

**TOWN OF HEMPSTEAD
1,4 DIOXANE AND PFOA/PFOS REMOVAL PROJECTS
QUARTERLY REPORT**

In support of the Department of Water's Deferral Application

Fourth Quarter 2022

**Prepared by the Town of Hempstead Department of Water
PWSID #NY2900000
January 9, 2023**

Executive Summary

The following Quarterly Report was prepared by the Town of Hempstead Department of Water (Department) to provide an update and status of the improvements being planned and constructed by the Department to our customers and the New York State Department of Health (NYSDOH) and Nassau County Department of Health (NCDOH) and covers the period from October 1, 2022 through December 31, 2022.

This report will provide a project by project update on the progress and efforts made during the previous three month period, any modification to the planned timeline of improvement milestones along with an explanation and justification for the modification. Finally, Appendix A of this report contains 1,4 dioxane test results for all Department wells which ran to system during the fourth quarter of 2022.

General Information Regarding Department-Wide Operations

As discussed in previous quarters, upon official notification of the granting of a deferral from the NYSDOH the Department created a page on its website dedicated to emerging contaminant information (www.hempsteadny.gov/water-department/eci) and sent a letter to every consumer advising them of the deferral and making them aware of the webpage and its contents. There is a link to the page from the homepage directory of the Town website as well as prominent links throughout the Departments page on the website. The Department continued to provide a note on bills regarding the ECI page as well as the website information of the front of every water bill issued by the Department advising consumers of the important information provided on the page. On August 23, 2022, the Department of Water was notified by New York State Department of Health that it was granted a one year extension on its deferral. The Department immediately added the extension notification to the ECI webpage and mailed all customers a post card notifying them of the extension and alerting them to the updates on the webpage. In the first quarter of 2022 the Department issued its Annual Drinking Water Quality Report (ADWQR) which included a section detailing emerging contaminants including detailed information about the Westbury and Garden City Water Districts interconnections with Hempstead, links to their water quality data and a note explaining where residents can get information about the status of these interconnections. Additionally, the original deferral notification was republished in the ADWQR.

In the second quarter of 2021 the Town of Hempstead board adopted a resolution authorizing the use of the Trojan UV Flex system at the sole vendor of ultraviolet light generators for the Departments AOP projects. This resolution is supported by the fact that all systems pilot tested and submitted for approval by the Department of Water have utilized the Trojan UV Flex system. By doing so, the Department of Water was able to prepare pre-purchase documents and solicit price proposals directly from Trojan to purchase UV generators ahead of the final approval of full design plans and prior to letting and awarding construction bid documents essentially shortening the lead time on these critical components of the AOP process. The department preordered the UV reactors as specifications were prepared by its consultants. Additionally, to reduce the lead time in obtaining materials given the current supply chain restrictions, the Department has, where they will be used, preordered prefabricated buildings

utilizing the Sourcewell purchasing contract. This has allowed the design and submittal process to run in advance of the actual construction bidding thus reducing construction time.

**1995 Prospect Avenue (west) East Meadow Well 1 (N3456) and
East Meadow Well 3 (N3465)**

The Department's consultant on this project, P.W.Grosser (PWG) finished the preparation of the its pilot study report and Basis of Design Report (BODR) and submitted these documents for review and approval to the NYSDOH and NCDOH on March 11, 2021 ahead of schedule. The Department has received a letter of approval on the design report from NYSDOH. The Department has received and approved 100% design documents and specifications from PWG and is preparing bid documents to advertise this project. Given that this AOP system will be connected to an existing GAC facility there is no anticipated delay in final completion of this facility. Work for the construction of a new building to house well 3 as well as the UV reactor and the hydrogen peroxide treatment was bid and awarded in Quarter 3 and contractors have begun providing submittals for approval. In Quarter 4 of 2022 contractors mobilized to the site and installed their erosion and sediment control, performed survey and control work as well as utility markout work and continued with project submittals. The UV reactors are ready for delivery to the project as soon as the building construction allows.

East Meadow Well 1 continued to operate in a last on first off scenario.

**1995 Prospect Avenue (east) East Meadow Well 5 (N4448) and
East Meadow Well 11 (N7797)**

H2M Consulting Engineers (H2M) the consultant retained for the design work on this project has received comments on the Pilot Study and BODR submitted in a previous quarter and had revised the necessary documents and returned to NYSDOH and NCDOH for their final review. Final approval was obtained in the fourth quarter of 2021.

