



2020 Annual  
**WATER QUALITY  
REPORT**

**SOUTH ORANGE VILLAGE**  
PWS ID: NJ0719001



**QUALITY. ONE MORE WAY  
WE KEEP LIFE FLOWING.**



# What is a Consumer Confidence Report (CCR)



**Each year, South Orange Village, operated by American Water Contract Services, produces a Water Quality Report. For more information about this report, please contact our Customer Call Center at 1-855-722-7072.**

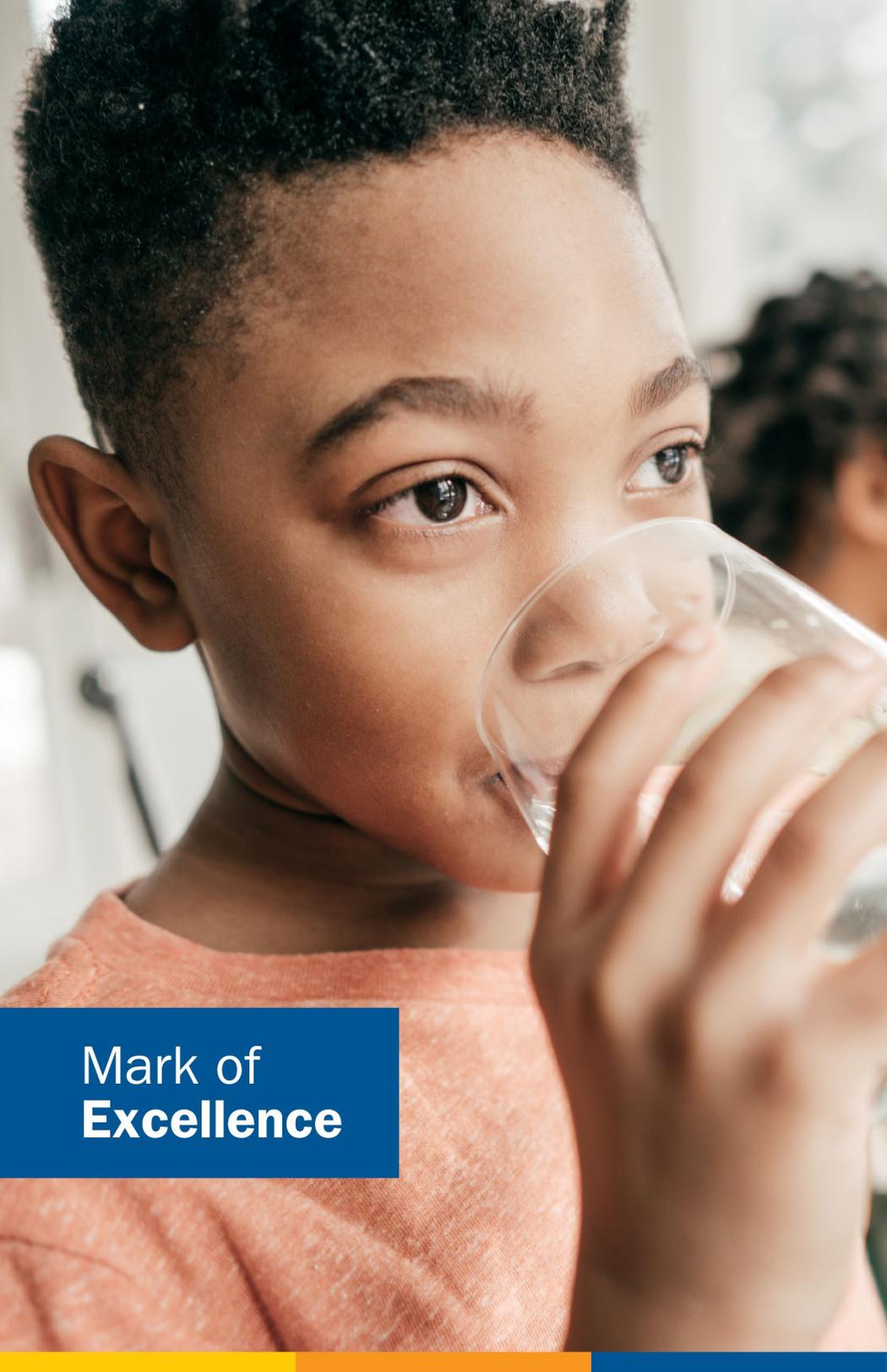
Once again, we proudly present our Annual Water Quality Report, also referred to as a Consumer Confidence Report (CCR). CCRs let consumers know what contaminants, if any, were detected in their drinking water as well as related potential health effects. CCRs also include details about where your water comes from and how it is treated. Additionally, they educate customers on what it takes to deliver safe drinking water and highlight the need to protect drinking water sources.

