DEPARTMENT OF THE NAVY
NAVAL SUPPORT ACTIVITY WASHINGTON
1411 PARSONS AVENUE ST STE. 303
WASHINGTON NAVY YARD DC 20374-5003

5090
Ser N4/ 392
12 August, 2016

MEMORANDUM

From: Commanding Officer, Naval Support Activity Washington
To: Washington Navy Yard Tenant Commands and Residents

Subj: REISSUANCE OF 2015 ANNUAL DRINKING WATER QUALITY REPORT, WASHINGTON NAVY YARD, PUBLIC WATER SYSTEM #DC0000003

Encl: (1) 2015 Annual Drinking Water Quality Report for the Washington Navy Yard
(2) 2015 Consumer Confidence Report from the District of Columbia Water and and Sewer Authority

1. In accordance with federal drinking water regulations, Naval Support Activity (NSA) Washington is providing Washington Navy Yard (WNY) Tenant Commands and Residents with the 2015 Annual Drinking Water Quality Report for the Washington Navy Yard and the 2015 Drinking Water Quality Report from the District of Columbia Water and Sewer Authority (DC Water).

2. This routine report is required by law, and is being reissued because the previous version was found to contain some data errors. Therefore this version is to ensure that you have accurate information regarding the quality of WNY drinking water. Please note that this is not being sent in response to a health threat, but a requirement of the law.

3. Washington Navy Yard's drinking water originates from the Potomac River and is treated by the U.S. Army Corps of Engineers, Washington Aqueduct (WA). The WA uses chloramines as a disinfectant. DC Water purchases drinking water from the WA and distributes it to residences and businesses in the District, to include the Washington Navy Yard.

4. NAVFAC Washington is required to monitor the drinking water distribution system for specific contaminants at the Washington Navy Yard. The results of routine monitoring are an indicator of whether or not Washington Navy Yard's drinking water met Safe Drinking Water Act standards.

5. As required, enclosure (1) contains drinking water monitoring results conducted at the Washington Navy Yard in Calendar Year (CY) 2015 and enclosure (2) provides DC Water's 2015 Drinking Water Quality Report. These enclosures also provide important information about the following topics:

a. Drinking Water Quality Monitoring Results for the Washington Navy Yard conducted in CY 2015;

b. Important health effects information;

c. Definitions of key terms, such as maximum contaminant level;

d. Contaminants reasonably expected to be found in drinking water;

e. Sources of drinking water and contaminants that may be present in source waters;

f. Environmental Protection Agency (EPA) and Food and Drug Administration regulations;

g. Non-English speaking population information; and

h. EPA Safe Drinking Water Hotline telephone number.

7. If you have any questions with regard to the quality of the Washington Navy Yard's drinking water, contact PWD Washington's Drinking Water Program Manager, Dane Bowker at (202) 433-4191.

J. J. DRAEGER

2015 ANNUAL DRINKING WATER QUALITY REPORT FOR THE WASHINGTON NAVY YARD

NAVFAC Washington distributes drinking water to residential and non-residential buildings on the Washington Navy Yard. This water is supplied to NAVFAC Washington by the District of Columbia Water (DC Water). The DC Water purchases the water from the U.S. Army Corps of Engineers, Washington Aqueduct who treats Potomac River water by removing impurities and adding a disinfectant to control microorganism levels. DC Water conducts water quality monitoring throughout the city to ensure that the water delivered throughout the District meets Federal drinking water quality standards. NAVFAC Washington conducts routine sampling and monitoring activities at the Washington Navy Yard (WNY). A summary of these monitoring results are contained in Table 1 of this report.

Important 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. The Environmental Protection Agency (EPA) and 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.

Cryptosporidium - The Washington Aqueduct monitors for *Cryptosporidium* in the Potomac River monthly. *Cryptosporidium* is a microbial pathogen found in most surface water in the U.S. In October 2005, the Washington Aqueduct detected *Cryptosporidium* at 1.5 oocysts per 100 liters in one sample. *Cryptosporidium* has not been detected in a single sample since that time.

Ingesting *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing a life-threatening illness. NAVFAC Washington encourages immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.

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 water service lines and home plumbing. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 2 minutes before using water for drinking or cooking. WNY has met EPA standards for lead in 2013 (see Table 1), the most recent round of monitoring. If you are concerned about lead in WNY water, please contact Public Works Department (PWD) Washington Drinking Water Program Manager Dane Bowker, at 202-433-4191.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 1-800-426-4791 or at http://water.epa.gov/drink/info/lead/index.cfm.

Maintaining High Water Quality in residential and non-residential buildings

What is the difference between building pipes and distribution mains?

Building pipes and distribution mains both move water. The difference is how fast the water is moving. Distribution mains typically have high water velocities that keep water fresh because of the continuous demand on the system. However, once the water leaves the main and enters a customer's service line, the water only turns over as fast as consumers use it. Water in buildings has the tendency to stagnate during off-work hours or vacation times.

Buildings also tend to keep water warmer, which can deteriorate water quality and at times create taste and odor issues.

What can I do as a building manager to improve water quality?

As a building manager, you play a larger role in enhancing the water quality within the building. Here are a few actions managers can take to prevent water quality degradation and even contamination.

- **Flush Lines After Extended Periods of Stagnation** - Often buildings will shut down over weekends and holidays. Following extended days of water stagnation, flush a tap at the farthest end of the building from where the water originates on each floor for 15 minutes. In addition, flush each frequently used fountain/tap for 2 minutes before use.

