

**CONSUMER CONFIDENCE REPORT – 2023
WATER SYSTEM**

**Borough of Oakland
PWS ID No. 0242001**

February 2024

During 2023, the Borough of Oakland Water Department conducted tests on water samples for over 100 contaminants that might be found in the water. These tests included items ranging from taste and odor to bacteriological and chemical contaminants. The United States Environmental Protection Agency (USEPA) and the New Jersey Department of Environmental Protection (NJDEP) set health and safety standards for these tests. The Oakland Water Department will notify consumers as required by the NJDEP if water quality fails to meet the standards.

This Consumer Confidence Report provides additional information on your sources of water and the quality of the water that we deliver. For more information on this report, please contact:

Mr. Anthony Marcucilli, Superintendent
Oakland Water Department
Municipal Plaza
63 Oak Street
Oakland, NJ 07436
(201) 337-8104

The NJDEP Bureau of Safe Drinking Water requires all CCRs to include the following information:

Landlords must distribute this information to every tenant as soon as practicable, but no later than three business days after receipt. Delivery must be done by hand, mail, or email, and by posting the information in a prominent location at the entrance of each rental premises, pursuant to section 3 of P.L. 2021, 82 (C.58:12A-12.4 et seq.).

Special Health Note

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 infections by cryptosporidium and other microbial contaminants are available from the EPA Safe Drinking Water Hotline at 800-426-4791.

Nitrate – 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.

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. Oakland 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>. Call us at (201) 337 – 8104 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.

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers, and Others

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

2024 Schedule of Mayor and Borough Council Meetings:

All meetings will be held in the Municipal Court/Council Chambers, 10 Lawlor Drive, Oakland, N.J. 07436. Business may be conducted at each meeting. Executive Sessions will be held at 6:30 p.m. to discuss possible litigation, negotiations, and personnel matters. All Regular Meetings, which are open to the public, will commence at 7:00 p.m. The schedule is as follows:

January 7, 2024	Oath of Office/Reorganization
January 9, 2024	Regular Meeting
January 23, 2024	Regular Meeting
February 13, 2024	Regular Meeting
February 27, 2024	Regular Meeting
March 12, 2024	Regular Meeting
March 26, 2024	Regular Meeting
April 9, 2024	Regular Meeting
April 30, 2024	Regular Meeting
May 14, 2024	Regular Meeting
May 28, 2024	Regular Meeting
June 11, 2024	Regular Meeting
June 25, 2024	Regular Meeting
July 17, 2024	Regular Meeting
August 14, 2024	Regular Meeting
September 10, 2024	Regular Meeting
September 24, 2024	Regular Meeting
October 8, 2024	Regular Meeting
October 22, 2024	Regular Meeting
November 12, 2024	Regular Meeting
November 26, 2024	Regular Meeting
December 10, 2024	Regular Meeting
December 23, 2024	Regular Meeting

General Information

Rivers, lakes, streams, ponds, 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 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 sewerage treatment plants, septic systems, agricultural livestock operations, wildlife, and domestic pets.
- 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 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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of a contaminant does not necessarily indicate that the water poses a health risk. The Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Regulated Contaminants

To ensure that tap water is safe to drink, the USEPA and NJDEP prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The water that we supply is treated according to these regulations.

Unregulated Contaminants

Unregulated contaminants are those for which the USEPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the USEPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Any unregulated contaminants detected are reported in the following table. For additional information and data visit <http://www.epa.gov/safewater/ucmr/ucmr2/index.html>, or call the Safe Drinking Water Hotline at (800) 426-4791.

Sources of Supply

The Borough of Oakland obtains its entire supply from groundwater through seven (7) primary wells presently in service. The locations of these wells are as follows:

<u>Well No.</u>	<u>Location</u>
5	Oak Street/River Road
6, 7, 8 and 8A	Ramapo Valley Road/Mahwah Border
9	Off of Raritan Road
10	End of Spruce Street

Treatment

The wells and the area around the wells are inspected regularly to ensure that no aboveground pollution sources are present in these areas. Water from all wells is treated by chlorination for disinfection.

