SUFFOLK COUNTY WATER AUTHORITY

Production Control - Bay Shore, New York

INTER-OFFICE CORRESPONDENCE

DATE: May 17, 2021

TO: Jeffrey Szabo, CEO

FROM: Michael O'Connell, Director of Production Control

Timothy Kilcommons, P.E., Chief Engineer & Dir. of R&D

SUBJECT: Emerging Contaminants Action Plan Monthly Update

The Suffolk County Water Authority has for years proactively addressed emerging contaminants in groundwater such as the perfluorinated compounds PFOA and PFOS and 1,4-dioxane, both through comprehensive testing and the development and implementation of innovative treatment technologies.

The following is the latest monthly update to the Emerging Contaminants Action Plan requested by the SCWA Board to provide the public with up-to-date information about the steps being taken to ensure that SCWA meets or surpasses the rigorous regulations established by New York State to remove these compounds from our groundwater. This update covers the period from April 26, 2021 to date.

PFC's

Since the last update, Production Control has placed in service four (4) new GAC systems. Pierson St #1 (Nesconset), Plymouth St #2A (Deer Park), Edgewood Ave #1A (St. James) and Flint Ln #2 (Selden) have all been assigned to GAC systems to remove PFOA/PFOS. Production Control continues to work through the start-up process of another two new GAC systems which includes a second system at Pierson St (Nesconset) and a second system at Flint Ln (Selden). The start-up process includes flushing new piping and collecting laboratory samples to ensure that all new equipment is clean and contaminant free, repairing leaks from installation and then actually loading the new carbon, rinsing and more sampling. Both systems are scheduled to be loaded with carbon in the next two weeks.

The Engineering department has an additional two (2) GAC systems on order and we are expecting delivery before the end of June 2021. Systems on order will be delivered to Hallock Ave (Smithtown) and Horseblock Rd (Farmingville). The concrete pads for these systems are ready for delivery.

Once the Hallock Ave system is placed on-line, all SCWA wells that have PFOA/PFOS levels above the MCL will either be on treatment or will be out of service.

1,4-dioxane

SCWA submitted final contract plans to NYSDOH for the Smith St East Farmingdale AOP system in late March 2021. Plans were submitted in print and digital formats. The Health Department has requested that these submittals be stamped. Engineering will be providing stamped documents this week. Since none of the final revisions were major, we intended on publishing the bid documents for this system in the next two weeks.

Design work and contract preparation continues with regards to the mechanical installation, controls, and peroxide delivery systems contracts that will be required to build the AOP systems. Site work continues for future AOP sites and electrical upgrade work where required continues. The Furnish & Deliver contract for 16 AOP reactors representing the wells at sites awarded WIIA grants had a bid opening date of January 21, 2021. The bid was awarded to Xylem, Inc. and they have executed the contract and a Purchase Order has been issued. We are now entering the submittal approval stage. Delivery of the first four reactors is currently projected to be in November 2021.

Two contracts have been awarded for AOP building additions at 7 locations: Hollywood Pl, McKay Rd, Waterside Dr, Sunken Meadow Park, Broadway, Falcon Dr, and Flower Hill Rd. These additions will house 13 AOP systems. Engineering has completed the design review process and these building additions have been released to the manufacturer for fabrication. Foundation work is underway at Flower Hill Rd. and is complete at Waterside Rd, McKay Rd, and Hollywood Pl. Foundation work for Falcon should begin in the next two weeks. Metal building additions have been fabricated and delivered for McKay, Waterside, and Hollywood. Steel framing has been erected at Waterside Rd. Building construction is nearly complete at Hollywood Pl. A public meeting was held with Village of Northport officials and the public regarding the construction plans for the AOP systems at Douglas Avenue. Response was favorable and site work and demolition are expected to begin in the beginning of June. GAC vessels for the AOP system are scheduled to be delivered in late June.

