

ESSENTIAL ACCOUNTABLE PROUD  
NEIGHBORLY INNOVATIVE  
COMMITTED RELIABLE  
CLEAN SATISFYING  
SAFE WATER



# 2021 WATER QUALITY REPORT



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# GREETINGS



Dear WSSC Water Customer,

The world has changed due to COVID-19. While it may take time to adjust to a new normal, one constant in your life did not change: our commitment to delivering safe, clean and reliable water to your home and business 24/7/365. WSSC Water employees are passionate about protecting public health, with zero drinking water quality violations in our 103-plus-year history.

We are proud to share the proof behind our passion in our 2021 Water Quality Report. In these pages, you'll learn how we ensure drinking water quality from source to tap, including performing ongoing tests at our two water filtration plants and carefully analyzing thousands of samples from our massive distribution system.

Like many of you, COVID-19 has caused us some financial strain. To offset the loss of revenue, we cut approximately \$134 million from our Fiscal Year (FY) 2023 budget, including more than \$110 million in capital projects. Despite these significant cuts, this budget remains focused on delivering safe, clean water to you.

Our FY 2023 budget also focuses on making water/sewer bills more affordable by increasing funding to help financially vulnerable customers. The budget includes \$3.5 million – a \$200,000 increase from the current budget – to enhance our financial assistance programs. We are pleased to outline these helpful programs in this report.

Your team at WSSC Water shares a vision of what a world-class water utility looks like, and we never stop pursuing it. Through hard work, experience, care and innovation, we push each other to deliver our best because we know it's what our Montgomery and Prince George's County neighbors expect and deserve.

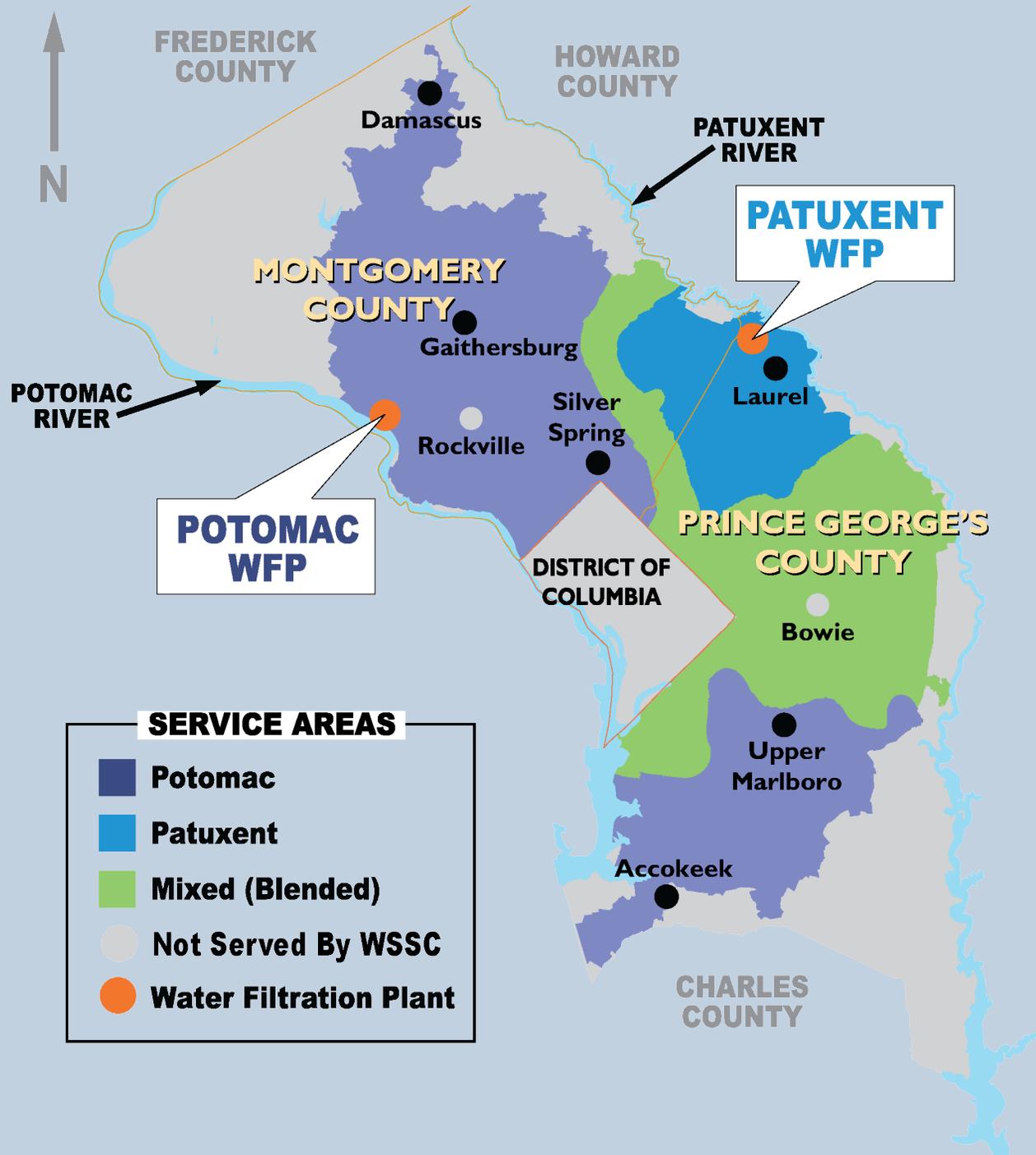
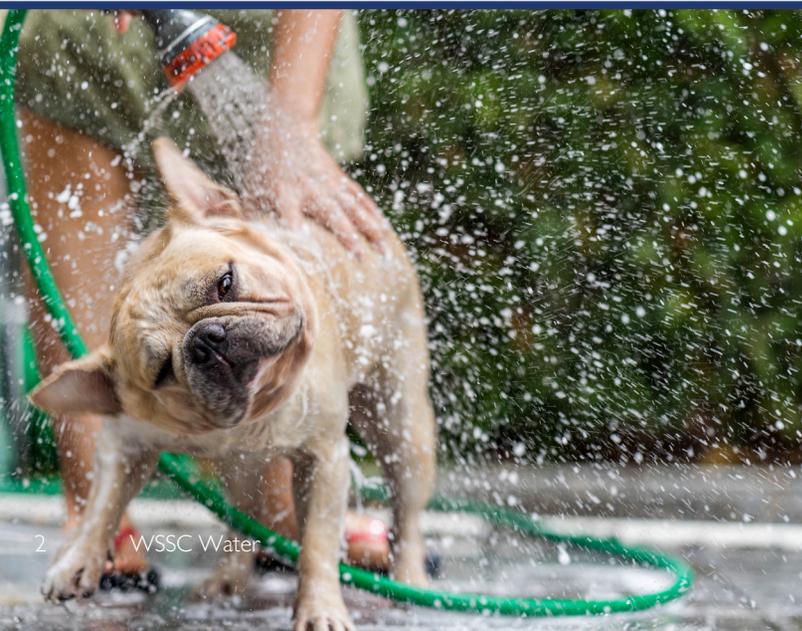
Please enjoy reading this report, and feel free to contact us if you have any questions.