The necessary contracts for this project have been bid and awarded. Contractors have made submittals and the consult has reviewed and approved same. The necessary prefabricated steel building for this project has been preordered by the Town and the construction and scheduled delivery is ahead of schedule. Work at the site have begun with the demolition of an existing structure, site clearing, and prep and asbestos remediation work performed at the existing well buildings. Bluescope, the prefabricated building manufacturer has advised that the building manufacturing is on schedule. Trojan has advised that the UV reactors are ready for delivery and will be held at their facility until the building is weatherproofed. All concrete construction for the prefabricated building installation has been completed at the site and GAC deliveries are scheduled for the second week of October. Site piping and wiring continues to progress.

In quarter 4 of 2022 electrical and plumbing work progressed in wells 5 and 11 in conformance with the project plans. The Remaining foundation work was completed in the new treatment building as well as the remaining large piping installed in advance of the installation of the prefabricated building scheduled for delivery in the second week of 2023. The prefabricated building contractor has confirmed that all installations are in conformance with their needs and

requirements to expedite the building installation. The electrical contractor on this job has indicated that there are supply chain delays for several the MCC and controls items and is working to expedite them as best as possible. To deal with his issue he is developing a plan to energize and test the facility prior to all materials being delivered to minimize delays. The UV reactors are ready for delivery to this project and are scheduled for delivery as the building is constructed in the first quarter of 2023 to facilitate installation while allowing for protection from the elements.

Well 11 continues to be voluntarily removed from service due to elevated nitrate levels and did not run to system during this quarter.

Oak Street Well Site Uniondale Well 5 (N8474) and Uniondale Well 6 (N8475)

As previously discussed, due to errors by bidders and on two contracts, bidders requested to withdraw their bids, the Department rebid these contracts. New contracts were awarded in Q2 of 2022. Concurrent to these efforts, the Town pre-purchased the prefabricated steel building to reduce the construction timeline and the vendor have advanced the work on this manufacturing. Contractor submissions have been reviewed and approved and material acquisition has begun. Bluescope, the prefabricated building manufacturer has advised that the building manufacturing is on schedule for delivery as soon as the building foundation is completed. Shoring and bracing has been installed for the clearwell construction for the PTA which will be located adjacent to the AOP building and excavation has been completed. Foundation forming and pouring of the clearwell and building foundation will begin shortly.

In quarter 4 of 2022 the building foundation and clearwell were fully poured and backfilled. Site piping was installed and the site prepped for the prefabricated building installation to begin the third week of January. The electrical contractor on this job has indicated that there are supply chain delays for a number of the MCC and controls items and is working to expedite them as best as possible. To deal with his issue he is developing a plan to energize and test the facility prior to all materials being delivered to minimize delays.

Well 6 remained OOS in Q4.

Hilltop Well Site Levittown Well 1A (N13887) and 2A (N8231)

As stated in the previous quarters report, the Department has issued purchase requisitions for UV reactors for this project to reduce any materials lead times during construction. As previously stated the need to add multiple treatment processes at this site with limited space has caused the project to progress through design at a slightly slower pace to ensure that all systems will be serviceable in the actual working environment.

Contracts for work at this site have been awarded and work is progressing. Contractor submissions have been made and approved. Existing infrastructure demolition has been made making way for foundation construction to begin. Site piping installation is progressing. During Q3 of 2022 the building foundation was excavated, formed, poured and backfilled. Electrical conduit has been installed in the new building foundation and all building steel was delivered to

site. In quarter 4 the GAC pads will be formed, the steel decking and concrete installed, and the building blockwork will begin. The UV Reactors are ready for delivery to the site.

In quarter 4 2023 the remaining building concrete work was completed, and the block building was constructed and completed. The stone facia remains to be installed but was put on hold to allow for the site piping to be installed which was begun during Q4 as well as has progressed to approximately 80% during this period. Electrical work progressed in the new building as well as in the adjacent well buildings. GAC delivery is on schedule for the end of January 2023 after which the building will be weatherproofed with the roof trusses currently on site.

Both Wells 1A and 2A remain voluntarily out of service due to elevated nitrate levels.

Market Lane well site Levittown Well 5A (N7076) and Levittown Well 6B (N12560)

As previously discussed, contracts for work at these wells were solicited and awarded and work has begun. To maintain operability of these wells throughout construction a primary electrical service bypass has been constructed. Building construction has progressed along with related electrical and plumbing installation under the building slab. Remaining site piping is currently being installed along with building steel.

The Department had issued materials purchase orders to Trojan for the UV reactors necessary for this project to expedite material lead time on this project. Trojan has advised that the UV reactors are on ready for delivery and are being held at their facility until the building is weatherproofed. In Q3 of 2022 the GACs were delivered and piped, building construction was completed and a majority of site piping installed. The UV Reactors are ready for delivery to the site.

With the building fully constructed and weatherproofed all small and large piping was installed in the building and a majority of the site piping has been installed. The UV reactors have been set and their wiring all landed. All mechanical components of the controls systems have been installed and wiring has begun from these components. A majority of the electrical conduit has been installed.