The AOP pilot work needed to obtain NYSDOH approval for the use of AOP at any of our sites continues. Production Control staff utilizing our mini-AOP reactor pilot trailer have completed pilot testing of twenty-six (26) wells. Pilot testing on Mayfair Dr #1 and #2 (Huntington) is in progress. Analysis of the data obtained to date has revealed no surprises in terms of by-product formation resulting from the AOP process. Last week, the Authority requested a waiver from further pilot testing from NYSDOH due to the extensive amount of data already provided and similar results at every site we have piloted.

The new well Old Dock Rd #2 (Kings Park) has been drilled and the well building is currently under construction. CM has installed the yard piping tie-ins. This well was drilled with the knowledge that it will require an AOP treatment system. It will replace Carlson Ave #5 and #6 (Kings Park), both of which require AOP but are very old wells and are located on a site that does not have enough room for more treatment systems.

Emerging Contaminant Wells Current Status

As of this writing, all wells that have PFOA or PFOS above the MCL are either being treated to remove the contaminants, are being blended to below the MCL or have been removed from service until treatment is installed. Wells that are above ½ of the MCL continue to be blended or have their run time managed to maintain lower levels.

Similar strategies apply to 1,4-dioxane management. We continue to add blending where we can or have removed wells from service when we have an analytical result that shows an exceedance of the MCL. As demand increases with the warmer weather this will become more and more difficult to accomplish. Wells with levels of 1,4-dioxane over the MCL are programmed in our SCADA system that they are the last wells on and the first wells off. This approach ensures that the water entering our system has the lowest possible 1,4-dioxane concentrations while at the same time ensures our ability to meet demand for both domestic and emergency use by our customers. We are also scheduling and exchanging carbon on all wells that have exceeded the MCL where we have a carbon system in place. Carbon does remove 1,4-dioxane, not well, but it does for a short period of time. Therefore, with new carbon, we can keep the levels as low as possible. This has and will continue to escalate our carbon and labor expenses.

SCWA applied for a MCL deferral to the NYSDOH. The application was approved on January 7.2021.

