

Fair Lawn Water Department

Borough of Fair Lawn

2016 Annual Water-Quality Report

PWS ID 0217001

June 2017

Dear Customer:

The Fair Lawn Water Department has been providing safe, quality drinking water to the people of Fair Lawn since the 1920's. Safe clean water is essential to our wellbeing. That's why we want you to know that your water meets or exceeds standards set by the New Jersey Department of Environmental Protection (NJDEP) and the U.S. Environmental Protection Agency (USEPA).

The Fair Lawn Water Department is committed to providing you with the safest and most reliable water supply. In 2016 alone, we collected more than 1000 water samples and performed more than 5000 analyses in both our "raw", or *untreated*, water and "finished", or *treated*, water to be sure that your water met the safety standards. All the test results are on file with the NJDEP, the agency that is responsible for monitoring and regulating drinking water in New Jersey.

The Safe Drinking Water Act (SDWA) has been the primary regulation to ensure that public health and safety is protected in drinking water supplies. SDWA requires all water suppliers to issue an annual Consumer Confidence Report (CCR) to customers. This water quality report is intended to share with you how well we are doing. If you have any questions about your water or your water service please call us at (201) 794-5374. You may also call the EPA safe drinking water hotline at (800) 426-4791 or find it on EPA's web site at www.epa.gov/safewater/hfacts. This report, as well as other information concerning our water supply, may be viewed on the Fair Lawn web site at www.fairlawn.org.

Water Source and Supply - Where Does it Come From?

The Fair Lawn Water Department operates 24 hours a day, seven days a week to provide a reliable supply of quality drinking water, as well as to ensure sufficient water quantity. Out of the approximately 600 public community water systems in the State of New Jersey, the Borough's water system ranks as the 50th largest. The distribution system consists of approximately 105 miles of distribution main, 1200 fire hydrants; 4 storage tanks. The combined capacity is 4.5 million gallons. There are also 4 pumping stations, having a total firm pumping capacity of 17.6 million gallons per day. The treatment system consists of 4 chlorination facilities and 2 packed column VOC treatment facilities, having a capacity of 4 million gallons per day. Average daily water consumption is 4.0 million gallons per day, with peak day demands as high as 10 million gallons per day.

The NJDEP permits the Borough to operate 16 production wells, sunk about 400 feet into an underground source of water called the New Brunswick Aquifer. On average, the production wells provide fifty-five percent of the Borough's water. These wells are located throughout the Borough. After the water is pumped from the wells, we treat it to remove several contaminants.

The Borough augments its well water supply with the bulk purchase of treated water from the Passaic Valley Water Commission (PVWC) and United Water New Jersey (UWNJ). About thirty-five percent of our water comes from the PVWC. The primary source of water for the PVWC is the Pompton and Passaic Rivers. UWNJ supplies us about ten percent of our water. The primary source of water received from UWNJ come from four reservoirs, the Oradell and Woodcliff Lake reservoirs in New Jersey, and Lake Tappan and Lake Deforest reservoirs in New York. Through a vast regional network of interconnected pipelines, we may receive other treated water supplies from the Wanaque, Monksville and Boonton reservoirs.

Conserve Water it is our most precious resource!

Capital Improvements

To serve you better, the Borough of Fair Lawn recently implemented a number of projects to improve water quality and reliability of our water supply system. For example, we rehabilitated three of our wells and installed new pumping equipment. The Borough began a study to evaluate treatment alternatives at our Westmoreland Treatment Facility. The new treatment process will address proposed regulations being established by the USEPA and NJDEP. In 2016 the Borough continued upgrading the water system's Supervisory Control and Data Acquisition system (SCADA). The system provides for monitoring and control of the water system, including all wells, pump station and treatment facilities. The Borough completed a water leak detection program of the distribution system. This is a proactive program to identify and locate unaccounted for water losses in the water distribution system. In 2016 we started meter replacement program. Over the course of the next three years we will replace all of the 11,000 water meters in the system. A number of control valves were replaced on our larger water distribution mains, this is an ongoing program. The Borough continues to work with the NJDEP Division of Science and Research on the Cadmus Place GAC Demonstration Project to help determine the effectiveness and efficiency of activated carbon treatment of unregulated contaminants. Fair Lawn Water Department continues to participate in and support these types of regulatory and research efforts to maintain a position of leadership in drinking water supply.