Cheers!

Carla A. Reid,  
General Manager and CEO



# SERVICE AREA MAP





# WHERE YOUR WATER COMES FROM



We draw the water we treat from the Patuxent and Potomac rivers. On the Patuxent River, we operate and maintain two reservoirs - Triadelphia and T. Howard Duckett. Our Patuxent Water Filtration (WFP) draws water from the Duckett Reservoir and produces approximately 60 million gallons per day (MGD). Our Potomac WFP draws water straight from the Potomac River and produces between 100 and 120 MGD. The map (page 2) shows the approximate service areas of both plants.

## Starting at the Source

Source water from rivers and reservoirs generally picks up contaminants before it reaches water treatment plants. As water travels over the land surface or through the ground on its way to the water body, it dissolves naturally occurring minerals and vegetation/organic matter. It also can pick up pesticides, herbicides and other synthetic/volatile organic chemicals from agricultural land, golf courses, or residential and urban lands. Radioactive contaminants can be naturally occurring or the result of mining activities. Sewage treatment plants and septic systems, as well as animal waste from pets, agricultural livestock and wildlife, may be sources of microbial contaminants. The salts and byproducts from winter road treatments may also be present in source water.

In the Potomac River Watershed, potential sources of contamination include land runoff and spills from highways and petroleum pipelines. Contaminants of particular concern include natural organic matter and disinfection byproduct (DBP) precursors, pathogenic microorganisms (*Cryptosporidium*, *Giardia*, fecal coliform), odor-causing compounds, ammonia, manganese, sodium and chloride from winter salt application, sediment and algae.

Potential sources of contamination in the Patuxent Reservoirs Watershed include transportation, agriculture, onsite septic systems, developed areas and minor permitted discharges. Phosphorus runoff from urban/suburban and agricultural land uses is the primary contaminant of concern for this watershed. Sediment, DBP precursors, iron, manganese, sodium and chloride from winter salt application, and pathogenic microorganisms are also concerns.

WSSC Water works with local agencies to protect the Potomac and Patuxent drinking water supplies. We have key roles in the Potomac River Basin Drinking Water Source Protection Partnership and the Patuxent Reservoirs Watershed Protection Group. This allows us to participate in discussions related to land use policy, promote source water protection and raise awareness about water quality and safety.

We also set aside \$1 million per year for purchasing watershed property to increase the protective buffer around our two reservoirs. This helps to reduce the amount of pollution from new development, fertilizers and pesticides, manure from farms and other sources. We work closely with stakeholders to improve the health of this watershed by planting trees, which help with erosion. The 6,000 acres of watershed recreation area is closed during the wetter winter months because there is less foliage and ground cover to reduce erosion and runoff. We also regularly review management of the watershed recreation areas to understand how our actions impact the forested buffer and water quality.

## WHAT YOU CAN DO TO HELP PROTECT SOURCE WATER

As customers, there are simple steps you can take to help protect the watershed and sources of your drinking water. In fact, partnering with you is crucial to our efforts. On this page are just a few of the many ways you can help.

### Be Salt Wise

Over the last 30 years, we've seen a tremendous increase in salt levels in the water we pull from the Patuxent and Potomac rivers. Once salt enters these drinking water sources, we cannot remove it during the filtration process.