## **ATTENTION: Landlords and Apartment Owners**

**Please share a copy of this notice with your tenants. It includes important information about their drinking water quality.**

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Mark of  
Excellence



### EVERY STEP OF THE WAY.

We monitor and test your water at multiple points throughout our process of drawing it from its source, treating it to meet drinking water standards, and distributing it through our pipeline systems. **In fact, American Water performs over one million tests annually for about 100 regulated contaminants, nationwide.**



### EXPERTISE. RECOGNIZED AT THE HIGHEST LEVEL.

American Water is an expert in water quality testing, compliance and treatment and has established industry-leading water testing facilities. Our dedicated team of scientists and researchers are committed to finding solutions for water quality challenges and implementing new technologies. We are recognized as an industry leader in water quality and work cooperatively with the EPA so that drinking water standards and new regulations produce benefits for customers and public water suppliers. American Water has earned awards from the EPA's Partnership for Safe Water as well as awards for superior water quality from state regulators, industry organizations, individual communities, and government and environmental agencies.



### WATER QUALITY. DOWN TO A SCIENCE.

We also have access to American Water's Central Laboratory in Belleville, Illinois, which conducts sophisticated drinking water testing and analysis. Here, American Water scientists refine testing procedures, innovate new methods, and look for ways to detect potentially new contaminants—even before regulations are in place.



### MAINTAINING QUALITY FOR FUTURE GENERATIONS.

Just as NJ American Water is investing in research and testing, we also understand the importance of investing in the infrastructure that provides high-quality water service to you.



# About Your Drinking Water Supply

## WHERE YOUR WATER COMES FROM

Water for the South Orange Village System is purchased from New Jersey American Water – Short Hills System with one ground water source, municipally owned Well 17, located within South Orange Village. The South Orange municipal government made the decision that the use of the Well 17 source be discontinued on November 30, 2018.

### Short Hills System PWSID # NJ0712001

New Jersey American Water - Short Hills System is a public community water system consisting of 25 wells, 4 surface water intakes, 12 purchased ground water sources, and 3 purchased surface water sources.

Source water comes from the following aquifers and/or surface water bodies: Passaic River, Brunswick aquifer.

The NJ American Water – Short Hills System purchases water from the following water systems: Orange, Verona, Southeast Morris County Utilities Authority, Passaic Valley Water Commission (PVWC) Morris County Connection, Newark, Montclair, Madison, Livingston Water, NJ American Water Raritan System, Chatham Water Department and Passaic Valley Water Commission.

## ABOUT YOUR CONTRACTED SYSTEM OPERATOR AND BULK SUPPLIER, AMERICAN WATER

With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 6,800 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to 15 million people in 46 states. American Water provides safe, clean, affordable and reliable water services to our customers to help keep their lives flowing. For more information, visit [www.amwater.com](http://www.amwater.com) and follow American Water on [Twitter](#), [Facebook](#) and [LinkedIn](#).



