

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

INTER-OFFICE CORRESPONDENCE

DATE: April 21, 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 February 26 to date.

PFC's

Since the last update in February 2020, two additional wells have been placed on GAC for PFC removal. Station Rd. #1A in North Bellport was assigned to GAC in March, 2020. Long Springs Rd #1A (Southampton) was assigned to GAC on April 20.

Regarding new GAC installations, site prep continues to take place at multiple sites while SCWA awaits the delivery of another 6 sets of GAC vessels. Fairmount Ave Medford #3 has been loaded with new carbon and we are currently flushing to obtain good samples before placing in service. Bellmore Ave #1 GAC vessels have been piped and are close to ready for carbon loading. New GAC systems have been delivered to Morris Ave (Farmingville) and Old Country Rd (Speonk) and are currently having underground piping installed by SCWA CM crews. GAC systems are on order for Flint Lane (Selden), Stem Lane (Stony Brook), Sy Court (Lake Grove), County Rd 31 (Westhampton) and Middleville Rd (Fort Salonga), delivery is currently projected to be in June.

A contract for a dozen more GAC systems is on the April Board meeting Agenda to help us meet the upcoming MCL.

1,4 Dioxane

Resubmittal of the Smith St East Farmingdale AOP system should take place in the next week. State DHS comments are addressed, specifications have been updated to reflect the newest Trojan AOP reactor model, and a full re-design of the bulk hydrogen peroxide system has been completed. On site, the relocation of the electrical transformer and installation of new electrical primary has also been

done. The cellular carriers are marking out their facilities in preparation for CM crews to do yard piping modifications.

CM crews have relocated piping on multiple AOP sites to accommodate the building additions required to house the new AOP systems. Extensive piping relocation has been done at Flower Hill Rd (Halesite), Hollywood Pl (Huntington), Sunken Meadow Park (Kings Park), McKay Rd (Huntington Manor), Falcon Drive (Hauppauge), and Broadway (Huntington Station) and will soon be done at Waterside Dr (Fort Salonga).

A contract has been issued 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. The bid date is April 29th with award to be made at the May 2020 Board meeting. Design work on the next group of building additions and stand-alone buildings has begun.

A contract has been prepared for truck containment pads for peroxide deliveries and another one is in the works for bulk storage tanks for peroxide. The mini-AOP reactor pilot trailer has been set up at Flower Hill Rd and is being run by PC to finalize flow rates, etc. The State has approved the system for this use at all AOP sites to help predict by-product formation from AOP treatment.

Emerging Contaminant Wells Current Status

We are currently doing our best to comply with the proposed MCLs now while making sure that we do not compromise public safety and fire protection. This involved removing another eighteen wells from service for the low demand winter season. A few other wells were placed in lower call service so that they only run in an emergency or for sampling. Because of these actions we have already seen contaminant levels change in many wells. In some cases, drastically reduced runtime has caused some contaminant levels to decrease. Unfortunately, some wells left in service have had increased run time and we have seen their contaminant levels rise substantially.

Now that we have begun piloting work for AOP design we have begun to return to service many of the wells that were taken out of service over the winter. In order to properly design an AOP system for a well we must run pilot trials utilizing water with typical chemistry for that well. When wells are not run, the chemistry may change. 1,4 Dioxane and other constituents may be higher or lower than typical. Therefore, the well to be piloted must be run until the water quality is what we typically see. Once piloting on a well is complete, the well will be placed in a lower call setting to minimize it's run time and will come out of service as soon as demand reduces to the point that we can afford to have it out of service.