Our drinking water is safe, but salt is corrosive and will slowly wear away our water mains leading to water main breaks and discolored water issues. By limiting your use of salt during the winter, you can decrease the amount of salt that enters our waterways. Get details at [wsscwater.com/saltwise](http://wsscwater.com/saltwise).

## It's Easy as 1-2-3!

**What's the problem?** Using salt to melt ice on driveways and walkways can corrode concrete and masonry, harm pets, damage surrounding plants and lawns, and contaminate our water supply. Salt levels have been steadily increasing in our streams, posing a major risk to sensitive wildlife and stream health. *In many cases, salt simply isn't needed. Once it gets into our waterways, salt doesn't go away!*

### 1 Shovel Right Away

Clear pavement and driveways before snow turns to ice. ❄️



### 2 Use Less Salt

If you must use salt, a 12-oz mug holds enough salt to treat a 20-foot driveway or 10 sidewalk squares.



### 3 Sweep & Reuse

Keep unneeded salt out of our waterways by sweeping and collecting for reuse.



Learn more at [MontgomeryCountyMD.gov/salt](http://MontgomeryCountyMD.gov/salt)

### Keep the Wipes out of the Pipes

Don't use your toilet as a trash can. Only flush the three Ps: pee, poop and [toilet] paper! Non-flushable items can get stuck in your pipes or our pipes. If that happens, sewage will back up in your basement or overflow from one of our manholes, impacting the environment.

Since the onset of the pandemic, we've seen a major increase in wipes in our sewer system. Unfortunately, many wipes labeled "flushable" don't break apart in the system. Tons of wipes, still intact, clog pumps at wastewater pumping stations across the nation. WSSC Water has spent \$2 million to install grinders at several of our wastewater pumping stations to deal with this growing problem. Learn more at [wsscwater.com/wipes](http://wsscwater.com/wipes).



## Help Keep the Watershed Clean

You can play a role in protecting source water just by picking up trash in your community. But if you'd like to be part of a more formalized program, join our crew of Patuxent Watershed Protectors to help keep the land around our two drinking water reservoirs on the Patuxent River trash free.

These reservoirs serve as the drinking water sources for one-third of our customers but are also popular outdoor recreation areas. The program is ideal for community organizations, youth and scout groups or any family looking to get outside and take action to protect the Patuxent River reservoirs and the Chesapeake Bay watershed. Get all the details at [wsscwater.com/protectors](https://wsscwater.com/protectors).



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# HOW AND WHY WE TEST YOUR WATER

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Testing is a vital part of our overall water treatment process. Beyond meeting U.S. Environmental Protection Agency (EPA) standards, our testing is just one more step in ensuring our water is always safe, clean and satisfying.

Water quality is our top priority. That's why we test water quality at the reservoir, in the rivers near the point where water enters our filtration system, and from 88 locations throughout our service area.

And at our Consolidated Laboratory, we have chemists, lab analysts and microbiologists who conduct 500,000 laboratory tests on our water every year. Our rigorous testing protocols work. Once again, we are proud to report that we have never had a drinking water quality violation in our history.



**103+**  
years without a  
drinking water  
quality violation.





# WHAT'S NOT IN YOUR WATER



## **PFAS**

WSSC Water tests your water for the presence of 18 different Per- and Polyfluoroalkyl Substances (PFAS) at our water filtration plants. This proactive measure goes above and beyond federal and state requirements.

Using an analytical method developed and approved by the EPA, we can confirm that your drinking water is safe from PFAS. And there are no known PFAS-contaminated sites upstream of our drinking water sources. Learn more about PFAS at [wsscwater.com/pfas](https://wsscwater.com/pfas).

Beginning in 2023, the EPA may regulate two PFAS compounds, Perfluorooctanoic acid and Perfluorooctane sulfonic acid, which we already test for. The safety of our drinking water and adhering to the strictest guidelines and regulations is just how we do business.

## ***Cryptosporidium***

Found in surface water throughout the U.S., *Cryptosporidium* is a microbial pathogen that must be ingested to cause disease. It may spread through means other than drinking water.

WSSC Water monitored *Cryptosporidium* for two years (March 2015 through February 2017) and the results show our source water is not affected. As an extra precaution, we have installed ultraviolet (UV) disinfection at both our water filtration plants to provide another barrier of protection.

## **Contaminants and Health Risks**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, who have undergone organ transplants, with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek drinking water advice from their healthcare providers.

To ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protections 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 EPA's Safe Drinking Water Hotline (800-426-4791).

## An Informational Statement From EPA on Lead

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. WSSC Water is responsible for providing high-quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home.

You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water.

If you are concerned about lead in your water and wish to have your water tested, contact WSSC Water at 301-206-4002. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at [epa.gov/safewater/lead](https://www.epa.gov/safewater/lead).

## Does WSSC Water Have any Lead in its Pipes?

No. WSSC Water completed its latest triennial Lead and Copper Rule (LCR) tap sampling in 2020. Ninety percent of the homes we tested had lead levels less than the analytical reporting limit of 1.0 parts per billion (ppb) and well below the EPA's Action Level of 15 ppb. Information about WSSC Water lead prevention methods can be found at [wsscwater.com/lead](https://www.wsscwater.com/lead).