Water System Improvements

Oakland continues to maintain and upgrade its water system to ensure that the residents receive a safe, adequate, and cost-effective water supply. In the past years, Oakland has repaired and replaced various aging water mains in order to provide residents with a dependable drinking water supply. Recent improvements include repairing 7 water

main breaks, replacing 8 hydrants, and replacement of water main on Lakeside Boulevard, River Road, Acorn Terrace, Florence Avenue and Birch Avenue.

Source Water Assessment Program (SWAP)

The NJDEP has completed and issued the Source Water Assessment Report and summary for this public water system, which is available at www.state.nj.us/dep/swap, or by contacting the NJDEP, Bureau of Safe Drinking Water, at 609-292-5550.

If a system is rated highly susceptible for a contamination 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. The source water assessment takes into consideration any land activities, potential contaminant sources and their proximity to the available water supply.

The source water assessment performed on our seven (7) wells determined the following potentials. At the time the NJDEP completed the assessment, there were seven (7) active wells; presently, there are six (6) wells:

	Pathogens			Nutrients			Pesticides			Volatile Organic Compounds			Inorganics			Radionuclides			Radon			Disinfection Byproducts Precursors		
Sources ¹	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 ²			7		6	1			1	6	4		3	4		3	4		7				7	

¹ NJDEP utilized a rating of high (H), medium (M), or low (L) for each contaminant category.

² All seven (7) wells were reviewed for each contaminant category.

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.

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.

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

Inorganics - Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides - Radioactive substances they 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 www.nj.gov/dep/rpp/radon/index 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.

Important Information About Your Drinking Water

Perfluorooctanoic Acid (PFOA) and Perfluorooctanesulfonic Acid (PFOS) Levels Above a Drinking Water Standard

Oakland Water Department routinely monitors for the presence of federal and state regulated drinking water contaminants. New Jersey adopted a standard, or maximum contaminant level (MCL), for PFOA and PFOS in 2020 and monitoring began in 2021. The MCL for PFOA is 14 parts per trillion (ppt) and the MCL for PFOS is 13 ppt. The MCL for both PFOA and PFOS is based on running annual average (RAA), in which the four most recent quarters of monitoring data are averaged. On September 16, 2021, the Borough received notice that the sample collected on August 31, 2021 showed that our system exceeds the PFOA and PFOS MCL at Well 10 (TP013026). They received a letter that samples taken on March 22, 2022 exceeded PFOA and PFOS for Well 10 and PFOA for Well 5 (TP 001002). The RAA for PFOS based on samples collected over the last year at Well 10 is 24.65 ppt. The RAA for PFOS at Well 5 is 19.3 ppt. The RAA for PFOA based on samples collected over the last year at Well 10 is 24.47 ppt. The RAA for PFOA for Well 5 is 19.46 ppt.

What is PFOA?

Perfluorooctanoic Acid (PFOA) is a member of the group of chemicals called per- and polyfluoroalkyl substances (PFAS), used as a processing aid in the manufacture of fluoropolymers used in non-stick cookware and other products, as well as, other commercial and industrial uses, based on its resistance to harsh chemicals and high temperatures. PFOA has also been used in aqueous film-forming foams for firefighting and training, and it is found in consumer products such as stain-resistant coatings for upholstery and carpets, water-resistant outdoor clothing and greaseproof food packaging. Major sources of PFOA in drinking water include discharge from industrial facilities where it was made or used and the release of aqueous film-forming foam. Although the use of PFOA has decreased substantially, contamination is expected to continue indefinitely because it is extremely persistent in the environment and is soluble and mobile in water.

What is PFOS?

Perfluorooctanesulfonic Acid (PFOS) is a member of the group of chemicals called per- and polyfluoroalkyl substances (PFAS), that are man-made and used in industrial and commercial applications. PFOS is used in metal plating and finishing, as well as, in various commercial products. PFOS has also been used in aqueous film-forming foams for firefighting and training, and it is found in consumer products such as stain-resistant coatings for upholstery and carpets, water-resistant outdoor clothing, and greaseproof food packaging. Major sources of PFOS in drinking water include discharge from industrial facilities where it was made or used and the release of aqueous film-forming foam. Although the use of PFOA has decreased substantially, contamination is expected to continue indefinitely because it is extremely persistent in the environment and is soluble and mobile in water.