Cc: J. Pokorny
K. Durk

Well	Current Status	Clearing	Pad	Yard Piping	GAC Systems			Carbon loaded	In Service
					GAC Ordered	Est. delivery date	Actual delivery date		
Fairmount Medford #3	New GAC system installed and piped up. Was Model 12 purchased for Oxhead Rd #4. Loaded with carbon on 04/16/20. Rinsing for clean samples.	Done	Done	Done	Moving existing from Oxhead #4 week of 1/20/19; diverted ordered system to Morris	1/20/20 or 1/21/20	Done	Yes	
Old Country Rd #4	Complete GAC system; pad is poured, vessels have been delivered; new basin is done, CM to start piping	Done	Done	tie-ins complete; dwgs issued wk of 3/2	Yes	1st week of June (#5 of six systems ordered)	3/20/2020		
Morris Ave #4	GAC site work complete, vessels delivered; bsin is done, CM piping in progress	Done	Done	CM in progress	Delivery scheduled 3/15/20 (new system was diverted from Fairmount #3)	Apr-20	3/19/2020		
Station Rd #1A	Well assigned to GAC 3/16/20. Restoration work remains.	Done	Done	Done	Relocated from Old Nichols Rd	N/A	N/A	Yes	Yes
County Rd 31 #1	GAC site work (clearing, concrete slab, restoration) in prep for future GAC system; system ordered; delivery in May	Done	Done	tie-ins complete; dwgs issued	Yes	Jun-20			
Flint Ln #1	GAC site work (clearing, concrete slab, restoration) in prep for future GAC system; system ordered; delivery in May	Done	Done	dwgs issued to CM; tie-ins done	Yes	Jun-20			
Plymouth St #1A									
Old Country Rd #1A	Blended, Pad complete	Done	Done	tie-ins complete; dwgs to be issued wk of 3/2					
Stem Ln #1	Blended; existing slab; WBS is for related site work (concrete mods, clearing, piping); system ordered; delivery in May	Done	Done	Tie-ins done	Yes	20-Jun			
Sy Ct #3	GAC site work (clearing, concrete slab, restoration) in prep for future GAC system; system ordered; concrete slab is done, piping tie-ins done. Delivery in May	Done	Done	Tie-ins done	Yes	Jun-20			
Plymouth St #2A									
Brook Ave #4	O/S								
Dare Rd #2	Pad exists								
Lincoln Ave #2	Pad for Model 10 exists, capacity?								
Oxhead Rd #4	Pad exists for Model 12	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	Last call	Done	Done	tie-ins done	will relocate ordered system to Middleville #2 AOP				
Hawkins Rd #3									
Church St Hol #2	O/S								
Stem Ln #2		Done	Done	Tie-ins done					
Edgewood Ave SJ #1A	Blended								
Flint Ln #2	Blended	Done	Done		Yes	20-Jun			
North Magee #3	O/S								
Boyle Rd PJ #2	Blended								
Hallock Ave #3									
Foxcroft La #2	Blended inside Well #1A								

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 to load carbon; 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
Bridgheampton 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	Blended; well #1 already piped and valved off to GAC "B". Will run #1 and #3 through GAC "B". Existing vessels from Old Nichols Rd moved here Prepping for service	Done	Done	Done	Model 10 Moved from Old Nichols Rd	N/A	Jan-20		
Long Springs Rd #1A	Complete 04/20/2020	Done	Done	Done	Done	N/A	N/A	Yes	Yes
Pierson St #2	can be blended with #1 after #1 is on GAC; long-term could require another GAC @ \$600K	N/A	N/A	N/A	N/A	N/A	N/A	will be blended	
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	Expected to remain out of service							

