

SUFFOLK COUNTY WATER AUTHORITY
Production Control - Bay Shore, New York

INTER-OFFICE CORRESPONDENCE

DATE: September 22, 2020

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

Pursuant to the Board's request, the following is an update to the Emerging Contaminants Action Plan covering from August 17, 2020 to date. As of August 26, 2020, the proposed limits are now official maximum containment levels.

PFC's

Since the last update, one additional well has been placed on GAC for PFC removal. County Rd 31 #1 in Westhampton was assigned to GAC on August 19, 2020.

Regarding other new GAC installations, commissioning of new systems continues to take place at multiple sites. We are trying to get clean samples on the Sy Court (Lake Grove) system. We have pressurized the two (2) new systems at Flint Lane (Selden). At this point in the year, we will wait to load these vessels in the Spring, as they will have to come out of service in the next month anyway.

Purchase orders for the next seven (7) GAC systems will be issued to Calgon in the next week. We have been told by the vendor that these systems should be delivered before the end of 2020. Engineering has already begun piping designs for these systems. Construction prints have been issued to CM for Plymouth St and Lincoln Ave to begin the piping process. The Civil Engineering department is issuing work orders for clearing and new concrete pads.

1,4 Dioxane

SCWA received additional comments from NYSDOH on SCWA's last submittal of the Smith St AOP system on September 8. Engineering is currently working on a response to these comments. One of the comments indicated that NYSDOH is requesting mini-AOP pilot data from Smith St. We will be completing that pilot in the next two weeks. The other comments appear to be of a minor nature.

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. Clearing and site work continued for future AOP sites such as Hollywood Place in Huntington where the existing drainage basin has been extensively re-worked and a new concrete headwall was installed to accommodate existing GAC and future AOP start-up needs.

A contract has 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. There are two contracts for this building work; both are now conformed, and the design submittal phase has commenced along with on-site meetings. Design drawings and specs continue to be prepared for future AOP sites.

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 thirteen (13) wells in Huntington and Northport. Pilot testing was completed this week at Middleville Rd in Fort Salonga. The trailer is being moved to Falcon Dr in Hauppauge to begin piloting one well there and then on to Smith St East Farmingdale. Early analysis of the data obtained has revealed no big surprises in terms of by-product formation resulting from the AOP process.

Engineering has commenced construction of the new well Old Dock Rd #2 in Kings Park. This well is being drilled with the knowledge that it will require an AOP treatment system. It will replace Carlson Ave #5 and #6, 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

Now that the MCLs are officially in place, we have removed a number of wells from service in order to not be in violation. Even with the decreased demand at this time of year, the impact of the loss of these wells is already being felt. Where we can blend wells and remain in compliance, we are doing so. We anticipate doing a couple of carbon exchanges on a few key 1,4 Dioxane wells so that these wells can remain in service on an emergency use only basis. Carbon does remove 1,4 Dioxane, not well, but it does for a short period of time. Therefore, with new carbon, a few wells will be available in the event of an emergency.