What Does This Mean?

"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, the reproductive system. Drinking water containing PFOA in excess of the MCL over time may also increase the risk of testicular and kidney cancer. For females, drinking water containing PFOA in excess of the MCL over time may cause developmental delays in a fetus and/or an infant. Some of these developmental effects may persist through childhood.

"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 time 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 may persist through childhood.

For specific health information, see https://www.nj.gov/health/ceohs/documents/pfas_drinking%20water.pdf.

What Should I Do?

- If you have specific health concerns, a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at a higher risk than other individuals and should seek advice from your health care providers about drinking this water.
- The New Jersey Department of Health advises that infant formula and other beverages for infants, such as juice, should be prepared with bottled water when PFOA is elevated in drinking water.
- Pregnant, nursing and women considering having children may choose to use bottled water for drinking and cooking to reduce exposure to PFOA.
- Other people may also choose to use bottled water for drinking and cooking to reduce exposure to PFOA or a home water filter that is certified to reduce levels of PFOA. Home water treatment devices are available that can reduce levels of PFOA. For more specific information regarding the effectiveness of home water filters for reducing PFOA, visit the National Sanitation Foundation (NSF) International website, <http://www.nsf.org/>.
- Boiling your water will not remove PFOA.

For more information, see <http://www.nj.gov/dep/watersupply/pdf/pfoa-pfos-faq.pdf>.

What Happened? What is Being Done?

The Oakland Water System relies on water supply wells to provide water to our system. These supply wells are located in the Borough and are owned, operated and maintained by the Borough of Oakland Water Department. **We are in the construction stages of treatment for our system to remove PFOA and PFOS in the drinking**

water at Wells 5 and 10 and anticipate having a water treatment facility installed at Well 5 and Well 10's facility in 2024. In an effort to be proactive, the Borough is installing treatment for Well 9 as well. Currently, Wells 5, 9 and 10 filters have been installed.

For more information, please contact Mr. Anthony Marcucilli, Superintendent, at (201) 337-8104. 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.

Sodium Recommended Upper Limit Exceeded

Oakland Water Department exceeded the Secondary Recommended Upper Limit (RUL) for Sodium at Well No. 5 during 2023. The RUL for Sodium is 50 parts per million (ppm), and our water system detected sodium at an annual average of 72.8 ppm. Well No. 5 is used primarily as a backup supply well.

This is not an emergency, but, as our customers, you have a right to know what happened and what is being done to correct the situation.

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 might be of concern to individuals on sodium-restricted diets.

What Should I Do?

There is nothing you need to do at this time.

What Happened? What is Being Done?

Sodium is derived geologically from the leaching of surface and underground deposits of salt (ex. Sodium Chloride), and from the decomposition of sodium aluminum silicate and similar minerals. The sodium ion is a major constituent of natural waters. Human activities also contribute sodium to water supplies, primarily through the use of sodium chloride as a deicing agent and the use of washing products. Oakland has not identified the origin of the sodium in the water at this time. Oakland will continue to closely monitor the water quality of the system to ensure compliance with State and Federal Laws, and will take the necessary corrective action with guidance from the New Jersey Department of Environmental Protection (NJDEP).

For more information, please contact Mr. Anthony Marcucilli, Superintendent, at (201) 337-8104. 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.

Total Coliform Bacteria

Total coliforms (TC) are used to determine the adequacy of water treatment and the integrity of the distribution system. TC are a group of related bacteria that are (with a few exceptions) not harmful to humans. All water systems test monthly for TC. In 2023, Oakland is required to take a minimum of 10 monthly samples. No more than 1 of the monthly samples can test positive for TC. If a sample tests positive for TC, the water system must collect a repeat sample from the positive sample site and collect a sample from within 5 service connections upstream and downstream from the positive sample site within 24 hours of being notified. When a routine or repeat sample tests positive for TC, it must also be analyzed for fecal coliform and E. coli.

For calendar year 2023, zero (0) samples tested positive for TC from the monthly distribution.