The electrical contractor on this job has indicated that there are supply chain delays for a number of the MCC and controls items and is working to expedite them as best as possible. To deal with his issue he is developing a plan to energize and test the facility prior to all materials being delivered to minimize delays. Modifications to the plans were made in quarter 4 to allow for the relocation of the existing standby generator to another location on the site to allow for continued use until the new generator is delivered. This item has an extended lead-time due to supply chain issues. This relocation will allow for operation of one well once treatment is placed online.

Entry Lane Levittown, Levittown Well 13 (N5303)

Work at this site required relocation of a considerable amount of drainage including Nassau County Drainage piping. All site drainage improvements and relocations have been completed, shoring piles were driven to protect the existing generator and foundation excavation has been

performed. In Q3 of 2022 the GACs were delivered and piped, the building foundation poured, and the building superstructure completed. Exterior brick facia has begun being installed and large piping has been manufactured and delivered to the treatment building.

The Department had issued materials purchase orders to Trojan for the UV reactors necessary for this project to expedite material lead time on this project. The UV Reactor is ready for delivery to the site.

In quarter 4 of 2022 the building was weatherproofed allowing for delivery of the UV reactor. With the building closed up all electrical conduit, small and large piping has been installed. The electrical contractor has mounted all electrical controls and begun wire termination.

Dibblee Drive Well Site Roosevelt Field Well 7 (N9521), Well 11 (N13524) and Well 12 (N13525)

As stated in a previous quarter, due to recently received water quality information, Well 12 has been voluntarily removed from service. Our consultant held numerous conference calls with various agencies to discuss treatment alternatives for treatment of well 12 as well as the anticipated need to treat wells 7 and 11 as they are proximate to 12. Additionally the scope has been widened to include the construction of a booster station between Uniondale and Roosevelt Field to allow for additional capacity to the district during construction. NCDOH has reviewed draft scope documents for this project and based on their comments this design work is advancing.

Based on meetings the Department has had with adjacent landowners the Department has authorized D&B to move forward with this project in two phases, Phase one to provide AOP treatment for wells 7, 11 and 12 in order to provide 1,4 dioxane treatment to 7 and 11 within the deferral timeline. Phase II will provide additional treatment systems to address new quality concerns which have resulted in the removal of well 12 from service. This work will take considerably more time so well 12 will remain OOS until such time as Phase II is completed. In Q3 the plans for this site were advanced to 60% and the Department met with the consultant and approved the advancement to final plans.

In Q4 of 2022 the plans were advanced to final plans and bid documents were prepared. Prepurchase documents were prepared to allow for the prepurchase of many components for the treatment systems including the UV reactors and the GAC vessels. The Design has been reviewed and endorsed by the Department of Health which is critical given the complex treatment sequence of this site and the future planned cation plant for this site. As work at this site will not be ready by the end of the deferral period the Department has begun negotiating with a neighboring supplier to supplement supply to the district. Additionally, the department is designing a booster facility to move water from lower pressure zones to this district.

Bowling Lane Well Site Levittown Well 7A (N8279) and Levittown Well 8A (N7523)

Optimization runs were completed on the pilot testing and a pilot report is being finalized. The Consultant has completed a 30% design set of drawings and a meeting was held to review the

proposals and assumptions. Based on the outcome of this meeting the Town has authorized the consultant to move forward towards 60% design. In Q3 of 2022 design work was completed and the Town solicited bids. Bidding continued on past the end of the quarter.

In quarter 4 of 2022 the project bids were opened, and the contracts awarded. Contractors have made the majority of their submissions; a preconstruction meeting was held and the contractors have mobilized to the site to begin construction. The electrical contractor on this job has indicated that there are supply chain delays for a number of the MCC and controls items and is working to expedite them as best as possible. The contractor has indicated that he will have electrical components built to allow for the energization of the plant as materials are supplied so as to allow for startup testing.

Iris Place Well Site Bowling Green Well 1 (8956) and Bowling Green Well 2 (N8957)

As previously discussed, a major component of design work at this site involves a study to determine the feasibility of installing an AOP treatment system for the removal of 1,4 dioxane as well as the reduction of organic concentrations at these wells and if deemed feasible. The Department and Dvirka and Bartilucci have determined that additional property will be needed to accommodate treatment improvements so that both wells can be treated. Letters have been sent to the adjacent property owner to begin acquisition discussions. Based on this a pilot test was authorized and design work has begun on the treatment aspect of the project. A BODR has been completed and submitted for review for this project. In Q3 of 2022 the department of Water met with Nassau County to determine the feasibility of acquiring the adjacent property for the treatment. This will require alienation of parkland due to a prior preservation action. Legal work is moving to effectuate this concurrent with design efforts. These efforts continued in quarter 4 of 2022.