Cc: J. Pokorny

K. Durk

T. Hopkins

PFOA / PFOS

MCL = 10 ppt

						Date Treatment		
			Recent levels	Current		I/S or Blend		Authorization(s)
Zone	Station	Well	(PFOA/PFOS)	Status	Action plan (Planning window = 4 months)	Started	Authorization(s)	Value to Date (\$)
1	Bellmore Ave	1	15/19	I/S	On GAC	4/24/2020	195-20-00-0068	\$ 37,512
1	Church St Hol	1A	12/10	O/S	On outdoor GAC - Seasonal	5/7/2019		
1	Church St Hol	2	8.7/4.6	O/S	O/S 11/2/18 - pending additional GAC installation			
					Received DHS approval to treat with resin (ion exchange) in portable GAC system; first			
1	Foxcroft Ln	1A	4.7/23	I/S	approval of resin for PFC's in NY. Outdoors - seasonal	5/30/2019	055-18-00-0019	\$ 165,590
1	Foxcroft Ln	2	4.9/6.8	I/S	Blended inside #1A - Seasonal well, #1A seasonal GAC	7/18/2019		
1	Smith St	8	ND/5.3	I/S	Monitor			
1	Station Rd	1A	11/50	I/S	On outdoor GAC - Seasonal	3/14/2020	055-19-00-0015	\$ 417,765
1	Station Rd	2A	7.6/7.0	I/S	Runs inside Well #1A when #1A is in service.			
10	Ruth Blvd	3	ND/6.1	I/S	Piped to existing GAC. Currently @ 1/2 MCL, monitor		055-19-00-0018	\$ 23,057
12	Blue Point Rd	1	7.6/4.2	I/S	Blended with any other well. Last blend 3.2/2.7	10/31/2016		
12	Carrol St	2	4.3/2.4	I/S	Blended - no further action planned	8/18/2016		
			-		·			
12	Hallock Ave	1	ND/16	I/S	Blend with Well #2 and #3 - GAC scheduled for delivery June 2021, last blend 9.6	5/11/2021		
12	Hallock Ave	2	ND/6.8	ı/S				
12	Hallock Ave	3	ND/9.7	I/S	With rotations, runs every other day		195-21-00-0061	\$ 758,862
12	Liberty St	3	6.9/3.5	I/S	With rotations, runs every other day - no further action planned			
			,	, -	Blended; New GAC vessels delivered. Yard piping completed. Sampling new piping.			
12	Lincoln Ave	2	ND/27	I/S	Well I/S and assigned to GAC "B" 03/19/2021.	3/19/2021	195-21-00-0065	\$ 549,854
12	Morris Ave	1	ND/ND	I/S	Monitor		195-20-00-0059	\$ 576,048
12	Morris Ave	4	4/19	I/S	On outdoor GAC - Seasonal	6/28/2020	195-20-00-0054	\$ 118,797
12	Pierson St	1	10/4.3	I/S	Assigned to new GAC "A" system 5/10/21	5/10/2021	195-21-00-0068	\$ 639,167
				, -	Blended inside Well #3 - Last blend was 8.5/6.3. GAC delivered 12/30/20. Piping by CM			, , , ,
12	Pierson St	2	12/8.4	I/S	complete. Initital carbon fill scheduled 5/24/21	9/21/2020	195-21-00-0068	\$ 639,167
12	Plymouth St	1A	8.2/13.0	I/S	Assigned to new GAC "B" system 4/13/2021	4/13/2021	195-21-00-0062	\$ 634,044
12	Plymouth St	2A	6.2/10	I/S	Assigned to new GAC "A" system 4/29/2021	4/29/2021	195-21-00-0062	\$ 634,044
	,			, ,			195-20-00-0056,	, , , ,
12	Sy Ct	3	14/6.3	I/S	On outdoor GAC - Seasonal	10/28/2020	195-20-00-0061	\$ 724,517
12	Townline Rd Nes	1A	9/14		On GAC	2/10/2020	055-19-00-0014	\$ 100,412
12	Wheeler Rd	3	22/16	I/S	Well I/S and assigned to GAC "A" 03/08/21	3/8/2021	195-21-00-0063	\$ 75,433
12	Wheeler Rd	4	4.4/7.3	I/S	Now that #3 is on GAC, may act as a blocking well to #4. Monitor	27 27		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
12	Wheeler Rd	5	2.5/6.5	I/S	On GAC - Was 18/32, big drop in level at HOP in March '21	9/6/2019	055-19-00-0017	\$ 15,888
15	Bicycle Path	1	7.2/ND	I/S	Blended for Mn for many years. Monitor. Last blend was 2.5	-, -,		, ,,,,,,
15	Boyle Rd South	1	4.8/3.4	I/S	Monitor			
15	Daniel Webster Dr	1	5.1/2.7	I/S	Monitor			
15	Dare Rd	2	5.3/4.7	I/S	No action planned, continue to monitor			
			,	, -				
					Blended for Nitrates - Last blend was 4.7/ND. New GAC vessels installed in existing			
15	Edgewood SJ	1A	12.0/5.6	I/S	building. Initial carbon fill completed 05/11/21. Assigned to GAC 05/14/21	5/14/2021	195-21-00-0064	\$ 579,263

