

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

In support of the Department of Water's Deferral Application

Third Quarter 2021

**Prepared by the Town of Hempstead Department of Water
PWSID #NY2900000
October 8, 2021**

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 July 1, 2021 through September 30, 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 third 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 issued purchase requisitions for five 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. While awaiting approval of these documents PWG is moving forward with the detailed design drawings. 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.

East Meadow Well 1 continued to operate in a last on first off scenario. Well 3 was returned to service in Q3 after an electrical failure was resolved and well 3 was returned to the sampling protocol with results included in Appendix A

**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 has revised the necessary documents and returned to NYSDOH and NCDOH for their final approval.

H2M has completed final design drawings and bid documents during Q3 and the Department prepared the necessary documentation to advertise this project. Construction plans will be amended and revised as needed based on comments received from the Health Departments.

The Department has solicited materials quotes from Trojan for the UV reactors necessary for this project and has issued purchase requisitions for the same in order to expedite material lead time on this project. The department has prepared prepurchase documents for the prefabricated building which will house the treatment system to eliminate lead time and shorten the build time.

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)

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 prepared. Comments were received from Health Departments and the plans amended prior to bidding. Once these comments are addressed this project will be bid during Q4. Well 6 remained OOS in Q3.

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. In Q3 our consultant, H2M, completed 100% design drawings for final review and approval. Parallel to the review and approval the Department has begun preparing the necessary documents to advertise the project for bid. 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. Accordingly the start of construction has been slightly delayed to Q4 of 2021.

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)

Having obtained approval of the BODR in a previous quarter, the Department's consultant, H2M finalized design drawings for submission to the NYSDOH and NCDOH. Bids were solicited during Q3 for this project, bids reviewed, recommendations made and the contracts awarded to the low bidders. Construction will begin in Q4 pending final comments from the NCDOH and NYSDOH.

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)

Having obtained approval of the BODR in a previous quarter, the Department's consultant, H2M finalized design drawings for submission to the NYSDOH and NCDOH. Bids were solicited during Q3 for this project, bids reviewed, recommendations made and the contracts awarded to the low bidders. Construction will begin in Q4 pending final comments from the NCDOH and NYSDOH.

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.

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

During Q3 the Departments consultant H2M prepared their pilot protocol documentation for approval by the Departments of Health and has drawn scavenging samples for analysis by Trojan. Now that peak pumpage season has passed, a pilot rig will be deployed to the site.

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

During Q3 the Department met with our consultants Dvirka and Bartilucci to review the site constraints and the treatment needs to meet both water quality and air emissions requirements. Based on that meeting D&B opened communications with Trojan to determine the best location to install a pilot test rig. Additionally D+B began preparing their pilot protocol for submission to the Health Departments. Due to the complexity of the water chemistry at this site pilot testing will not commence until opinions and approvals are obtained and analyzed.

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.

These wells remain out of service voluntarily.

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

As previously discussed, the Department has worked with our consultants for this project, Dvirka and Bartilucci, to utilize a predesigned treatment structure and layout already in use in another district in order to expedite the design timeline. The Department met with Dvirka and Bartilucci to review preliminary drawings of how this pre-designed building and treatment improvements will fit into existing site characteristics and has determined that it will fit the site constraints. With minor comments the Department authorized D&B to move forward with the preliminary site and building design parallel to pilot testing. Now that peak pumpage season has passed, a pilot rig will be deployed to the site.

Roosevelt Field Well 5 (N7957)

No work was contemplated for this well during the third 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
EM1	4.3	5.6	2.6	3.9	4.2	1.7
EM3	0.76	0.79	0.85	0.30	O/S	0.79
EM5	0.46	0.61	0.59	0.67	0.83	0.43
EM6	0.48	0.34	0.25	0.32	0.36	0.15
EM8	0.11	0.91	0.71	0.74	0.77	0.58
EM10	0.87	0.40	0.61	0.53	0.58	0.56
EM11	1.2	1.2	1.3	1.5	1.6	1.6 *
UN1	0.15	<0.20	0.17	0.21	0.29	0.14
UN2	<0.10	0.069	0.08	0.11	0.12	0.08
UN3	<0.070	<0.020	<0.07	<0.07	<0.07	<0.07
UN4	0.25	0.25	0.16	0.17	0.16	0.14
UN5	1.3	1.4	1.5	1.3	1.6	2.1
UN6	2.7	2.9	3.4	4.1	3.6	6.7 *
LEV1A	0.31	3.7*	4.1	4.4	4.7	4.4 *
LEV2A	4.0	3.4	2.6	2.7	2.5	3.2 *
LEV5A	0.47	0.31	0.35	0.36	0.39	0.38
LEV6B	1.6	1.4	1.6	1.2	0.97	0.92
LEV7A	1.0	0.91	1.6	0.97	1.1	1.8
LEV8A	0.27	0.28	1.0	1.0	1.3	1.3
LEV12	0.37	0.38	0.12	0.10	0.13	0.50
LEV13	<0.070	1.4	1.8	1.4	1.7	2.0
LEV14	<0.020	<0.020	<0.07	<0.07	<0.07	<0.07
RF5	3.1	3.5	1.4	1.1	1.2	0.93 *
RF7	0.97	0.97	1.4	1.4	1.6	1.4
RF10	0.21	0.18	0.29	0.22	0.19	0.2
RF11	1.6	0.72	1.1	1.1	1.3	1.0
RF12	1.5	1.5	1.6	1.4	1.4	1.4 *
BG1	2.6	2.3	2.2	2.2	2.0	4.9 *
BG2	1.5	1.4	1.5	1.5	1.6	1.7 *
LPL1A**	<0.070	<0.020	<0.07	<0.07	<0.07	<0.07
LPL2A**	<0.070	<0.020	<0.07	<0.07	<0.07	<0.07
LIDO3**			<0.07	<0.07	<0.07	<0.07

* well is currently not running to system

** These wells are located in the Lido-Point Lookout Water District operating under PWSID 2902828 but are included herein for public information and disclosure purposes