Bottled Water or Tap Water?

Rivers, lakes, reservoirs, springs and wells are sources for both tap water and bottled water. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals. In some cases this includes radioactive material. The water can also pick up others substances resulting from the presence of animals or human activity. Examples of these include salts, metals, viruses, bacteria or organic chemicals.

In order to ensure that the water is safe to drink, the federal government sets regulations that limit the amount of certain contaminants in water. The EPA prescribes regulations for contaminants in water provided by public water systems. The Food and Drug Administration (FDA) prescribes regulations for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. However, the presence of a contaminant does not necessarily indicate that the water poses a health risk.

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 a result of 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 volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities

An Explanation of the Water Quality-Data Table

It's easy! Our water is tested to assure compliance with all standards. The following definitions and terms will assist you in reading the table:

Maximum Contaminate Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

Maximum Contaminate Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.

Action Level – The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Primary Standards – Federal drinking water regulations for substances that are health-related. Water suppliers must meet all primary drinking water standards.

Secondary Standards – Federal drinking water measurements for substances that do not have an impact on health. These reflect aesthetic qualities such as taste, odor and appearance. Secondary Standards are recommendations not mandates.

Unregulated Contaminant (UCMR) - A contaminant with no set standards. Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.

Maximum Residual Disinfectant Level (MRDL) – 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.

Maximum Residual Disinfectant Goal (MRLG) – 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 contamination

Key to Tables

mg/l - milligrams per liter or parts per million.
The equivalent of 1 second in 12 days

ND - Not detected

TU - Turbidity Unit

ug/l - micrograms per liter or parts per billion.
The equivalent of 1 second in 32 years.

NA - Not Applicable

MFL – Million fibers per liter

pCi/l - Picocuries per liter.
The equivalent of 1 second in 320 centuries.

CU - Color Unit

Water-Quality Data Table

This Table shows the results of our water-quality analysis. Every regulated contaminate that we detected in the treated water, even in the most minute traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and key to units of measurements.

SDWA Primary Standards (Directly related to the safety of drinking water)

Substance	EPA MCLG	NJ Standard	EPA MCL	UWNJ Highest	PVWC Highest	Fair Lawn Highest	Range	Typical Source
Inorganic Chemicals								
Arsenic (ug/l)	6	5	6	ND	ND	3.03 ⁴	ND-3.03	Erosion of natural deposits
Barium (mg/l)	2	2	2	0.16	0.024	0.30 ⁴	0.16-0.30	Erosion of natural deposits
Chromium (ug/l)	100	100	100	2.6	0.60	1.57 ⁴	0.60-2.6	Corrosion of household plumbing
Fluoride (not added; mg/l)	4	4	4	ND	0.087	ND	ND-0.087	Erosion of natural deposits
Lead (Action Level; ug/l) ¹	0	15	15	NA	NA	2.56	ND-2.56	Corrosion of household plumbing
Copper (Action Level mg/l) ¹	1.3	1.3	1.3	NA	NA	0.109	ND-0.109	Corrosion of household plumbing
Nickel (ug/l)	NA	100	100	ND	2.75	4.07 ⁴	ND-4.07	Erosion of natural deposits
Nitrate (mg/l)	10	10	10	3.33	4.05	3.19	3.33-4.05	Runoff from fertilizer use; Erosion of natural deposits
Selenium (ug/l)	50	50	50	ND	0.74	1.94 ⁴	0.74-0.69	Discharge from petroleum refineries, Erosion of natural deposits
Thallium (ug/l)	0.5	2	2	ND	0.6	0.698 ⁴	0.6-0.698	Leaching from ore-processing sites; discharge from electronics, glass & drug factories
Turbidity (TT=1)	NA	1	1	0.71	0.17	NA	0.17-0.71	Natural silt
The above category contains 7 additional parameters, which were not detected.								
Radionuclides								
Alpha-emitters (pCi/l) ²	0	15	15	NA	NA	5.09	3.32 - 5.09	Erosion of natural deposits
Volatile Organic Chemicals								
Tetrachloroethylene (ug/l)	0	1	5	ND	ND	0.91	ND- 0.91	Discharge from factories and dry cleaners
Stage 2 Disinfection Byproducts								
Haloacetic Acids ³ (ug/l)	NA	60	60	NA	NA	30.03	9.30-35.50	By-product of drinking water disinfection
Trihalomethanes. ³ (ug/l)	NA	80	80	NA	NA	49.13	22.00-61.00	By-product of drinking water disinfection
The above category contains 56 additional compounds that the Borough tests for, which were not detected								
Chlorine /Chloramines as CL ₂ (mg/l)	4	4	4	NA	NA	0.88 Average for 48 samples/month	NA	Treatment Process. Chlorine is used a drinking water disinfectant