- **Maintain Water Fountains** - Many fountains have filters that remove chlorine taste, reduce byproducts of chlorine, and reduce sediments and particulate metals such as lead, copper, and iron which can leach from in-house plumbing. However, without routine maintenance and changing of these filters as recommended by the manufacturer, water quality will diminish considerably. Carbon filters that are not changed will eventually accumulate enough nutrients for bacteria to grow. As bacteria activity increases, their byproducts can reduce water quality. Another common water filter is a sediment filter. If these filters are not routinely changed in accordance with the manufacturer's recommendation, they may introduce contaminants into the water.

- **Clean Strainers/ Aerators** - Periodically remove and clean the strainer/ aerator device on faucets in the building to remove debris.

- **Backflow Devices must be Tested** - Many commercial buildings have heating and cooling recirculation systems and other industrial equipment that utilize public water as the main component. The water is sometimes heated during the circulation process, which can cause an increase in bacterial levels within the loop. In addition, some of these systems inject chemicals in water used by the equipment. Backflow prevention devices

are placed on the inlet of the industrial equipment to prevent industrial water from getting back into the cold, public drinking water lines. At times, these devices can become clogged with debris, or their parts can wear over time and create the potential for recirculated water to backflow into the potable water. These devices should be tested at least annually by a certified backflow tester to ensure they are working properly. Some devices require testing every six months.

- **Keep Water Coolers Clean** - Many buildings purchase bottled water coolers for drinking water purposes. Unlike tap water, the water provided in these coolers contains no disinfectant and therefore provides the potential for bacterial growth in the cooler dispenser. Coolers must be routinely cleaned as prescribed by the manufacturer.

Water Conservation. For information on what you can do to conserve water, please visit www.epa.gov/watersense.

Notices of Violation During 2015

Public Works Department Washington (PWD) received three Notices of Violation in 2015 from the Environmental Protection Agency (EPA), two at Washington Navy Yard (WNY) and one at the US Naval Observatory (NOBSY). All three violations were regarding sampling protocols, the deficiencies have been corrected and no adverse impact on health was experienced. Public Notifications were issued by PWD Washington with regards to the violations described below.

PWD monitors the WNY and NOBSY water systems for the presence of drinking water contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. Samples were collected at WNY and NOBSY on April 1, 2015. The samples returned chlorine levels in excess of 4.0 parts per million (ppm). It was determined that the high chlorine levels were due to operator error with regards to the sampling equipment. The Safe Drinking Water Act standard states chlorine must be below 4.0 ppm. PWD notified EPA on April 2, 2015 of the high chlorine results and their likely cause. PWD retested on April 3, 2015 and all samples returned normal and safe levels of chlorine. The results of the April 3 test were reported to the EPA however, PWD failed to submit the faulty April 1 results resulting in EPA issuing two Notices of Violation, one for each installation. In the future, PWD shall seek clarification from EPA of reporting requirements if future instructions are unclear.

This is not a widespread issue. Sampling protocols have been reviewed and reinforced. Since April 3, 2015, chlorine measurements have been within expected limits.

The third Notice of Violation was in response to samples taken on May 8, 2015. Seven samples were collected at WNY on May 8, 2015 as part of PWD's regular monitoring schedule and one of those samples showed the presence of coliform bacteria. The Safe Drinking Water Act standard is coliform may be present in no more than one sample per month. WNY did not exceed the one sample per month.

If a routine sample is total coliform-positive, repeat samples must be collected within 24 hours of notification of a positive result. Although WNY did not exceed the 1 sample per month, repeat samples were not collected within 24 hours. Repeat samples were collected on May 13, 2015. All repeat samples were negative for coliform bacteria. Coliform bacteria have not been detected since May 8, 2015 in the drinking water on WNY.

Coliform bacteria are generally not harmful themselves and are naturally present in the environment. They are used as an indicator that other bacteria may be present.

Table 1: 2015 Results of Drinking Water Monitoring for Washington Navy Yard

Microbial Indicators							
		EPA Limits		Washington Navy Yard Drinking Water			Description/ Typical Sources of Contaminants
	Units	MCLG	MCL or TT	Highest	Range	Violation	
Total Coliform Bacteria	Number Positive Samples	0	0§	1	0-1	Yes	Naturally present in the environment
Fecal Coliform or E.coli Bacteria	Number Positive Samples	0	0	0	0	No	Human and animal fecal waste
Disinfectants							
Chlorine	ppm	4 MRDLG (annual average)	4.0 MRDL (annual average)	2.6 (Highest running annual average)	ND-4.6 (Range of single site results)	No	Water additive that protects against microbiological contamination. Chlorine is combined with ammonia to form chloramine
Disinfection Byproducts ‡							
Total Trihalomethanes – Monitoring Period	ppb	N/A	80 ‡	50 (Highest locational running annual average)	17 to 78 (Range of single site results)	No	Trihalomethanes are a byproduct of drinking water disinfection
Haloacetic Acids – Monitoring Period	ppb	N/A	60 ‡	34 (Highest locational running annual average)	17 to 40 (Range of single site results)	No	Haloacetic acids are a byproduct of drinking water disinfection
Nitrate and Nitrite							
Nitrate	ppm	10	10	2.1	1.9-2.1	No	Runoff from fertilizer use; erosion from natural deposits
Nitrite	ppm	1	1	<0.20	<0.20	No	Runoff from fertilizer use; erosion from natural deposits
Lead and Copper (at the consumer's Tap)							
		EPA Limits		Washington Navy Yard Drinking Water			Description/ Typical Sources of Contaminants
	Units	MCLG	Action Level (AL)	Samples Above AL	90th Percentile	Violation	
Lead							
June–Sept 2013 Monitoring Period***	ppb	0	15	0	<2	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper							
June–Sept 2013 Monitoring Period***	ppm	1.3	1.3	0	0.18	No	Corrosion of household plumbing systems; erosion of natural deposits

§ For a system that collects fewer than 40 samples per month, if one or more samples during the month are total-coliform positive, the system has triggered a monthly MCL violation for coliform.