BOROUGH OF OAKLAND WATER QUALITY TABLE

The following Water Quality Table lists all the drinking water contaminants that were detected during the 2023 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless noted, the data presented in this table is from January 1 through December 31, 2023. The NJDEP requires monitoring for certain contaminants less than once per year because the concentration of these contaminants is not expected to vary significantly from year to year.

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).

PRIMARY STANDARDS (Directly related to the safety of drinking water)

<u>Contaminant</u> ⁹	<u>MCLG</u> [*]	<u>MCL</u> [*]	<u>Oakland Result</u>	<u>Range of Results</u>	<u>Meets Standard</u>	<u>Likely Source of Contaminant</u>
Inorganic Compounds						
Arsenic (ppb) ¹	-0-	10	0.911 ²	ND-0.911	Yes	Erosion of natural deposits
Barium (ppm) ³	2	2	0.229 ²	0.0209-0.229	Yes	Erosion of natural deposits
Chromium (ppb) ⁴	100	100	2.09 ²	1.06-2.09	Yes	Erosion of natural deposits
Chlorine (ppm)	4	4	0.88 ²	0.23-0.88	Yes	Water additive used to control microbes
Copper ⁵ (ppm) - 2022	1.3	AL=1.3	0.199 ⁶	0.018 – 0.256	Yes	Household plumbing
Lead ⁵ (ppb) - 2022	-0-	AL=15	2.12 ⁶	ND – 2.41	Yes	Household plumbing
Nickel (ppb)	100	100	12.2 ²	ND – 12.2	Yes	Erosion of natural deposits
Nitrates (ppm)	10	10	5.1 ²	1.9 – 5.1	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Radionuclides						
Gross Alpha (pCi/l) – 2020	0	15	4.48 ²	< 3.00 - 4.48	Yes	Erosion of natural deposits
Radium 228 (pCi/l) – 2020	0	5	< 1.00 ²	< 1.00	Yes	Erosion of natural deposits
Uranium (pCi/l) – 2020	0	30	1.84 ²	1.20 – 1.84	Yes	Erosion of natural deposits
Microbiological						
Total Coliforms ⁷ (no. of detects per month)	-0-	1	0 ⁷	0	Yes	Naturally present in the environment
Organic Compounds						
Total Haloacetic Acids Five (HAA5) (ppb)	NS	60	2.22 ⁸	0.468 – 4.59	Yes	Byproduct of drinking water chlorination
Inorganic Compounds						
Total Trihalomethanes (TTHM) (ppb)	NS	80	5.46 ⁸	0 – 11.4	Yes	Byproduct of drinking water chlorination

¹ Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

² Highest detected level.

³ Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

- ⁴ Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
- ⁵ The Oakland Water Dept. collected 30 water samples during 2022 from residents randomly selected in the distribution system. These samples were analyzed to determine the concentration of lead and copper. This data is used to determine if the water is corrosive, and it was found after testing that it is not. The Borough is required to test for lead and copper every three years.
- ⁶ This is the 90th percentile. No sites exceeded the Action Level (AL) for lead and copper.
- ⁷ In 2023, the Oakland Water Department collected 120 samples for Total Coliforms. Zero (0) samples tested positive. Please refer to text on "Total Coliform Bacteria" for more information.
- ⁸ Locational running annual average.
- ⁹ All items were sampled in 2023, or as noted.
- * See definitions.

SECONDARY STANDARDS
(Related to the aesthetic quality of drinking water)

<u>Substance Name</u> ¹	<u>RUL</u> ²	<u>Oakland Result</u>	<u>Range of Results</u>	<u>Meets Standard</u>
Alkalinity (ppm)	NS ^{*,*}	132	114-132	Yes
Aluminum (ppm)	0.2	< 0.01	< 0.01 ³	Yes
Chloride (ppm)	250	188	75.5-188	Yes ⁴
Color (CU)	15	< 2	< 2 ³	Yes
Fluoride (ppm)	4	< 0.2	< 0.2 ³	Yes
Foaming Agents (ppm)	0.5	< 0.05	< 0.05 ³	Yes
Hardness (ppm)	250	325	179-325	No ⁵
Iron (ppm)	0.3	< 0.2	< 0.2 ³	Yes
Manganese (ppm)	0.05	< 0.01	< 0.002 - < 0.01	Yes
Odor (TON)	3	< 1	< 1 ³	Yes
pH (units)	6.5-8.5	7.45	6.87-7.45	Yes
Silver (ppm)	0.1	< 0.002	< 0.002 ³	Yes
Sodium (ppm)	50	72.8 ⁶	69.5-76.2	No ⁷
Sulfate (ppm)	250	29.2	10.5-29.2	Yes
Total Dissolved Solids (ppm)	500	615	325-615	No ⁸
Zinc (ppm)	5	0.0233	0.0135-0.0233	Yes

¹ All items were sampled in 2023, or as noted.