In 2005, WSSC Water conducted an aggressive search to find and replace any lead pipes in its distribution system. These pipes are on public property, owned and maintained by WSSC Water.

The EPA's new LCR was formally made effective in December 2021. Originally published in 1991 to regulate the amount of lead and copper in drinking water, there have been small updates in the past. This is the first major revision since it was originally published. Per this revision, the initial requirements call for several steps to be completed by October 2024. For more information visit <https://www.epa.gov/ground-water-and-drinking-water/review-national-primary-drinking-water-regulation-lead-and-copper>.

## Notice of Availability of Unregulated Contaminant Monitoring Data

Part of our testing includes looking at contaminants not currently listed under those required for federal and state review. As part of the fourth Unregulated Contaminant Monitoring Rule (UCMR4) program, we collected quarterly samples from our source and finished water from our water filtration plants. Certain contaminants were also monitored at 16 sites representing the WSSC Water distribution system.

Per the requirements of Public Utilities Article 28-301(b)(2), WSSC Water will continue to monitor unregulated contaminants under UCMR4 at the same frequency until the next cycle of federal UCMR monitoring begins. The detected contaminants of the UCMR4 sampling are listed in this report (page 11).

The EPA has not established maximum contaminant levels (MCL) for these unregulated contaminants, and the human health effects of these contaminants at the levels they were found is unclear. If you are interested in learning more about the results, contact us at 301-206-4002 or visit [wsscwater.com/ucmr4](https://www.wsscwater.com/ucmr4).

More information on UCMR4 is also available at the EPA's website: [epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule](https://www.epa.gov/dwucmr/fourth-unregulated-contaminant-monitoring-rule).

## Harmful Algal Blooms

July through October, we monitor our drinking water reservoirs for microscopic organisms known as Cyanobacteria (blue-green algae). They usually multiply and bloom when the water is warm, stagnant and rich in phosphorous and nitrogen from things like fertilizer runoff.

These blooms can sometimes create toxin levels that are dangerous to people, pets, aquatic life and the environment. WSSC Water's drinking water is not affected and continues to meet all Safe Drinking Water Act standards. As a precaution, we closely monitor water quality conditions at our Patuxent Water Filtration Plant and post warning signs along the watershed when concentrations of the algae are high. Learn more at [wsscwater.com/hab](https://www.wsscwater.com/hab).

If you are concerned and want to have your water tested, call our Emergency Call Center at 301-206-4002.

# 2021 WATER QUALITY RESULTS

## How to Read the Water Quality Data Tables on the Next Two Pages:

The EPA establishes the safe drinking water regulations that limit the amount of contaminants allowed in drinking water. The tables show the concentrations of detected substances compared to regulatory limits. The results in the tables were collected during 2021. Typical sources are shown for each contaminant.

## Terms Defined

**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 and are non-enforceable public health goals.

**MCL - Maximum Contaminant Level.** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

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

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

**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 contamination.

**Turbidity** - A measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our treatment process.

**NTU - Nephelometric Turbidity Unit.** The level of sediments suspended in the water.

**n/d** - not detected

**n/a** - not applicable

**=** equals

**<** less than detected limits

**\*** Based on yearly average except as noted

**mg/L** - milligrams per liter, equal to parts per million (ppm).

The equivalent of one minute in 2 years or one penny in \$10,000.

**µg/L** - micrograms per liter, equal to parts per billion (ppb).

The equivalent of one minute in 2,000 years or one penny in \$10 million.

**ng/L** - nanograms per liter, equal to parts per trillion (ppt).

The equivalent of one minute in 2 million years or one penny in \$10 billion.

**pCi/L** - picocuries per liter (a measure of radiation).

## Definitions

<sup>1</sup> - Filtered water, maximum of measurements taken every 15 minutes.

<sup>2</sup> - EPA considers 50 pCi/L to be the level of concern for beta particles.

<sup>3</sup> - Most recent required sampling, between June and September 2020.

<sup>4</sup> - If more than 10% of sites exceed action level, system is required to take additional steps to control corrosiveness of their water.

<sup>5</sup> - Highest running annual average (RAA).

<sup>6</sup> - All samples deemed to have detectable disinfectant residual.

<sup>7</sup> - Maximum residual disinfectant level (MRDL), the highest level of a disinfectant allowed in drinking water; based on a running annual average (RAA).

<sup>8</sup> - Highest locational running annual average (LRAA).

<sup>9</sup> - Maximum contaminant level based on LRAA.