‡ Disinfection byproducts are the result of providing continuous disinfection of your drinking water and form when disinfectants combine with organic matter naturally occurring in the source water. Disinfection byproducts are grouped into two categories, Total Trihalomethanes (TTHM) and Haloacetic Acids. USEPA set standards for controlling the levels of disinfectants and disinfectant byproducts in drinking water, including both TTHMs and HAAs.

** Lead and copper results are from the 2013 monitoring year, which is the most recent sampling completed in accordance with Federal regulations.

The Washington Navy Yard is required to participate in EPA's third round of the Unregulated Contaminant Monitoring Rule (UCMR3) by analyzing samples from four consecutive quarterly monitoring events beginning December 2014 and ending September 2015. Unregulated contaminants are those that do not yet have a drinking water standard or maximum allowable concentration set by EPA. The monitoring of unregulated contaminants will help EPA evaluate the occurrence of these compounds to determine if they should be regulated. The Washington Navy Yard conducted the first quarterly monitoring in December 2014 and contaminants detected during the sampling event in 2015 are listed below. More information on UCMR3 is also available at the EPA's website (http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/).

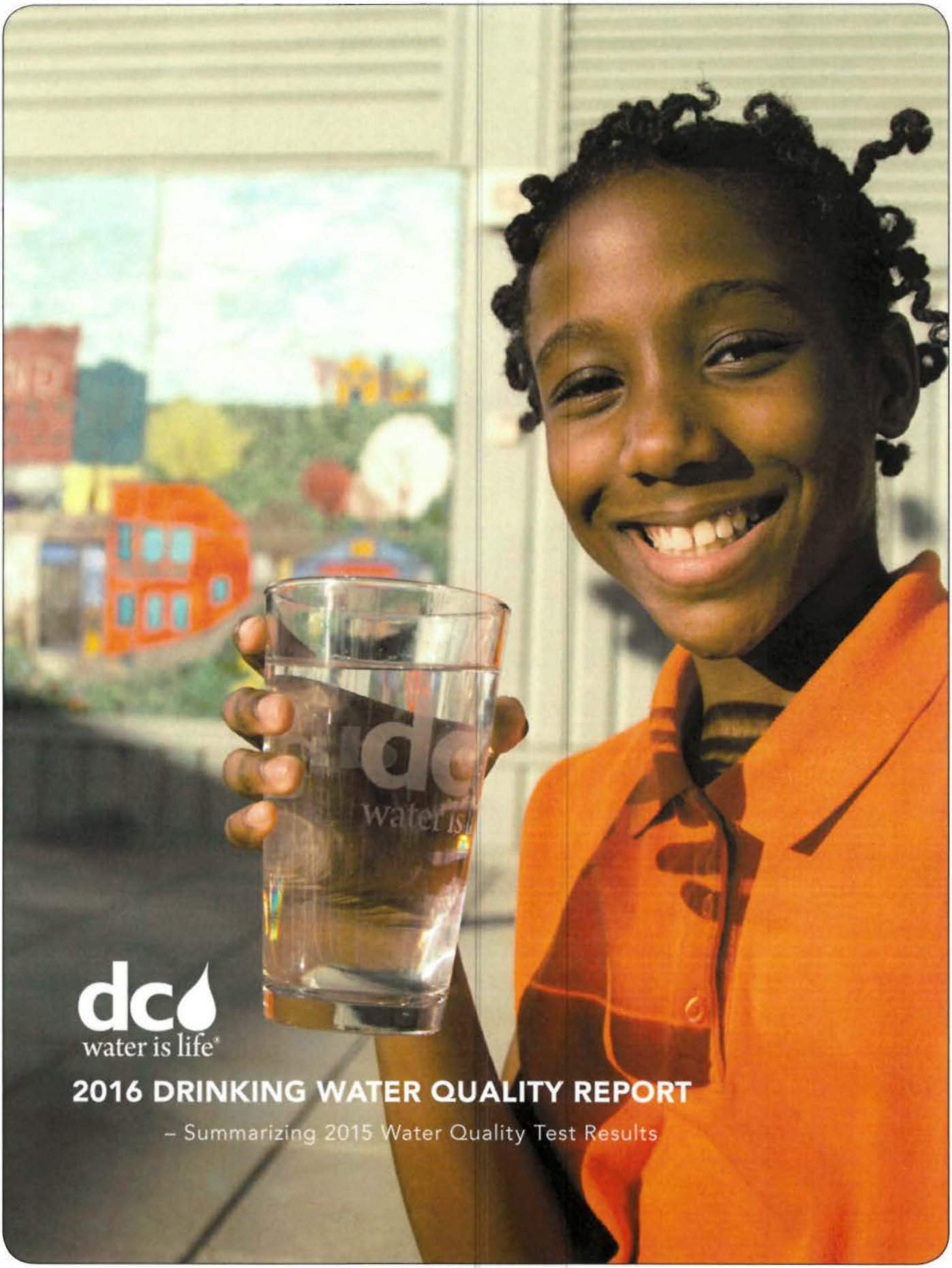
Table 2: Detected Unregulated Contaminants (ppb)*

