(ELECTRONIC ARTICLE FOR JB MDL Website)

JB Officials Release Annual Drinking Water Consumer Confidence Reports

Joint Base Public Affairs

2025/06/30 - Joint Base McGuire-Dix-Lakehurst, NJ. – Joint Base officials from the 87th Civil Engineer Group and the 87th Medical Group released the 2022 Consumer Confidence Reports (CCRs) for the McGuire, Dix, and Hill (Lakehurst) water systems as of ***2024/06/30***.

The CCR is a federally-mandated document summarizing annual drinking water testing results for public water systems registered with the state. The 87th Civil Engineer Group and Pride Industries maintain the base's water systems. The 87th Medical Group collects and oversees sample collection for McGuire and Lakehurst drinking water systems, and Pride oversees sample collection for the Dix drinking water system. All drinking water samples are sent to a State certified laboratory for analysis to ensure the water is safe to drink.

Each report includes system information and water monitoring results for biological, organic, inorganic, and radioactive substances in the water supply. The report also examines if these substances exceed federal or state limits on water-quality parameters outlined by the Environmental Protection Agency (EPA) in the Safe Drinking Water Act (SWDA) and New Jersey Department of Environmental Protection (NJDEP) Safe Drinking Water Act Rules.

JB MDL's water systems are registered with the NJDEP, and the water delivered to JB MDL consumers is certified safe to drink.

Hard copies are available at the United Communities Housing Office; Joint Base Library; Warfighter and Family Readiness Centers; Bioenvironmental Engineering Office; Civil Engineer Group and the Dix Correctional Facility.

Call Bioenvironmental Engineering at (609) 754-9057 for health-related questions or the 87 CES at (609) 754-6166 for operations and maintenance questions.

The 2024 CCRs for all JB MDL water systems are available at this public website link: https://www.jbmdl.jb.mil/About-Us/About-Us/Environmental-Publications/Consumer-Confidence-Report/

Annual Water Consumer Confidence Report

McGuire Drinking Water System on Joint Base McGuire-Dix-Lakehurst

Public Water System ID No. NJ0326006

Monitoring Period:
January 1, 2024 – December 31, 2024

Publish Date: June 30, 2025

Is my water safe?

Yes. Last year, as in years past, the tap water in the McGuire water system met all U.S. Environmental Protection Agency (EPA) and New Jersey Department of Environmental Protection (NJDEP) drinking water health standards. Members of the 87th Air Base Wing, 87th Medical Group and 87th Civil Engineer Group vigilantly safeguard water supplies and once again we are proud to report that our system is in full compliance with primary water quality standards. This report is being distributed to consumers to provide information, enabling consumers to make personal health-based decisions regarding drinking water consumption. This report provides sampling data for the water system and discusses health concerns for any contaminants detected in the system. The report also provides definitions, so consumers are clear on the terminology discussed. Additional information concerning water consumption anywhere in the United States can be obtained by calling the Safe Drinking Water Hotline, toll free at (1-800-426-4791).

Where does my water come from?

The McGuire Drinking Water System obtains water from the Potomac-Raritan-Magothy (PRM) aquifer, a groundwater source. Three wells (Wells A1, B2, and C1) tap into the PRM aquifer at approximately 800-900 feet below the surface. These wells are maintained by Civil Engineering Utilities. In December 2012, JB MDL requested that Well A be placed in inactive status by NJDEP. In 2020, a new Well A1 was completed and is active. Well B2 has been offline for maintenance since March 2022, and was put back into service 31 October 2024. Well D has been inactive since 2018. Well D is proposed to be redrilled or a new well installed. CE will update BEF when an update is available. The well water is treated (filtered for iron, chlorinated, and fluoridated) before entering the system and then distributed across the base, including housing areas. McGuire's drinking water is monitored by two base agencies. The 87th Civil Engineer Squadron services the drinking water supply and distribution system, while the 87th Operational Medical Readiness Squadron's Bioenvironmental Engineering Flight (BEF) checks the quality of the drinking water provided to consumers and addresses any related health concerns. All monitoring follows EPA-approved methods for sampling and laboratory analyses. BEF personnel and State-certified laboratories collect samples from the wells and water distribution system. Samples are then delivered to a State-certified laboratory where water quality analyses are performed. NJDEP has directed compliance sampling

schedule requirements into two categories: Points of Entry (POE) to the distribution system and Distribution System (DS) monitoring requirements. The POE samples are collected at the individual wells and represent the quality of the source water. The DS samples represent the quality of the water in the pipes of the system. Samples are taken from different locations across the distribution system every week.

Source Water Assessments

NJDEP has prepared Source Water Assessment Reports and Summaries for all public water systems. The NJDEP has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at http://www.nj.gov/dep/watersupply/swap/index.html, or by contacting the NJDEP, Bureau of Safe Drinking Water at (609)-292-5550, or watersupply@dep.nj.gov. Consumers may also contact the personnel in charge of the public water system through the Joint Base Public Affairs office at (609)-754-2104.

Source Water Assessment Summary

The results of the source water assessment performed on our three sources (all groundwater wells) are presented in Table 1. The table illustrates the susceptibility ratings each individual source for each contaminant categories and provides the rating for each well: High, Medium, and Low for each contaminant category. The McGuire system does not have any sources that are classified as ground water under the direct influence of surface water (GUDI), or surface water and it does not purchase water from other public water systems. The eight contaminant categories are defined below Table 1.

Table 1 – Source Water Assessment Summary

Contaminant	Well A1	Well B2	Well C1
Pathogens	Low	Low	Low
Nutrients	Low	Low	Low
Pesticides	Low	Low	Low
Volatile Organic Compounds (VOCs)	Low	Low	Low
Inorganics	Low	Low	Low
Radionuclides	Low	Low	Medium
Radon	Low	Low	Low
Disinfection Byproducts Precursors (DBPs)	Low	Low	Low

Pathogens: Disease causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorous.

VOCs: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE) and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds, and fungus. Common sources include land application and manufacturing of pesticides. Examples include herbicides, such as atrazine and insecticides, such as chlordane.

Inorganics: Mineral based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead and nitrate.
Radionuclides: Radioactive substances are both naturally occurring and man-made. Examples include radium and uranium.
Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment.
DBPs: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectant (usually chlorine) used to kill pathogens reacts with dissolved organic material (for example leaves) present in surface water. Examples include Trihalomethanes (TTHMs) & Haloacetic Acids (HAA5).

If a system is rated highly susceptible for a contamination category, it does not mean a customer is or will be consuming contaminated water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any are detected at frequencies and concentrations above allowable levels.

NJDEP found the following potential contaminant sources within the source water assessment areas for our sources. All potential contaminant sources are on the base:

1. Solid and hazardous waste handling and transfer facilities.
2. Closed solid waste landfill.
3. Septic tanks.
4. Urban, commercial, and industrial land use.
5. Distance of the wells to wetlands.
6. The Golf Course (idle).
7. Population density.
8. Density of known contaminated sites, and NJDEP permitted surface water discharges.

Source Water Protection Tips: Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's "Adopt Your Watershed" to locate groups in your community or visit the Watershed Information Network's "How to Start a Watershed Team."
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Sources of Drinking Water Contamination

The sources of drinking water (both tap water and bottled water) may include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical compounds, including synthetic organic compounds (SOCs) and volatile organic compounds (VOCs), which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or the result of oil/gas production and mining activities.
- Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS chemicals are persistent in the environment, and some are persistent in the human body - meaning they do not break down and they can accumulate over time. (See the "Additional Information for Per- and Polyfluoroalkyl Substances (PFAS)" section of this report for additional information.)

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Table 2 summarizes the regulated analytes and monitoring frequencies for the wells (Points of Entry) and DS servicing the McGuire Water System.

Table 2 – Regulated Substances and Monitoring Frequencies

Regulated Substance	TP001005 (Well A1)	TP002007 (Well B2) and TP003010 (Well C1)	Distribution System
Total Coliform, Free Available Chlorine, pH	N/A	N/A	Monthly
Nitrates	Annually	Annually	N/A
Trihalomethanes (TTHM)	N/A	N/A	Annually (July)
Haloacetic Acids (HAA5)	N/A	N/A	Annually (July)
Inorganics	Every 3 years (2026)	Every 3 years (2026)	N/A
Secondary Standards	Every 3 years (2026)	Every 3 years (2026)	N/A
Federal and State VOCs	Annually	Every 3 years (2026)	N/A
Radiologicals	Every 6 years (2026)	Every 9 years (2030)	N/A
Lead and Copper	N/A	N/A	Every 3 years (2027)
Per- and polyfluoroalkyl substances (Regulated PFAS)	Quarterly	Annually	N/A
SOCs: 1,2,3-Trichloropropane, 1,2-Dibromoethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP)	Quarterly	Twice every 3 years (1st half and 2nd half of 2026)	N/A
Asbestos	N/A	N/A	Within first 3 years of 9-year cycle (2020-2028)
Iron and Manganese	N/A	N/A	Annually

Frequency is determined by the NJDEP schedule.
N/A = Not Applicable
TP = Treatment Point and the number is the designation assigned by the NJDEP for that treatment center where water is treated prior to entering the distribution system.