² Recommended upper limit (RUL) or optimum range.

³ These substances were all below the minimum detectable limit (MDL).

⁴ The secondary recommended upper limit for chloride is based on taste. You may notice a salty taste if the level of chloride is above the secondary upper limit. Chloride is a natural soil deposit.

⁵ The hardness range of 50-250 ppm is the recommended standard. Hardness will cause the scaling of pipe but is not a health issue.

⁶ Annual Average.

⁷ Sodium was found to be at a level higher than the RUL. 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 of concern to individuals on a sodium-restricted diet.

⁸ The Total Dissolved Solids (TDS) recommended standard is 500 ppm. High levels of TDS would make the water aesthetically objectionable, but is not a health issue.

^{*,*} See Terms and Abbreviations next page.

<u>Substance Name</u>	<u>MCL¹</u>	<u>Result</u>	<u>Results</u>	<u>Drinking Water</u>
1, 4 – Dioxane (ppb) - 2020	0	0.353 ¹	0.251 – 0.417	Used as a solvent, cleaning agent, chemical stabilizer, surface coating, adhesive agent and an ingredient in chemical manufacturer.
Perfluorobutanesulfonic Acid ³ (PFBS) (ppb)	0	0.0067 ¹	ND – 0.0214	Used in products to make them stain, grease, heat and water resistant.
Perfluoroheptanoic Acid ³ (PFHpA) (ppb)	0	0.00261 ¹	ND – 0.00563	Used in products to make them stain, grease, heat and water resistant.
Perfluorohexanesulfonic Acid ³ (PFHxS) (ppb)	0	0.0032 ¹	0.00232 – 0.00473	Used in products to make them stain, grease, heat and water resistant.
Perfluorohexanoic Acid ³ (PFHxA) (ppb)	0	0.0049 ¹	ND – 0.01	Used in products to make them stain, grease, heat and water resistant.
Perfluorononanoic Acid ³ (PFNA) (ppb)	0.013	0.000146 ¹	ND – 0.00234	Used in products to make them stain, grease, heat and water resistant.
Perfluorooctanesulfonic Acid ³ (PFOS) (ppb)	0.013	0.0132 ¹	0.0049 – 0.0268 ²	Used in firefighting foam, circuit board etching, cleaners, floor polish and pesticides.
Perfluorooctanoic Acid ³ (PFOA) (ppb)	0.014	0.0146 ¹	0.00511 – 0.028 ²	Used in manufacturer of fluoropolymers, firefighting foams, cleaners, cosmetics, greases, lubricants, paints, polishes, adhesives and photographic films.

¹ Average detected level.

² PFOS and PFOA highest level exceeded the maximum contaminant level.

³ Well 5 was out of service during Quarter 4 due to the current PFAS filtration installation project. These results include sampling information from Well 5 during Quarters 1 through 3.

DEFINITIONS

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment of other requirements which a water system must follow.

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Contaminant Level (MCL) - 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.

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 Level Goal (MRDLG) - 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.

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.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

TERMS AND ABBREVIATIONS

ABS/LAS - Common major components of synthetic detergents. ABS is the abbreviation for sodium alkyl benzene sulfonate, which has been largely replaced by linear alkyl sulfonate (LAS).

Coliform - Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Color Unit (CU) - Dissolved organic material from decaying vegetation and certain inorganic matter cause color in water. While color itself is not a health risk, its presence is aesthetically objectionable and suggests that the water needs appropriate treatment.