Cc: J. Pokorny
K. Durk

Suffolk County Water Authority
PFC Treatment Priority Ratings Master Status

Well	Current Status	Clearing	Pad	Yard Piping	GAC Systems			Carbon loaded	In Service
					GAC Ordered	Est. delivery date	Actual delivery date		
Fairmount Medford #3	Well assigned to GAC 5/19/20. Restoration work remains.	Done	Done	Done	Moved existing from Oxhead #4 week of 1/20/19	1/20/20 or 1/21/20	Done	Yes	Yes
Old Country Rd #4	Well assigned to GAC 6/26/20. Restoration work remains.	Done	Done	Done	Yes		3/20/2020	Yes	Yes
Morris Ave #4	Well assigned to GAC 6/28/20. Restoration work in progress	Done	Done	Done	Delivery scheduled 3/15/20	Apr-20	3/19/2020	Yes	Yes
Station Rd #1A	Well assigned to GAC 3/14/20. Restoration work in progress	Done	Done	Done	Relocated from Old Nichols Rd	N/A	N/A	Yes	Yes
County Rd 31 #1	Well assigned to GAC 8/19/20. Restoration work remains.	Done	Done	Done	Yes	Jun-20	5/28/2020	Yes	Yes
Flint Ln #1	PC prep started	Done	Done	Done	Yes	Jun-20	6/18/2020		
Plymouth St #1A	Tie-in drawings to CM	Scheduled							
Old Country Rd #1A	Blended, Pad complete	Done	Done	tie-ins done					
Stem Ln #1	Well assigned to GAC 08/04/20. Restoration work remains	Done	Done	Done	Yes	20-Jun	5/29/2020	Yes	Yes
Sy Ct #3	Preparing for loading. Bacti issues	Done	Done	Done	Yes	Jun-20	6/2/2020		
Plymouth St #2A	Tie-in drawings to CM	Scheduled							
Brook Ave #4	O/S								
Dare Rd #2	Pad exists, current level less than 1/2 MCL, monitor								
Lincoln Ave #2	Tie-in drawings to CM								
Oxhead Rd #4	Blended, levels dropped, monitor	Done	Done		relocated to Fairmount				
Wheeler Rd #3	Pad and Bldg for Model 10 exists - O/S 8/2019	Done	Done	some mods needed					
Morris Ave #1	Current level less than 1/2 MCL, monitor	Done	Done	tie-ins done	will relocate ordered system to Middleville #2 AOP				
Hawkins Rd #3	PFOS at 1/2 MCL, monitor								
Church St Hol #2	O/S								
Stem Ln #2	Non-detect in 2020, monitor	Done	Done	Tie-ins done					
Edgewood Ave SJ #1A	Blended, GAC on order. Pad and bldg done	Done	Done						
Flint Ln #2	PC prep started, load in Spring	Done	Done	Done	Yes	20-Jun	6/18/2020		
North Magee #3	Blended, O/S								
Boyle Rd PJ #2	Blended, Levels have dropped, less than 1/2, monitor								
Hallock Ave #3	Watch. Up and down								
Foxcroft La #2	Blended, current levels <1/2 MCL, monitor								

Annual Total (K\$)

Foxcroft La #1A	Received DHS approval to treat with resin (ion exchange) in portable GAC system; first approval of resin for PFC's in NY. Went into service 5/30/19.	Done	Trailer	Done	Portable Trailer	N/A	N/A	Resin loaded	Yes
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Short Term Plan

Well	Current Status	Clearing	Pad	Yard Piping	GAC Systems			Carbon loaded	In Service
					GAC Ordered	Est. delivery date	Actual delivery date		
Pierson St #1	GAC (Model 10) on Site and piped, site access issue being addressed; cost is carbon load	N/A	N/A	N/A	N/A	N/A	N/A		
Eastwood Blvd #3	Complete 5/6/2019	Done	Done	Done	Done	N/A	N/A	Yes	Yes
West Prospect #1	Complete 3/18/2019	Done	Done	Done	Done	N/A	N/A	Yes	Yes
Bridgehampton Rd #2A	Complete 10/01/2019	Done	Done	Done	Done	N/A	N/A	Yes	Yes
Wheeler Rd #5	Complete - Assigned to GAC "A" 09/06/2019	Done	Done	Done	Done	N/A	N/A	Yes	Yes
Townline Rd #1A	Complete	Done	Done	Done	Done	N/A	N/A	Yes	Yes
Church St Hol #1A	Complete 5/7/2019	Done	Done	Done	Done	N/A	N/A	Yes	Yes
Bellmore Ave #1	Complete 4/24/2020	Done	Done	Done	Model 10 Moved from Old Nichols Rd	N/A	Jan-20	Yes	Yes
Long Springs Rd #1A	Complete 04/20/2020	Done	Done	Done	Done	N/A	N/A	Yes	Yes
Pierson St #2	Blended with #3. Priority over #1. Ordered vessels, working on site access	N/A	N/A	N/A	N/A	N/A	N/A		
Ruth Blvd #3	only piping req'd, Well is currently Non Detect	N/A	N/A	Done	N/A	N/A	N/A	Yes	
Race Ave #1	O/S - RETIRED	Well has been retired							