The NJDEP regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, radiological, VOCs, and SOCs. Current sample results for all SOCs and VOCs are below analytical detection limits. The McGuire Water System has been granted SOC waivers in prior years. We currently have no active waivers.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800)-426-4791.

Parts per million (ppm), parts per billion (ppb), and parts per trillion (ppt) are the most used terms to describe very small amounts or trace levels of chemicals of concern in our drinking water.

- One ppm is the equivalent of four drops of impurity in a 55-gallon barrel of water or one minute in two years, also expressed as milligrams per liter (mg/L).
- One ppb is the equivalent of one drop of impurity in 500 barrels of water or 1 cent out of $10 million, also expressed as micrograms per liter (µg/L).
- One ppt is the equivalent of one drop of impurity in 500,000 barrels of water or traveling 6 inches out of a 93-million-mile journey toward the sun, also expressed as nanograms per liter (ng/L).

Additional Information for Lead and Copper Rule

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. JB MDL is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

The water supplied by the McGuire System is tested for lead triennially (once every three years) and has a consistent history of low concentrations. JB MDL participated in lead and copper monitoring in 2024.

In accordance with NJDEP regulation, the 90th percentile of sample results are required to be at or below the Action Level (AL), which is 15 ppb (as of 2024; it is 10 ppb as of 2025). Of the 30 samples collected in 2024 for lead, the 90th percentile result was 0.8 ppb. The AL for copper by regulation is 1,300 ppb. Of the 30 samples collected in 2024 for copper, the 90th percentile result was 150 ppb. Call us at (609) 754-9057 to find out how to get your water tested for lead. Testing is essential because you cannot see, taste, or smell lead in drinking water.

Additional Information for Per- and Polyfluoroalkyl Substances (PFAS)

PFAS compounds are a subset of man-made compounds containing approximately 6,000 chemicals formed from carbon chains with fluorine attached to these chains. PFAS are part of a group of the most extensively produced and studied chemicals and are currently classified as unregulated or "emerging" contaminants.

Perfluorononanoic acid (PFNA) is historically contained in discharge from industrial chemical factories. Some people who drink water containing PFNA in excess of the MCL over many years could experience problems with their liver; kidney; immune system; or, in males, reproductive system. For females, drinking water containing PFNA in excess of the MCL over many years may cause developmental delays in a fetus and/or an infant.

Perfluorooctanoic Acid (PFOA) is historically contained in discharge from industrial, chemical, and manufacturing factories, release of aqueous film forming foam.

Some people who drink water containing PFOA in excess of the MCL over many years could experience problems with their blood serum cholesterol levels, liver, kidney, immune system, or, in males, reproductive system. Drinking water containing PFOA in excess of the MCL over many years may also increase the risk of testicular and kidney cancer. For females, drinking water containing PFOA in excess of the MCL over many years may cause developmental delays in a fetus and/or an infant.

Perfluorooctanesulfonic Acid (PFOS) is historically contained in discharge from industrial, chemical factories, release of aqueous film forming foam. Some people who drink water containing PFOS in excess of the MCL over many years could experience problems with their immune system, kidney, liver, or endocrine system. For females, drinking water containing PFOS in excess of the MCL over many years may cause developmental effects and problems with the immune system, liver, or endocrine system in a fetus and/or an infant. Some of these developmental effects can persist through childhood.

In May 2016, the EPA issued health advisory level (HAL) for Perfluorooctane sulfonate (PFOS) and Perfluorooctanoic acid (PFOA) at 70 parts per trillion (ppt), equivalent to nanograms per liter (ng/L). When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS (both chemicals are types of PFAS) should be compared with the 70 parts per trillion health advisory level. PFOS, PFOA and PFNA were below the detection limit in the McGuire water system when initially sampled in 2016.

In 2018, the NJDEP established health based Maximum Contaminant Level (MCL) for PFNA, PFOA and PFOS and has identified these three analytes as “Regulated PFAS”. The MCLs are 13 ppt for PFNA and PFOS, and 14 ppt for PFOA.

In 2020, the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA HAL of 70 ppt, water systems would quickly undertake additional sampling to assess the level, scope, and localized source of contamination, and take action to reduce exposure to PFOS or PFAS. DoD is continuing to evaluate its efforts to address PFAS in drinking water, and what actions we can take to be prepared to incorporate this standard, such as reviewing our current data and collecting additional sampling where necessary. We remain committed to fulfilling our cleanup responsibilities, operating within the law and authorities provided by the federal cleanup law, and clearly communicating and engaging with our communities.

In June 2022, the EPA issued interim updated drinking water health advisories to 0.004 ppt for PFOA and 0.02 ppt for PFOS, with a minimum reporting level of 4 ppt. The current SWDA for NJDEP are 14 ppt for PFOA and 13 ppt for PFOS. EPA moved forward with proposing a PFAS National Drinking Water Regulation in all 2022.

At the same time, EPA also issued final health advisories for two other PFAS, perfluorobutane sulfonic acid and its potassium salt (PFBS) and for hexafluoropropylene oxide (HFPO) dimer acid

and its ammonium salt (“GenX chemicals"). In chemical and product manufacturing, GenX chemicals are considered a replacement for PFOA, and PFBS is considered a replacement for PFOS.

As of December 2023, there was currently no established federal water quality regulation for any PFAS compounds. On April 10, 2024, EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS. To inform the final rule, EPA evaluated over 120,000 comments submitted by the public on the rule proposal, as well as considered input received during multiple consultations and stakeholder engagement activities held both prior to and following the proposed rule. EPA expects that over many years the final rule will prevent PFAS exposure in drinking water for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious PFAS-attributable illnesses. EPA finalized a National Primary Drinking Water Regulation (NPDWR) establishing legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water. PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS. **Regulated PFAS were below the detection limit in the McGuire Water System for 2024**. Results of sampling for PFAS and other contaminants are provided in Table 5.

Table 3 – Regulated PFAS and Maximum Contaminant Levels

Compound	EPA Final MCLG (ppt)	EPA Final MCL (ppt)	NJDEP 2018 & 2020 MCLs (ppt)
PFOA	Zero	4.0	14
PFOS	Zero	4.0	13
PFNA	10	10	13
PFBS	N/A	N/A	N/A
PFHxS	10	10	N/A
HFPO-DA (commonly known as Gen X Chemicals	10	10	N/A
Mixtures containing two or more of PFNA, PFHxS, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index	N/A

Well B2 was shut down from March 2022 to November 2024, for maintenance and servicing. The maintenance was scheduled to require less than 3 months. However, due to unforeseen issues, the maintenance and service took longer than originally planned. No samples were required to be collected per NJDEP regulations while Well B2 was offline, since it did not produce water. This well was sampled before putting it back online in November 2024, and it met all drinking water standards. Well D is proposed to be redrilled or a new well installed. CE will update BEF when an update is available.

For more information on how EPA manages the unregulated or "emerging" contaminants, refer to: UCMR - https://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule

For more information on drinking water health advisories for PFOS and PFOA, refer to: https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos

Reporting Requirements Not Met for McGuire Water System
Our water system violated one drinking water requirement over the past year. Even though this was not an emergency, you, our customers, have a right to know what happened and what we are doing to correct these situations.

We are required to submit the Consumer Confidence Report (CCR) annually; no later than 30 June. It was received by NJDEP 19 days late. We received one Notice of Violation from NJDEP on 19 July for the monitoring period of 07/01/2024 - 07/19/2024 for missing the CCR submission deadline. The NOV was resolved upon receipt of the CCR.

What should you do?
There is nothing you need to do currently. The McGuire water supply is safe and there is no required action needed by the consumer.

Table 4 – Missed Reporting Requirements

Requirement	Required Reporting Deadline	When report was submitted
Annual CCR	30 June annually	July 19, 2024

What is being done?
NJDEP requires submission of the Consumer Confidence Report (CCR) annually; no later than 30 June. We have corrected this error by started work on the CCR earlier than the previous reporting year.