						Date Treatment			
_	c		Recent levels	Current		I/S or Blend			orization(s)
Zone	Station	Well	(PFOA/PFOS)	Status	Action plan (Planning window = 4 months)	Started	Authorization(s)	value	to Date (\$)
15	Fairmount Medford	3	22/33	I/S	On outdoor GAC - Seasonal	5/19/2020	055-19-00-0021, 195-20-00-0052	\$	609,567
15	Flint Ln	1	4.8/2.9	I/S	New GAC will load in Spring. Initial carbon load scheduled for 05/26/2021	3/ 13/ 2020	195-20-00-0057	\$	157,860
15	Flint Ln	2	5.4/6.0	I/S	New GAC will load in Spring. Assigned to new GAC "B" 05/15/21	5/15/2021	195-20-00-0063	\$	1,051,739
15	Hawkins Rd	3	3.3/4.1	I/S	Continue to monitor	3/13/1011	155 15 55 555	7	1,031,733
15	Horseblock Rd	1	7.8/2.7	, -	Already blended for nitrates. GAC System delivery 06/21.	5/12/2013	195-21-00-0067	\$	724,023
15	Oxhead Rd	1A	3.8/110.0	I/S	On outdoor GAC - Seasonal	6/7/2017	055-17-00-0014	\$	265,494
15	Oxhead Rd	2A	6.5/7.2		Blended inside #3. Last blend was 4.1/4.6	5/20/2017			,
15	Oxhead Rd	4	ND/4.4	-	Blended inside #1A	7/1/2017			
							195-20-00-0058,		
15	Stem Ln	1	6.2/23	I/S	On outdoor GAC - Seasonal	8/6/2020	195-20-00-0062	\$	672,080
15	Strathmore Ct	3	6.6/5.4	I/S	With rotations, runs every third day - no further action planned				
15	Wheat Path	1	6.8/ND	I/S	With rotations, runs every third day - no further action planned				
20	Gus Guerrera	1	ND/23.0	O/S	On outdoor GAC - Seasonal	7/27/2016	055-17-00-0016	\$	182,842
20	Gus Guerrera	2	ND/ND	I/S	Removed from GAC due to decrease in levels 11/2020	7/11/2017			
20	Meetinghouse Rd	12A	47.0/150.0	I/S	On GAC	6/10/2016	055-17-00-0015	\$	788,844
20	Meetinghouse Rd	14	27.0/220.0	I/S	Same as above	6/10/2016	055-18-00-0015		
20	Meetinghouse Rd	17	150.0/1,510.0	I/S	Same as above	6/10/2016			
20	Meetinghouse Rd	19	96.0/440.0	I/S	Same as above	6/10/2016			
20	Meetinghouse Rd	22	ND/15	I/S	On GAC	7/27/2016	055-17-00-0013	\$	29,528
20	Old Country Rd	1A	2.4/4.8	I/S	Blended with #3 and throttled. Last blend was ND/2.8	7/30/2007			
							055-19-00-0020,		
20	Old Country Rd	4	10/48	O/S	On outdoor GAC - Seasonal	6/26/2020	195-20-00-0053	\$	802,282
23	Bridgehampton Rd	2A	3/36	I/S	On GAC	10/1/2019			
23	Long Springs Rd	1A	9/8	I/S	On outdoor GAC - Seasonal	4/20/2020	055-19-00-0019	\$	35,490
23	North Magee	3	2/13	O/S					
23	West Prospect	1	7/20	I/S	Loaded carbon in existing empty vessel	3/18/2019			
							195-20-00-0055,		
32	County Rd 31	1	ND/22	O/S	On outdoor GAC - Seasonal	8/19/2020	195-20-00-0060	\$	691,008

Total Funds Authorized to date for PFAS related work	\$ 12,700,176
Total Funds Authorized to date for Emerging Containment Work	\$ 23,634,691

Actions typed in RED have occurred in the past 30 days.