Cryptosporidium - A microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 % removal. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. Immuno-compromised individuals should consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Foaming Agents - Many natural and manmade substances will cause foam when water is agitated. The major cause of foaming is surfactants, which are synthetic organic chemicals used as the principal ingredient in modern detergents. Foaming is an undesirable property of drinking water because foaming agents may impart an unpleasant taste, can cause frothing and usually can be associated with contamination of groundwater. Surfactants are the foaming agents which are measured to determine if drinking water has an acceptable foamability. The MCL of 0.5 mg/l is based on levels of foaming agents that would prevent the occurrence of visible foam.

Total Haloacetic Acids (HAA5) - HAA5s are formed when organic compounds in water react with chlorine (used as a disinfectant). HAA5s may have harmful health effects.

Inorganic Compounds - Chemicals associated with minerals and metals.

Microbiologicals - Microorganisms such as bacteria, viruses, and protozoa, which may be potentially harmful. These organisms may occur naturally or can be introduced into the environment from sewerage treatment plants, septic systems, and agricultural runoff.

ml - Milliliters.

NA - Not Applicable.

ND - Non-Detectable.

NS - No Standard.

Nephelometric Turbidity Unit (NTU) - A measure of the clarity of water.

Organic Compounds - Chemicals associated with carbon or living matter.

ORSG - Office of Research and Standards Guideline.

Parts per billion (ppb) or micrograms per liter - One part per billion corresponds to a single penny in \$10,000,000.00. Concentration in parts per billion.

Parts per million (ppm) or milligrams per liter (mg/l) - One part per million corresponds to a single penny in \$10,000.00. Concentration in parts per million.

Parts per trillion (ppt) or nanograms per liter (ng/l) - One part per trillion corresponds to a single penny in \$10,000,000,000.00. Concentration in parts per million.

Per- and polyfluoroalkyl substances (PFAS) - A group of over 4,000 human-made chemicals (they do not occur naturally) that have been used in industry and consumer products worldwide and includes:

(PFNA): Perfluorononanoic Acid

(PFOA): Perfluorooctanoic Acid

(PFOS): Perfluorooctane Sulfonic Acid

(PFHpA): Perfluoroheptanoic Acid

(PFHxS): Perfluorohexane Sulfonic Acid

(PFBS): Perfluorobutane Sulfonic Acid

(PFHxA): Perfluorohexanoic Acid

Picouries per Liter (pCi/l) - is a measure of radioactivity in water.

Radionuclides - Contaminants giving off ionizing radiation.

TON - Threshold Odor Number.

Total Trihalomethanes (TTHM) - TTHMs are formed when organic compounds in water react with chlorine (used as a disinfectant). TTHMs may have harmful health effects.

Turbidity - In excess of 5 NTU is just noticeable to the average person. Clarity or amount of suspended material in water.

Variances and Exemptions - NJDEP or EPA permission not to meet an MCL or a treatment technique under certain conditions.

solutions to Stormwater Pollution

Easy Things You Can Do Every Day To Protect Our Water

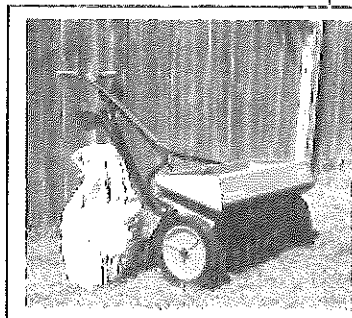
A Guide to Healthy Habits for Cleaner Water

Pollution on streets, parking lots and lawns is washed by rain into storm drains, then directly to our drinking water supplies and the ocean and lakes our children play in. Fertilizer, oil, pesticides, detergents, pet waste, grass clippings: You name it and it ends up in our water.

Stormwater pollution is one of New Jersey's greatest threats to clean and plentiful water, and that's why we're all doing something about it.

By sharing the responsibility and making small, easy changes in our daily lives, we can keep common pollutants out of stormwater. It all adds up to cleaner water, and it saves the high cost of cleaning up once it's dirty.