For more information, please contact Mr. Neil Thornton at (609)-754-1809 or Ms. Tiffany Sollog at (609) 754-9057, 3457 Neely Road, JBMDL, NJ 08641.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Water Quality Data Tables

To ensure tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in drinking water. Tables 5 and 6 below list the drinking water monitoring results for the calendar year of the report unless otherwise noted. The EPA and the state require monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of the data, though representative, may be more than one year old. Tables 7 and 8 provides a comprehensive listing of abbreviations and definitions for terms found throughout this document which might not be familiar to the average consumer.

Table 5 – Water Monitoring Results

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Disinfectant									
Contaminants (Units)	**Location**	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**LRAA**	**Range**		**Sample Date**	**Violation**	**Typical Source**
					Low	**High**			
Chlorine (as Cl_2, ppm) (Monthly Range)	N/A	4	4	N/A	0.05	1.88	2024	No	Drinking water disinfectant[1]

Disinfectant Precursors and Byproducts (cont'd)								
Contaminants (Units)	**Location**	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**LRAA**	**Result**	**Sample Date**	**Violation**	**Typical Source**
Total Trihalomethanes (TTHMs) (ppm)	1507	NA	80	0.007	0.00661	2024	No	Byproduct of drinking water disinfection[1]
	4551			0.003	0.0031	2024	No	
Haloacetic Acids (HAA5) (ppm)	1507	NA	60	0.001	0.00107	2024	No	
	4551			0.003	0.00273	2024	No	

1. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Nitrate							
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Results**		**Sample Date**	**Violation**	**Typical Source**
			Low	**High**			
Nitrate [measured as Nitrogen] (ppm)	10	10	N/A	<0.1	2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Microbiological							
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Results**		**Sample Date**	**Violation**	**Typical Source**
			Negative*	**Positive**			
Total Coliform (positive samples/months)[2,3]	0	0	120	0	2024	No	Human or animal fecal waste
2. A violation occurs when a routine sample and a repeat sample, in any given month, are total coliform positive, and one is also fecal coliform or E. coli positive. 3. If a system collecting fewer than 40 samples per month has two or more positive samples in one month, the system has an MCL violation. *Negative means no bacteria was detected in the sample.							

Volatile Organic* and Synthetic Organic Compounds (VOCs/SOCs)						
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Result**	**Sample Date**	**Violation**	**Typical Source**
1,2,3-Trichloropropane (TCP) (ppb)	0.03	0.03	<0.01	2024	No	Discharge of industrial solvents and cleaning/degreasing agent; impurity resulting from the production of soil fumigants
Ethylene dibromide (EDB) (ppb)	0.05	0.05	<0.01	2024	No	Used as a fumigant to protect against insects, pests, and nematodes in crops; treatment of felled logs; intermediate for dyes, resins, waxes, and gums
1,2 Dibromo-3-chloropropane (DBCP) (ppb)	0.2	0.2	<0.01	2024	No	Used a soil fumigant and nematicide; also, as an intermediate in the synthesis of organic chemicals
*No VOCs were detected above the method detection limit for samples collected during 2024.						

Regulated PFAS					
Contaminant (Units)	**NJ MCL**	**Well A1**	**Well B2***	**Well C1**	**Monitoring Year**
		Result	**Result**	**Result**	
PERFLUOROCTANOIC ACID (PFOA) (ppt)	14	< 2	< 2	< 2	2024
PERFLUOROCTANE SULFONIC ACID (PFOS) (ppt)	13	< 2	< 2	< 2	2024
PERFLUORONONANOIC ACID (PFNA) (ppt)	13	< 2	< 2	< 2	2024
PERFLUOROBUTANESULFONIC ACID (PFBS) (ppt)	N/A	< 2	< 2	< 2	2024
PERFLUOROHEXANE SULFONIC ACID (PFHXS)	N/A	< 2	< 2	< 2	2024
HFPO-DA (commonly known as Gen X Chemicals) (ppt)	N/A	< 2	< 2	< 2	2024
PFNA = Perfluorononanoic acid; PFOS = Perfluorooctane sulfonic acid; PFOA = Perfluorooctanoic acid * = Well B2 was offline until 31 October 2024.					

Table 6 – Secondary[4] and Unregulated[5] Contaminants (No MCL Established)

Secondary Group/ Unregulated Contaminant Monitoring Rule*				
Secondary Contaminant (Units)	**Recommended Upper Limit (RUL)**	**Range Detected**		**Date of Monitoring**
		Low	**High**	
Iron (ppm)	0.3	NA	<0.04	2024
Manganese (ppm)	0.05	NA	<0.04	2024

*No other compounds were detected above the method detection limit (MDL), therefore are considered non-detect and not reported herein.

4. Secondary contaminant Recommended Upper Limits (RULs) are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health and are not enforced by the NJDEP or the EPA.

5. Unregulated contaminant monitoring (UCMR) helps EPA to determine where certain contaminants occur and whether the agency should consider regulating those contaminants in the future. Monitoring for UCMR was required for 2023.
Per USEPA (April 2024), the next round of UCMR-6 sample collection is tentatively scheduled to take place between 2027 - 2031. Awaiting final rule determination in 2026.

Table 7 – Unit Descriptions

Term	Definition
<	Less than the lowest detectable concentration for the specific approved analysis method used, the result can be considered zero
ppm	parts per million or milligrams per liter (mg/L)
ppb	parts per billion or micrograms per liter (µg/L)
ppt	parts per trillion or nanograms per liter (ng/L).
positive samples	positive samples/year: the number of positive samples
MFL	million fibers per liter
NA	not applicable
ND	not detected
NR	monitoring not required but recommended
pCi/L	pico-Curies (pCi) of contaminant per Liter of water – One pCi is one trillionth of a Curie; a Curie is a measurement of the rate at which a radioactive material will decay.

Table 8 – Drinking Water Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded triggers treatment or other requirements which a water system must follow.
LHA	Lifetime health advisory levels (LHAs) are not regulatory standards. LHAs identify the concentration of a chemical of concern in drinking water at and below which adverse health effects are not anticipated to occur over specific exposure durations (e.g., 1 day, 10 days, a lifetime).
LRAA	Locational Running Annual Average
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MNR	Monitored Not Regulated
MPL	Maximum Permissible Level: State-assigned
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants
RUL	Recommended Upper Limit: NJDEP
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	State or EPA permission to not meet an MCL or a treatment technique under certain conditions.

Water Conservation Tips

The average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day. Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair, and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your children about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill.
- Visit www.epa.gov/watersense for more information.

How can I get involved?

This Consumer Confidence Report was prepared Joint Base Drinking Water Working Group members from the 87th Medical Group, 87th Civil Engineer Group and Pride Industries. We welcome your questions and comments about the water quality from the McGuire system. Any questions regarding this report or the quality of McGuire drinking water, including information about the Joint Base Drinking Water Working Group, its policies, decision making procedures, and any requests to attend meetings, should be directed to the Public Affairs office at (609) 754-2104, Bioenvironmental Engineering at (609) 754-9057 or Civil Engineering at (609) 754-6166. Copies of this report are available in the following locations: United Communities Housing Office, Joint Base Library, Warfighter and Family Readiness Centers, Bioenvironmental Engineering Office, Civil Engineering Office.

The public website for the JBMDL installation posted links to the reports here:

https://www.jbmdl.jb.mil/Activity-Feed/About-Us/Environmental-Publications/Consumer-Confidence-Report/

Annual Water Consumer Confidence Report

Dix Drinking Water System on
Joint Base McGuire-Dix-Lakehurst
(JB MDL)

Public Water System ID No. 0325001

Monitoring Period:
January 1, 2024 – December 31, 2024

Publish Date: June 30, 2025

Is my water safe?

Yes. Last year, as in years past, the tap water in the Dix Drinking Water System on JB MDL met all U.S. Environmental Protection Agency (EPA) and New Jersey Department of Environmental Protection (NJDEP) drinking water health standards. Members of the 87th Air Base Wing, 87th Medical Group, 87th Civil Engineer Group, and Pride Industries safeguarded water supplies and once again, we are proud to report that our system currently is in full compliance with primary water quality standards. This report is being distributed to you, the consumer, to provide you with information to allow you to make personal health-based decisions regarding drinking water consumption. The report provides sampling data for the water system and discusses health concerns for each contaminant detected in the system. The report also provides definitions, so consumers are clear on the terminology and material presented in this report. Additional information concerning water consumption anywhere in the United States can be obtained by calling the Safe Drinking Water Hotline, toll free at (800) 426-4791.