<sup>10</sup> - Unregulated contaminants were monitored in accordance to State of Maryland legislation requiring WSSC Water to continue the latest cycle of UCMR. Federally required UCMR4 monitoring ended in 2018. For full results please visit: <https://www.wsscwater.com/ucmr4>

<sup>11</sup> - Routine and repeat samples are total coliform-positive and either *E. coli* positive or system fails to take repeat samples following *E. coli* positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

## 2021 WATER QUALITY RESULTS

### DETECTED REGULATED CONTAMINANTS

SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL (or TT)	MCLG	VIOLATION	MAJOR SOURCE IN DRINKING WATER
		LEVELS FOUND*	RANGE	LEVELS FOUND*	RANGE				
<b>METALS</b>									
Barium	mg/L	0.03	0.02-0.03	0.04	0.03-0.04	2	2	No	Discharge of drilling wastes & metal refineries; erosion of natural deposits
<b>INORGANIC CONTAMINANTS</b>									
Fluoride	mg/L	0.7	0.5-0.7	0.9	0.6-0.9	4	4	No	Water additive that promotes strong teeth; erosion of natural deposits
Nitrate	mg/L	1.6	0.5-1.6	2.1	0.5-2.1	10	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>MICROBIAL CONTAMINANTS</b>									
	NTU	0.05	0.05-0.16 <sup>1</sup>	0.05	0.02-0.16 <sup>1</sup>	TT=1 NTU	n/a	No	
Turbidity	% <0.3 NTU	100%	n/a	100%	n/a	TT=95% min	n/a	No	Soil runoff
Residual Chlorine	mg/L	met TT requirements		met TT requirements		TT>=0.2	n/a	No	Water additive used to control microbes
Viruses	n/a	met TT requirements		met TT requirements		TT=99.99% removal	0	No	Human and animal fecal waste
<i>Giardia Lamblia</i>	n/a	met TT requirements		met TT requirements		TT=99.9% removal	0	No	Human and animal fecal waste
<i>Cryptosporidium</i>	n/a	met TT requirements		met TT requirements		TT=99% removal	0	No	Human and animal fecal waste
<b>DISINFECTION BYPRODUCT (DBP) PRECURSOR</b>									
Total Organic Carbon	n/a	met TT requirements		met TT requirements		TT	n/a	No	Naturally present in the environment
<b>RADIOACTIVE CONTAMINANTS</b>									
Gross Alpha	pCi/L	2	n/d -2	3.4	n/d - 3.4	15	0	No	Erosion of natural deposits
Gross Beta	pCi/L	7.8	n/d -7.8	7.3	n/d - 7.3	50 <sup>2</sup>	0	No	Decay of natural and man-made deposits
Radium 228	pCi/L	0.2	n/d -0.2	0.5	n/d - 0.5	5 <sup>3</sup>	0	No	Erosion of natural deposits

## 2021 WATER QUALITY RESULTS

SUBSTANCE	UNITS	CUSTOMER TAP <sup>3</sup>		AL	MCLG	VIOLATION	MAJOR SOURCE IN DRINKING WATER
		90 <sup>TH</sup> PERCENTILE <sup>4</sup>	#OF SITES ABOVE AL				
<b>METALS</b>							
Copper	mg/L	0.12	0 of 55 sites	1.3	1.3	No	Corrosion of household plumbing systems
Lead	µg/L	<1.0	0 of 55 sites	15	0	No	Corrosion of household plumbing systems

SUBSTANCE	UNITS	DISTRIBUTION SYSTEM		MCL	MCLG	VIOLATION	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND*	RANGE				
<b>BACTERIOLOGICAL CONTAMINANTS</b>							
Total Coliform	%Positive per month	0.02	0-0.27	TT	0	No	Naturally present in the environment
# of <i>E. Coli</i> Positive Samples	Count	0	0-0	0 <sup>11</sup>	0	No	Human and animal fecal waste
<b>DISINFECTANT &amp; DBPs</b>							
Residual Chlorine	mg/L	1.2 <sup>5</sup>	0.09-3.4 <sup>6</sup>	4.0 <sup>7</sup>	4.0 <sup>7</sup>	No	Water additive used to control microbes
Haloacetic Acids (HAA5)	µg/L	45 <sup>8</sup>	14-75	60 <sup>9</sup>	n/a	No	Byproduct of drinking water chlorination
Total Trihalomethanes (TTHMs)	µg/L	66 <sup>8</sup>	15-113	80 <sup>9</sup>	n/a	No	Byproduct of drinking water chlorination

### DETECTED UNREGULATED CONTAMINANTS

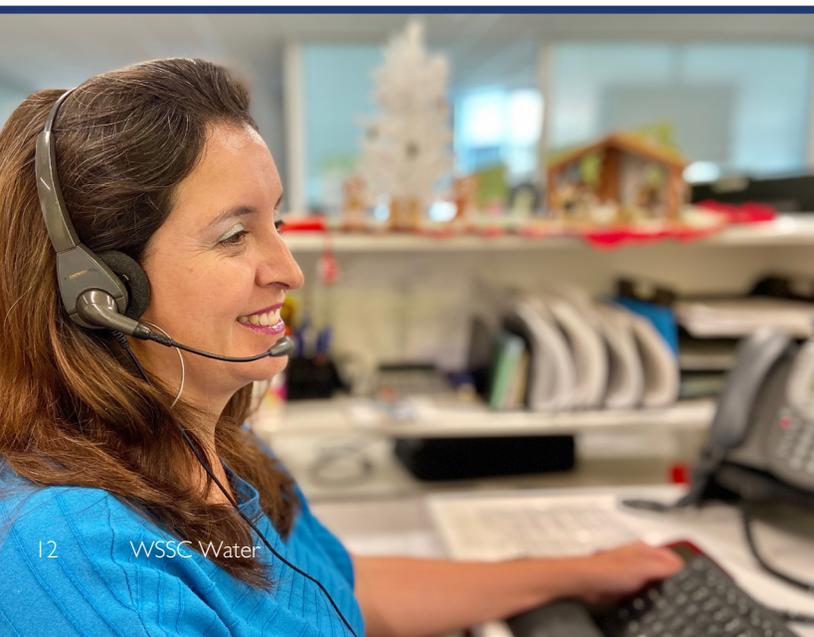
SUBSTANCE	UNITS	PATUXENT TAP		POTOMAC TAP		MCL (or TT)	MCLG	VIOLATION	MAJOR SOURCE IN DRINKING WATER
		LEVELS FOUND*	RANGE	LEVELS FOUND*	RANGE				
<b>METALS</b>									
Manganese <sup>10</sup>	µg/L	0.6	n/d-1.2	8	2.1-33	n/a	n/a	n/a	Erosion of natural deposits
Sodium	mg/L	18	14-30	22	27-64	n/a	n/a	n/a	