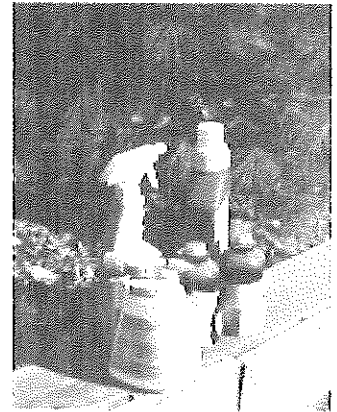
As part of New Jersey's initiative to keep our water clean and plentiful and to meet federal requirements, many municipalities and other public agencies including colleges and military bases must adopt ordinances or other rules prohibiting various activities that contribute to stormwater pollution. Breaking these rules can result in fines or other penalties.



As a resident, business, or other member of the New Jersey community, it is important to know these easy things you can do every day to protect our water.

Limit your use of fertilizers and pesticides

- Do a soil test to see if you need a fertilizer.
- Do not apply fertilizers if heavy rain is predicted.
- Look into alternatives for pesticides.
- Maintain a small lawn and keep the rest of your property or yard in a natural state with trees and other native vegetation that requires little or no fertilizer.
- If you use fertilizers and pesticides, follow the instructions on the label on how to correctly apply it.



Make sure you properly store or discard any unused portions.

Properly use and dispose of hazardous products

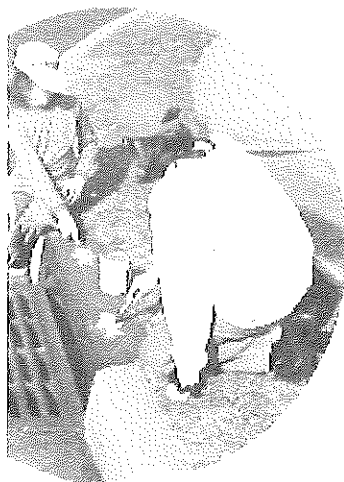
- Hazardous products include some household or commercial cleaning products, lawn and garden care products, motor oil, antifreeze, and paints.
- Do not pour any hazardous products down a storm drain because storm drains are usually connected to local waterbodies and the water is not treated.

■ If you have hazardous products in your home or workplace, make sure you store or dispose of them properly. Read the label for guidance.

■ Use natural or less toxic alternatives when possible.

■ Recycle used motor oil.

■ Contact your municipality, county or facility management office for the locations of hazardous-waste disposal facilities.



Keep pollution out of storm drains

■ Municipalities and many other public agencies are required to mark certain storm drain inlets with messages reminding people that storm drains are connected to local waterbodies.

■ Do not let sewage or other wastes flow into a stormwater system.

Clean up after your pet

■ Many municipalities and public agencies must enact and enforce local pet-waste rules.

■ An example is requiring pet owners or their keepers to pick up and properly dispose of pet waste dropped on public or other people's property.

■ Make sure you know your town's or agency's requirements and comply with them. It's the law. And remember to:

■ Use newspaper, bags or pooper-scoopers to pick up wastes.

■ Dispose of the wrapped pet waste in the trash or unwrapped in a toilet.

■ Never discard pet waste in a storm drain.

Don't feed wildlife

■ Do not feed wildlife, such as ducks and geese, in public areas.

■ Many municipalities and other public agencies must enact and enforce a rule that prohibits wildlife feeding in these areas.



Don't litter

■ Place litter in trash receptacles.

■ Recycle. Recycle. Recycle.

■ Participate in community cleanups.

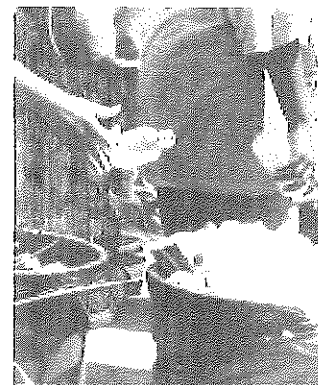
Dispose of yard waste properly

■ Keep leaves and grass out of storm drains.

■ If your municipality or agency has yard waste collection rules, follow them.

■ Use leaves and grass clippings as a resource for compost.

■ Use a mulching mower that recycles grass clippings into the lawn.



Contact information

For more information on stormwater related topics, visit www.njstormwater.org or www.nonpointsource.org

Additional information is also available at U. S. Environmental Protection Agency Web sites www.epa.gov/npdes/stormwater or www.epa.gov/nps

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Nonpoint Pollution Control
Municipal Stormwater Regulation Program
(609) 633-7021



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