monthly well heights by percentile of historic values.

The mid-December to end of January precipitation continues to improve the aquifer height.



Section 3 – Comparison showing readings for the month compared to the median value history

Median value for February, even with the relatively low precipitation in February. The Deer Park Lane well report (at 7.18 feet) is unlikely, and may be due to sediment clogging the screen – USGS will investigate in March.

Well readings compared to the the months Median for each well for:	Manhansett, Well #1 Big 4	Rocky Point Ave/Belvedere Well #2	Big Ram Island Well #3	Manwaring Rd Well #4 Big 4	Congdon Well #5 Big 4	Brander/Lilliput Well #6	Menantic Rd Well #7	Deer Park Lane Well #8	LITTLE RAM Well #9	DERING HARBOR Well #10	HAY BEACH Well #11	Goat Hill Well #12 Big 4	SHOREWOOD Well #13
February 29 2024	16	13	16	14	24	17	16	17	5	5	9	17	17
Median Value	3.18	1.88	1.21	4.13	5.61	2.07	1.67	3.36	1.06	1.73	2.14	6.36	1.44
This Month	3.89	2.43	1.60	4.91	6.65	2.64	2.14	7.28	1.11	2.25	2.88	6.68	2.00
Prev. Reading (Jan)	3	2.62	2.26	3.9	5.78	3.25	2.67	4.11	2.34	2.61	2.67	5.94	2.58
Change from prior reading	0.89	(0.19)	(0.66)	1.01	0.87	(0.61)	(0.53)	3.17	(1.23)	(0.36)	0.21	0.74	(0.58)
	Big 4			Big 4	Big 4							Big 4	
					7.78								
					7.75								
					6.94	2.96	2.63	7.28				8.19	
	4.55		2.17	6.18	6.89	2.64	2.14	4.53				7.88	2.33
	4.51	2.68	1.87	5.93	6.82	2.54	2.06	4.51				7.77	2.00
	3.89	2.43	1.84	5.19	6.65	2.38	1.97	4.38			2.97	7.38	1.89
	3.87	2.4	1.60	5.09	6.56	2.35	1.86	4.08	2.22	2.59	2.97	7.07	1.88
	3.82	2.25	1.46	4.91	6.37	2.34	1.77	3.51	1.38	2.25	2.88	7.04	1.73
	3.59	2.23	1.39	4.66	6.14	2.34	1.77	3.5	1.33	2.2	2.56	6.83	1.72
	3.57	2.21	1.38	4.35	5.8	2.21	1.76	3.5	1.29	2	2.5	6.68	1.63
	3.53	1.99	1.38	4.32	5.79	2.16	1.76	3.47	1.28	1.84	2.47	6.65	1.55
	3.47	1.96	1.34	4.29	5.77	2.13	1.75	3.39	1.23	1.77	2.33	6.56	1.51
	3.22	1.92	1.23	4.28	5.67	2.08	1.68	3.37	1.11	1.76	2.21	6.49	1.45
Median Value	3.18	1.88	1.21								2.14		1.44
	2.96	1.69	1.19	3.98	5.54	2.06	1.65	3.34	1.01	1.7	2.13	6.22	1.42
	2.95	1.67	1.15	3.91	5.32	1.96	1.63	3.27	0.97	1.57	1.97	6.22	1.4
	2.92	1.67	1.12	3.82	5.25	1.95	1.56	3.22	0.96	1.55	1.93	6.16	1.33
	2.73	1.61	1.12	3.79	5.23	1.93	1.53	3.14	0.91	1.52	1.91	6.14	1.3
	2.69	1.54	1.07	3.67	4.98	1.84	1.51	3.07	0.89	1.42	1.82	6.06	1.27
	2.47	1.49	1.06	3.26	4.91	1.82	1.49	3	0.84	1.39	1.77	5.97	1.15
	2.33	1.44	1.04	3.19	4.79	1.77	1.33	2.93	0.16	1.39	1.71	5.73	1.13
	2.15	1.42	1.03	3.06	4.68	1.75	1.32	2.89			1.68	5.7	1.11
	2.12	1.42	1.03	2.92	4.54	1.56	1.3	2.86				5.65	1.11
	1.83		0.62	2.57	4.2	1.27	1.22	2.77				5.62	0.95
					3.76	1.24	1.04	2.18				5.47	
					3.67								
					3.48								
	Big 4			Big 4	Big 4							Big 4	
CURRENT MONTH ANALYSIS													
percentrank current read to historic range	90%	94%	85%	79%	80%	95%	95%	100%	54%	92%	88%	67%	95%
Percent to median	22%	29%	32%	19%	19%	28%	29%	117%	5%	30%	35%	5%	39%

Section 4 - "Comparison of the size of the change in current well readings compared to the historic Median change for that month."