Detected Unregulated Contaminants							
	Units	EPA Limits		Washington Navy Yard Drinking Water		Violations	Common Sources of Contaminants
		MCLG	MCL or TT	Entry Point Range	Distribution System Range		
Hexavalent Chromium	ppb	N/A	N/A	0.06-0.08	0.06-0.08	N/A	Ingredient in some paint and industrial products such as metal coatings
Chromium	ppb	N/A	N/A	<0.2	<0.2	N/A	Naturally occurring element that can be found in soils, plants, rocks, water and animals
Strontium	ppb	N/A	N/A	160-220	160-220	N/A	Occurs naturally in the environment but can be released at higher levels from industrial processes, such as coal burning and fertilizer manufacturing
Vanadium	ppb	N/A	N/A	<0.2-0.7	<0.2-0.6	N/A	Occurs naturally in many minerals and fossil fuel deposits. Industrial use to strengthen steel.
Chlorate	ppb	N/A	N/A	260 - 380	260-400	N/A	Byproduct of the water disinfection process and ingredient in herbicides and explosives.
Bromochloromethane	ppb	N/A	N/A	<0.06-0.08	N/A	N/A	Ingredient in some industrial products such as fire extinguishers

* These results are available from PWD Washington. If you have any questions, with regard to UCMR3 sample results for this system, please contact Dane Bowker, the Drinking Water Program Manager at 202-433-4191 or dane.bowker@navy.mil.

Abbreviations and Definitions

AL- Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a 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 -Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health.
MRDL - Maximum Residual Disinfectant Level. The highest level of a disinfectant allowed in drinking water.
MRDLG - Maximum Residual Disinfectant Level Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health.
ND- Not Detected
ppb - parts per billion
ppm - parts per million
TT - Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.



2016 DRINKING WATER QUALITY REPORT

– Summarizing 2015 Water Quality Test Results

Enclosure(1)

Dear Customers,

It is with great pride that I present your 2016 Water Quality Report, which details the outstanding quality of your drinking water and reflects the dedication of more than 1,100 employees who serve you seven days a week and 24 hours a day. Customer safety is our first priority, and the 2015 test results presented in this report demonstrate that your drinking water surpassed the water quality standards established by the U.S. Environmental Protection Agency (EPA). In 2015, DC Water collected more than 6,000 water samples and conducted over 41,000 tests to ensure that high quality water reaches residents and businesses in the District of Columbia.

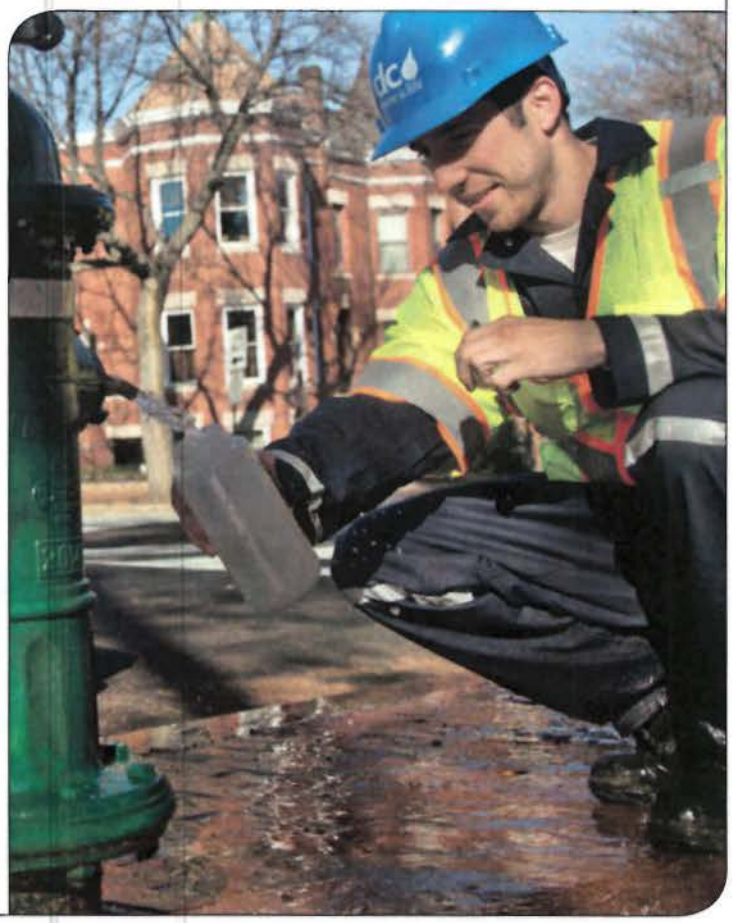
Please take this opportunity to learn more about your drinking water and DC Water's efforts to protect public health and our drinking water source, the Potomac River. We are committed to providing you with the best water at the lowest possible price and protecting your drinking water source for generations to come. If you have questions, concerns or suggestions, please contact us at one of the numbers listed on the previous page.

Sincerely,

George S. Hawkins, CEO and General Manager

YOUR DRINKING WATER QUALITY

In the following pages, you will find an overview of the required and voluntary water testing programs that protect our drinking water system. In order to ensure that tap water is safe to drink, the Environmental Protection Agency prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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 POTOMAC RIVER – YOUR DRINKING WATER SOURCE

Drinking water for the District of Columbia comes from the Potomac River, a "surface water" supply. DC Water purchases the treated drinking water from the U.S. Army Corps of Engineers, Washington Aqueduct (Aqueduct). The Aqueduct withdraws approximately 180 million gallons of water each day from the Potomac River at the Great Falls and Little Falls intakes and treats the water at two treatment plants, Dalecarlia and McMillan. The Aqueduct filters and disinfects water from the Potomac River to meet EPA's safe drinking water standards. The treatment process includes sedimentation, filtration, fluoridation, pH adjustment, primary disinfection using free chlorine, secondary disinfection with chloramines through the addition of ammonia, and corrosion control with orthophosphate.
To view the Washington Aqueduct's Annual Report of Water Quality Analysis (2015), visit **dcwater.com/wadreport**.