Emerging Contaminant Wells Current Status
All Wells > 1/2 Proposed MCL W/ No Treatment

9/22/2020

1,4 D MCL = 1.0 ppb

Zone	Station	Well	Recent levels	Current Status	Action planned (Planning window = 4 months)
1	Albany Ave	6	0.7	I/S	Blended w/ 4A since 8/23/16 - Last blend 0.28
1	Barton Ave	2A	1.79	O/S	Blended
1	Brook Ave	4	0.6	O/S	O/S for Mn
1	Great Neck Rd	1	3.36	O/S	2 well blend was below 1.0. Blended
1	Harvest Ln	1A	1.52	O/S	Blended since 10/31/17 - 2021 will be a 2 well blend. Last blend 0.91
5	Hollywood Pl	1	1.25	I/S	Lock in Fire Call to minimize run time. One of two well fields in Zone. Mini AOP pilot complete. Carbon exchange scheduled
6	Broadway	1A	1.73	O/S	2 well blend was still over 1.0, Stay O/S; mini-AOP pilot complete
6	Broadway	2	0.78	I/S	Monitor; mini-AOP pilot complete
6	Broadway	3	0.79	O/S	Monitor; mini-AOP pilot complete, O/S for pump failure
6	Flowerhill Rd	1	2.82	O/S	Runs blended with two other wells, last on - first off. Mini AOP pilot complete
6	Flowerhill Rd	2	1.71	O/S	New carbon, Emergency use only. Mini AOP pilot complete
6	Flowerhill Rd	3	0.82	O/S	Carbon exchanged scheduled; mini AOP pilot complete
6	Jennings Rd	1	0.77	I/S	With rotations, runs every other day
6	Jennings Rd	3	0.59	I/S	With rotations, runs every other day
6	Mayfair Dr	1	0.56	I/S	With rotations, runs every other day
6	Mayfair Dr	2	0.85	I/S	With rotations, runs every other day
6	Woodchck Hllw	1A	1.06*	I/S	Blend with either well. *GAC Eff sample
7	McKay Rd	1	1.68	O/S	Minimal run time - Mini AOP pilot complete
9	Douglas Ave	1	2.73	O/S	Mini AOP pilot complete
9	Douglas Ave	2	1.20	O/S	Mini AOP pilot complete
9	Middleville	1	0.94	I/S	Could throttle #1 and get 500 gpm - Mini AOP pilot complete
9	Middleville	2	0.80	I/S	Mini AOP pilot complete
9	Sunken Meadow	1	0.65	I/S	Blended, level has dropped significantly, monitor
9	Sunken Meadow	2	0.55	I/S	Lead with
9	Waterside Rd	2	1.08	O/S	Can change carbon for emergency use - Mini AOP pilot complete
9	Wayne Ct	1	0.68	I/S	Lock in Call-2. 0.94 on GAC Eff. Change carbon this fall.
10	Church St NPT	1	1.20	Blended	Nitrate Blend w/ Washington since 7/25/07 - last blend 0.49
10	Church St NPT	2	1.09	Blended	Nitrate Blend w/ Washington since 8/22/07 - last blend 0.59
10	Reservoir Ave	1A	0.78*	Blended	Nitrate Blend w/ Washington since 1/22/16 - *GAC Effluent Sample
10	Reservoir Ave	2	0.55*	Blended	Nitrate Blend w/ Washington since 5/25/12 - *GAC Effluent Sample
10	Ruth Blvd	1	0.63	I/S	With rotations, runs every other day - monitor
10	Ruth Blvd	3	0.65	I/S	With rotations, runs every other day - monitor
10	South Spur	1	0.84*	I/S	Rotates with Well #3 - monitor *GAC Effluent sample