Where does my water come from?

The Dix Drinking Water System obtains water from three groundwater wells and a surface water treatment plant. Three wells (Wells 5, 2R and 4R) are screened in the Potomac-Raritan-Magothy (PRM) Aquifer System. The wells range in depth from 1118 feet to 1155 feet. Total pumping capacity for each of the wells is approximately 700 gallons per minute (GPM). The groundwater is filtered through manganese greensand filters, for iron and manganese removal. Sodium hypochlorite is used for disinfection.

The surface water source is the Greenwood Branch of the North Branch of the Rancocas Creek. The surface water plant has a capacity of 4 million gallons per day (MGD). Surface water is treated using sodium hydroxide to adjust pH, rapid mixing with aluminum sulfate addition for flocculation (a process where solids in water aggregate through chemical action so they can be separated from water), sedimentation (solids settling by gravity), multimedia filtration, and

chlorine gas for disinfection. The water system has a total storage capacity of 3,000,000 gallons for use at JB MDL - Dix in four water towers/clear wells.

Source Water Assessments

The NJDEP has prepared Source Water Assessment Reports and Summaries for all public water systems. Further information on the Source Water Assessment Program can be obtained by logging onto NJDEP's source water assessment web site at www.state.nj.us/dep/swap or by contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. You may also contact the personnel in charge of the public water system through the Joint Base Public Affairs office, 87 ABW/PA, at (609) 754-2104.

Source Water Assessment Summary

The results of the source water assessment performed on our five water sources (four active groundwater wells, and one surface water source) are presented in the following table. The table illustrates the susceptibility ratings for the seven contaminant categories and radon for each well in the system. The table provides the rating for each well: high, medium, and low for each contaminant category. The Dix system does not have any sources that are classified as groundwater under the direct influence of surface water, and it does not purchase water from other public water systems. The eight contaminant categories are defined in Table 1.

Table 1 – Source Water Assessment Summary

Contaminant	Rancocas Creek	Well 2R	Well 4R	Well 5	Well 6*
Pathogens	High	Low	Low	Low	Low
Nutrients	Low	Low	Low	Low	Low
Pesticides	Low	Low	Low	Low	Low
Volatile Organic Compounds (VOCs)	Low	Low	Low	Low	Low
Inorganics	High	Low	Low	Low	Low
Radionuclides	Low	Medium	Medium	Medium	Medium
Radon	Low	Low	Low	Low	Low
Disinfection Byproducts Precursors (DBPs)	High	Medium	Medium	Medium	Medium

*Well 6 is currently inactive

Pathogens: Disease causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.
Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorous.
VOCs: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE) and vinyl chloride.
Pesticides: Man-made chemicals used to control pests, weeds, and fungus. Common sources include land application and manufacturing of pesticides. Examples include herbicides such as atrazine and insecticides such as chlordane.

Inorganics: Mineral based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead and nitrate.
Radionuclides: Radioactive substances are both naturally occurring and man-made. Examples include radium and uranium.
Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment.
DBPs: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectant (usually chlorine) used to kill pathogens reacts with dissolved organic material (for example leaves) present in surface water. Examples include Trihalomethanes (TTHMs) & Haloacetic Acids (HAA5).

If a system is rated highly susceptible for a contamination category, it does not mean a customer is or will be consuming contaminated water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any are detected at frequencies and concentrations above allowable levels.

NJDEP found the following potential contaminant sources within the Source Water Assessment areas for our sources. All potential contaminant sources are on the base.

1. Solid and hazardous waste handling and transfer facilities.
2. Closed solid waste landfill.
3. Septic tanks.
4. Urban, commercial, and industrial land use.
5. Distance of the wells to wetlands.
6. The Golf Course.
7. Population density.
8. Density of known contaminated sites, and NJDEP permitted surface water discharges.

Source Water Protection Tips
Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source
- Pick up after your pets
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system
- Dispose of chemicals properly; take used motor oil to a recycling center
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's "Adopt Your Watershed" to locate groups in your community, or visit the Watershed Information Network's "How to Start a Watershed Team."
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Sources of Drinking Water Contamination

The sources of drinking water (both tap water and bottled water) may include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Regulated substances that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- Organic chemical compounds, including synthetic organic compounds (SOCs) and volatile organic compounds (VOCs), which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems;
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
- Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS chemicals are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time. (See the "Additional Information for Per- and Polyfluoroalkyl Substances (PFAS)" section of this report for additional information.)

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Table 2 summarizes the regulated analytes and monitoring frequencies for the wells (Points of Entry) and Distribution system servicing the Dix Water System.

Table 2 – Regulated Substances and Monitoring Frequencies

Regulated Substance	Frequency*
Total Coliform, Free Available Chlorine	Monthly
Nitrates	Annually
TTHM	Quarterly
HAA5	Quarterly
Inorganics	Annually or Every 3 years
Secondary Standards	Annually or Every 3 years
Federal and State VOC lists	Annually or Every 3 years
Radiologicals	Every 3 years or Every 6 years
Lead and Copper	30 samples every third year of a 3-year cycle
Asbestos	Within the first 3-years of 9-year cycle
DBP Precursors	Monthly
Iron & Manganese	Annually
1,2,3-Trichloropropane (TCP)	2 Samples Every 3 years
Ethylene dibromide (EDB)	2 Samples Every 3 years
1,2 Dibromo-3-chloropropane (DBCP)	2 Samples Every 3 years
PFAS	Annually

*Frequency is determined by the NJDEP schedule and the source of the water (surface or groundwater).

The NJDEP regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, radiological, VOCs, and SOCs. Our system received monitoring waivers for asbestos, radiological, and SOCs because prior samplings have demonstrated that these substances were not detected in our source water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Parts per million (ppm), parts per billion (ppb), and parts per trillion (ppt) are the most used terms to describe very small amounts or trace levels of chemicals of concern in our drinking water.

- One ppm is the equivalent of four drops of impurity in a 55-gallon barrel of water or one minute in two years, also expressed as milligrams per liter (mg/L).
- One ppb is the equivalent of one drop of impurity in 500 barrels of water or 1 cent out of $10 million, also expressed as micrograms per liter (µg/L).
- One ppt is the equivalent of one drop of impurity in 500,000 barrels of water or traveling 6 inches out of a 93-million-mile journey toward the sun, also expressed as nanograms per liter (ng/L).

Additional Information for Lead and Copper Rule

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. JB MDL is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

JB MDL participated in lead and copper monitoring in 2024. In accordance with NJDEP regulation, the 90th percentile of sample results are required to be at or below the Action Level (AL), which is 15 ppb (or µg/L). Of the 30 samples collected in 2024 for lead, the 90th percentile result was 0.3 ppb. The AL for copper by regulation is 1,300 ppb. Of the 30 samples collected in 2024 for copper, the 90th percentile result was 450 ppb.

Additional Information for PFAS

PFAS compounds are a subset of man-made compounds containing approximately 6,000 chemicals formed from carbon chains with fluorine attached to these chains. PFAS are part of a group of the most extensively produced and studied chemicals and are currently classified as unregulated or "emerging" contaminants.

In May 2016, the EPA issued health advisory level (HAL) for Perfluorooctane sulfonate (PFOS) and Perfluorooctanoic acid (PFOA) at 70 parts per trillion (ppt), equivalent to nanograms per liter (ng/L). When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS (both chemicals are types of PFAS) should be compared with the 70 parts per trillion health advisory level. In June 2022, the EPA issued interim updated drinking water health advisories to 0.004 ppt for PFOA and 0.02 ppt for PFOS, with a minimum reporting level of 4 ppt. The current SWDA for NJDEP are 14 ppt for PFOA and 13 ppt for PFOS. EPA moved forward with proposing a PFAS National Drinking Water Regulation in fall 2022.

At the same time, EPA also issued final health advisories for two other PFAS, perfluorobutane sulfonic acid and its potassium salt (PFBS) and for hexafluoropropylene oxide (HFPO) dimer acid and its ammonium salt ("GenX chemicals"). In chemical and product manufacturing, GenX chemicals are considered a replacement for PFOA, and PFBS is considered a replacement for PFOS.

In 2018, the NJDEP established health based Maximum Contaminant Level (MCL) for PFNA, PFOA and PFOS and has identified these three analytes as "Regulated PFAS". The MCLs are 13 ppt for PFNA and PFOS, and 14 ppt for PFOA.