Footnotes: and Information

1. Test Year Results 2014. As per NJDEP Requirements additional monitoring will be conducted in 2017 2. Test Year Results 2011. As per NJDEP Requirements additional monitoring will be conducted in 2017. The State allows us to monitor for some contaminants less than once a year because the concentrations of these contaminants do not change frequently. 3. Trihalomethanes & HAA's MCL is based on locational running annual average of all results, at each specific sampling site collected in the distribution system and reflects the results of our blended water supply. 4. Test Year Results 2015. As per NJDEP Requirements additional monitoring will be conducted in 2017. The State allows us to monitor for some contaminants less than once a year because the concentrations of these contaminants do not change frequently

UCMR – Unregulated Contaminates for which EPA Requires Monitoring

Contaminant	Range of Results (ug/l)
1,4 - Dioxane	ND – 3.24
Chlorate	ND - 331
Chromium (6)	ND – 0.93
Chromium (total)	ND – 0.98
Cobalt	ND – 1.29
PFOA	ND – 0.031
PFOS	ND – 0.066
Strontium	ND - 601
Vanadium	ND – 2.80

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in the drinking water and whether future regulation is warranted. This testing was performed in 2013. An additional 20 parameters were tested for but not detected. Fair Lawn Water Department continues to participate in and support these types of regulatory and research efforts to maintain a position of leadership in drinking water supply.

Source Water Assessment

The NJDEP has completed and issued the Source Water Assessment report and summary for this public water systems, which is available at www.state.nj.us/dep/swap or contacting NJDEP's Bureau of Safe Drinking Water at (609) 292-5550. The Borough also augments our water supply from two other sources as defined on page one of this report. Additional information on these contributory suppliers can be found at the same NJDEP web page.

Susceptibility Ratings for Fair Lawn Water Department Sources The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system's source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens; therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes' susceptibility to radionuclides was not determined and they all received a low rating.

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. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Sources	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproduct Precursors			
	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	
Wells - 16		12	4	4	12			4	12	16			14	2		12	4		16				16		
GUDI - 0																									
Surface water intakes - 0																									

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 phosphorus.

Volatile Organic Compounds: 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 centers 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 that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.

Health Facts

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)

Nitrates 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.

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. Fair Lawn 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>.

The Fair Lawn Water Department exceeded the recommended upper limit for sodium. For healthy individuals, the sodium intake from water is not important, because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the RUL may be a concern to individuals on sodium restricted diet.

Additional Customer Information

The Safe Water Drinking Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for two of these types of contaminants, asbestos and synthetic organic chemicals. The Borough of Fair Lawn received these waivers from the NJDEP after conducting vulnerability analyses on our water system. **Este informe contiene información muy importante sobre su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.**

SDWA Secondary Standards (Related to the aesthetic quality of drinking water)

Substance	EPA or NJ Guideline	UWNJ Average	PVWC Average	Fair Lawn Average	Range Average	Typical Source
Aluminum (mg/l)	0.2	0.07	0.015	0.003	0.003 - 0.03	Treatment process
Chloride (mg/l)	250	136	124	128	124-136	Natural mineral, road salt
Color (color units)	10 CU	3	ND	3	ND - 3	Natural material
Hardness (as CaCO ₃) (mg/l)	250	159	136	280	136-280	Natural mineral
Hardness (as CaCO ₃) (grains/gal)	15	93	8	16	8 - 16	Natural mineral
Iron (mg/l)	0.3	ND	ND	ND	ND	Natural mineral
Manganese (mg/l)	0.05	ND	0.004	ND	ND - 0.004	Natural mineral
Odor (threshold odor #)	3	1	9	1	1 - 9	Natural characteristics
PH (units)	6.5-8.5	8.13	8	8.1	8 - 8.13	Treatment process
Sodium (mg/l)	50	71	92	80	71 - 92	Natural mineral
Sulfate (mg/l)	250	19	69	53	19-69	Natural mineral