10	South Spur	2	1.38	O/S	Remain O/S - Try to blend if we need more supply
10	South Spur	3	0.66	I/S	Seasonal GAC - monitor
11	Carlson Ave	5	2.16	O/S	Remain O/S - Long term, retire and replace w/ Old Dock Rd #2
11	Carlson Ave	6	3.11	O/S	Remain O/S - Long term, retire and replace w/ Old Dock Rd #2
11	Cornell Dr	2	0.57	I/S	Rotates Call-1, Call-2 daily, so only runs every other day
11	Kings Park Rd	2A	0.52	I/S	Rotates Call-1, Call-2 daily, so only runs every other day
11	Lawrence Rd	1A	0.91	I/S	With rotations, runs every other day - monitor
11	Lawrence Rd	3	3.73	O/S	O/S pending AOP
11	Lawrence Rd	4	1.27	I/S	Blended w/ Well #1A and #3 - Monitor
11	Old Dock Rd	1	0.97*	I/S	Locked in Call-2 to minimize run time, coming out of service, *GAC Eff sample
11	Wicks Rd	1	0.66	I/S	With rotations, runs every other day - monitor
12	Eastwood Blvd	2A	2.11	O/S	Leave O/S
12	Falcon Dr	1	0.76	I/S	Lock in Call-2
12	Falcon Dr	2A	1.44	Blended	Throttled to 1/2 capacity, Blended w/ #1. Will be O/S by end of quarter, Next Mini AOP Pilot
12	Falcon Dr	2B	1.53	O/S	Leave O/S pending AOP
12	Oval Dr	4	0.54	I/S	Blend removed - Monitor, at or below 1/2 MCL
12	Peconic St	1	1.68	O/S	Blended since 8/15/16. Minimize run time, blend is still over 1.0 Leave O/S
12	Peconic St	2	0.78	I/S	Limited run time in winter
12	Third Ave	3	0.69	I/S	Blended since 4/1/19. Seasonal GAC
15	Boyle Rd N	1A	0.96	O/S	Reduced runtime
15	Boyle Rd PJ	2	0.46	Blended	Nitrate Blend since 7/31/07 - monitor
15	Boyle Rd PJ	3	0.49	Blended	Nitrate Blend since 7/31/07 - monitor
15	College Rd	3	1.27	Blended	Blended w/ #4 since 10/27/16 - monitor - Last blend was 0.57
15	Daniel Webster	2A	0.49	O/S	Blended since 8/23/16 - monitor
15	Hawkins Rd	2	0.56	I/S	Rotates Call-1, Call-2 daily, so only runs every other day
15	Horseblock Rd	1	0.89	Blended	Nitrate Blend since 5/12/13 - monitor
15	Jayne Blvd	1	0.46	Blended	Nitrate blend since 6/21/07 - monitor

Zone	Station	Well	Recent levels	Current Status	Action planned (Planning window = 4 months)
15	Jayne Blvd	2A	1.02*	O/S	Blend with #5 and #1. Seasonal GAC. *GAC Eff Sample
15	Jayne Blvd	3	1.29	Blended	Blended w/#4 since 2/19/19 - monitor - Last blend was 0.43
15	Kayron Dr	1A	0.52	I/S	Rotates Call-1, Call-2 daily, so only runs every other day
15	N Washington	1	0.72	I/S	Short timeclock for winter
15	Oxhead Rd	2A	0.81	I/S	Blended w/ #3 since 8/25/16 - monitor - Last blend was 0.57
26	Montauk St Blvd	1A	0.68	I/S	Blended with minimal run time has lowered level
60	Gazza Blvd	2	3.62	O/S	Remain O/S. Additional supply to zone from Zone 12 now.
60	Smith St Ef	1	22.3	O/S	Awaiting approval of AOP; Mini AOP pilot after Falcon