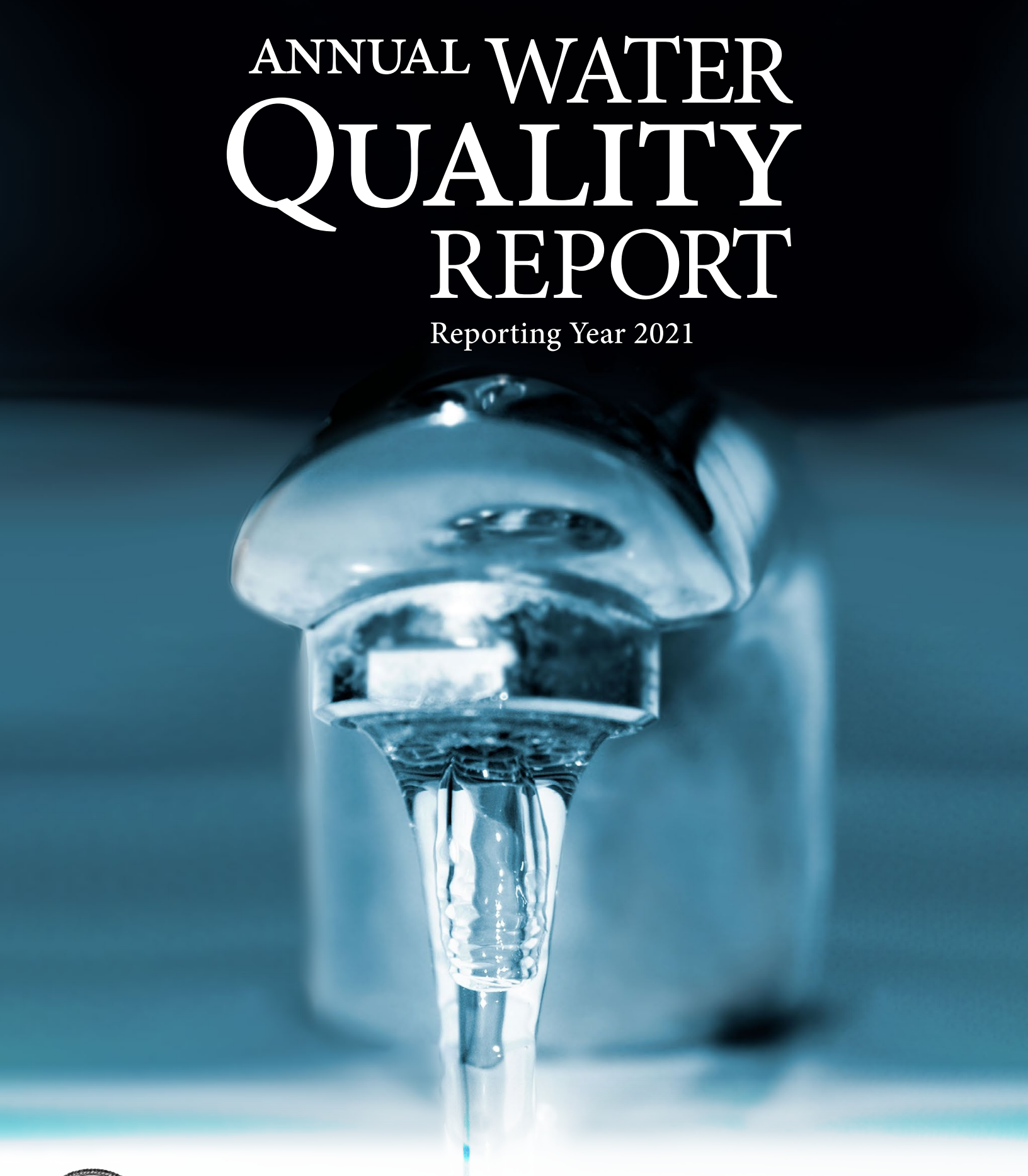
ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By

Georgetown Water Department

PWS ID#: 3105000

We've Come a Long Way

Georgetown Water Department is proud to present our annual water quality report covering the period between January 1 and December 31, 2021. The upcoming year will be instrumental in improving water quality with the refurbishment of Georgetown's existing Water Treatment Plant filters. These filters have been strained for years due to increased pumping and influent iron. Our exceptional staff continues to work hard every day—at all hours—to deliver the highest-quality drinking water without interruption. Although the challenges ahead are many, we feel that by relentlessly investing in customer outreach and education, new treatment technologies, system upgrades, and training, the payoff will be reliable, high-quality tap water delivered to you and your family.

Water Treatment Process

Georgetown Water Department utilizes a pressure filtration process at the West Street Water Treatment Plant to remove naturally occurring iron and manganese. This process is enhanced by raising the pH level of the source water at each of our three wells using potassium hydroxide feed systems. The well water is blended at the plant where two oxidants, sodium hypochlorite and potassium permanganate, are added to promote iron and manganese precipitation so their particulate form can be captured through pressure filtration. The finished water is chlorinated a second time, for disinfection, and pH is adjusted to maintain (pipe) corrosion control before entering the distribution system. The elevated pH helps to control corrosion not only in the ductile iron and cast iron water mains, but also in the copper water services and plumbing systems in your homes. Pressure filters are backwashed regularly to restore their filtering capacity. Filtered particulate iron and manganese are discharged in concentrated water to dewatering lagoons/drying beds. Following final processing, fully-dried residuals are properly disposed of abiding by DEP regulations.