SUBSTANCE	UNITS	DISTRIBUTION SYSTEM		MCL	MCLG	VIOLATION	MAJOR SOURCE IN DRINKING WATER
		LEVEL FOUND*	RANGE				
<b>DBPS</b>							
HAA5 <sup>10</sup>	µg/L	38	15-88	n/a	n/a	n/a	Byproduct of drinking water chlorination
HAA6Br <sup>10</sup>	µg/L	12	4-16	n/a	n/a	n/a	Byproduct of drinking water chlorination
HAA9 <sup>10</sup>	µg/L	49	23-98	n/a	n/a	n/a	Byproduct of drinking water chlorination

## HERE TO HELP

We included \$3.5 million in our FY 2023 budget - a \$200,000 increase from our current budget - to help financially vulnerable customers.

# FINANCIAL ASSISTANCE



Serving 1.9 million customers in Montgomery and Prince George's counties, we are one of the largest water and wastewater utilities in the nation. Many times, we have customers who need help paying their water and sewer bills, a need that became even greater during the COVID-19 pandemic.

During the height of the pandemic, one in five WSSC Water customers were behind on their bills. That equates to more than 90,000 past due accounts totaling nearly \$70 million in potential revenue.

Like so many of our customers, WSSC Water also took a financial hit. To offset revenue shortfall, we cut approximately \$134 million from our budget, including more than \$110 million in capital projects.

But throughout all of this, we remained focused on enhancing our financial assistance programs to help even more customers. We included \$3.5 million in our FY 2023 budget - a \$200,000 increase from our current budget - to help financially vulnerable customers. We also expanded payment plans and permanently waived late fees for Customer Assistance Program customers.

Among our financial assistance programs are:

**The Water Fund:** Administered by The Salvation Army, customers can make multiple requests for assistance with water/sewer bills, up to \$500 per year.

**Customer Assistance Program (CAP):** Provides a credit for WSSC Water's fixed fees on water and sewer bills of up to \$122 annually. Customers who are enrolled in Maryland's Office of Home Energy Programs qualify for this program.

**Bay Restoration Fund Exemption:** Waives the state-mandated Bay Restoration Fund fee of up to \$60 annually. CAP customers are automatically enrolled.

**Flexible Payment Options:** Extended due dates and payment plans to help when customers need financial assistance.

**Bill Adjustments:** Available to residential customers once every three years under certain circumstances.

**PipeER:** The water service line emergency replacement loan program provides loans to finance the replacement of a water service line located on residential property.

Visit [wsscwater.com/assistance](https://wsscwater.com/assistance) for more information on these programs.



## In our Community

Keeping our customers informed is a priority.

Thanks to our outstanding Customer Engagement and Advocacy team, we're regularly reaching out to communities with information about our financial assistance programs as well as answering and resolving complex issues.

Through teamwork and collaboration, we continue to find new and different ways to share information for those in need. That includes attending numerous community events, answering billing questions and distributing our bilingual financial assistance flyer through our community partners.

Another way we deliver exceptional customer service is through our three customer advocates. Strategically situated to serve residents in both counties, this terrific trio serves as liaisons between you and WSSC Water, ensuring we provide the service you expect and deserve.

Their wide-ranging roles include coordinating on-the-scene customer support during emergency and planned work, preparing customers for water outages and other emergency work that will impact their water and sewer service. They also help you deal with any WSSC Water-related issues in your community.

Find your customer advocate by visiting [wsscwater.com/advocates](https://wsscwater.com/advocates).





# INNOVATION HIGHLIGHTS



We proudly deliver the essential to you, our neighbors, 24/7/365 because it's what you expect and deserve. And we never forget our obligation to be fiscally minded in fulfilling that mission.

The financial strain caused by COVID-19 has made us even more focused on doing things efficiently and economically. Thanks to our Strategy and Innovation Office, we're using new ways to deliver safe, clean, reliable water, while saving money and looking for opportunities to generate revenue.

The Strategy and Innovation Office is aimed at sparking creativity throughout our organization. With a special emphasis on supporting pipeline networks and treatment plants, the office promotes research and developing innovative ideas. Many of our employees' bright ideas are now moving into the pilot and implementation stages.