## QUICK FACTS ABOUT THE SOUTH ORANGE VILLAGE SYSTEM

**Communities Served:**  
South Orange Village

### About Your Municipally Owned Water Utility

South Orange Village Water Utility is a municipally owned water utility that owns all mains, tanks, reservoir and ground water sources that comprise the system. The municipality has contracted the operation and maintenance of the water system to American Water under a 10-year operations and maintenance contract. Separately, the municipality has contracted with New Jersey American Water for supply of bulk water, under a 30-year sales agreement. Both agreements commenced January 1, 2017. Your local municipal government establishes billing rates, system policy, executes capital improvement projects, guides the strategic direction of the water system and is the beneficiary of all customer revenue collected.

# Protecting Your Water Sources

## WHAT IS S.W.A.P.

The Source Water Assessment Program (SWAP) is a program of the New Jersey Department of Environmental Protection (NJDEP) to study existing and potential threats to the quality of public drinking water sources throughout the state. Sources are rated depending upon their contaminant susceptibility.

## SUSCEPTIBILITY RATINGS FOR SOUTH ORANGE VILLAGE

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. Source Water Assessment Reports and Summaries available at <http://www.nj.gov/dep/watersupply/swap/index.html>, or by contacting the NJDEP, Bureau of Safe Drinking Water at 609-292-5550 or [watersupply@dep.nj.gov](mailto:watersupply@dep.nj.gov).

## CONTAMINANT CATEGORIES

The NJDEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of the SWAP, 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 a low rating was assigned.

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, the NJDEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

Source water protection is a long-term dedication to clean and safe drinking water. It is more cost effective to prevent contamination than to address contamination after the fact. Every member of the community plays an important role in source water protection. The NJDEP recommends controlling activities and development around drinking water sources, whether it is through land acquisition, conservation easements or hazardous waste collection programs. We will continue to keep you informed of SWAP's progress and developments.

## SUSCEPTIBILITY CHART DEFINITIONS

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

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	
Short Hills: 25 Wells	1	21	3	13	12			6	19	17		8	10	11	4			25		25			3	22	
Short Hills Surface Water Intakes - 4	4			2	2			2	2		4		4					4			4	4			
South Orange Village: 1 Well			1		1				1	1			1				1			1				1	



# What are the Sources of Contaminants?

To provide tap water that is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) 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 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 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, aquifers and/or groundwater. 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.

**SPECIAL HEALTH INFORMATION**

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 and Prevention (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 (800-426-4791).

## CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

<b>Microbial Contaminants</b>	such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
<b>Inorganic Contaminants</b>	such as salts and metals, which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
<b>Pesticides and Herbicides</b>	which may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
<b>Organic Chemical Contaminants</b>	including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also, come from gas stations, urban storm water runoff, and septic systems.
<b>Radioactive Contaminants</b>	which can be naturally occurring or may be the result of oil and gas production and mining activities.



# Protecting Your Drinking Water Supply

Protecting drinking water at its source is an important part of the process to treat and deliver high quality water. It takes a community effort to protect our shared water resources. This includes utilities, businesses, residents, government agencies and organizations. Everyone who lives, works, and plays in the area has a role and stake in clean water supplies.

## WHAT CAN YOU DO?

Quality drinking water starts upstream. Everyone can help maintain and improve drinking water supplies through the following actions:

- Properly dispose of pharmaceuticals, household chemicals, oils and paints. Materials can impact water ways if poured down the drain, flushed down the toilet, or dumped on the ground.
- Check for leaks from automobiles and heating fuel tanks. Clean up any spills using an absorbent material like cat litter. Sweep up the material and put it in a sealed bag in the trash.
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Take part in watershed activities.

**Report any spills, illegal dumping or suspicious activity to the NJDEP at 1-877-WARNDEP (1-877-927-6337).**

## FOR MORE INFORMATION

To learn more about your water supply and local activities, visit us online at [www.amwater.com](http://www.amwater.com) or contact our Customer Service Call Center at 1-855-722-7072.

## Remember to be Water Smart

Wise water use is an important first step in protecting our water supply. Such measures not only save the supply of our source water but can also save you money by reducing your water bill.