DC Water purchases treated drinking water from the Washington Aqueduct and distributes the treated drinking water to more than 650,000 residential, commercial, and governmental customers in the District of Columbia.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land and into the Potomac River, it dissolves naturally occurring minerals, and in some cases, radioactive material. The water can also pick up substances resulting from the presence of animals or human activity. Prior to water treatment, contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria that may come from agricultural livestock operations, septic systems, wastewater treatment plants and wildlife.
- Inorganic contaminants, such as salts and metals that can be naturally occurring or result from urban stormwater runoff, farming, and industrial or domestic wastewater discharges.
- Pesticides and herbicides that 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 that are by-products of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants that can be naturally-occurring or the result of mining activities.

SOURCE WATER PROTECTION EFFORTS

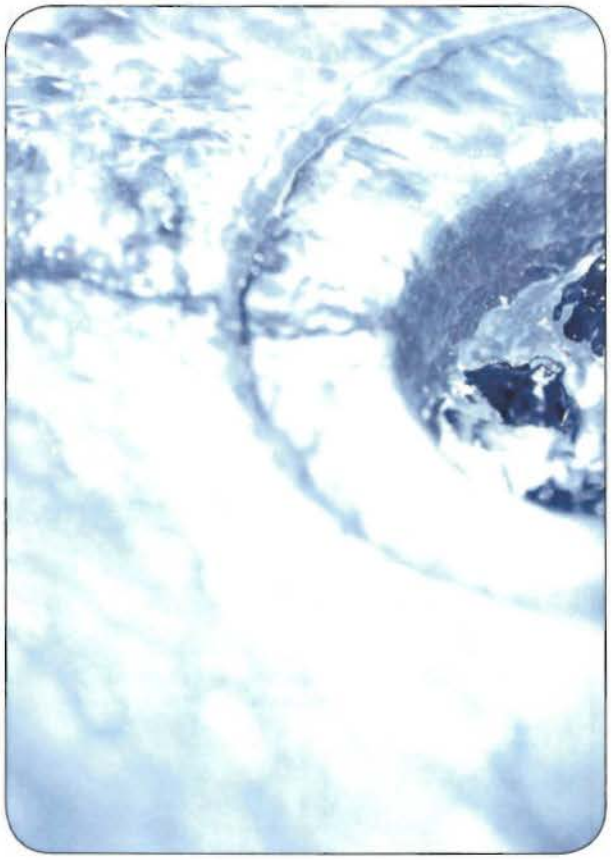
The Interstate Commission on the Potomac River Basin conducted a Source Water Assessment of the Potomac River watershed in April 2002 under a contract with the District of Columbia government. The assessment titled, *The District of Columbia Source Water Assessment*, identified urban runoff, toxic spills, agriculture and inadequate wastewater treatment as potential contamination sources to the water supply. The Assessment can be found at:
potomacriver.org/wp-content/uploads/2014/12/DC_SWA_redacted.pdf.
For more information on this Assessment, contact the Interstate Commission on the Potomac River Basin at 301-984-1908.

DC Water is a member of the Potomac River Basin Drinking Water Source Protection Partnership, a collaborative effort of drinking water suppliers and government agencies to protect shared drinking water sources. The group is currently working with the Metropolitan Washington Council of Governments (MWCOG) to update the 2002 *District of Columbia Source Water Assessment*. For more information about the Partnership's efforts, visit **potomacdwspp.org**.

PROTECTING YOUR DRINKING WATER SUPPLY

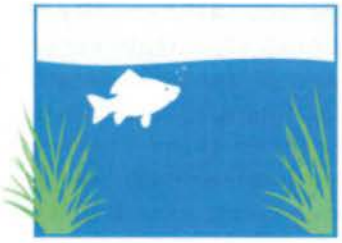
Protect The Watershed – A watershed is an area of land that drains to a particular point along a stream or river. The best way to protect the Potomac River from contamination is to help protect the watershed. You can help protect your drinking water supply in several ways:

- Prevent trash and debris from entering storm drains and catch basins. To report a clogged drain or basin, call (202) 612-3400.
- Dispose of household waste, grease and motor oil properly.
- Report spills that could potentially enter the waterways by calling the DC 311 Call Center.
- Do not flush pharmaceuticals down the toilet or drain. Find a drug take-back location or properly dispose of medications in the garbage.

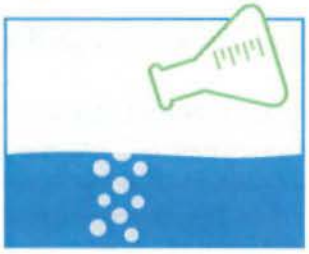


DRINKING WATER QUALITY IS A SHARED RESPONSIBILITY OF DC WATER AND RESIDENTS

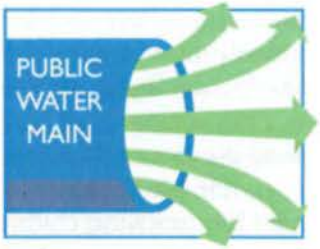
1. Drinking water is drawn from the Potomac River by the Washington Aqueduct.