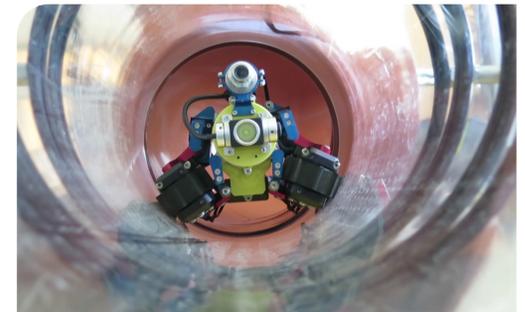
## Smart Ball

The Pure Smart Ball is an acoustic inspection tool, which can be inserted into large water mains to locate and repair leaks before they surface. The tool uses the flow of the water to move through the pipeline. This innovative technology is particularly useful in detecting and stopping leaks in our aging pipes, many of which are more than 50 years old.



## Robot

We're currently designing a robot to deploy in our large mains to perform tasks currently done by employees. Working in mains and confined spaces is dangerous. This robot will enhance safety and efficiency by more easily maneuvering in cramped and difficult-to-reach spaces to perform tasks such as positioning pumps and placing bypass pipes. We will field test the robot in Fall 2022.



## Flexible Pipe Replacement

We're using a flexible water liner for rehabilitating water mains suspended from bridges. The new method reduces replacement costs, construction time and permitting hurdles while extending the life of the pipe. When deployed at the Decatur Street Bridge (Prince George's County), the liner reduced costs by 30 percent, saving WSSC Water \$70,000.

## Fire Hydrant Tool

With more than 43,000 fire hydrants in our service area, there are six different types, each requiring different tools for opening the main valve and repairing them. Our Principal Product Engineer, James Haldeman, designed a universal tool with an interchangeable socket that works on every fire hydrant, reducing the number of tools needed from five to one. And because the tool removes broken main valves, it saves significant money and time. Instead of digging up and replacing a fire hydrant, an \$8,000 effort, the tool enables us to repair the hydrant for only \$800.



## Satellite Leak Detection

Early leak detection is critical to preventing water loss and costly breaks, which can sometimes leave customers without water service while crews make repairs. Through a partnership with Utilis, we now use satellite imagery to look for leaks below ground and identify areas to investigate. Leak detection crews target their survey efforts to specific areas instead of surveying the entire system.



Not only does this technology save time, but also it cuts the cost of finding each leak by nearly half. We reduce water loss and breaks, and minimize customer impact.

## Acoustic Fiber Optic (AFO) Cable

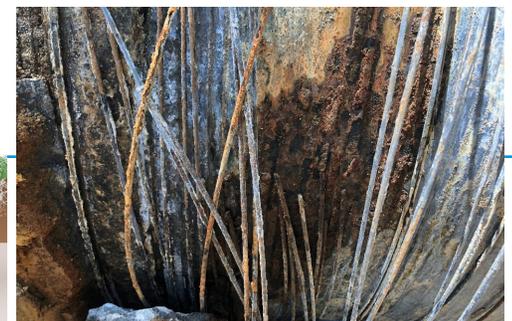
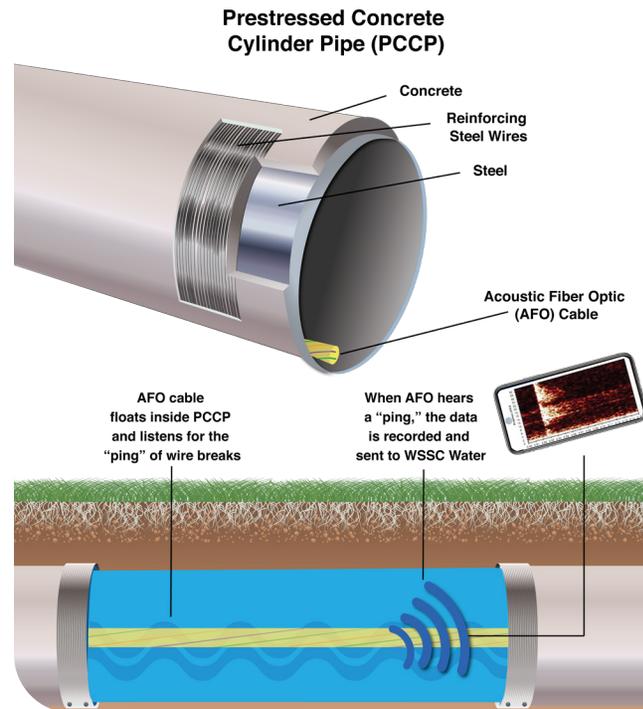
In 2007, WSSC Water began installing Acoustic Fiber Optic (AFO) cable to detect the sounds associated with pre-stressed wire breaks on PCCP sections while the pipelines are in service.

Once installed, the AFO system continuously monitors the integrity of all the pipes and provides notification to trained personnel if a potential problem is detected in any pipe section.

The initial \$21 million investment in this innovative technology has alerted us more than 20 times to major impending breaks and saved customers more than \$42 million by avoiding costly emergency repairs.

WSSC Water has a total 145 miles of PCCP ranging from 36 inches – 96 inches. As of 2022, 110 miles of WSSC Water's PCCP is monitored with AFO, making it the longest, active monitoring system in the United States.