In 2020, the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA HAL of 70 ppt, water systems would quickly undertake additional sampling to assess the level, scope, and localized source of contamination, and take action to reduce exposure to PFOS or PFAS.

As of December 2023, there was currently no established federal water quality regulation for any PFAS compounds. On April 10, 2024, EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS. To inform the final rule, EPA evaluated over 120,000 comments submitted by the public on the rule proposal, as well as considered input received during multiple consultations and stakeholder engagement activities held both prior to and following the proposed rule. EPA expects that over many years the final rule will prevent PFAS exposure in drinking water for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious PFAS-attributable illnesses. EPA finalized a National Primary Drinking Water Regulation (NPDWR) establishing legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water. PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS.

Table 3 – Regulated PFAS and Maximum Contaminant Levels

Compound	EPA Final MCLG (ppt)	EPA Final MCL (ppt)	NJDEP 2018 & 2020 MCLs (ppt)
PFOA	Zero	4.0	14
PFOS	Zero	4.0	13
PFNA	10	10	13
PFBS	N/A	N/A	N/A
PFHxS	10	10	N/A
HFPO-DA (Commonly known as Gen X Chemicals)	10	10	N/A
Mixtures containing two or more of PFNA, PFHxS, HFPO- DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index	N/A

Regulated PFAS were below the detection limit in the Ft Dix Water System for 2024. Results of sampling are provided in Table 4.

Public water systems must monitor for these PFAS and have three years to complete initial monitoring (by 2027), followed by ongoing compliance monitoring. Water systems must also provide the public with information on the levels of these PFAS in their drinking water beginning in 2027.

Public water systems have five years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs.

Beginning in five years (2029), public water systems that have PFAS in drinking water which violates one or more of these MCLs must take action to reduce levels of these PFAS in their drinking water and must provide notification to the public of the violation.

For more information on how EPA manages the unregulated or "emerging" contaminants, refer to: UCMR - https://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule

For more information on drinking water health advisories for PFOS and PFOA, refer to: https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos

Water Quality Data Tables

To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of contaminants in water provided by public water systems. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Table 4 below lists the drinking water monitoring results for the calendar year of this report. Some of our data, though representative, may be more than one year old but still within required sampling frequency. To help you understand the contents of this Consumer Confidence Report, we have provided the common abbreviations, terms, and definitions in Tables 5 and 6 below.

Table 4 – Water Monitoring Results

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (1-800-426-4791).

Disinfectant, Disinfectant Precursors and Byproducts[1]									
Contaminants (Units)	**Location**	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**LRAA**	**Results**		**Sample Date**	**Violation**	**Typical Source**
					Low	**High**			
Chlorine (as Cl2, ppm) (Monthly Range)	NA	4.0	4.0	**NA**	**0.88**	**1.17**	**2024**	No	Drinking water disinfectant[1]
TTHMs (ppb)	1220	NA	80	**8**	**0**	**54.7**	**2024**	No	Byproduct of drinking water disinfection[1]
	3601			**15**	**0.69**	**69.5**		No	
	5255			**15**	**1.52**	**80.7**		No	
	5953			**15**	**0.73**	**77.5**		No	
HAA5 (ppb)	1220	NA	60	**17**	**3.2**	**86.4**	**2024**	No	Byproduct of drinking water disinfection[1]
	3601			**19**	**3.6**	**80**		No	
	5255			**25**	**4.16**	**120.6**		No	
	5953			**25**	**5.27**	**84**		No	
Total Organic Carbon (% Removal)	NA	NA	TT	NA	**48**	**82.17**	**2024**	No	Organic materials naturally present in the environment Disinfectants and Disinfection byproducts

1. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Physical Contaminants							
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Results**		**Sample Date**	**Violation**	**Typical Source**
			Low	**High**			
Turbidity[2]	NA	0.3	**NA**	**0.00**	**2024**	No	Soil runoff
2. 100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. Any measurement more than 1 is a violation unless otherwise approved by the State.							

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

Nitrate							
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Results**		**Sample Date**	**Violation**	**Typical Source**
			Low	**High**			
Groundwater Treatment - Nitrate [measured as Nitrogen] (ppm)	1	10	**NA**	**0.1**	**2024**	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Surface Water Treatment - Nitrate [measured as Nitrogen] (ppm)	1	10	**NA**	**<0.1**	**2024**	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Microbiological							
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Results**		**Sample Date**	**Violation**	**Typical Source**
			Negative*	**Positive**			
Total Coliform (positive samples/ months) [3,4]	0	0	**156**	**0**	**2024**	No	Human or animal fecal waste
2. A violation occurs when a routine sample and a repeat sample, in any given month, are total coliform positive, and one is also fecal coliform or E. coli positive. 3. If a system collecting fewer than 40 samples per month has two or more positive samples in one month, the system has an MCL violation. *Negative means no bacteria was detected in the sample.							

NJDEP Regulated PFAS				
Contaminant (Units)	**NJDEP MCL**	**Location**	**Results**	**Monitoring Year**
PFOS (ppt)	13	GW	**< 2**	**2024**
		SW	**< 2**	
PFOA (ppt)	14	GW	**< 2**	**2024**
		SW	**2.4**	
PFNA (ppt)	13	GW	**< 2**	**2024**
		SW	**< 2**	
PFNA = Perfluorononanoic acid, PFOS = Perfluoroctane sulfonic acid, PFOA = Perfluoroctanoic acid GW = Groundwater Treatment Plant; SW = Surface Water Treatment Plant				

Inorganic Compounds*						
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Result**	**Sampled**	**Violation**	**Typical Source**
Fluoride (ppm)	4	4	**0.3**	**2024**	No	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
*No other compounds were detected above the method detection limit (MDL), therefore are considered non-detect and not reported herein.						

Table 5 – Secondary[4] and Unregulated Contaminants[5]- No MCL Established

Secondary Group			
Secondary Contaminant (Unit)	**Recommended Upper Limit (RUL)**	**Result**	**Date of Monitoring**
Iron (ppm)	0.3	**<0.04**	**2024**
Manganese (ppm)	<0.04	**<0.04**	**2024**

4. Secondary contaminant Recommended Upper Limits (RULs) are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health and are not enforced by the NJDEP or the EPA.

5. Unregulated contaminant monitoring (UCMR) helps EPA to determine where certain contaminants occur and whether the agency should consider regulating those contaminants in the future. No monitoring for UCMR was required for 2024.

Table 6 – Unit Descriptions

Unit Descriptions	
Term	**Definition**
<	Less than the lowest detectable concentration for the specific approved analysis method used, the result can be considered zero
ppm	parts per million, or milligrams per liter (mg/L)
ppb	parts per billion, or micrograms per liter (µg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
positive samples	The number of positive samples taken that year
NA	Not applicable
ND	Not detected
NR	Monitoring not required but recommended.
pCi/L	PicoCuries of contaminant per Liter of water – a Curie is a measurement of how radioactive a material is.

Table 7 – Drinking Water Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded triggers treatment or other requirements which a water system must follow.
LHA	Lifetime health advisory levels (LHAs) are not regulatory standards. LHAs identify the concentration of a chemical of concern in drinking water at and below which adverse health effects are not anticipated to occur over specific exposure durations (e.g., 1 day, 10 days, a lifetime).
LRAA	Locational Running Annual Average
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MNR	Monitored Not Regulated
MPL	Maximum Permissible Level: State-assigned
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants
RUL	Recommended Upper Limit: NJDEP
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	State or EPA permission to not meet an MCL or a treatment technique under certain conditions.

Notice Of Violations

Subject: State Lead Service Line Rule Violation - Notice of Violation #2025-28987 - Resolution

This notice is to inform residents served by the Ft Dix Water System that on November 18, 2024, the system was issued a Notice of Violation (#2025-28987) by the New Jersey Department of Environmental Protection (NJDEP) for non-compliance with the State Lead Service Line Rule.

What does this mean?

The violation was issued due to a delay in submitting a required report on the inventory of lead service lines within the system's service area.

What has been done?

The Ft Dix Water System took immediate action to address the violation and achieve compliance with the NJDEP regulations. As of December 11, 2024, the Ft Dix Water System is in compliance with the State Lead Service Line Rule.

Lead service lines are pipes made of lead that connect homes and businesses to the public water main. Lead can leach into drinking water from these pipes, potentially causing health problems, especially for pregnant women and young children.

What is the Ft Dix Water System doing to address lead in drinking water?

The Ft Dix Water System is committed to providing safe and reliable drinking water to our customers. We are actively working to remove all identified lead and galvanized service lines in the system in accordance with state regulations.

