

2020 Water Quality Report



Joint Base Anacostia-Bolling

Dear Valued Customer,

Joint Base Anacostia-Bolling (JBAB) is committed to safeguarding the health of the installations personnel, their families, and anyone who may utilize the JBAB Public Water System (PWS). Ensuring safe drinking water is a top priority for the JBAB Command Team and the 2020 sampling results presented in this report demonstrate that the installation's drinking water met the water quality standards established by the Safe Drinking Water Act and is regulated by the Environmental Protection Agency (EPA). Please take this opportunity to learn more about your drinking water and if you have any questions, concerns, or suggestions, please call or email the Civil Engineering Environmental Element, whose contact information is provided at the end of this report.

Michael J. Zuhlsdorf

Michael J. Zuhlsdorf, Colonel, USAF
Commander, JBAB & 11th Wing



SOURCE WATER

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE:

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

In order 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 (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.



The sources of tap water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

PRESENT IN SOURCE WATER INCLUDES:

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

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

Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

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 Safe Drinking Water Hotline at **1-800-426-4791**.

The Source of Your Drinking Water

Drinking water for the District of Columbia (DC) is sourced 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), and then sells the finished water to JBAB. The Aqueduct withdraws approximately 140 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 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. DC Water conducts water quality monitoring throughout the city to ensure that the water it provides meets safe drinking water quality standards; for more information on DC Water's quality please visit their website at <https://www.dewater.com/waterquality>.

JBAB's Public Water System (PWS) operates as a consecutive water system that receives treated water from the local utility, DC Water. JBAB's PWS consists only of distribution (i.e. does not perform treatment or have storage). Please note that although there are two distinct distribution systems on JBAB, one that serves the former Naval Support Facility Anacostia side, and one that serves the former Bolling Air Force Base side, U.S. EPA consolidated the two systems under one PWS identification number in 2017. Per Navy policy, JBAB performs routine regulatory sampling and monitoring activities on its PWS and 2020 results are contained within Tables 1, 2, and 3 of this report.

U.S. EPA Region 3, as the drinking water primacy agency for the District of Columbia, funded the update and completion of the Source Water Assessment of the Potomac River watershed in early 2020. This "report" is in the form of an innovative web based storyboard containing interactive links and a visual representation of the updated information. The intention was to provide the resource managers, scientists, and interested citizens with a more interactive, user friendly way of assessing the data through a GIS platform to better understand source water protection. The storyboard can be found at:

<https://epa.maps.arcgis.com/apps/Cascade/index.html?appid=25bd8df30dcb4f729b8c617d1e0ac4c9>

WATER QUALITY ANALYSIS DATA

In order for the Aqueduct to be aware of the initial concentration of *Giardia* and *Cryptosporidium* contaminants in the surface water prior to treatment, it performs regular monitoring.

Giardia

The Aqueduct monitored for *Giardia* in the source water (Potomac River) by collecting samples from the Little Falls and/or Great Falls intakes every month in 2020. *Giardia* cysts were detected in six samples with a concentration ranging from 0.093 to 0.465 cysts per liter. *Giardia* is effectively removed through the Aqueduct's treatment process.