## Wise Water Tips for inside your home

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

## You can be water smart outdoors as well

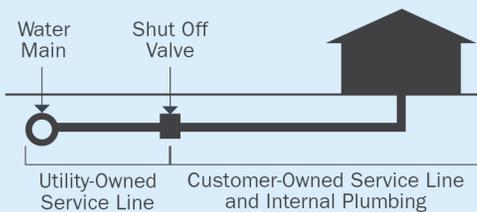
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.



# About 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. Your water utility 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>.

## UTILITY-OWNED VS. CUSTOMER-OWNED PORTION OF THE SERVICE LINE



Please note: This diagram is a generic representation. Variations may apply.

## The most common source of lead in tap water is from the customer's plumbing and their service line.

Our water mains are not made of lead; however, the water service line that carries the water from the water main in the street to your home could be. Homeowners' service lines may be made of lead, copper, galvanized steel or plastic. You can assess your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve.

### MINIMIZING YOUR POTENTIAL EXPOSURE

You cannot see, smell or taste lead, and boiling water will not remove lead. Here are steps you can take to reduce your potential exposure if lead exists in your home plumbing.

### CHECK YOUR PLUMBING AND SERVICE LINE

If you live in an older home, consider having a licensed plumber check your plumbing for lead. If your service line is made of lead, and you're planning to replace it, be sure to contact us at 1-855-722-7072.



**1. Flush your taps.** The longer the water lies dormant in your home's plumbing, the more lead it might contain. If the water in your faucet has gone unused for more than six hours, flush the tap with cold water for 30 seconds to two minutes before drinking or using it to cook. To conserve water, catch the running water and use it to water your plants.



**2. Use cold water for drinking and cooking.** Hot water has the potential to contain more lead than cold water. If hot water is needed for cooking, heat cold water on the stove or in the microwave.



**3. Routinely remove and clean all faucet aerators.**



**4. Look for the "Lead Free" label** when replacing or installing plumbing fixtures.



**5. Follow manufacturer's instructions for replacing water filters** in household appliances, such as refrigerators and ice makers, as well as home water treatment units and pitchers. Look for NSF 53 certified filters.



**6. Flush after plumbing changes.** Changes to your service line, meter, or interior plumbing may result in sediment, possibly containing lead, in your water supply. Remove the strainers from each faucet and run the water for 3 to 5 minutes.

# Important Information About **Drinking Water**

## **DRINKING WATER CONTAMINANTS**

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

## **RADON**

Radon is a radioactive gas that occurs naturally in some groundwater. It may pose a health risk when the gas is released from water into air, as occurs while showering, washing dishes and performing other household activities. Radon can move up through the ground and into a home through cracks in the foundation. Compared to radon entering the home through soil, radon entering through tap water is, in most cases, a small source of radon in indoor air. Inhalation of radon gas has been linked to lung cancer; however, the effects of radon ingested in drinking water are not yet clear. If you are concerned about radon in your home, tests are available to determine the total exposure level.

During 2015 testing, our water showed radon levels between ND to 2090 pCi/L in the South Orange Village System. The EPA is developing regulations to reduce radon in drinking water. Radon in the air is inexpensive to test and easy to correct. For additional information, call the EPA's Radon Hotline at 1-800-55-RADON.

## **FLUORIDE**

Fluoride is a naturally occurring substance. It can be present in drinking water from two sources:

1. **By nature** when groundwater comes into contact with fluoride-containing minerals naturally present in the earth; or
2. **By a water purveyor** through addition of fluoride to the water they are providing in the distribution system.

The South Orange Village System does not contain naturally-occurring fluoride in the groundwater or purchased water supply. Your contracted system operator, NJ American Water, does not add fluoride to the water they are providing to South Orange Village.

If you have any questions on fluoride, please call the South Orange Village Customer Call Center at 1-855-722-7072.





## **CRYPTOSPORIDIUM**

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. 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, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to 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.

## **NITRATES**

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant or are pregnant, you should ask for advice from your health care provider.