2. The Washington Aqueduct is responsible for water treatment.



3. DC Water is responsible for monitoring water quality in the distribution system.



4. Customers are responsible for ensuring that water quality is maintained on private property.

DRINKING WATER TREATMENT

The Washington Aqueduct collects water from the Potomac River and treats the water at the Dalecarlia and McMillan Treatment Plants. Like most public water systems around the country, the Washington Aqueduct uses a multi-step treatment process. The treatment process includes sedimentation, filtration, fluoridation, pH adjustment, disinfection using free chlorine and chloramine (chlorine + ammonia), and corrosion control using orthophosphate. DC Water works closely with the Aqueduct to ensure that the water leaving the plant meets the Environmental Protection Agency drinking water standards. Once the water leaves the treatment plant, DC Water collects samples throughout the District of Columbia to monitor the quality of the water as it travels through the pipes to your tap.

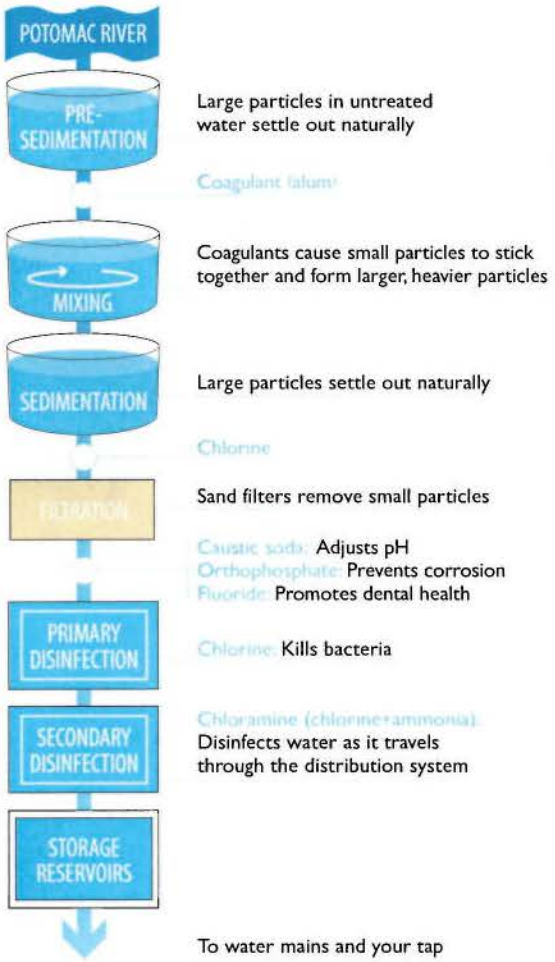
DRINKING WATER DISINFECTION

The Environmental Protection Agency requires the disinfection of water supplies to protect public health. The Washington Aqueduct uses chloramine, a combination of chlorine and ammonia, to disinfect the drinking water that is delivered to the District. Chloramine is a common disinfectant used to protect water supplies from harmful bacteria and viruses that can be found in rivers and streams. DC Water continuously monitors the drinking water to ensure that safe disinfectant levels are maintained in the distribution system. Chloramine must be removed from water used for kidney dialysis and aquariums. Contact your kidney dialysis center, physician or local pet store about water treatment for removing chloramine. For more information about chloramine, visit **dcwater.com/water/faqs**.

Why is chlorine used for disinfection?

Most of the year, the Washington Aqueduct uses chloramine to disinfect the drinking water. For a short period each year, during the spring, the Washington Aqueduct switches the disinfectant from chloramine to chlorine. This change is part of an annual program to clean water pipes and maintain water quality throughout the year. This is a standard practice for water systems that use chloramine during the majority of the year. Public water systems use chlorine to kill harmful bacteria and viruses that can make people sick. The level of chlorine is safe for consumption, but you can reduce the chlorine smell and taste by placing an open pitcher of water in the fridge. If you haven't used water in several hours, let the cold water run for 2 minutes before filling the pitcher.

WATER TREATMENT PROCESS DALECARLIA AND MCMILLAN WATER TREATMENT PLANTS



IMPORTANT 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. The Environmental Protection Agency and the 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).

Cryptosporidium

Cryptosporidium is a microbial pathogen found in most surface water in the U.S. The Washington Aqueduct monitors for Cryptosporidium in the Potomac River every month. Cryptosporidium has not been detected in a single sample since October 2005. Ingesting Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing a life-threatening illness. DC Water encourages immuno-compromised individuals to consult their doctor regarding appropriate precautions to avoid infection.

Giardia

The Washington Aqueduct monitors for giardia lamblia cysts in the Potomac River every month. Giardia lamblia cysts were detected in one sample with a concentration of 0.10 cysts/L in February of 2015.

Lead

Drinking water is essentially lead-free when it leaves the treatment plant, but lead can be released when the water comes in contact with pipes and plumbing fixtures that contain lead. Lead sources and lead levels vary between buildings, so it is important to identify and remove any lead sources in each household.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. A water service line connects the water main in the street to your household plumbing. The service line is owned by the property owner. The Washington Aqueduct and DC Water are responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your cold water tap for at least two minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you should determine if you have lead plumbing or other sources of lead on your property and consider testing your water for lead. To request information about your water service pipes, please contact DC Water's Customer Service at (202) 354-3600. To request a free lead test kit from DC Water, please contact our Drinking Water Division at 202-612-3440.

Until all sources of lead in drinking water have been removed, pregnant or nursing women and children under the age of six should use filtered tap water for drinking and cooking. This includes water used for making infant formula, beverages and ice. Filters should be certified to meet NSF Standard 53 for lead removal. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA's Safe Drinking Water Hotline (800-426-4791), epa.gov/safewater/lead and dcwater.com/lead.