Wells highlighted in green are being treated to remove contaminant

1,4 Dioxane

MCL = 1.0 ppb

						Date Treatment			
			Recent levels	Current		I/S or Blend		Authoriz	ation(s)
Zone	Station	Well	НОР	Status	Action plan (Planning window = 4 months)	Started	Authorization(s)	Value to	Date (\$)
1	Albany Ave	6	0.66	I/S	Blended w/ 4A - Last blend 0.28	8/23/2016			
1	Barton Ave	2A	2.05	O/S	Blended w/ any other well. Last blend was 0.78	2/19/2019			
1	Brook Ave	4	0.60	O/S	O/S for Mn				
1	Forty First St	6	0.79	I/S	Blended with Well #5 for operational control	8/23/2004			
1	Great Neck Rd	1	3.40	O/S	2 well blend was below 1.0. Blended	10/31/2016			
1	Harvest Ln	1A	1.50	I/S	Last blend 0.8	10/31/2017			
					Lock in Call-2 to minimize run time. One of two well fields in Zone. Mini AOP pilot complete.				
					Blow-off basin modified, GAC Bldg addition, foundation complete, building erection nearly		195-20-00-0068,		
5	Hollywood Pl	1	0.81	I/S	complete.		195-21-00-0052	\$	518,835
5	Mill Lane	13A	0.62	I/S	With rotations, runs every third day. New carbon in April '21				
					2 well blend was still over 1.0, Stay O/S; mini-AOP pilot complete; site work, piping has been		195-20-00-0066,		
6	Broadway	1A	1.73	O/S	relocated		195-21-00-0053	\$	200,023
					Mini-AOP pilot complete; site work, piping has been relocated; Well locked in lower call to		195-20-00-0066,		
6	Broadway	2	0.56	I/S	minimize run time, 01/27/21.		195-21-00-0053	\$	200,023
							195-20-00-0066,		
6	Broadway	3	0.72	I/S	Monitor; mini-AOP pilot complete; site work, piping has been relocated		195-21-00-0053	\$	200,023
					Runs blended with two other wells, last on - first off. Mini AOP pilot complete; site work;				
					piping has been relocated; PSE&G service upgrade complete, Control Room elec upgrade		195-20-00-0020,		
6	Flowerhill Rd	1	2.82	O/S	completed; GAC Bldg addition foundation in progress.		195-21-00-0051	\$	168,625
					New carbon 09/20, Locked in Fire Call, Emergency use only. Mini AOP pilot complete; site				
_					work; piping has been relocated; building expansion project; PSE&G service upgrade		195-20-00-0020,		
6	Flowerhill Rd	2	2.44	I/S	complete, Control Room elec upgrade completed.		195-21-00-0051	\$	168,625
					New carbon 10/20, Locked in Call-4; mini AOP pilot complete; site work; piping has been				
			0.00	. /0	relocated; building expansion project; PSE&G service upgrade complete, Control Room elec		195-20-00-0020,	,	460 635
6	Flowerhill Rd	3	0.82	1/S	upgrade completed.		195-21-00-0051	\$	168,625
6	Jennings Rd	1	0.57	O/S	With rotations, runs every other day. O/S for pump failure 4/20/21				
6	Jennings Rd	3	0.69	I/S	With rotations, runs every other day				
6	Mayfair Dr	1	0.54*	I/S	With rotations, runs every other day. *GAC Effluent sample. Mini AOP pilot in progress.				
	iviayian bi	1	0.54	1/3	The rotations, runs every other day.				
6	Mayfair Dr	2	0.88*	I/S	With rotations, runs every other day. *GAC Effluent sample. Mini AOP pilot in progress.				
6	Woodchck Hllw	1A	1.37*	O/S	Blended with Wells #2 and #3. *GAC Eff sample	9/25/2020			
6	Woodchck Hllw	3	0.60	ı/S	With rotations, runs every other day	, ,			
					Mini AOP pilot complete; GAC building addition started, foundation complete. GAC vessel		195-20-00-0070,		
7	McKay Rd	1	1.68	O/S	painting and rehab in progress.		195-21-00-0055	\$	465,219
9	Douglas Ave	1	2.73	O/S	Mini AOP pilot complete				
9	Douglas Ave	2	1.20	O/S	Mini AOP pilot complete				
							195-21-00-0059,		
9	Middleville	1	1.18	O/S	Blended - Mini AOP pilot complete; site work project authorized; new GAC vessels delivered.		195-21-00-0070	\$	630,573
9	Middleville	2	0.88	I/S	Mini AOP pilot complete		195-21-00-0059	\$	159,693