Where Does My Water Come From?

Georgetown Water comes from a blend of three groundwater wells. Source water from Marshall's Well, Commissioner's Well, and Duffy's Landing Well is blended and treated at the West Street Treatment Plant to remove naturally occurring iron and manganese through oxidation and pressure filtration.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 cold water 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 are available from the Safe Drinking Water Hotline at (800) 426-4791 or online at: www.epa.gov/safewater/lead.

Source Water Assessment

Georgetown has a source water head protection program in place to ensure the preservation of our groundwater. Mapping of various zoning laws can be viewed online at: https://www.georgetownma.gov/ by way of the planning department MIMAPS- DEP wellhead protection. A Source Water Assessment has been completed for our system and is currently being updated. The purpose of the assessment is to determine the susceptibility of each drinking water source to potential contaminant sources. The report includes background information and a relative susceptibility rating of "Lower," "Moderate," or "Higher." It is important to understand that a susceptibility rating of "Higher" does not imply poor water quality, only the system's potential to become contaminated within the assessment area. A susceptibility rating of "Higher" was accessed for the town of Georgetown water source; the full report may be found online at: https://www.mass.gov/lists/source-water-assessment-and-protection-swap-program-documents. (Georgetown's report can be found on pp. 499-506.)

If you would like a copy of our assessment or have questions, please feel free to contact our office during regular business hours at the number provided in this report.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or online at: http://water.epa.gov/drink/hotline.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Marlene Ladderbush, Georgetown Water Department Utility Director, at (978) 352-5750.

Public Meetings

Georgetown's Water Department is overseen by a Board of Water Commissioners who meet monthly. These meetings are open to the public. Information is posted physically on the Water Office (1 Moulton Street) and Town Hall (1 Library Street) front doors as well as on both the Town and Water Department websites.

What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (backpressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (backsiphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection.

For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

Water Safety Testing

To ensure that tap water is safe to drink, the Department of Environmental Protection (DEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits 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. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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. 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 which may also come from gas stations, urban stormwater runoff, and septic systems;

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

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data is included, along with the year in which the sample was taken.

In October 2021 Georgetown began its quarterly analysis for PFAS. Through testing, Georgetown Water was shown to be significantly below the Maximum Contamination Limit of 20 ppt for 6 compounds. All sampling results are posted on our website.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2021	[4]	[4]	1.25	1.0–1.6	No	Water additive used to control microbes
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2021	60	NA	18.38	5.7–37	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	0.19	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2020	1	1	0.2	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Perchlorate (ppb)	2021	2	NA	0.06	NA	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks and explosives.
TTHMs [Total Trihalomethanes]–Stage 2 (ppb)	2021	80	NA	39.9	19–54	No	By-product of drinking water disinfection
Total Coliform Bacteria[1] (Positive samples)	2021	TT	NA	17	NA	No	Naturally present in the environment

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2021	1.3	1.3	1.2	1/20	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2021	15	0	0.006	1/20	No	Lead services lines, corrosion of household plumbing systems including fittings and fixtures; Erosion of natural deposits

Definitions

90th %ile: Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the Action Level to determine lead and copper compliance.

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

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.

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 Disinfectant 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.

NA: Not applicable

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TON (Threshold Odor Number): A measure of odor in water.

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

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2021	250	NA	0.338	NA	No	Runoff/leaching from natural deposits
Copper (ppm)	2021	1.0	NA	0.162	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits
Fluoride (ppm)	2021	2.0	NA	0.2	NA	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Iron (ppb)	2021	300	NA	6	NA	No	Leaching from natural deposits; Industrial wastes
Odor (TON)	2021	3	NA	2.0	NA	No	Naturally occurring organic materials
pH (Units)	2021	6.5-8.5	NA	7.3	NA	No	Naturally occurring
Sulfate (ppm)	2021	250	NA	26	NA	No	Runoff/leaching from natural deposits; Industrial wastes
Total Dissolved Solids [TDS] (ppm)	2021	500	NA	214	NA	No	Runoff/leaching from natural deposits

UNREGULATED SUBSTANCES [2]

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2021	7.4	3.8–10.0	By-product of disinfection
Chlorodibromomethane	2021	1.015	0.53–1.5	By-product of disinfection
Chloroform (ppb)	2021	31.18	13.7–42.5	By-product of disinfection
Perfluorooctanesulfonate Acid [PFOS] (ppt)	2021	2.3	NA	NA
Sodium[3] (ppm)	2021	17.8	NA	Naturally occurring

[1] Georgetown Water Department tests its raw (untreated) water for Total Coliform. In 2021, 72 well samples were taken of which only 17 tested positive for total coliform bacteria, but all were negative for E. Coli. All raw water is treated and disinfected before being sent for distribution.

[2] Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist U.S. EPA in determining their occurrence in drinking water and whether future regulation is warranted.

[3] The Massachusetts Department of Environmental Protection maintains a guideline level of 20 ppm for sodium.

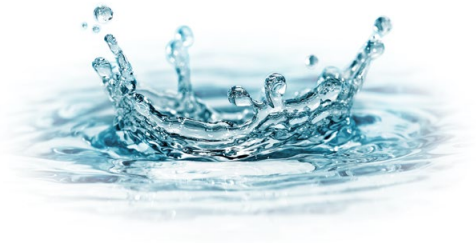
What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants



Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit online at: https://www.atsdr.cdc.gov/pfas/index.html.