

**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 2021

**Prepared by the Town of Hempstead Department of Water
PWSID #NY2900000
January 6, 2022**

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, 2021 through December 31, 2021.

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 2021.

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.

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 has now issued purchase requisitions for seven such systems to date and has a number of others ready to issue shortly.

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 and PWG held a brief phone meeting prior to PWGs submission of 60% design drawings on June 27, 2021. These plans were reviewed and comments forwarded to PWG for their action with the directive to advance the plans. Due to an unforeseen health situation the

review was delayed which has pushed the schedule for this project slightly. Given that this AOP system will be connected to an existing GAC facility there is no anticipated delay in final completion of this facility. Final design drawings are currently being forwarded to the Department for their review in Q1 of 2022 with the project bidding shortly thereafter.

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.

With the completion of final design drawings and bid documents the Department let the necessary contracts for this project and received bid proposals in the fourth quarter. The Department has prepared the necessary documentation to award this project and award will be made at the next Town Board meeting with construction beginning shortly thereafter.

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)

Bid documents were prepared and approved in In Q3 final design drawings for this project were completed and reviewed by the Department. Final specifications were developed and finalized with Trojan for the UV reactors for this project and purchase documents were issued. Comments were received from Health Departments and the plans amended prior to bidding. Bids are currently being solicited for this project with award and start of construction in Q1 of 2022. 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. Bid document will be let in early Q1 of 2022 with the start of construction following shortly thereafter.

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)

With bids having been solicited during Q3 for this project, contracts were awarded in Q4 and work has begun at the site. Materials have been delivered for various components and site work including drainage improvements have been performed.

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

Entry Lane Levittown, Levittown Well 13 (N5303)

With bids having been solicited during Q3 for this project, contracts were awarded in Q4 and work has begun at the site. Material submissions have begun being submitted and approvals issued for various components. Site work including drainage improvements will begin shortly.

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.

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.

30% design plans for phase I have been submitted to the Department for review and approval and the OK has been given to advance the plans.

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

Pilot testing was performed and the results analyzed for AOP treatment at this site. Based on these results an optimization run is now being conducted to finalize the pilot study results and prepare a final BODR. Additionally, soil borings were performed for the structural design of the GAC building.

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 may need to be acquired to accommodate treatment improvements and this process has begun with the drafting of letters to adjacent property owners. The feasibility study has been completed and it was determined that with the land currently available well one could be retained and necessary treatment added within the existing site constraints. If the additional land were obtained, both wells can be treated. Based on this a pilot test was authorized and design work has begun on the treatment aspect of the project. Shortly a decision will be made if the site plans will include one or two wells in the final scenario. This option allows the design work to proceed while awaiting a response on the availability of land. A BODR has been completed and submitted for review for this project.

These wells remain out of service voluntarily.

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

Pilot testing has been completed at this site and the results are being analyzed. A BODR has been completed and submitted for review for this project. As previously stated a predesigned treatment building and process will be utilized at this site so once a BODR report is approved, design drawings will follow very quickly behind.

Roosevelt Field Well 5 (N7957)

No work was contemplated for this well during the fourth quarter of 2021. This well remains voluntarily out of service.

APPENDIX A

1,4 Dioxane Results (ug/L)

WELL	2018	2019	4th Q 2020	1st Q 2021	2nd Q 2021	3rd Q 2021	4th Q 2021
EM1	4.3	5.6	2.6	3.9	4.2	1.7	2.8
EM3	0.76	0.79	0.85	0.30	O/S	0.79	0.87
EM5	0.46	0.61	0.59	0.67	0.83	0.43	0.55
EM6	0.48	0.34	0.25	0.32	0.36	0.15	0.33
EM8	0.11	0.91	0.71	0.74	0.77	0.58	0.56
EM10	0.87	0.40	0.61	0.53	0.58	0.56	0.58
EM11	1.2	1.2	1.3	1.5	1.6	1.6	1.3 *
UN1	0.15	<0.20	0.17	0.21	0.29	0.14	0.15
UN2	<0.10	0.069	0.08	0.11	0.12	0.08	0.076
UN3	<0.070	<0.020	<0.07	<0.07	<0.07	<0.07	<0.07
UN4	0.25	0.25	0.16	0.17	0.16	0.14	0.13
UN5	1.3	1.4	1.5	1.3	1.6	2.1	1.6
UN6	2.7	2.9	3.4	4.1	3.6	6.7	4.0 *
LEV1A	0.31	3.7	4.1	4.4	4.7	4.4	4.1 *
LEV2A	4.0	3.4	2.6	2.7	2.5	3.2	2.3 *
LEV5A	0.47	0.31	0.35	0.36	0.39	0.38	0.36
LEV6B	1.6	1.4	1.6	1.2	0.97	0.92	0.84
LEV7A	1.0	0.91	1.6	0.97	1.1	1.8	0.99
LEV8A	0.27	0.28	1.0	1.0	1.3	1.3	1.2
LEV12	0.37	0.38	0.12	0.10	0.13	0.50	0.51
LEV13	<0.070	1.4	1.8	1.4	1.7	2.0	1.4
LEV14	<0.020	<0.020	<0.07	<0.07	<0.07	<0.07	<0.07
RF5	3.1	3.5	1.4	1.1	1.2	0.93	0.97 *
RF7	0.97	0.97	1.4	1.4	1.6	1.4	1.5
RF10	0.21	0.18	0.29	0.22	0.19	0.2	0.29
RF11	1.6	0.72	1.1	1.1	1.3	1.0	0.99
RF12	1.5	1.5	1.6	1.4	1.4	1.4	0.92 *
BG1	2.6	2.3	2.2	2.2	2.0	4.9	3.9 *
BG2	1.5	1.4	1.5	1.5	1.6	1.7	1.3 *

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