9 Wa 9 Wa 10 Ch 10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soo	Sunken Meadow Sunken Meadow Vaterside Rd Vayne Ct Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	well 1 2 2 1 1 2 1A 2 1A	0.80 0.72 1.08 1.07* 0.91 1.04 0.69*	Current Status I/S I/S	Action plan (Planning window = 4 months) Level has dropped significantly, monitor, piping relocated - Mini AOP pilot complete Monitor; piping relocated - Mini AOP pilot complete Can change carbon for emergency use - Mini AOP pilot complete; blow-off basin complete; GAC Bldg expansion material delivered, foundation complete, building erection in progress Lock in Call-2. Mini AOP pilot complete; *GAC Effluent sample. Scheduling a carbon exchange when Middleville tank is back in service Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete Nitrate Blend w/ Washington - *GAC Effluent Sample; PSE&G service upgrade completed;	7/25/2007 8/22/2007	Authorization(s) 195-20-00-0065, 195-21-00-0056 195-20-00-0065, 195-21-00-0056 195-20-00-0069, 195-21-00-0054		234,602 234,602 608,715
9 Sul 9 Wa 9 Wa 10 Ch 10 Rel 10 Rel 10 Ru 10 Ru 10 Sol	Sunken Meadow Sunken Meadow Vaterside Rd Vayne Ct Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	1 2 2 1 1 2 1A 2	0.80 0.72 1.08 1.07* 0.91 1.04 0.69*	I/S I/S O/S I/S I/S I/S	Level has dropped significantly, monitor, piping relocated - Mini AOP pilot complete Monitor; piping relocated - Mini AOP pilot complete Can change carbon for emergency use - Mini AOP pilot complete; blow-off basin complete; GAC Bldg expansion material delivered, foundation complete, building erection in progress Lock in Call-2. Mini AOP pilot complete; *GAC Effluent sample. Scheduling a carbon exchange when Middleville tank is back in service Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete	7/25/2007	195-20-00-0065, 195-21-00-0056 195-20-00-0065, 195-21-00-0056	\$	234,602 234,602
9 Wa 9 Wa 10 Ch 10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soo	Vaterside Rd Vayne Ct Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	2 2 1 2 1A 2	0.72 1.08 1.07* 0.91 1.04 0.69*	1/S O/S 1/S 1/S 1/S	Monitor; piping relocated - Mini AOP pilot complete Can change carbon for emergency use - Mini AOP pilot complete; blow-off basin complete; GAC Bldg expansion material delivered, foundation complete, building erection in progress Lock in Call-2. Mini AOP pilot complete; *GAC Effluent sample. Scheduling a carbon exchange when Middleville tank is back in service Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete		195-20-00-0065, 195-21-00-0056 195-20-00-0069,	\$	234,602
9 Wa 9 Wa 10 Ch 10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soo	Vaterside Rd Vayne Ct Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	2 1 2 1A 2	1.08 1.07* 0.91 1.04 0.69*	O/S I/S I/S I/S	Can change carbon for emergency use - Mini AOP pilot complete; blow-off basin complete; GAC Bldg expansion material delivered, foundation complete, building erection in progress Lock in Call-2. Mini AOP pilot complete; *GAC Effluent sample. Scheduling a carbon exchange when Middleville tank is back in service Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete		195-21-00-0056 195-20-00-0069,		
9 Wa 10 Ch 10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soi	Vayne Ct Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	1 1 2 1A 2	1.07* 0.91 1.04 0.69*	1/S 1/S 1/S	GAC Bldg expansion material delivered, foundation complete, building erection in progress Lock in Call-2. Mini AOP pilot complete; *GAC Effluent sample. Scheduling a carbon exchange when Middleville tank is back in service Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete		•	\$	608,715
9 Wa 10 Ch 10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soi	Vayne Ct Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	1 1 2 1A 2	1.07* 0.91 1.04 0.69*	1/S 1/S 1/S	GAC Bldg expansion material delivered, foundation complete, building erection in progress Lock in Call-2. Mini AOP pilot complete; *GAC Effluent sample. Scheduling a carbon exchange when Middleville tank is back in service Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete		•	\$	608,715