Download our brochure
TIPS TO REDUCE LEAD in DRINKING WATER

dcwater.com/news/factsheet/pdfs/TipstoReduceLead.pdf

District of Columbia Drinking Water Analysis Data for 2015

The tables in the following section present the 2015 results of our monitoring of regulated and unregulated water quality parameters that were detected above the Environmental Protection Agency's (EPA) analytical method detection limit. Not listed are over 100 substances that were tested for, but were not detected. The test results compare the quality of your tap water to federal standards for each detected parameter, where applicable. For most of the results, you will see the unit of measurement, the EPA's regulatory limits, and the range of detected values. For regulated contaminants, we have also provided the typical contaminant sources. Please note that the monitoring frequency of each parameter varies.

The water quality test results indicate that your drinking water complied with all of the EPA's drinking water standards in 2015.

For testing results from previous years, please visit dcwater.com/waterquality/waterquality_reports.cfm.

As you review the test results in the following section, you may find terms and abbreviations with which you are not familiar. Below is a reference guide to help you better understand the terms and abbreviations used in this report.

Abbreviations and Definitions

AL (Action Level):
The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement that a water system must follow. Other requirements may include additional testing, public notification or capital improvements. The AL is not equivalent to a maximum contaminant level or MCL (see definition below).

$CaCO_3$: Calcium carbonate.

EPA (Environmental Protection Agency):
An agency of the U.S. federal government which was created for the purpose of protecting human health and the environment, including drinking water, by writing and enforcing regulations based on laws passed by Congress.

HAA5 (Haloacetic Acids (5)):
The five haloacetic acid species required to be monitored by EPA.

MRDL (Maximum Residual Disinfectant Level):
The highest level of a disinfectant that is 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. MDRLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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.

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.

NA: Not applicable.

ND: Not detected.

NH_3-N:
Measurement of ammonia in the form of nitrogen.

NO_2-N:
Measurement of nitrite in the form of nitrogen.

NTU (Nephelometric Turbidity Units):
Turbidity is measured with an instrument called a nephelometer, which measures the intensity of light scattered by suspended matter in the water. Measurements are given in nephelometric turbidity units (NTUs).

pCi/L (picocuries per liter): Measure of radioactivity.

PO_4:
Phosphate

ppm:
parts per million. Equivalent to a drop of water in 50 liters of liquid.

ppb:
parts per billion. Equivalent to half a teaspoon of water in one Olympic-size swimming pool.

ppt:
parts per trillion. Equivalent to a drop of water in 20 Olympic-size swimming pools.

SMCL (Secondary Maximum Contaminant Limit):
Established by EPA as non-mandatory water quality standards only as guidelines to assist public water systems in managing drinking water for aesthetic qualities, such as taste, color and odor. These contaminants are not considered to present a risk to human health at the SMCL.

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

Turbidity:
A measure of the cloudiness of water. We measure turbidity because it is a good indicator of the effectiveness of the water treatment system. Turbidity in excess of 5 NTU is just noticeable to the average person.

TEST RESULTS →

Regulated Contaminants

WASHINGTON AQUEDUCT WATER TREATMENT PLANT PERFORMANCE					
	Units	EPA Limits		DC Drinking Water	Description / Typical Sources of Contaminants
		MCLG	MCL or TT		
Turbidity	NTU	NA	TT = 1 (maximum)	(maximum hourly) 0.11	Turbidity is often caused by soil runoff
	% of monthly turbidity readings ≤ 0.3 NTU	NA	TT = 95% (minimum)	100%	
Total Organic Carbon (TOC)	% removal	NA	TT 6% to 31% as monthly removal target	All months met TOC treatment requirement. 44% (lowest annual average) 33% to 54% (range of monthly averages)	Naturally present in the environment

WATER ENTERING DC WATER'S DISTRIBUTION SYSTEM						
	Units	EPA Limits		DC Drinking Water		Description / Typical Sources of Contaminants
		MCLG	MCL	Highest	Range	
Inorganic Metals						
Antimony[1]	ppb	6	6	0.3	ND to 0.3	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic[1]	ppb	0	10	0.4	ND to 0.4	Erosion of natural deposits; Runoff from orchards
Barium	ppm	2	2	0.04	0.03 to 0.04	Erosion of natural deposits
Inorganic Anions						
Fluoride	ppm	4.0	4.0	0.9	0.5 to 0.9	Water additive which promotes strong teeth
Nitrate as Nitrogen	ppm	10	10	2	0.5 to 2	Runoff from fertilizer use; Erosion of natural deposits
Nitrite as Nitrogen	ppm	1	1	0.01	ND to 0.01	Runoff from fertilizer use; Erosion of natural deposits
Cyanide[2]	ppb	200	200	7	ND to 7	Discharge from steel/ metal factories; Discharge from plastic and fertilizer factories
Synthetic Organic Contaminants						
Atrazine	ppb	3	3	0.1	ND to 0.1	Herbicide runoff
Volatile Organic Contaminants						
None detected other than trihalomethanes reported on next page						
Radionuclides[3]						
Gross alpha particles	pCi/L	0	15	9	ND to 9	Erosion of natural and man-made deposits

[1] Antimony and arsenic were detected, although levels were below the minimum detection limits prescribed by EPA.
[2] The cyanide result is a measure of total cyanide. The MCL (0.2 ppm) is for free cyanide only which is subset of total cyanide.
[3] Triennial radionuclide monitoring was performed in 2014.