This notice is to inform residents served by the Fort Dix Water System that the New Jersey Department of Environmental Protection (NJDEP) issued Notice of Violation #2024-28984 to the system for the compliance period of July 1, 2024, to July 19, 2024.

The violation concerned a delay in the publication and distribution of the annual Consumer Confidence Report (CCR) for the year 2023. The CCR is a requirement of the Safe Drinking Water Act and provides important information about your drinking water quality.

We are pleased to report that this violation has been resolved. Fort Dix Water System has successfully published the 2023 Consumer Confidence Report, and it is now available to the public. You can access the report by visiting our website at https://www.jbmdl.jb.mil/Activity-Feed/About-Us/Environmental-Publications/Consumer-Confidence-Report/, contacting our office at 609-754-2104, or picking up a copy at the following locations United Communities Housing Office, Joint Base Library, Warfighter and Family Readiness Centers, Bioenvironmental Engineering Office, Civil Engineering Office, and the Dix Correctional Facility.

Water Conservation Tips

The average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day. Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To

check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.

- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your children about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill.
- Visit www.epa.gov/watersense for more information.

How can I get Involved?

The Consumer Confidence Report was prepared by Joint Base Drinking Water Working Group members from the 87th Medical Group, 87th Civil Engineer Group and Pride Industries. We welcome your questions and comments about the water quality from the Dix system. Any questions regarding this report or the quality of Dix drinking water, including information about the Joint Base Drinking Water Working Group, its policies, decision making procedures, and any requests to attend meetings, should be directed to the Public Affairs office at (609) 754-2104, Bioenvironmental Engineering at (609) 754-9057 or Civil Engineering at (609) 754-6166. Copies of this report are available in the following locations: United Communities Housing Office, Joint Base Library, Warfighter and Family Readiness Centers, Bioenvironmental Engineering Office, Civil Engineering Office, and the Dix Correctional Facility.

The public website for the JB MDL installation posted links to the reports here:

https://www.jbmdl.jb.mil/Activity-Feed/About-Us/Environmental-Publications/Consumer-Confidence-Report/

Annual Water Consumer Confidence Report

Hill Drinking Water System on Joint Base McGuire-Dix-Lakehurst (JB MDL)

Public Water System ID No. NJ1511010

Monitoring Period: January 1, 2024 – December 31, 2024

Publish Date: June 30, 2025

Is my water safe?

Yes. Last year, as in years past, the tap water in the Hill water system met all U.S. Environmental Protection Agency (EPA) and New Jersey Department of Environmental Protection (NJDEP) drinking water health standards. Members of the 87th Air Base Wing, 87th Medical Group and 87th Civil Engineer Group vigilantly safeguard water supplies and once again we are proud to report that our system is in full compliance with primary water quality standards. This report is being distributed to consumers to provide information, enabling consumers to make personal health-based decisions regarding drinking water consumption. This report provides sampling data for the water system and discusses health concerns for any contaminants detected in the system. The report also provides definitions, so consumers are clear on the terminology discussed. Additional information concerning water consumption anywhere in the United States can be obtained by calling the Safe Drinking Water Hotline, toll free at (1-800-426-4791).

Where does my water come from?

The Hill Drinking Water System obtains from Cohansey Aquifer and the Potomac-Raritan-Magothy (PRM) Aquifer; both are groundwater sources. The two active wells (Well 50 and Well 48) are screened in the Cohansey Aquifer and the Potomac-Raritan-Magothy (PRM) Aquifer, and range in depth from 50 feet to 990 feet. Total pumping capacity of the wells is approximately 560 gallons per minute (GPM). These wells are maintained by Civil Engineering Utilities. The well water is treated using calcium hydroxide (slaked lime) and sodium carbonate (soda ash) to adjust pH, Calcium Hypochlorite ("chlorine") for disinfection, and five Greensand Plus filters for iron and manganese removal. The system stores 400,000 gallons of water for use at JB MDL - Lakehurst in two water towers. The Hill system serves the area from Route 547 to Westfield Hangar, excluding the Cathedral of the Air, Freedom Park and Building 42.

Hill's drinking water is monitored by two base agencies. The 87th Civil Engineer Squadron services the drinking water supply and distribution system, while the 87th Operational Medical Readiness Squadron's Bioenvironmental Engineering Flight (BEF) checks the quality of the drinking water provided to consumers and addresses any related health concerns. All monitoring follows EPA-

approved methods for sampling and laboratory analyses. BEF personnel and State-certified laboratories collect samples from the wells and water distribution system. Samples are then delivered to a State-certified laboratory where water quality analyses are performed. NJDEP has directed compliance sampling schedule requirements into two categories: Points of Entry (POE) to the distribution system and Distribution System (DS) monitoring requirements. The POE samples are collected at the individual wells and represent the quality of the source water. The DS samples represent the quality of the water in the pipes of the system. Samples are taken from different locations across the distribution system every month.

Source Water Assessments

NJDEP has prepared Source Water Assessment Reports and Summaries for all public water systems. The NJDEP has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at http://www.nj.gov/dep/watersupply/swap/index.html, or by contacting the NJDEP, Bureau of Safe Drinking Water at (609)-292-5550 or watersupply@dep.nj.gov. Consumers may also contact the personnel in charge of the public water system through the Joint Base Public Affairs office at (609)-754-2104.

Source Water Assessment Summary

The results of the source water assessment performed on our two sources (all groundwater wells) are presented in Table 1. The table illustrates the susceptibility ratings each individual source for each contaminant categories and provides the rating for each well: high, medium, and low for each contaminant category. The Hill system does not have any sources that are classified as ground water under the direct influence of surface water, (GUDI) or surface water and it does not purchase water from other public water systems. The eight contaminant categories are defined below Table 1.

Table 1 – Source Water Assessment Summary

Contaminant	Well 48	Well 50
Pathogens	Low	Low
Nutrients	High	High
Pesticides	Medium	Medium
Volatile Organic Compounds (VOCs)	High	High
Inorganics	High	High
Radionuclides	High	High
Radon	Medium	Medium
Disinfection Byproducts Precursors (DBPs)	Medium	Medium

Pathogens: Disease causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorous.

VOCs: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE) and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds, and fungus. Common sources include land application and manufacturing of pesticides. Examples include herbicides such as atrazine and insecticides such as chlordane.
Inorganics: Mineral based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.
Radionuclides: Radioactive substances are both naturally occurring and man-made. Examples include radium and uranium.
Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment.
DBPs: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectant (usually chlorine) used to kill pathogens reacts with dissolved organic material (for example leaves) present in surface water. Examples include Trihalomethanes (TTHMs) & Haloacetic Acids (HAA5).

If a system is rated highly susceptible for a contamination category, it does not mean a customer is or will be consuming contaminated water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any are detected at frequencies and concentrations above allowable levels.

NJDEP found the following potential contaminant sources within the source water assessment areas for our sources. All potential contaminant sources are on the base:

1. Solid and hazardous waste handling and transfer facilities.
2. Closed solid waste landfill.
3. Septic tanks.
4. Urban, commercial, and industrial land use.
5. Distance of the wells to wetlands.
6. The Golf Course.
7. Population density.
8. Density of known contaminated sites, and NJDEP permitted surface water discharges.

Source Water Protection Tips
Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.

- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's "Adopt Your Watershed" to locate groups in your community or visit the Watershed Information Network's "How to Start a Watershed Team."
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Sources of Drinking Water Contamination

Sources of drinking water (both tap water and bottled water) may include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Regulated substances that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- Organic chemical compounds, including synthetic and volatile organic compounds (VOCs), which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems;
- Radioactive contaminants, which can be naturally occurring or the result of oil/gas production and mining activities;
- Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS chemicals are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time. (See the "Additional Information for Per- and Polyfluoroalkyl Substances (PFAS)" section of this report for additional information.)

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration

regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Table 2 summarizes the regulated analytes and monitoring frequencies for the wells (POE) and DS servicing the Hill Drinking Water System.