These wells remain out of service voluntarily.

East Meadow Site II East Meadow Well 6 (N5318) and Well 8 (N5320)

A BODR has been completed and submitted for review for this project. The towns consultant has advanced the design drawings to 60% and these plans have been reviewed and approved by the Town with direction to advance the design to final bid documents. Bids for this project will be let in Q4. While well 8 has produced test results near 90% of the MCL at times, both wells 6 and 8 still remain below the MCL. In quarter 4 of 2022 plans were advanced to final plans and bid documents were prepared with bidding expected to happen in early Q1 of 2023.

Roosevelt Field Well 5 (N7957)

No work was contemplated for this well during the fourth quarter of 2022. This well remains voluntarily out of service.

APPENDIX A

1,4 Dioxane Results (ug/L)

WELL	2019	2019	'20 Q4	'21 Q1	'21 Q2	'21 Q3	'21 Q4	'22 Q1	'22 Q2	'22 Q3	'22 Q4
EM1	4.3	5.6	2.6	3.9	4.2	1.7	2.8	4.4	3.8	2.3	2.9
EM3	0.76	0.79	0.85	0.30	O/S	0.79	0.87	1.1	1.1	1.0	0.60
EM5	0.46	0.61	0.59	0.67	0.83	0.43	0.55	0.75	0.71	0.59	0.73
EM6	0.48	0.34	0.25	0.32	0.36	0.15	0.33	0.24	0.39	0.27	0.31
EM8	0.11	0.91	0.71	0.74	0.77	0.58	0.56	0.90	0.80	0.68	0.66
EM10	0.87	0.40	0.61	0.53	0.58	0.56	0.58	0.52	0.58	0.56	0.62
EM11	1.2	1.2	1.3	1.5	1.6	1.6	1.3	1.4	1.9 *	OOS*	OOS*
UN1	0.15	<0.20	0.17	0.21	0.29	0.14	0.15	0.15	0.17	0.22	0.16
UN2	<0.10	0.069	0.08	0.11	0.12	0.08	0.076	0.071	0.072	0.092	OOS***
UN3	<0.070	<0.020	<0.07	<0.07	<0.07	<0.07	<0.07	<0.070	<0.070	<0.070	<0.070
UN4	0.25	0.25	0.16	0.17	0.16	0.14	0.13	0.11	0.080	0.13	0.17
UN5	1.3	1.4	1.5	1.3	1.6	2.1	1.6	0.91	0.87	1.9	2.1
UN6	2.7	2.9	3.4	4.1	3.6	6.7	4.0	1.9	OOS *	4.0*	4.3
LEV1A	0.31	3.7*	4.1	4.4	4.7	4.4	4.1	3.8	4.7 *	OOS*	OOS*
LEV2A	4.0	3.4	2.6	2.7	2.5	3.2	2.3	2.7	OOS *	OOS*	OOS*
LEV5A	0.47	0.31	0.35	0.36	0.39	0.38	0.36	0.41	0.39	0.43	0.33
LEV6B	1.6	1.4	1.6	1.2	0.97	0.92	0.84	1.6	1.6	0.90	0.74
LEV7A	1.0	0.91	1.6	0.97	1.1	1.8	0.99	1.0	1.2	1.5	0.98
LEV8A	0.27	0.28	1.0	1.0	1.3	1.3	1.2	1.3	1.3	1.4	1.3
LEV12	0.37	0.38	0.12	0.10	0.13	0.50	0.51	0.60	0.65	0.74	0.83
LEV13	<0.070	1.4	1.8	1.4	1.7	2.0	1.4	1.3	1.9	2.1	1.5
LEV14	<0.020	<0.020	<0.07	<0.07	<0.07	<0.07	<0.07	<0.070	<0.070	<0.070	NO SAMPLE**
RF5	3.1	3.5	1.4	1.1	1.2	0.93	0.97	1.0	OOS *	1.2*	1.2
RF7	0.97	0.97	1.4	1.4	1.6	1.4	1.5	0.64	1.5	1.4	1.8
RF10	0.21	0.18	0.29	0.22	0.19	0.2	0.29	0.29	0.25	0.32	0.35
RF11	1.6	0.72	1.1	1.1	1.3	1.0	0.99	1	1.1	1.1	1.2
RF12	1.5	1.5	1.6	1.4	1.4	1.4	0.92	1.2	1.1 *	1.0*	1.1
BG1	2.6	2.3	2.2	2.2	2.0	4.9	3.9	4.1	OOS *	2.8*	2.9
BG2	1.5	1.4	1.5	1.5	1.6	1.7	1.3	1.6	OOS *	1.7*	1.5

* These wells did not run to the system in this quarter

** These wells were not sampled as all prior samples were non-detect

*** This well was out of service for sampling due to an electrical feed failure.