



East Basin Road Groundwater Site

FAQs

Where is the site located?

The East Basin Road Groundwater Site is located in the city of New Castle County in New Castle County, Delaware. The site is an approximately seven-square mile area surrounding New Castle's public wells.

Is the water safe to drink?

Artesian Water Company and the City of New Castle's Municipal Services Commission (MSC) are currently treating the public drinking water to remove contamination, including Volatile Organic Compounds (VOCs), or human-made chemicals used in the manufacture of paints, pharmaceuticals and refrigerants, such as industrial solvents like tetrachloroethene (PCE). Treatment is also underway to address two chemical compounds, perfluorooctanoic acid (PFOA), and perfluorooctane sulfonic acid (PFOS), widely used in grease-resistant food packaging, water-resistant clothing, nonstick cookware and many other everyday products. The finished drinking water – after treatment – meets all applicable federal and state Safe Drinking Water Act standards, also known as Maximum Contaminant Levels (MCLs), for all other compounds. The finished drinking water does not exceed the proposed State of Delaware MCLs for PFOA and PFOS.

What were the levels of contamination detected in the samples from the public wells?

The most recent sampling results for the untreated groundwater samples from the Expanded Site Inspection in November 2021 indicate PCE was detected at 7.5 micrograms per liter (ug/L), which is above the state MCL of 1 ug/L and the federal MCL of 5 ug/L.

In untreated groundwater from the public wells, the maximum concentration of PFOA was 269 nanograms per liter (ng/L) and PFOS was 3240 ng/L, which are above the interim EPA health advisory levels of 0.004 ng/L and 0.02 ng/L respectively and above the proposed state MCLs of 21 ng/L for PFOA, 14 ng/L for PFOS, or 17 ng/L for combined PFOA and PFOS.

The most recent results **for treated drinking water samples show the concentrations continue to meet federal and state drinking water standards**, also known as MCLs, for all other compounds. The finished drinking water does not exceed the proposed state MCLs for PFOA and PFOS.

What are the potential sources of the contamination?

Potential sources of contamination near the wells include the following sites listed below, where historical operations may have included the use of compounds which may have contained VOCs, PFOA, and/or PFOS. Additional sources of contamination in groundwater may also be identified in the future as a result of U.S. Environmental Protection Agency (EPA)'s investigation.

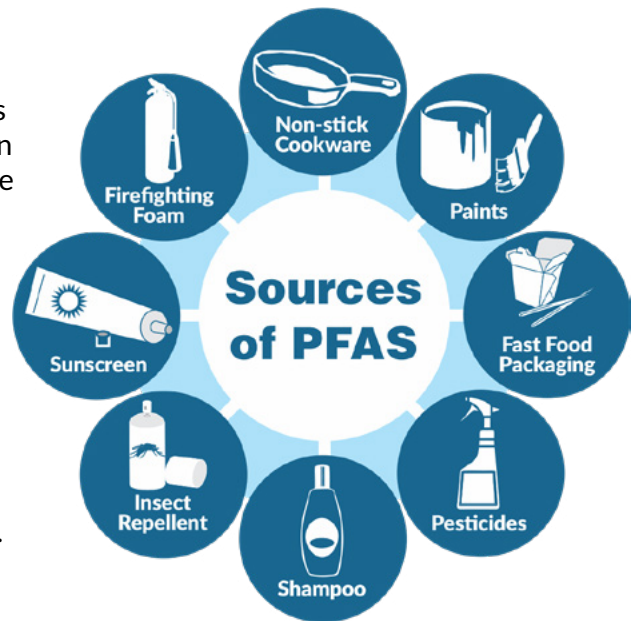
- Delaware Air National Guard Base (DE-1003)
- New Castle County Airport (DE-0357)
- Duncan Readiness Center and Army Aviation Support Facility (DE-1753)

How many people are served by the New Castle water system?

Groundwater is the main source of drinking water in the New Castle area, which has a population of more than 5,000 people. However, the larger population served by the public wells (including these wells) in the New Castle area may include approximately 215,000 homes and businesses.

What are PFAS and where did they come from?

PFOA and PFOS are part of the group of synthetic chemicals known as per- and polyfluoroalkyl substances (PFAS). These chemicals were used in manufacturing and industrial operations since the 1940's. PFAS chemicals were first developed for use in manufacturing adhesives and nonstick surfaces. They have since been used in firefighting foams and other products with stain-, water-, oil- and grease repellent properties such as clothing, automobile finishes, upholstered goods, food-wrappers, and carpeting. They are persistent compounds and do not readily break down in the environment. They also tend to become concentrated inside the bodies of living things, a process scientists call bioaccumulation, which means the amount of PFAS builds up over time in the blood and organs. These chemicals have become widely distributed in the environment and have been detected in people and wildlife across the globe.



For more information about PFAS, visit <https://de.gov/pfas> and <https://www.epa.gov/pfas>.

What adverse health effects may be associated with exposure to PFAS?

In laboratory studies of animals given large doses of PFOS and PFOA, results indicate that the substances can cause developmental, reproductive, and other adverse health effects. In humans, while the research is still ongoing, the most consistent findings show elevated blood serum total cholesterol levels among exposed populations and the potential for low infant birth weights and changes to the body's immune response capabilities.

For information about the health effects associated with exposure to PFAS, please visit <https://atsdr.cdc.gov/pfas/health-effects>.

What is the NPL and how does the listing process work?

The Superfund National Priorities List (NPL) process provides a means of identifying contaminated sites (and the associated potential responsible parties) that warrant remedial action or cleanup under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA). Cleanups at NPL sites are managed and financed under the Federal Superfund program by EPA and any potentially responsible parties.

The EPA ranks sites for further investigation using a Hazard Ranking System (HRS) screening. The East Basin Road Groundwater Site exceeded the score required for potential listing on the NPL primarily because a public drinking water source was impacted by contaminants. EPA recommended proposing the site to the NPL. After a site such as this is identified, there is a 60-day public comment period on the proposed listing. If the comments do not affect EPA's scoring of the site using the HRS, the site is then eligible for listing on the NPL.

EPA will publish a final rule in the Federal Register and the East Basin Road Groundwater Site will become a Superfund Site in Spring 2023. For more information on the NPL listing process, please visit: <https://www.epa.gov/superfund/superfund-national-priorities-list-npl>

Whom should I contact for additional questions?

For more information on the proposed listing and [EPA's Superfund Program](#), please contact:

- Akudo Ejelonu, EPA Community Involvement Coordinator, 215-814-5535 or email ejelonu.akudo@epa.gov
- John Brakeall, EPA Community Involvement Coordinator, at 215-814-5537 or brakeall.john@epa.gov
- Nancy Cruz, EPA Community Involvement Coordinator, at 215-814-5518 or cruz.nancy@epa.gov
- Christian Matta, EPA Remedial Project Manager, at 410-305-5518 or matta.christian@epa.gov
- Sarah Kloss, EPA Remedial Project Manager, at 215-814-3379 or kloss.sarah@epa.gov

For additional questions to DNREC regarding the East Basin Road Groundwater Site, please contact:

- Stephanie Gordon, Project Manager, DNREC Remediation Section at 302-395-2600, or by email: stephanie.gordon@delaware.gov
- Qazi Salahuddin, Program Administrator, DNREC Remediation Section at 302-395-2600, or by email: qazi.salahuddin@delaware.gov



Department of Natural Resources
and Environmental Control
89 Kings Hwy
Dover, DE 19901
dnrec.delaware.gov