10 Ch 10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soi	Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	1 2 1A 2	0.91 1.04 0.69*	I/S I/S	when Middleville tank is back in service Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete				
10 Ch 10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soi	Church St NPT Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	1 2 1A 2	0.91 1.04 0.69*	I/S I/S	Nitrate Blend w/ Washington - last blend 0.52; mini AOP pilot complete Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete				
10 Ch 10 Re 10 Re 10 Ru 10 Ru 10 Soo	Church St NPT Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	2 1A 2	1.04 0.69*	I/S	Nitrate Blend w/ Washington - last blend 0.60; mini AOP pilot complete				
10 Re. 10 Re. 10 Ru 10 Ru 10 Soo	Reservoir Ave Reservoir Ave Ruth Blvd Ruth Blvd	1A 2	0.69*			-, ,			
10 Re 10 Ru 10 Ru 10 So	Reservoir Ave Ruth Blvd Ruth Blvd	2		I/S	, p., p.,,				
10 Ru 10 Ru 10 Soi	Ruth Blvd Ruth Blvd			'	mini AOP pilot complete.	1/22/2016	195-21-00-0069	\$	36,327
10 Ru 10 Ru 10 Soi	Ruth Blvd Ruth Blvd				Nitrate Blend w/ Washington - *GAC Effluent Sample; PSE&G service upgrade completed;				,
10 Ru	tuth Blvd	1	0.58*	I/S	mini AOP pilot complete.	5/25/2012	195-21-00-0069	\$	36,327
10 So			0.70	ı/S	With rotations, runs every other day				,
		3	0.65	I/S	With rotations, runs every other day - monitor Now piped to GAC				
	outh Spur	1	1.50	O/S	Will blend with Well #3, ready for service when needed				
10 So	outh Spur	2	1.38	O/S	Remain O/S - Try to blend if we need more supply				
10 So	outh Spur	3	0.66	I/S	Seasonal GAC - monitor				
					Remain O/S - Long term, retire and replace w/ Old Dock Rd #2; drilling of Old Dock #2		040-20-0009, 040-		
11 Ca	Carlson Ave	5	2.16	O/S	completed		20-00-0010	\$	598,311
					Remain O/S - Long term, retire and replace w/ Old Dock Rd #2; drilling of Old Dock #2		040-20-0009, 040-		
11 Ca	Carlson Ave	6	3.11	O/S	completed		20-00-0010	\$	598,311
11 Ca	Carlson Ave	7	0.80	I/S	Monitor - Piping to existing GAC		195-21-00-0074	\$	27,414
11 Co	Cornell Dr	2	0.80	I/S	Rotates Call-1, Call-2 daily, so only runs every other day				
11 Kir	lings Park Rd	2A	0.55	I/S	Rotates Call-1, Call-2 daily, so only runs every other day				
11 Lav	awrence Rd	1A	0.84	I/S	With rotations, runs every other day - monitor				
11 Lav	awrence Rd	3	3.73	O/S	O/S pending AOP		195-21-00-0066	\$	594,459
11 Lav	awrence Rd	4	1.04	O/S	Blended w/ Well #1A and #3 - Monitor - Last blend was 0.81	9/17/2020	195-21-00-0066	\$	594,459
11 Old	Old Dock Rd	1	ND*	I/S	Locked in Call-2, Mini AOP Pilot complete, *GAC Eff 3/30/21 was Non-Detect				
11 Wi	Vicks Rd	1	0.71	I/S	With rotations, runs every other day - monitor				
					Well failed and retired, have permit for Well #2A; drill in Fall '21. GAC piping relocated to				
	Commercial Blvd	2	1.13	O/S	allow for building expansion		195-21-00-0060	\$	45,583
	Commercial Blvd	3	5.37	I/S	AOP completed - Station Treated sample is Negative	3/1/2018	055-14-00-0016	\$	909,474
12 Eas	astwood Blvd	2A	2.11	O/S	Leave O/S				
					Lock in Call-2. Mini AOP Pilot complete, piping relocated, building expansion awarded, bldg		195-20-00-0067,		
12 Fal	alcon Dr	1	0.40	I/S	design submittals in. GAC Vessels rebuilt.		195-21-00-0057	\$	217,314
					Throttled to 500 gpm, Blended w/ #1., Mini AOP Pilot complete, piping relocated, building		195-20-00-0067,		
12 Fal	alcon Dr	2A	1.44	O/S	expansion awarded, bldg foundation to begin soon		195-21-00-0057	\$	217,314
					Leave O/S pending AOP. Mini AOP pilot complete, piping relocated, building expansion		195-20-00-0067,		•
12 Fal	alcon Dr	2B	1.53	O/S	awarded, bldg foundation to begin soon		195-21-00-0057	\$	217,314
	incoln	2	0.71	I/S	Monitor, throttled to 1,200 gpm and on GAC			T	,
	Oval Dr	4	0.57	I/S	Monitor, at or below 1/2 MCL				
	Peconic St	1	2.60	O/S	Blended. Blend is still over 1.0 Leave O/S	8/15/2016			