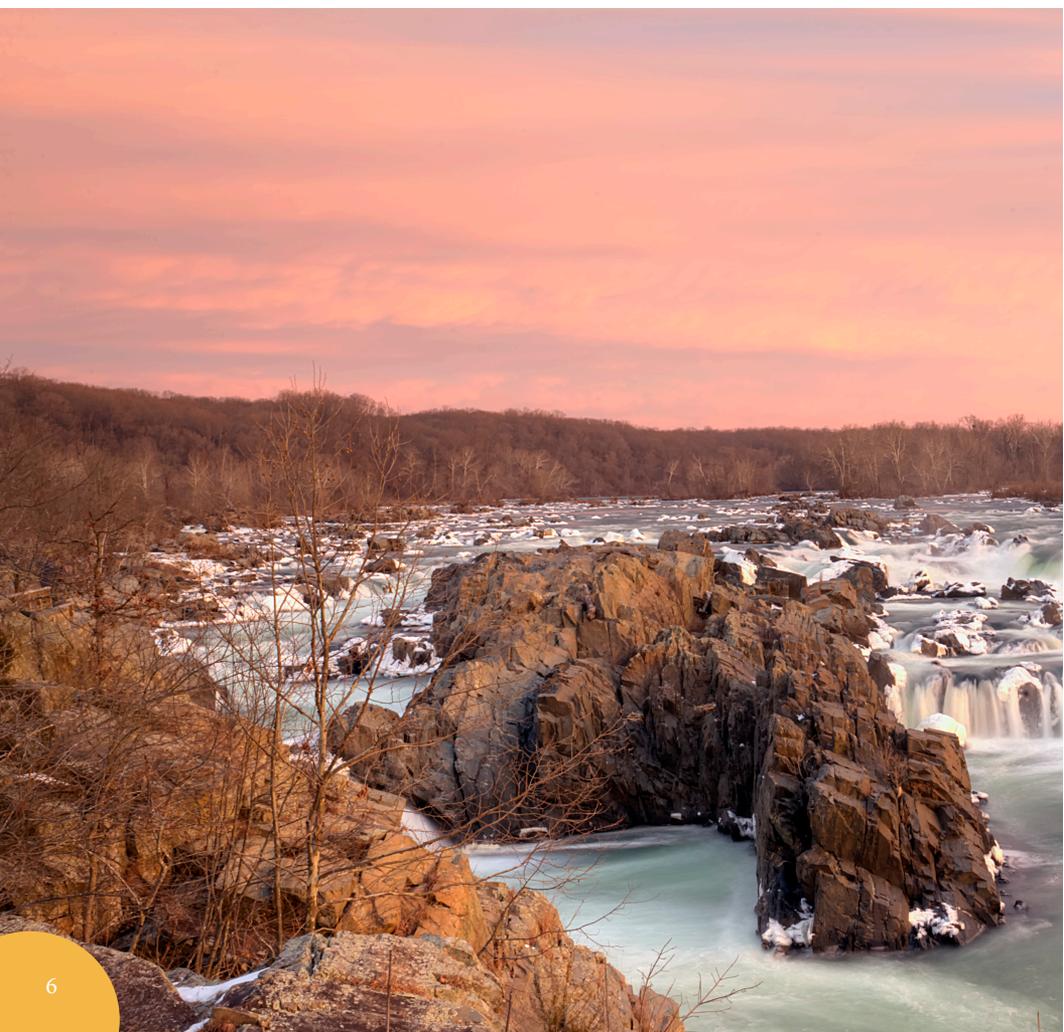
Cryptosporidium

The Aqueduct monitored for *Cryptosporidium* in the source water (Potomac River) by collecting samples from Little Falls and/or Great Falls intakes every month in 2020. *Cryptosporidium* was detected in 2 samples with a concentration of 0.186 oocysts/L in 2020. *Cryptosporidium* is a microbial pathogen found in most surface water in the U.S. Once *Cryptosporidium* is detected in the source water, Washington Aqueduct is required to ensure that their drinking water treatment system is adequate to control *Cryptosporidium*.

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. JBAB encourages immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.