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

4/22/2020

1,4 D

Proposed 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 since 8/23/16 - No further action planned
1	Barton Ave	2A	1.79	O/S	Remain O/S
1	Brook Ave	4	0.6	O/S - 9/21/17	O/S for Mn - No further action planned
1	Great Neck Rd	1	3.36	O/S	2 well blend was below 1.0. If needed, blend with #3 and #4
1	Harvest Ln	1A	1.52	O/S	Blended since 10/31/17 - No further action planned
5	Hollywood Pl	1	1.29	I/S	Lock in Call-2 to minimize run time. One of two well fields in Zone
6	Broadway	1A	1.73	I/S	2 well blend was still over 1.0, Last call
6	Broadway	2	0.78	I/S	No further action planned
6	Broadway	3	0.79	I/S	No further action planned
6	Flowerhill Rd	1	2.82	I/S	Needs to operate to maintain typical water chemistry for pilot testing to design AOP
6	Flowerhill Rd	2	1.71	I/S	Needs to operate to maintain typical water chemistry for pilot testing to design AOP
6	Flowerhill Rd	3	0.82	I/S	Needs to operate to maintain typical water chemistry for pilot testing to design AOP
6	Jennings Rd	1	0.77	I/S	With rotations, runs every other day - no further action planned
6	Jennings Rd	3	0.59	I/S	With rotations, runs every other day - no further action planned
6	Mayfair Dr	1	0.47	I/S	With rotations, runs every other day - no further action planned
6	Mayfair Dr	2	0.85	I/S	With rotations, runs every other day - no further action planned
6	Woodchck Hllw	1A	0.62	I/S	With rotations, runs every other day - no further action planned
7	McKay Rd	1	1.68	I/S	Minimal run time - pilot testing after Flowerhill Rd
9	Douglas Ave	1	2.73	O/S	Remain O/S.
9	Douglas Ave	2	1.20	I/S	No further action planned
9	Middleville	1	1.24	O/S	Blend is just over 1.0 (1.07). Could throttle #1 and get 500 gpm
9	Middleville	2	0.80	I/S	Lock in Call-2
9	Sunken Meadow	1	1.04	I/S	Need to run every day or so to keep GAC from nitrate slough, Blend in summer
9	Sunken Meadow	2	0.77	I/S	Lead with
9	Waterside Rd	2	1.08	O/S	Remain O/S. Have to run 4 hrs/day to prevent nitrate slough
9	Wayne Ct	1	1.02	I/S	Lock in Call-2
10	Church St NPT	1	1.20	Blended	Nitrate Blend w/ Washington since 7/25/07 - No further action planned
10	Church St NPT	2	1.00	Blended	Nitrate Blend w/ Washington since 8/22/07 - No further action planned
10	Reservoir Ave	1A	0.76	Blended	Nitrate Blend w/ Washington since 1/22/16 - No further action planned
10	Reservoir Ave	2	0.62	Blended	Nitrate Blend w/ Washington since 5/25/12 - No further action planned
10	Ruth Blvd	1	0.63	O/S - 10/18/19	Seasonal GAC
10	Ruth Blvd	3	0.59	I/S	With rotations, runs every other day - no further action planned
10	South Spur	1	0.71	I/S	Rotates with Well #3 - no further action planned
10	South Spur	2	1.38	O/S	Remain O/S - Try to blend if we need more supply
10	South Spur	3	0.62	I/S	Seasonal GAC - no further action planned

Zone	Station	Well	Recent levels	Current Status	Action planned (Planning window = 4 months)
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	0.92	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	1	0.94	I/S	With rotations, runs every other day - no further action planned
11	Lawrence Rd	3	3.73	O/S	Remain O/S - 3 well blend was over 1.0
11	Lawrence Rd	4	1.11	I/S	With rotations, runs every other day - no further action planned
11	Old Dock Rd	1	1.22	I/S	Locked in Call-2 to minimize run time
11	Wicks Rd	1	0.66	I/S	With rotations, runs every other day - no further action planned
12	Eastwood Blvd	2A	2.11	O/S - 9/26/19	Leave O/S
12	Falcon Dr	1	0.76	O/S	Lock in Call-2
12	Falcon Dr	2A	1.44	O/S	Remain O/S until demand increases
12	Falcon Dr	2B	1.53	O/S	Remain O/S until demand increases
12	Oval Dr	4	0.54	Blended	Blend since 8/24/16 - No further action planned
12	Peconic St	1	2.05	O/S	Blended since 8/15/16. Minimize run time, blend is still over 1.0
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 - 10/22/19	
15	Boyle Rd PJ	2	0.54	Blended	Nitrate Blend since 7/31/07 - No further action planned
15	Boyle Rd PJ	3	0.49	Blended	Nitrate Blend since 7/31/07 - No further action planned
15	College Rd	3	1.04	Blended	Blended since 10/27/16 - No further action planned
15	Daniel Webster	2A	0.49	I/S	Blended since 8/23/16 - No further action planned
15	Hawkins Rd	2	0.64	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 - No further action planned
15	Jayne Blvd	1	0.46	Blended	Nitrate blend since 6/21/07 - No further action planned
15	Jayne Blvd	2	1.01	O/S - 9/27/19	Well has been retired - Coming off the list
15	Jayne Blvd	3	0.69	Blended	Blended since 2/19/19 - No further action planned
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	1.02	I/S	Blended since 8/25/16 - No further action planned
26	Montauk St Blvd	1A	1.06	O/S - 10/18/19	Remain O/S until demand requires usage
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 - 3/20/18	Awaiting approval of AOP