## UNREGULATED CONTAMINANT MONITORING RULE (UCMR)

The EPA created the Unregulated Contaminants Monitoring Rule (UCMR) to assist them in determining the occurrence of unregulated contaminants in drinking water and whether new regulations are warranted. The first Unregulated Contaminants Monitoring Rule (UCMR1) testing was completed in 2003 for a list of contaminants specified by the EPA. Unregulated contaminants are those for which the EPA has not established drinking water standards. UCMR2 testing was conducted between November 2008 and August 2009, and UCMR3 assessment monitoring was conducted between January 2013 and December 2016. The fourth list of contaminants to monitor as part of the UCMR was published by the EPA in December 2016. UCMR4 testing began in 2018 and will continue until 2020. The results from the UCMR monitoring are reported directly to the EPA. The results of this monitoring are incorporated in the data tables in this report as appropriate. For more information, contact our Customer Service Center at 1-855-722-7072.

## PFNA Monitoring

Perfluorononanoic Acid (PFNA) was a regulated compound in 2020. The NJDEP established a regulatory MCL of 13 ppt. New Jersey American Water conducted PFNA monitoring in your water system. PFNA was not detected in the treated water supply in 2020.

## PFOA/PFOS Monitoring

Perfluorooctanoic acid (PFOA) and Perfluorooctanesulfonic acid (PFOS) are fluorinated organic chemicals that are part of a larger group of chemicals referred to as per- and poly-fluoroalkyl substances (PFASs). PFOS and PFOA have been extensively produced and studied in the United States. They have been used in consumer products such as carpets, clothing, fabrics for furniture, paper packaging for food, and other materials (e.g., cookware) designed to be waterproof, stain-resistant or non-stick. In addition, they have been used in fire-retarding foam and various industrial processes.

Exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes). While people are exposed to PFOS and PFOA largely through food, food packaging, consumer products, and house dust, the exposure through drinking water has become an increasing concern due to the tendency of PFASs to accumulate in groundwater. In 2021, the NJDEP established Maximum Contaminant Levels (MCLs) at 13 ppt for PFOS and 14 ppt for PFOA in drinking water.

This is one of the most rapidly changing landscapes in drinking water contamination. We have invested time and effort on our own independent research, as well as engaging with other experts in the field to understand PFAS occurrence, fate and transport in the environment. We are also actively assessing treatment technologies that can effectively remove PFAS from drinking water, because we believe that investment in research is critical for addressing this issue.

**Lauren Weinrich**  
Principal Scientist,  
Water Research and Development



## Water Quality Results

### **WATER QUALITY STATEMENT**

We are pleased to report that during calendar year 2020, the results of testing of your drinking water complied with all state and federal drinking water requirements.

For your information, we have compiled a list in the table below showing the testing of your drinking water during 2020. The NJ Department of Environmental Protection allows us to monitor for some contaminants less than once per year because the concentration of the contaminants does not change frequently. Some of our data, though representative, are more than one year old.

The data presented in the Table of Detected Contaminants is the same data collected to comply with EPA and New Jersey state monitoring and testing requirements. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the levels set by the EPA to protect public health. To assure high quality water, individual water samples are taken each year for chemical, physical and microbiological tests. Tests are done on water taken at the source, from the distribution system after treatment and, for lead and copper monitoring, from the customer's tap. Testing can pinpoint a potential problem so that preventative action may be taken. The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals, and synthetic organic chemicals. The South Orange Village system was granted a waiver for asbestos in the 2011-2019 monitoring period and was granted a waiver for synthetic organic chemicals in the 2017-2019 monitoring period.

# Definitions of Terms Used in This Report

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

**LRAA:** Locational Running Annual Average

**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. Secondary MCLs (SMCL) are set to protect the odor, taste, and appearance of drinking water.

**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 Residual Disinfectant Level (MRDL):** The highest level of 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 contaminants.