## How AFO Works



# THE PEOPLE BEHIND THE PASSION

The real secret to our success is our employees, H<sub>2</sub>O People, as we like to call them. They come to work each day knowing that what they do matters, and they're proud to serve you.

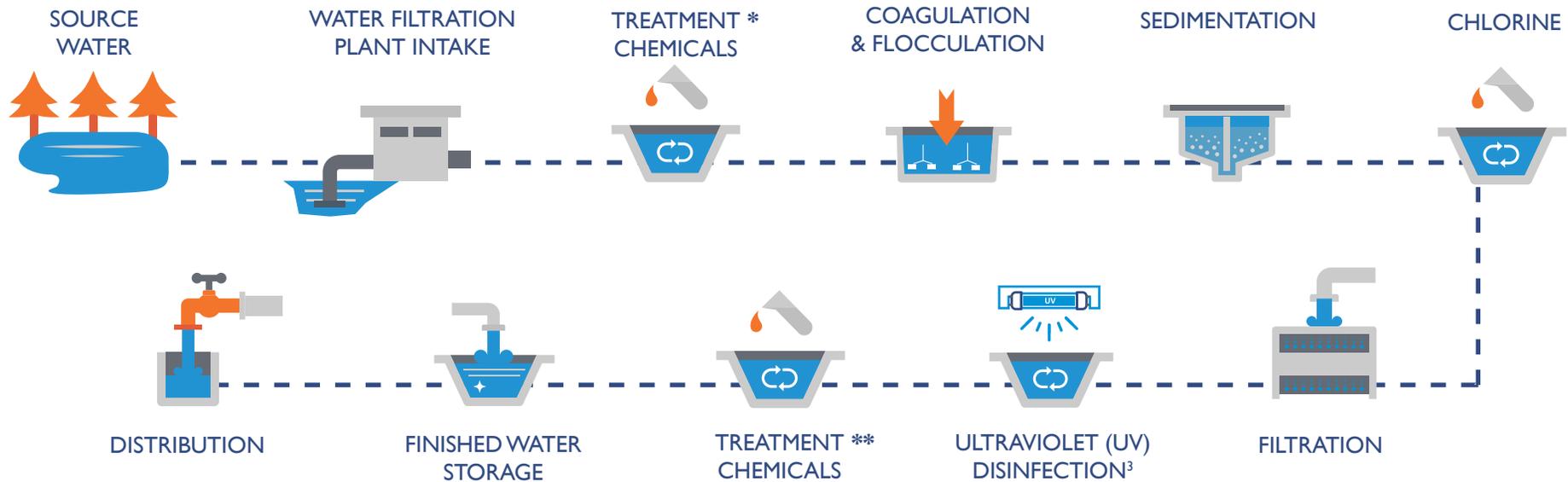
At WSSC Water, you're our neighbors; with 44 percent of our H<sub>2</sub>O People living in our service district, nearly half of us are customers, too. Whether we live in Montgomery or Prince George's County or make our way into the plants, depots, lab or headquarters building from a nearby county, we know how important it is to ensure we deliver the essential to you every day.

Thank you for being our customers and entrusting your safe, clean water to us.



- |                             |                   |
|-----------------------------|-------------------|
| * Permanganate              | ** Fluoride       |
| * Powdered Activated Carbon | ** Lime           |
| * Acid                      | ** Chlorine       |
| * Coagulant                 | ** Orthophosphate |

## Drinking Water Filtration Process





## Stay Informed

WSSC Water Commissioners hold monthly meetings, which are open to the public and typically take place the third Wednesday of each month, beginning at 10 a.m. Meetings are held virtually or at the WSSC Water headquarters building, 14501 Sweitzer Lane, Laurel, MD 20707.

Visit [wsscwater.com](http://wsscwater.com) or contact the Corporate Secretary's Office at 301-206-8200 to confirm meeting times and locations.

## Contact Information

**Customer Service** 301-206-4001  
weekdays, 7:30 a.m. to 7 p.m.  
[customerservice@wsscwater.com](mailto:customerservice@wsscwater.com)

**Water/Sewer Emergencies/Water Testing**  
301-206-4002  
24/7/365  
[emergencycenter@wsscwater.com](mailto:emergencycenter@wsscwater.com)



The 2021 Water Quality Report is available for download at [wsscwater.com/wqr](http://wsscwater.com/wqr).  
Please call 301-206-8100 or send an email to [communications@wsscwater.com](mailto:communications@wsscwater.com) to request a printed copy.

This report contains very important information about your drinking water. Please find someone to translate it for you, or speak to someone who understands.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

此报告包含有关您的饮用水的重要信息。请人帮您翻译出来，或请看懂此报告的人将内容说给您听。

Tài liệu này có tin tức quan trọng về nước uống của quý vị. Hãy nhờ người dịch cho quý vị, hoặc hỏi người nào hiểu tài liệu này.

COLLABORATION PEOPLE WATER  
COMMUNICATE ESSENTIAL  
COMMUNITY RESOURCES PROUD  
IDEAS SEAMLESS EDUCATION  
ENVIRONMENTAL STEWARDSHIP  
CREATIVE SUSTAINABLE PARTNER  
FINANCIALLY RESPONSIBLE  
ACCOUNTABLE COMMITTED



# 2021 WATER QUALITY REPORT