Regulated Contaminants continued →

Regulated Contaminants continued

DC WATER'S DISTRIBUTION SYSTEM							
	Units	EPA Limits		DC Drinking Water		Violation	Description / Typical Sources of Contaminants
		MCLG	MCL or TT	Highest	Range		
Microbial Indicators							
Total Coliform Bacteria	% of total-coliform-positive samples	0	5% of monthly samples are positive	0.8%	0 to 0.8%	no	Naturally present in the environment
E.coli Bacteria	Number positive	0		1 positive sample	0 to 1	no	Human and animal fecal waste
DISINFECTANTS AND DISINFECTION BYPRODUCTS							
Chlorine	ppm	4 (MRDLG) (annual average)	4 (MRDL) (annual average)	3.2 (Highest running annual average)	0.1 to 4.3 (Range of single site results)	no	Water additive used to control microbes; Chlorine is combined with ammonia to form chloramine.
Total Trihalomethanes	ppb	NA	80 (4-quarter locational running average)	46 (Highest locational running annual average)	15 to 66 (Range of single site results)	no	By-product of drinking water disinfection.
Haloacetic Acids (5)	ppb	NA	60 (4-quarter locational running average)	29 (Highest location running annual average)	12 to 43 (Range of single site results)	no	By-product of drinking water disinfection.
LEAD AND COPPER (AT THE CUSTOMER'S TAP)							
	Units	EPA Limits		DC Drinking Water		Violation	Description / Typical Sources of Contaminants
		MCLG	Action Level	Samples above AL	90th Percentile		
Lead							
January-June Monitoring Period	ppb	0	15	0 of 108	2	no	Corrosion of household plumbing systems; erosion of natural deposits
July-December Monitoring Period	ppb	0	15	1 of 110	4		
Copper							
January-June Monitoring Period	ppm	1.3	1.3	0 of 108	0.085	no	Corrosion of household plumbing systems; erosion of natural deposits
July-December Monitoring Period	ppm	1.3	1.3	0 of 110	0.086		

Contaminants without Primary MCLs or Treatment Techniques

WATER ENTERING DC WATER'S DISTRIBUTION SYSTEM

Parameter	Units	Average	Range
Aluminum	ppb	26	10 to 68
Bromide	ppm	ND	ND to 0.08
Calcium	ppm	37	26 to 51
Chloride	ppm	53	27 to 140
Copper at Point of Entry[4]	ppb	4	0.7 to 17
Iron	ppb	ND	ND to 16
Lithium	ppb	2	1 to 3
Magnesium	ppm	8	3 to 14
Manganese	ppb	0.6	ND to 2
Molybdenum	ppb	0.6	ND to 1
N-Nitroso-dimethylamine (NDMA)	ppt	ND	ND to 3
Nickel	ppb	0.9	0.6 to 1
Orthophosphate (as PO_4)	ppm	2.4	1.9 to 3
Perchlorate	ppb	0.6	0.2 to 7.5
Potassium	ppm	3.0	2.2 to 4.2
Sodium	ppm	32	16 to 70
Strontium	ppb	161	85 to 246
Sulfate	ppm	43	30 to 71
HAA5 at Point of Entry[5]	ppb	25	10 to 36
Total Ammonia	ppm	0.7	0.01 to 0.9
Total DCPA (mono- & -di-acid degradates)	ppb	ND	ND to 0.1
Total Hardness	ppm	124	82 to 173
Total Hardness	grains/gal	7.2	4.8 to 10.1
TTHM at Point of Entry[5]	ppb	37	14 to 65
Vanadium	ppb	ND	ND to 0.9
Zinc	ppb	1	ND to 23

[4] Results represent levels entering DC Water's distribution system and are distinct from the results of copper compliance monitoring conducted in residential homes.
[5] Monitoring for these parameters is not required at entry points, but is required in the distribution system.

Other Water Quality Parameters

DC WATER'S DISTRIBUTION SYSTEM & TAP MONITORING RESULTS

Parameter	Units	Average	Range
Alkalinity	ppm	65	47 to 93
Aluminum Total mg/L	ppm	0.007	0 to 0.08
Ammonia-Free NH3-N	ppm as NH_3-N	0.20	0.08 to 0.31
Calcium Hardness mg/L as CaCO3	ppm as $CaCO_3$	94	61 to 128
grains per gallon	Grains per gallon as $CaCO_3$	5.5	3.6 to 7.5
Dissolved Orthophosphate mg/L	ppm	2.50	2.01 to 4.14
Iron Total mg/L[6]	ppm	0.05	0 to 0.21
Nitrite mg/L	ppm as NO_2-N	0.02	0.002 to 0.212
pH	--	7.67	7.52 to 7.86
Temperature F	Degrees Fahrenheit	65	39 to 91
Total Dissolved Solids	ppm	204	146 to 286

[6]The secondary maximum contaminant level (SMCL) for iron is 0.3 ppm. SMCLs are established by EPA only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, or odor. These contaminants are not considered to present a risk to human health at the SMCL.

drink tap

dcwater.com/tap

TapIt Metro D.C.

TapIt Metro D.C. is a network of nearly 400 businesses in the metro region that provide free tap water to refill a reusable bottle.

Download the free **TapIt Metro D.C.** app to find locations or visit **freetapwater.org** for a map of partners.

ANDROID APP ON Google play

Available on the iPhone App Store

FOR WATER QUALITY TIPS, DOWNLOAD

DC Water's **HOUSEHOLD WATER QUALITY GUIDE**

dcwater.com/homeguide
or call
202-787-2200
to request a mailed copy.

GET INVOLVED

The DC Water Board of Directors conducts reguarly scheduled board meetings that are open to the public, generally on the first Thursday of each month, 9:30 AM at the Blue Plains Facility, 5000 Overlook Ave, SW, Washington, DC 20032.

Please visit dcwater.com or contact the Office of the Board Secretary at (202) 787-2330 to confirm a meeting time and location.