**MFL:** Million fibers per liter.

**micromhos per centimeter ( $\mu\text{mhos/cm}$ ):** A measure of electrical conductance.

**NA:** Not applicable

**N/A:** No data available

**ND:** Not detected

**Nephelometric Turbidity Units (NTU):** Measurement of the clarity, or turbidity, of the water.

**pH:** A measurement of acidity, 7.0 being neutral.

**picocuries per liter (pCi/L):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

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

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

**parts per trillion (ppt):** One part substance per trillion parts water, or nanograms per liter.

**Primary Drinking Water Standard (PDWS):** MCLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

**RAA:** Running Annual Average

**Secondary Maximum Contaminant Level (SMCL):** Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**TON:** Threshold Odor Number

**Total Dissolved Solids (TDS):** An overall indicator of the amount of minerals in water.

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

**Variances and Exemptions:** State or EPA permission not to meet an MCL or utilize a treatment technique under certain conditions.

**%:** Percent

## MEASUREMENTS

### Parts Per Million



in a 10 gallon fish tank

### Parts Per Billion



in a 10,000 gallon swimming pool

### Parts Per Trillion



in 35 junior size Olympic pools

# Water Quality Results

South Orange Village Water Utility conducts extensive monitoring to determine if your water meets all water quality standards. The detections of our monitoring are reported in the following tables. While most monitoring was conducted in 2020, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting the tables below, see the “Definition of Terms Used in This Report” on the previous page.

## HOW TO READ THIS TABLE (FROM LEFT TO RIGHT)

- Starting with **Substance (with units)**, read across.
- **Year Sampled** is usually in 2020 but may be a prior year.
- A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements.
- **MCLG/MRDLG** is the goal level for that substance (this may be lower than what is allowed).
- **MCL/MRDL/TT/Action Level** shows the highest level of substance (contaminant) allowed.
- **Highest, Lowest or Average Compliance Result** represents the measured amount detected.
- **Range** tells the highest and lowest amounts measured.
- **Typical Source** tells where the substance usually originates.

Some unregulated substances are measured, but maximum contaminant levels have not been established by the government. These contaminants are shown for your information.

## Vulnerable Populations Statement

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 (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial pathogens are available from the Safe Drinking Water Hotline (1-800-426-4791).

## South Orange Village Water System – Table of Detected Contaminants – 2020

**NOTE:** Regulated contaminants not listed in this table were not found in the treated water supply.

### LEAD AND COPPER MONITORING PROGRAM - At least 30 tap water samples collected at customers' taps annually

Substance (units)	Year Sampled	Compliance Achieved	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2020	Yes	0	15	2	34	1	Corrosion of household plumbing systems.
Copper (ppm)	2020	Yes	1.3	1.3	0.341	34	0	Corrosion of household plumbing systems.

**TOTAL COLIFORM RULE - At least 15 samples collected each month in the distribution system**

Substance (units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Percentage	Typical Source
Total Coliform	2020	Yes	0	*MCL = Less than 5% of monthly samples	0.8%	Naturally present in the environment.

NOTE: Coliforms are bacteria that are naturally present in the environment and are used as an indicator of the general bacteriological quality of the water. We are reporting the highest percentage of positive samples / highest number of positive samples in any month.

**DISINFECTION BYPRODUCTS - Collected in the Distribution System and at the Treatment Plant**

Sample Location	Year	Compliance Achieved	MCLG	MCL	LRAA	Range Detected	Typical Source
<b>Total Trihalomethanes (TTHMs) (ppb)</b>							
DBP2-1	2020	Yes	NA	80	22	14 to 34	By-product of drinking water disinfection.
DBP2-2	2020	Yes	NA	80	38	29 to 51	By-product of drinking water disinfection.
DBP2-3	2020	Yes	NA	80	25	15 to 29	By-product of drinking water disinfection.
DBP2-4	2020	Yes	NA	80	28	22 to 35	By-product of drinking water disinfection.
<b>Haloacetic Acids (HAAs) (ppb)</b>							
DBP2-1	2020	Yes	NA	60	7	5 to 9	By-product of drinking water disinfection.
DBP2-2	2020	Yes	NA	60	9	4 to 11	By-product of drinking water disinfection.
DBP2-3	2020	Yes	NA	60	6	5 to 10	By-product of drinking water disinfection.
DBP2-4	2020	Yes	NA	60	8	3 to 8	By-product of drinking water disinfection.