Table showing the current month's change in well height from previous and comparison to change history.

The Big 4 wells had a very strong height increase, the impact of the mid-December to end of January heavy precipitation . The shallower wells have started to recede from the prior months extreme increase.

February 2024 SIZE OF CHANGE FROM PREVIOUS MONTH													
	Manhansett, Well #1	Rocky Point Ave/Belvedere Well #2	Big Ram Island Well #3	Manwaring Rd Well #4	Congdon Well #5	Brander/Liliput Well #6	Menantic Rd Well #7	Deer Park Lane Well #8	Little Ram Well #9	Dering Harbor Well #10	Hay Beach Well #11	Goat Hill Well #12	Shorewood Well #13
Well #	1	2	3	4	5	6	7	8	9	10	11	12	13
Change v previous	0.89	(0.19)	(0.66)	1.01	0.87	(0.61)	(0.53)	3.17	(1.23)	(0.36)	0.21	0.74	(0.58)
Med Change	0.17	0.00	(0.06)	0.15	0.41	0.03	0.07	0.15	(0.05)	(0.07)	0.03	0.24	0.02
	Big 4			Big 4	Big 4	0.61						Big 4	
			0.60		0.87	0.47						1.06	
	0.89		0.45	1.01	0.83	0.25	2.06	3.17				0.74	0.42
	0.54	0.35	0.38	1.01	0.62	0.23	0.87	0.56				0.51	0.36
	0.45	0.35	0.27	0.76	0.59	0.23	0.55	0.46			0.41	0.50	0.32
	0.44	0.34	0.24	0.55	0.54	0.16	0.46	0.39	0.76	0.38	0.29	0.37	0.30
	0.35	0.22	0.19	0.47	0.54	0.15	0.36	0.32	0.26	0.35	0.29	0.35	0.25
	0.33	0.16	0.12	0.37	0.49	0.13	0.29	0.28	0.23	0.17	0.21	0.30	0.16
	0.27	0.14	0.10	0.35	0.47	0.08	0.28	0.27	0.17	0.10	0.11	0.30	0.15
	0.26	0.14	0.01	0.31	0.45	0.03	0.15	0.24	0.14	0.09	0.09	0.28	0.14
	0.22	0.12	(0.03)	0.27	0.44	0.03	0.08	0.19	0.00	(0.05)	0.08	0.27	0.07
	0.19	0.00	(0.05)	0.15	0.41	0.00	0.07	0.16	(0.05)	(0.07)	0.04	0.25	0.02
MEDIAN		0.00		0.15	0.41	(0.03)	0.07		(0.05)	(0.07)	0.03		0.02
	0.16	(0.07)	(0.07)	0.14	0.40	(0.04)	0.05	0.14	(0.08)	(0.12)	0.01	0.23	(0.05)
	0.12	(0.07)	(0.09)	0.14	0.37	(0.08)	(0.05)	0.11	(0.09)	(0.16)	(0.05)	0.21	(0.10)
	0.12	(0.11)	(0.18)	0.11	0.29	(0.20)	(0.09)	0.07	(0.45)	(0.27)	(0.06)	0.17	(0.11)
	0.09	(0.12)	(0.22)	0.10	0.26	(0.23)	(0.16)	0.03	(0.57)	(0.30)	(0.10)	0.17	(0.13)
	0.05	(0.19)	(0.27)	0.08	0.21	(0.26)	(0.17)	0.02	(0.65)	(0.36)	(0.14)	0.14	(0.15)
	0.02	(0.23)	(0.31)	0.05	0.13	(0.59)	(0.21)	0.02	(1.23)	(0.39)	(0.16)	0.11	(0.18)
	0.00	(0.24)	(0.31)	(0.11)	0.09	(0.61)	(0.22)	0.02	(1.32)	(0.78)	(0.21)	0.09	(0.19)
	(0.01)	(0.34)	(0.44)	(0.12)	(0.03)	(0.72)	(0.42)	0.00				0.09	(0.37)
	(0.05)	(1.25)	(0.51)		(0.07)		(0.53)	(0.20)				0.06	(0.40)
	(0.15)		(0.66)		(0.41)		(0.65)	(0.29)				0.05	(0.58)
			(0.79)									(0.04)	
percentrank current read to historic change	100%	22%	5%	94%	100%	5%	5%	100%	7%	14%	80%	95%	0%

Section 5 - "Raw" aquifer readings for the Big 4 wells.

All four wells continued to gain in height, even though the February rainfall was low (1.25 inches). The recharge of the deeper Big 4 continued from the heavy precipitaiton from mid-December to end of January.

