2020 Drinking Water Quality Report-2019 Data
Upper Deerfield Township Water Utility
PWSID # NJ0613004

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Where does my water come from?

Upper Deerfield draws it water supply from four wells drilled into the Kirkwood-Cohansey aquifer at depths ranging from 120 to 160 feet. The water is treated at two separate facilities. These plants remove radionuclides, adjust pH,and chlorinate for disinfection. The water system has a storage capacity of 750,000 gallons and a supply capacity of 2.23 million gallons per day.

SOURCE WATER INFORMATION:

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Summary. This study was done to identify potential contamination sources near public water supplies. You may obtain a copy of this report by contacting the Township Water Utility at 609-381-6443.

The source water assessment determined the following:

Seven Contaminant categories (and radon) were used to determine the system's susceptibility, and rating of high(H), medium(M) and low(L) were assigned. The categories are listed below.

Category	*Well 3*	*Well 4*	*Well 15*	*Well*
Pathogens: Bacteria and Viruses	L	L	L	L
Nutrients: Compounds, Minerals, and Elements	H	H	H	H
Pesticides: Man-made chemicals, herbicides, insecticides	M	M	M	M
Volatile Organic Compounds: Chemicals and Solvents	L	L	M	M
Inorganics: Natural and man-made minerals	L	L	M	M
Radionuclides: Radioactive substances-natural and man-made	H	H	H	H
Radon: Naturally occurring gas	M	M	M	M
Disinfectant By-product Precursors: Disinfection reaction with organic Material:	M	M	M	M

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking 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 contaminants are detected at frequencies and concentrations above allowable levels.

Potential Contaminant Sources:

Nitrates-Agricultural land use
Nutrients: Agricultural land use
Pesticides-Agricultural land use
Radio nuclides and Radon- Naturally occurring

If you have any questions regarding the source water assessment report or summary please contact the Bureau of Safe Drinking Water at swap@dep.state.nj.us or 609-292-5550.

Why are there contaminants in my drinking 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791). The sources of drinking water (both tap water and bottled water) 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:
microbial contaminants, such as viruses and bacteria, that 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 stormwater 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 stormwater runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

If you have any questions about this report or wish to address any concerns, please contact John Hoogendorn at 609-381-6443. You may also attend any of our regularly scheduled Township Committee meetings which are held on the **first and third Thursday of every month at 7:00 PM at the Municipal Building located at 1325 Hwy 77 in Seabrook.**

Monitoring and reporting of compliance data violations

Our utility received a violation notice for failure to sample for combined uranium in the third quarter of 2019 at our Love Lane treatment plant. The sampling was triggered by the exceedance of the MCL for Gross-Alpha and Combined Radium 226-228 in that quarter. We failed to take the sample and the health effects for that time period are unknown Subsequent quarterly sampling results did not exceed the MCL. **The public notice for this violation is included in this report.**

Additional information for Uranium

Some people who drink water containing uranium excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Violations of terms of variance, exemption, or administrative or judicial order

A notice was issued to our water customers on 8/14/19 informing them of a treatment violation for failure to install treatment within a one year time period between 7/10/18 to 7/10/19 to bring nitrate MCL's into compliance.

Additional information for Alpha Emitters

Certain minerals are radioactive and may emit a form of radiation known as Alpha radiation. Some people who drink water containing alpha emitters in excess over the MCL over many years may have an increased risk of getting cancer.

Additional information for Combined Radium 226/228

Some people who drink water containg radium 226 or radium 228 in excess of the MCL over many years may have an increased risk of getting cancer.

Additional information for Barium

Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

Additional Information for Lead

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. Upper Deerfield Township 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, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Nitrate violations

We exceeded the MCL for nitrates in the first and third quarters of 2019 at the Love Lane treatment plant. Public notices were delivered to the affected customers on 1/10/19 and 7/12/19. We exceeded the MCL for nitrates at the Seabrook plant in the second quarter . A public notice was delivered on 4/5/19.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask for advice from your health care provider.

THEWATER QUALITY TABLES IN THE BACK THIS REPORT ARE SEPARATED ACCORDING TO THE AREAS SERVED BY EACH WATER TREATMENT PLANT. PLEASE CHOOSE THE TABLE THAT REFERS TO YOUR LOCATION.

Water Treatment Update

Since the drinking water produced at the Love Lane Water Treatment Facility exceeded the allowable nitrate level in the Township's water test in July of 2018, Upper Deerfield Township has taken a number of significant steps to address this issue. These steps include:

1. Retained the services of an engineering specialist to assist with the conceptual and detailed design of a nitrate removal system.
2. Solicited bids and contracted for the drilling of a replacement well for well #3. Even though initial nitrate levels were low in the possible replacement well; the secondary well at this facility # 4 began exceeding the acceptable levels that required a treatment component to be constructed.
3. Nitrate removal contractors were contacted and they submitted preliminary design concepts with preliminary cost estimates to aid in the design of a nitrate removal system for the existing Love Lane water treatment facility.
4. Plans were prepared to construct a new nitrate removal system utilizing ion exchange as the method - the design of this system included;
    a. Size of building
    b. Placement of mechanical component
    c. Relocation of piping
    d. Logistics to deliver required media
    e. Discharge of backwash material into the sewer system
5. As the final specifications were being prepared for competitive bidding of the nitrate removal components and approval of the system by NJ DEP, the Cumberland County Utilities Authority informed the Township that the Township could not discharge the backwash from the ion exchange system into the CCUA sewer treatment facility. With no economical way to safely remove the backwash from an ion exchange system, the Township was forced to explore other more expensive methods of removing nitrates.
6. The Township received approval from NJ DEP to allow a pilot program of a biological treatment system that is being utilized in other areas of the country. The Pilot Study at Love Lane treatment is currently taking place and the results could take up to two months to complete to send to the state DEP for their review and approval. Representatives from DEP inspected the Pilot Program in January.
7. If the State DEP approves the results from the Pilot Program and Study, it is anticipated that the full scale biological treatment system could be bid in late spring of 2020 with construction to begin in the summer or fall of 2020.
8. The most recent quarterly water quality tests at the Love Lane water facility in October 2019 and January 2020 have shown the nitrate levels to be within the safe drinking standards and the quarterly water quality tests in Seabrook water facility for July and October 2019 and January 2020 have been within the safe drinking standards.

The Township's efforts and plans are being monitored by the New Jersey Department of Environmental Protection (NJDEP). The Township will continue to keep the public informed of the progress made in the removal of the nitrates from the drinking water at the Love Lane Water Treatment Facility.

Water Quality Data Table

CUSTOMERS NORTH OF BIG OAK ROAD

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 (800-426-4791).

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor 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 our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl2) (ppm)	4	4	.81	.73	.92	2019	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	3.5	.1	4.2	2019	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	21.4	6	28.2	2019	No	By-product of drinking water disinfection
Inorganic Contaminants								
Barium (ppm)	2	2	.0281	NA	NA	2018	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate [measured as Nitrogen] (ppm)	10	10	9.3	6.7	10.9	2019	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range Low	Range High	Sample Date	Violation	Typical Source
								deposits
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	3	NA	3	2019	No	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0	5	1.2	.44	1.8	2019	No	Erosion of natural deposits
Synthetic organic contaminants including pesticides and herbicides								
Dibromochloropropane (DBCP) (ppt)	0	200	69	36	69	2019	No	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	.338	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Inorganic Contaminants							
Lead - action level at consumer taps (ppb)	0	15	1	2017	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Unit Descriptions	
Term	**Definition**
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
ppt	ppt: parts per trillion, or nanograms per liter
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	**Definition**
MCLG	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.
MCL	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.

WATER QUALITY DATA TABLE

CUSTOMERS SOUTH OF BIG OAK ROAD

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 (800-426-4791).

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Sample Testing Waivers

The Safe Drinking Water Act regulations allow for monitoring waivers to reduce or eliminate the monitoring requirements for some contaminants. Our system received waivers for Asbestos and VOC's.

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				Low	High			
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(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Chlorine (as Cl2) (ppm)	4	4	.81	.73	.92	2019	No	Water additive used to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	3.5	.1	4.2	2019	No	By-product of drinking water chlorination

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
TTHMs [Total Trihalomethanes] (ppb)	NA	80	21.4	6	28.2	2019	No	By-product of drinking water disinfection
Inorganic Contaminants								
Barium (ppm)	2	2	.119	NA	NA	2018	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Nitrate [measured as Nitrogen] (ppm) *	10	10	10.7	12.1	9.3	2019	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radioactive Contaminants								
Alpha emitters (pCi/L)	0	15	10.2	4.8	20	2019	No	Erosion of natural deposits
Radium (combined 226/228) (pCi/L)	0	5	3.5	1.5	6.2	2019	No	Erosion of natural deposits

Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
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MCL	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	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.
MRDL	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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

For more information please contact:

Contact Name: John Hoogendorn

Address: 1325 Hwy 77

Seabrook, NJ

Phone: 609-381-6443

Monitoring Violations Annual Notice – Template 3-1A

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Monitoring Requirements Not Met for Upper Deerfield Township Water Utility

Our water system violated drinking water requirements over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we are doing (did) to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During [7/1/19 to 9/30/19 we did not test for combined uranium and therefore cannot be sure of the quality of your drinking water during that time.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for [this contaminant/these contaminants], how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.[1]

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were taken
Combined Uranium	Upon exceedance of Gross-Alpha & Ra226-228 MCL.	0	7/1/2019-9/30/19	See below

What is being done?

3rd qtr 2019 Gross Alpha and combined,Radium 226-228 samples exceeded the Maximum Contaminant Levels at the Love Lane Treatment Plant triggering a requirement to sample for Combined Uranium. The sampling was not done .Subsequent testing for Gross alpha and combined radium has shown results below the MCL.

For more information, please contact John Hoogendorn at 609-381-6443 or 1325 Hwy 77, Seabrook, NJ 08302

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.

This notice is being sent to you by Upper Deerfield Township Water Department. State Water System PWSID# NJ0613004

Date distributed: March 24, 2020 as Attachment to 2020 Consumer Confidence Report