NOTE: Compliance is based on the running annual average at each location. The Highest Compliance Result reflects the highest average at any location and the Range Detected reflects all samples from this year used to calculate the running annual average.

**DISINFECTANTS - Collected in the Distribution System and at the Treatment Plant**

Substance (units)	Year Sampled	Compliance Achieved	MCLG	MCL	Compliance Result	Range Detected	Typical Source
Chlorine (ppm) (Distribution System)	2020	Yes	MRDLG = 4	MRDL = 4	0.9 <sup>1</sup>	0.5 to 0.9	Water additive used to control microbes.
Chlorine (ppm) (Surface Water)	2020	Yes	MRDLG = 4	TT: Results $\geq$ 0.20	0.7 <sup>2</sup>	0.7 to 1.5	Water additive used to control microbes.

1 - Data represents the highest monthly average of chlorine residuals measured throughout our distribution system.

2 - Data represents the lowest residual entering the distribution system from our surface water treatment plant.

### TREATMENT BYPRODUCTS PRECURSOR REMOVAL - Collected at the Treatment Plant

	Year Sampled	Compliance Achieved	MCLG	MCL	Lowest Compliance Result	Percent (%) Removal	Typical Source
Total Organic Carbon	2020	Yes	NA	TT = % removal or removal ratio	NA	50% to 68% (35-45 required)	Naturally present in the environment.

### 2020 TURBIDITY - Collected at the Treatment Plant

Substance	Units	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Turbidity <sup>1</sup>	NTU	Yes	0	TT = 1 NTU	0.17	0.02 to 0.17	Soil runoff.
	%	Yes	NA	TT: At least 95% of samples <0.3 NTU	100%	NA	Soil runoff.

1 - Turbidity is a measure of the cloudiness of the water. Over 99% of the turbidity readings were below the treatment technique requirement of 0.3 ntu. We monitor it because it is a good indicator of the effectiveness of our filtration system.

### REGULATED SUBSTANCES - Collected at the Treatment Plant

Substance (units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
1,2,3-Trichloropropane (ppb)	2020	Yes	0.03	0.03	0.01	ND to 0.01	Halogenated alkane; used as an ingredient in paint, varnish remover, solvents and degreasing agents.
Nitrate (ppm)	2020	Yes	10	10	0.3	ND to 0.3	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.

### OTHER SUBSTANCES OF INTEREST - Collected at the Treatment Plant<sup>1</sup>

Substance (units)	Year Sampled	Compliance Achieved	MCLG	Secondary Limit	Highest Result	Range Detected	Comments
Aluminum (ppm)	2020	NA	NA	0.2	0.02	ND to 0.02	Erosion of natural deposits
Chloride (ppm)	2020	NA	NA	250	80	60 to 80	Erosion of natural deposits
Sodium (ppm) <sup>2</sup>	2020	NA	NA	50	43	28 to 43	Erosion from naturally occurring deposits: Used in water softener regeneration.

1 - Substances with Secondary MCLs do not have MCLGs and are primarily established to address aesthetic concerns.

2 - 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 recommended upper limit may be of concern to individuals on a sodium restricted diet.

## UNREGULATED CONTAMINANT MONITORING 2019-2020

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is necessary. Every five years, the EPA issues a new list of no more than 30 unregulated contaminants to be monitored.