SPECIAL PRECAUTIONS

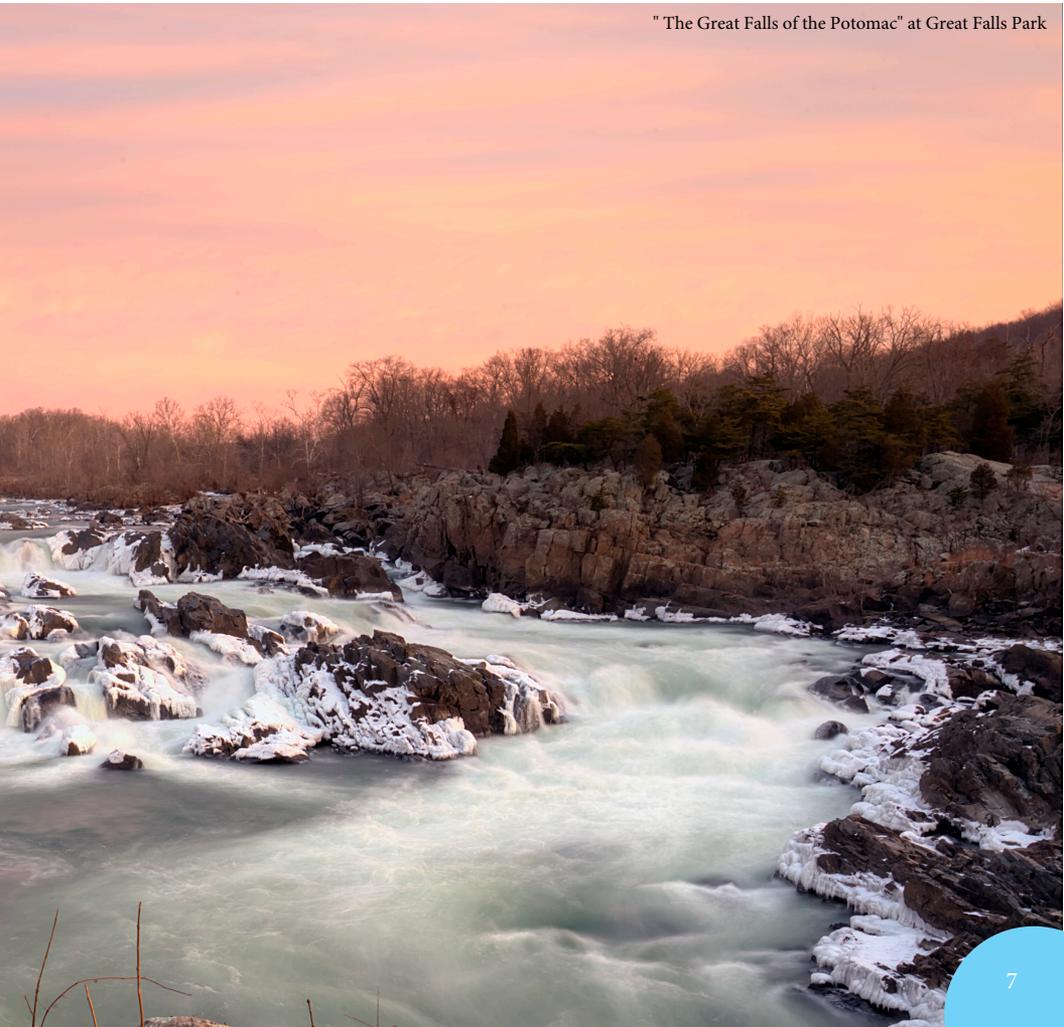
Some individuals may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals such as those with cancer and undergoing chemotherapy, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These individuals should seek advice about drinking water from their health care providers. The U.S. 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 at **1-800-426-4791**.



LEAD IN DRINKING WATER

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. 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. JBAB met EPA standards for lead in 2019 (see Tables 1& 2). If you are concerned about lead in your water, please contact JBAB's Drinking Water Program Manager at 202-404-1273. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

"The Great Falls of the Potomac" at Great Falls Park



ANACOSTIA REGULATED SUBSTANCES 2020:

SUBSTANCE (UNITS)	MCLG	MCL	Highest
Total Coliform Bacteria	0	1 positive/ month	1
E. Coli Bacteria	0	0	0

SUBSTANCE (UNITS)	MRDLG	MRDL	HIGHEST ANNUAL AVERAGE	RANGE
Chlorine (ppm)	4	4	1.90	ND-3.60

SUBSTANCE (UNITS)	MCLG	MCL	HIGHEST ANNUAL AVERAGE	RANGE
Haloacetic Acids (ppb)	N/A	60	30	2-53
Total Trihalomethanes (ppb)	N/A	80	63	23-105

SUBSTANCE (UNITS)	MCLG	MCL	ANNUAL AVERAGE	RANGE
Nitrate (ppm)	10	10	2	1.7-2.6
Nitrite (ppm)	1	1	0.10	ND-0.32