Table 2 – Regulated Substances and Monitoring Frequency

Regulated Substance	TP001018 (Well 50)	TP002011 (Well 48)	Distribution System
Total Coliform, Free Available Chlorine	NA	NA	Monthly
pH	Every 2 weeks	Every 2 weeks	2 samples every 6 months
Nitrates	Annually	Annually	NA
Trihalomethanes (TTHM)	NA	NA	Annually (July)
Haloacetic Acids (HAA5)	NA	NA	Annually (July)
Inorganics	Every 3 years (2027)	Every 3 years (2027)	NA
Secondary Standards	Every 3 years (2026)	Every 3 years (2027)	NA
Federal and State VOCs	Quarterly	Every 3 years (2027)	NA
Radiologicals	Quarterly	Every 6 years (2030)	NA
Lead and Copper	NA	NA	20 Samples every 6 months
SOCs: 1,2,3-Trichloropropane, 1,2-Dibromoethane (EDB), 1,2-Dibromo-3-Chloropropane (DBCP)	Quarterly	Every 3 years (2027)	NA
Per- and polyfluoroalkyl substances (Regulated PFAS)	Quarterly	Annually (1st Quarter)	NA
Asbestos	N/A	N/A	Within first 3 years of 9-year cycle (2020-2028)

Frequency is determined by the NJDEP schedule.
N/A = Not Applicable
TP = Treatment Point and the number is the designation assigned by the NJDEP for that treatment center where water is treated prior to entering the distribution system.

The NJDEP regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, VOCs, and synthetic organic compounds (SOCs). The Hill system has received a reduced sampling frequency for VOCs and SOCs for Well 48 (Well 50 is still new) because prior sampling events have demonstrated that these substances were not detected in our source water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800)-426-4791.

Parts per million (ppm), parts per billion (ppb), and parts per trillion (ppt) are the most used terms to describe very small amounts or trace levels of chemicals of concern in our drinking water.

- One ppm is the equivalent of four drops of impurity in a 55-gallon barrel of water or one minute in two years, also expressed as milligrams per liter (mg/L).
- One ppb is the equivalent of one drop of impurity in 500 barrels of water or 1 cent out of $10 million, also expressed as micrograms per liter (µg/L).
- One ppt is the equivalent of one drop of impurity in 500,000 barrels of water or traveling 6 inches out of a 93-million-mile journey toward the sun, also expressed as nanograms per liter (ng/L).

Additional Information for Lead and Copper Rule

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. JB MDL is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

JB MDL has participated in lead and copper monitoring since July 2004. In accordance with NJDEP regulation, the 90th percentile of sample results are required to be at or below the Action Level (AL), which is 15 ppb. Of the 40 samples collected in Fall 2024 for lead, the 90th percentile result was 0.0018 mg/L (1.8 ppb). The AL for copper by regulation is 1,300 ppb. Of the 40 samples collected in Fall 2024 for copper, the 90th percentile result was 0.038 mg/L (38 ppb).

Additional Information for Per- and Polyfluoroalkyl Substances (PFAS)

PFAS compounds are a subset of man-made compounds containing approximately 6,000 chemicals formed from carbon chains with fluorine attached to these chains. PFAS are part of a group of the most extensively produced and studied chemicals and are currently classified as unregulated or "emerging" contaminants.

Perfluorononanoic acid (PFNA) is historically contained in discharge from industrial chemical factories. Some people who drink water containing PFNA more than the MCL over many years could experience problems with their liver; kidney; immune system; or, in males, reproductive system. For females, drinking water containing PFNA more than the MCL over many years may cause developmental delays in a fetus and/or an infant.

Perfluorooctanoic Acid (PFOA) is historically contained in discharge from industrial, chemical, and manufacturing factories, release of aqueous film forming foam.

Some people who drink water containing PFOA more than the MCL over many years could experience problems with their blood serum cholesterol levels, liver, kidney, immune system, or, in males, reproductive system. Drinking water containing PFOA more than the MCL over many years may also increase the risk of testicular and kidney cancer. For females, drinking water containing PFOA more than the MCL over many years may cause developmental delays in a fetus and/or an infant.

Perfluorooctanesulfonic Acid (PFOS) is historically contained in discharge from industrial, chemical factories, release of aqueous film forming foam. Some people who drink water containing PFOS more than the MCL over many years could experience problems with their immune system, kidney, liver, or endocrine system. For females, drinking water containing PFOS more than the MCL over many years may cause developmental effects and problems with the immune system, liver, or endocrine system in a fetus and/or an infant. Some of these developmental effects can persist through childhood.

In May 2016, the EPA issued health advisory level (HAL) for Perfluorooctane sulfonate (PFOS) and Perfluorooctanoic acid (PFOA) at 70 parts per trillion (ppt), equivalent to nanograms per liter (ng/L). When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS (both chemicals are types of PFAS) should be compared with the 70 parts per trillion health advisory level.

Detected levels of PFOS/PFOA exceeded the Lifetime health advisory level (LHA) in backup Well 5 and Well 9A only in 2016. The primary well that feeds the water system had no detection for PFOS/PFOA. Those backup wells were not in regular use, but were activated from December 2-20, 2016, while service was being conducted on the primary deep well. Wells 5 and 9A were emergency backup wells only and an ion exchange unit was installed to remove PFAS. These wells are disconnected and decommissioned (sealed) from the system, as of **May 04, 2023**. A new deep well (Well 50) was constructed to replace wells 5 and 9A and was approved on 13 Mar 2023 (Permit No. WCP220002) to provide water to the Hill Drinking Water System; reporting to NJDEP was effective **October 01, 2024**, after being finalized and approved by NJDEP on **September 30, 2024**.

In 2018, the NJDEP established health based Maximum Contaminant Level (MCL) for PFNA, PFOA and PFOS and has identified these three analytes as “Regulated PFAS”. The MCLs are 13 ppt for PFNA and PFOS, and 14 ppt for PFOA. **Regulated PFAS were below the detection limit in the Lakehurst Water System for 2023**. Results of sampling are provided in Table 4.

In 2020, the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA HAL of 70 ppt, water systems would quickly undertake additional sampling to assess the level, scope, and localized source of contamination, and take action to reduce exposure to PFOS or PFAS. DoD is continuing to evaluate its efforts to address PFAS in drinking water, and what actions we can take to be prepared to incorporate this standard, such as reviewing our current data and collecting additional sampling where necessary. We remain committed

to fulfilling our cleanup responsibilities, operating within the law and authorities provided by the federal cleanup law, and clearly communicating and engaging with our communities.

In June 2022, the EPA issued interim updated drinking water health advisories to 0.004 ppt for PFOA and 0.02 ppt for PFOS, with a minimum reporting level of 4 ppt. The current SWDA for NJDEP are 14 ppt for PFOA and 13 ppt for PFOS. EPA moved forward with proposing a PFAS National Drinking Water Regulation in Fall 2022.

At the same time, EPA also issued final health advisories for two other PFAS, perfluorobutane sulfonic acid and its potassium salt (PFBS) and for hexafluoropropylene oxide (HFPO) dimer acid and its ammonium salt ("GenX chemicals"). In chemical and product manufacturing, GenX chemicals are considered a replacement for PFOA, and PFBS is considered a replacement for PFOS.

As of December 2023, there was currently no established federal water quality regulation for any PFAS compounds. On April 10, 2024, EPA announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS. To inform the final rule, EPA evaluated over 120,000 comments submitted by the public on the rule proposal, as well as considered input received during multiple consultations and stakeholder engagement activities held both prior to and following the proposed rule. EPA expects that over many years the final rule will prevent PFAS exposure in drinking water for approximately 100 million people, prevent thousands of deaths, and reduce tens of thousands of serious PFAS-attributable illnesses. EPA finalized a National Primary Drinking Water Regulation (NPDWR) establishing legally enforceable levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water. PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS. **Regulated PFAS were below the detection limit in the Hill Water System for 2024**. Results of sampling for PFAS and other contaminants are provided in Table 5.

Table 3 – Regulated PFAS and Maximum Contaminant Levels

Compound	EPA Final MCLG (ppt)	EPA Final MCL (ppt)	NJDEP 2018 & 2020 MCLs (ppt)
PFOA	Zero	4.0	14
PFOS	Zero	4.0	13
PFNA	10	10	13
PFBS	N/A	N/A	N/A
PFHxS	10	10	N/A
HFPO-DA (commonly known as Gen X Chemicals	10	10	N/A
Mixtures containing two or more of PFNA, PFHxS, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index	N/A

For more information on how EPA manages the unregulated or "emerging" contaminants, refer to: UCMR - https://www.epa.gov/dwucmr/learn-about-unregulated-contaminant-monitoring-rule

For more information on drinking water health advisories for PFOS and PFOA, refer to: https://www.epa.gov/ground-water-and-drinking-water/drinking-water-health-advisories-pfoa-and-pfos

Reporting Requirements Not Met for Hill Water System
Our water system violated one drinking water requirement over the past year. Even though this was not an emergency, you, our customers, have a right to know what happened and what we are doing to correct these situations.