ADDITIONAL WATER QUALITY PARAMETERS OF INTEREST - Water Leaving the Treatment Facility)				
Parameter	Units	Average Result	Range Detected	Typical Source
Bromochloroacetic Acid	ppb	3	1 to 5	By-product of drinking water disinfection
Bromodichloroacetic acid	ppb	3	2 to 3	By-product of drinking water disinfection
Chlorodibromoacetic acid	ppb	1	1 to 2	By-product of drinking water disinfection
Dibromoacetic Acid	ppb	1	1 to 2	By-product of drinking water disinfection
Dichloroacetic Acid	ppb	4	1 to 7	By-product of drinking water disinfection
Monobromoacetic Acid	ppb	0.2	ND to 0.4	By-product of drinking water disinfection
Total Haloacetic Acids	ppb	8	4 to 14	By-product of drinking water disinfection
Total Haloacetic Acids - 6Br	ppb	9	5 to 12	By-product of drinking water disinfection
Total Haloacetic Acids-9	ppb	15	9 to 24	By-product of drinking water disinfection
Trichloroacetic Acid	ppb	3	2 to 5	By-product of drinking water disinfection
2-Methoxyethanol	ppb	ND	ND	Used as a solvent in varnishes, dyes, resins, airplane deicing solutions. It is also used in organometallic chemistry synthesis.
Manganese*	ppb	21	2 to 47	Naturally-occurring elemental metal; largely used in aluminum alloy production. Essential dietary element.

\* Manganese has a Secondary MCL of 50 ppb.

## PER- AND POLYFLUOROALKYL SUBSTANCES

Per- or polyfluoroalkyl substances (PFASs) are man-made substances used in a variety of products, such as: stain resistant fabric, non-stick coatings, firefighting foam, paints, waxes, and cleaning products. They are also components in some industrial processes like electronics manufacturing and oil recovery. While the EPA has not developed drinking water standards for PFAS, NJ American Water recognizes the importance of testing for these contaminants. Compounds detected are tabulated below, along with typical sources.

PERFLUORINATED COMPOUNDS				
Parameter	Units	Average Result	Range Detected	Typical Source
Perfluorooctanoic Acid (PFOA)*	ppt	6	5 to 7	Used for its emulsifier and surfactant properties in or as fluoropolymers (such as Teflon), fire fighting foams, cleaners, cosmetics, lubricants, paints, polishes, adhesives and photographic films
Perfluorooctanesulfonic Acid (PFOS)*	ppt	1	ND to 2	Manmade chemical; used in products for stain, grease, heat and water resistance

\* In 2021, the NJDEP established Maximum Contaminant Levels (MCLs) of 14 ppt for PFOA and 13 ppt for PFOS in drinking water.

# How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact our Customer Call Center at 1-855-722-7072.

**South Orange Village Water Utility**

Box 371852, Pittsburgh, PA 15250-7852

<http://www.southorange.org/572/Water>



## WATER INFORMATION SOURCES

**NJ Dept of Environmental Protection Bureau of Safe Drinking Water:**  
(609) 292-5550 • [www.state.nj.us/dep](http://www.state.nj.us/dep)

**United States Environmental Protection Agency (USEPA):**  
[www.epa.gov/safewater](http://www.epa.gov/safewater)

**Safe Drinking Water Hotline:** (800) 426-4791

**Centers for Disease Control and Prevention:** [www.cdc.gov](http://www.cdc.gov)

**American Water Works Association:** [www.awwa.org](http://www.awwa.org)

**Water Quality Association:** [www.wqa.org](http://www.wqa.org)

**National Library of Medicine/National Institute of Health:**  
[www.nlm.nih.gov/medlineplus/drinkingwater.html](http://www.nlm.nih.gov/medlineplus/drinkingwater.html)

**New Jersey American Water**  
[www.amwater.com/njaw/](http://www.amwater.com/njaw/)

**This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.**

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

આ અહેવાલ માં તમારા પીવાના પાણી વિષે  
અગત્ય ની જાણકારી આપવા માં આવી છે.  
એનો અનુવાદ કરો અથવા જેને સમજવો પડતી  
ભાષા તેની સાથે વાત કરો

이 보고서에는 귀하께서 사용하고 계시는 식수에 관한 정보가 들어있습니다.  
만약에 이해를 못하시면 누군가에게 번역을 의뢰하십시오.

本报告与您的饮用水有关。  
如果您不了解其内容，应请别人为您翻译解说。