SUBSTANCE (UNITS)	MCLG	AL	RANGE AND 90TH PERCENTILE	SITES ABOVE AL
Copper (ppm)	1.3	1.3	8.8 to 490 90th Percentile is 139	0
Lead (ppb)	0	15	0 to 17 90th Percentile is 0	1

TABLE 1- Anacostia Side

VIOLATION	TYPICAL SOURCE	COMMENTS
No	Coliforms are naturally present in the environment; as well as feces; fecal coliforms and <i>E. coli</i> only come from human and animal fecal waste.	One sample tested positive for Total Coliform and/or <i>E. Coli</i> Bacteria in 2020 on the Anacostia side of JBAB.
No		

VIOLATION	TYPICAL SOURCE	COMMENTS
No	Water additive that protects against microbial contamination. Chlorine is combined with ammonia to form chloramine.	Chlorine levels were not always within required standards for 2020, but heterotrophic plate counts were preformed for all points . All points met HPC requirements.

VIOLATION	TYPICAL SOURCE	COMMENTS
No	Haloacetic acids are a byproduct of drinking water disinfection.	Disinfection byproducts remained within required standards for 2020.
No	Trihalomethanes are a byproduct of drinking water disinfection.	

VIOLATION	TYPICAL SOURCE	COMMENTS
No	Runoff from fertilizer use; erosion from natural deposits.	
No	Runoff from fertilizer use; erosion from natural deposits.	

VIOLATION	TYPICAL SOURCE	COMMENTS
No	Corrosion of household plumbing systems; erosion of natural deposits.	Lead and Copper data resulted from JBAB's most recent monitoring period, June to September 2018.
No	Corrosion of household plumbing systems; erosion of natural deposits.	

BOLLING REGULATED SUBSTANCES 2020:

SUBSTANCE (UNITS)	MCLG	MCL	HIGHEST
Total Coliform Bacteria	0	1 positive/ month	1
E. Coli Bacteria	0	0	1

SUBSTANCE (UNITS)	MRDLG	MRDL	HIGHEST ANNUAL RANGE	RANGE
-------------------	-------	------	----------------------	-------

Chlorine (ppm)	4	4	1.70	ND-3.60
----------------	---	---	------	---------

SUBSTANCE (UNITS)	MCLG	MCL	HIGHEST ANNUAL RANGE	Range
-------------------	------	-----	----------------------	-------

Haloacetic Acids (ppb)	N/A	60	31	14.7-56.0
Total Trihalomethanes (ppb)	N/A	80	57	21.3-76.3

SUBSTANCE (UNITS)	MCLG	MCL	ANNUAL AVERAGE	RANGE
-------------------	------	-----	----------------	-------

Nitrate (ppm)	10	10	0.90	0.78-1.5
Nitrite (ppm)	1	1	N/A	N/A

SUBSTANCE (UNITS)	MCLG	AL	RANGE AND 90th PERCENTILE	SITES ABOVE AL
-------------------	------	----	---------------------------	----------------

Copper (ppm)	1.3	1.3	8.8 to 490 90th Percentile is 139	0
Lead (ppb)	0	15	0 to 17 90th Percentile is 0	1

TABLE 2- Bolling Side

VIOLATION	TYPICAL SOURCE	COMMENTS
No	Coliforms are naturally present in the environment; as well as feces; fecal coliforms and <i>E. coli</i> only come from human and animal fecal waste.	One sample tested positive for Total Coliform and/or <i>E. Coli</i> Bacteria on the Bolling side of JBAB in 2020.
No		
VIOLATION	TYPICAL SOURCE	COMMENTS
No	Water additive that protects against microbial contamination. Chlorine is combined with ammonia to form chloramine.	Chlorine levels were not always within required standards for 2020, but hetero-trophic plate counts were preformed for all points. All points met HPC requirements.
VIOLATION	TYPICAL SOURCE	COMMENTS
No	Haloacetic acids are a byproduct of drinking water disinfection.	Disinfection byproducts remained within required standards for 2020.
No	Trihalomethanes are a byproduct of drinking water disinfection.	
VIOLATION	TYPICAL SOURCE	COMMENTS
No	Runoff from fertilizer use; erosion from natural deposits.	Monitoring for Bolling Nitrite is triennial. Will occur again in August of 2021.
No	Runoff from fertilizer use; erosion from natural deposits.	
VIOLATION	TYPICAL SOURCE	COMMENTS
No	Corrosion of household plumbing systems; erosion of natural deposits.	Lead and Copper data resulted from JBAB's most recent monitoring period, June to September 2018.
No	Corrosion of household plumbing systems; erosion of natural deposits.	