We are required to submit the Consumer Confidence Report (CCR) annually; no later than 30 June. It was received by NJDEP 19 days late. We received one Notice of Violation from NJDEP on 19 July for the monitoring period of 07/01/2024 - 07/19/2024 for missing the CCR submission deadline. The NOV was resolved upon receipt of the CCR.

What should you do?
There is nothing you need to do currently. The Hill water supply is safe and there is no required action needed by the consumer.

Table 4 – Missed Reporting Requirements

Requirement	Required Reporting Deadline	When report was submitted
Annual CCR	30 June annually	July 19, 2024

What is being done?
NJDEP requires submission of the Consumer Confidence Report (CCR) annually; no later than 30 June. We have corrected this error by started work on the CCR earlier than the previous reporting year.

For more information, please contact Mr. Neil Thornton at (609)-754-1809 or Ms. Tiffany Sollog at (609) 754-9057, 3457 Neely Road, JBMDL, NJ 08641.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Water Quality Data Tables

To ensure tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in drinking water. Tables 5 and 6 below list the drinking water monitoring results for the calendar year of the report unless otherwise noted. The EPA and the state require monitoring for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of the data, though representative, may be more than one year old. Tables 7 and 8 provides a comprehensive listing of abbreviations and definitions for terms found throughout this document which might not be familiar to the average consumer.

Table 5 – Water Monitoring Results

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Disinfectant									
Contaminants (Units)	**Location**	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**LRAA**	**Range**		**Sample Date**	**Violation**	**Typical Source**
					Low	**High**			
Chlorine (as Cl_2, ppm) (Monthly Range)	N/A	4.0	4.0	N/A	0.08	0.73	2024	No	Drinking water disinfectant[1]

Disinfectant Precursors and Byproducts (cont'd)								
Contaminants (Units)	**Location**	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**LRAA**	**Result**	**Sample Date**	**Violation**	**Typical Source**
Total Trihalomethanes (TTHMs) (µg/L)	5	NA	80	0.002	2.45	2024	No	Byproduct of drinking water disinfection[1]
	307			0.005	4.81	2024	No	
Haloacetic Acids (HAA5) (µg/L)	5	NA	60	0.004	3.87	2024	No	
	307			0.000	0.000	2024	No	

1. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
2. µg/L=micrograms of contaminant per liter of water, equivalent to ppb (parts per billion).

Nitrate							
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Results**		**Sample Date**	**Violation**	**Typical Source**
			Low	**High**			
Nitrate [measured as Nitrogen] (ppm)	1	10	<0.1	<0.1	2024	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
*mg/L=milligrams of contaminant per liter of water, equivalent to ppm (parts per million). "<" (less than) means the contaminant cannot be accurately detected below the limit specified; the result can be considered zero.							

Microbiological							
Contaminants (Units)	**MCLG or MRDLG**	**MCL, TT, or MRDL**	**Results**		**Sample Date**	**Violation**	**Typical Source**
			Negative*	**Positive**			
Total Coliform (positive samples/months)[2,3]	0	0	36	0	2024	No	Human or animal fecal waste
1. A violation occurs when a routine sample and a repeat sample, in any given month, are total coliform positive, and one is also fecal coliform or E. coli positive. 2. If a system collecting fewer than 40 samples per month has two or more positive samples in one month, the system has an MCL violation. *Negative means no bacteria was detected in the sample.							

Regulated PFAS				
Contaminant (Units)	**NJ MCL (ppt)**	**TP001018 (Well 50)**	**TP002011 (Well 48)**	**Monitoring Year**
		Result	**Result**	
PERFLUOROCTANOIC ACID (PFOA) (ppt)	14	< 2	< 2	2024
PERFLUOROCTANE SULFONIC ACID (PFOS) (ppt)	13	< 2	< 2	2024
PERFLUORONONANOIC ACID (PFNA) (ppt)	13	< 2	< 2	2024
PERFLUOROBUTANESULFONIC ACID (PFBS) (ppt)	N/A	< 2	< 2	2024
PERFLUOROHEXANE SULFONIC ACID (PFHXS)	N/A	< 2	< 2	2024
HFPO-DA (commonly known as Gen X Chemicals) (ppt)	N/A	< 2	< 2	2024
Results reported on NJ Water Watch are in µg/L=micrograms of contaminant per liter of water, equivalent to ppb (parts per billion). "<" (less than) means the contaminant cannot be accurately detected below the limit specified; the result can be considered zero.				

Lead and Copper							
Contaminants (Units)	**MCLG**	**AL**	**Sample Date***	**90th Percentile value**	**Exceeds AL**	**# Samples Exceeding AL**	**Typical Source**
Lead (ppb)	0	15	1/1/24 - 6/30/24	2.69	No	0	Corrosion of household plumbing systems; Erosion of natural deposits
			7/1/24 - 12/31/24	1.8	No	0	
Copper (ppm)	1.3	1.3	1/1/24 - 6/30/24	0.317	No	0	Corrosion of household plumbing systems; Erosion of natural deposits
			7/1/24 - 12/31/24	0.38	No	0	
* Due to missing data for pH during 2022 monitoring period, this system was placed into standard routine sampling protocol which calls for 20 samples in the first and second half of 2022, 2023 and 2024.							

Table 6 – Secondary[4] and Unregulated[5] Contaminants (No MCL Established)

Secondary Group/ Unregulated Contaminant Monitoring Rule*				
Secondary Contaminant[4] (Units)	**Recommended Upper Limit (RUL)**	**Range**		**Date of Monitoring**
		Low	**High**	
Alkalinity (ppm)	N/A	52	92	2024
pH	8.5	7.15	8.19	2024
Temperature	N/A	10.0	21.0	2024
4. Secondary contaminant Recommended Upper Limits (RULs) are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health and are not enforced by the NJDEP or the EPA. 5. Unregulated contaminant monitoring (UCMR) helps EPA to determine where certain contaminants occur and whether the agency should consider regulating those contaminants in the future. Monitoring for UCMR was required for 2023. Per USEPA (April 2024), the next round of UCMR-6 sample collection is tentatively scheduled to take place between 2027 - 2031. Awaiting final rule determination in 2026.				

Table 7 – Unit Descriptions

Term	Definition
<	Less than the lowest detectable concentration for the specific approved analysis method used, the result can be considered zero
ppm	parts per million or milligrams per liter (mg/L)
ppb	parts per billion or micrograms per liter (µg/L)
ppt	parts per trillion or nanograms per liter (ng/L)
positive samples	positive samples/year: the number of positive samples
NA	not applicable
ND	not detected
NR	monitoring not required but recommended
pCi/L	pico-Curies (pCi) of contaminant per Liter of water – One pCi is one trillionth of a Curie; a Curie is a measurement of the rate at which a radioactive material will decay.

Table 8 – Drinking Water Definitions

Term	Definition
AL	Action Level: The concentration of a contaminant which, if exceeded triggers treatment or other requirements which a water system must follow.
LHA	Lifetime health advisory levels (LHAs) are not regulatory standards. LHAs identify the concentration of a chemical of concern in drinking water at and below which adverse health effects are not anticipated to occur over specific exposure durations (e.g., 1 day, 10 days, a lifetime).
LRAA	Locational Running Annual Average
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
MCLG	Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MNR	Monitored Not Regulated
MPL	Maximum Permissible Level: State-assigned
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
MRDLG	Maximum Residual Disinfection Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants
RUL	Recommended Upper Limit: NJDEP
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
Variances and Exemptions	State or EPA permission to not meet an MCL or a treatment technique under certain conditions.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair, and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your children about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill.
- Visit www.epa.gov/watersense for more information.

How can I get involved?

This Consumer Confidence Report was prepared by the Joint Base Drinking Water Working Group members from the 87th Medical Group and the 87th Civil Engineer Group. We welcome your questions and comments about the water quality from the Lakehurst Hill system. Any questions regarding this report or the quality of Lakehurst Hill drinking water, including information about the Joint Base Drinking Water Working Group, its policies, decision making procedures, and any requests to attend meetings, should be directed to Public Affairs office at (609) 754-2104, Bioenvironmental Engineering at (609) 754-9057 or Civil Engineering at (609) 754-1809. Copies of this report are available in the following locations: Base Library, United Communities Housing Office, Warfighter and Family Readiness Center and the Bioenvironmental Engineering, and Civil Engineering Offices.

The public website for the JBMDL installation posted links to the reports here:

https://www.jbmdl.jb.mil/Activity-Feed/About-Us/Environmental-Publications/Consumer-Confidence-Report/