						Date Treatment			
			Recent levels	Current		I/S or Blend		Διιt	:horization(s)
Zone	Station	Well	HOP	Status	Action plan (Planning window = 4 months)	Started	Authorization(s)		ie to Date (\$)
12	Peconic St	2	0.89	I/S	Limited run time in winter	Started	rtatiioiizatioii(s)	1	ic to bate (4)
12	Third Ave	3	0.77	I/S	Blended. Seasonal GAC. Last blend was 0.31. Mini AOP complete	4/1/2019			
12	Wheeler	6	0.88	I/S	On GAC. Blend with any other well	4/13/2021			
15	Boyle Rd N	1A	1.21	O/S	Leave O/S	., 10, 1011			
15	Boyle Rd PJ	1	0.53	I/S	Monitor				
	Boyle Rd PJ	2	0.46	I/S	Nitrate Blend - monitor	7/31/2007			
15	Boyle Rd PJ	3	0.53	I/S	Nitrate Blend - monitor	7/31/2007			
15	College Rd	3	1.19	I/S	Blended w/ #4 - monitor - Last blend was 0.56	10/27/2016			
15	Daniel Webster	2A	0.50	ı/S	Blended - monitor. Last blend was 0.30	8/23/2016			
15	Hawkins Rd	2	0.62	I/S	Rotates Call-1, Call-2 daily, so only runs every other day				
15	Horseblock Rd	1	1.00	I/S	Nitrate Blend - monitor. Last blend was 0.54	5/12/2013			
15	Jayne Blvd	1	0.47	I/S	Nitrate blend - monitor. Last blend was 0.28	6/21/2007			
15	Jayne Blvd	2A	1.02*	I/S	Blend with #5 and #1. Seasonal GAC. *GAC Effluent sample	9/17/2020			
15	Jayne Blvd	3	1.10	I/S	Blended w/#4 - monitor - Last blend was 0.49	2/19/2019			
15	Kayron Dr	1A	0.45	I/S	Rotates Call-1, Call-2 daily, so only runs every other day				
15	N Washington	1	0.75	I/S	Short timeclock for winter				
15	Oxhead Rd	2A	0.98	I/S	Blended w/ #3 - monitor - Last blend was 0.73	8/25/2016			
26	Montauk St Blvd	1A	ND	I/S	Blended. Seasonal. Level tends to increase with pumping.	4/1/2016			
60	Gazza Blvd	2	3.62	O/S	Remain O/S. Additional supply to zone from Zone 12 now.				
60	Smith St Ef	1	22.30	O/S	AOP design approved 12/10/20, going out to bid soon; Mini AOP complete		190-19-00-0004	\$	1,249,309
	Various				Electrical Service Upgrades for AOP		195-20-00-0072	\$	562,630
	Various				Electrical Service Upgrades for AOP		195-21-00-0058	\$	851,784
	Various				Mini-AOP by-products pilot testing project		195-20-00-0051	\$	220,000
					Total Funds Authorized to date for 1,D related work			\$	10,934,515

Actions typed in RED have occurred in the past 30 days.

Wells highlighted in green are being treated to remove contaminant