VIOLATIONS

*No violations occurred in calendar year 2020

UNREGULATED CONTAMINANT MONITORING RULE

JBAB Bolling participated in EPA's fourth round of the Unregulated Contaminant Monitoring Rule (UCMR4). Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. As our customers, you have a right to know that this data is available. However, for the calendar year 2020, no unregulated contaminants were sampled. If you are interested in learning more about the results, please reach out to the contact person listed at the end of this report.

UNREGULATED SUBSTANCES

2020:

SUBSTANCE (UNITS)	MCLG	MCL	AVERAGE
HAA5	N/A	N/A	N/A
HAA6Br	N/A	N/A	N/A
HAA9	N/A	N/A	N/A
Germanium	N/A	N/A	N/A
Manganese	N/A	N/A	N/A
Alpha-hexachlorocyclohexane	N/A	N/A	N/A
Profenofos	N/A	N/A	N/A
Chlorpyrifos	N/A	N/A	N/A
Tebuconazole	N/A	N/A	N/A
Dimethipin	N/A	N/A	N/A
Total Permethrin	N/A	N/A	N/A
Ethoprop	N/A	N/A	N?A
Tribufos	N/A	N/A	N/A
Oxyfluorfen	N/A	N/A	N/A
1-butanol	N/A	N/A	N/A
2-propen-1-ol	N/A	N/A	N/A
2-methoxyethanol	N/A	N/A	N/A
butylated hydroxyanisole	N/A	N/A	N/A
o-toluidine	N/A	N/A	N/A
quinoline	N/A	N/A	N/A
total microcystins	N/A	N/A	N/A
cylindrospermopsin	N/A	N/A	N/A
anatoxin-a	N/A	N/A	N/A

TABLE DEFINITIONS

Action Level (AL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements by the water supplier.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

Maximum Residual Disinfectant Level 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.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. Compliance with the MRDL is based on the highest Quarterly Running Annual Average.

N/A: Not applicable.

ND: Not detected at testing limit.

Parts Per Billion (ppb): One part substance per billion parts of water (or micrograms per liter).

Parts Per Million (ppm): One part substance per million parts of water (or milligrams per liter).

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

90th Percentile Detection: Result from a set of lead and copper samples that is used to determine if the water system will be required to implement additional actions. Action is only required should the 90th Percentile sample be higher than the Action Level listed for either copper or lead.

WHAT CAN I DO TO IMPROVE WATER QUALITY?

As a user, you play a larger role in enhancing the water quality within the building. Here are a few actions that can be taken 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 furthest 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.
- **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 they will begin to accumulate excessive amounts of metals which may eventually break through the filter or leach into the water during times of excessive stagnation, which may be considered any period greater than six (6) hours without water use.
- **Clean Strainers/Aerators** - Periodically remove and clean the strainer/aerator device on faucets in the building to remove debris.
- **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.

MAINTAINING HIGH WATER QUALITY

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. JBAB is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

For more information about your drinking water, please contact Jennifer McDonnell, Environmental Element Chief at (202) 284-4669 .

Este reporte contiene información importante sobre el agua potable que usted consume. Para obtener una traducción del reporte, por favor comuníquese con la Oficina de Asuntos Públicos al (202) 404-8863. Si necesita la asistencia de un traductor con respecto a información sobre DC Water, favor de contactar DC Water Asistencia al Cliente al (202) 354-3600 (8am a 5pm, Lunes a Viernes).

Joint Base Anacostia-Bolling

