2016 ANNUAL DRINKING WATER QUALITY REPORT

JOINT BASE ANACOSTIA-BOLLING (JBAB), Bolling Side (JBAB-Bolling), PUBLIC WATER SYSTEM (PWS) #DC0000007

JBAB-Bolling distributes drinking water to residential and non-residential buildings on the installation. This water is supplied to JBAB-Bolling by the District of Columbia Water and Sewer Authority (DC Water). The DC Water purchases the water from the US Army Corps of Engineers, Washington Aqueduct who treats the 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. Routine sampling and monitoring activities at JBAB-Bolling are done by Washington Suburban Sanitary Commission (WSSC). Those 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 **-** *Cryptosporidium* was monitored by the Washington Aqueduct in the Potomac River monthly and was detected in 2 samples with a concentration ranging from 0.200 to 0.300 oocysts per liter in April 2016 and May 2016, respectively. *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*. Giardia was also monitored in the source water monthly in 2016. Giardia cysts were detected in eleven samples with a concentration ranging from 0.095 to 0.837 cysts/L in April, May, June, July, August, and December of 2016. Giardia is effectively removed through the treatment process.

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.

Lead - If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. 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-Bolling met EPA standards for lead in 2016 (see Table 1). If you are concerned about lead in your water, please contact JBAB's Environmental 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 or at http://www.epa.gov/safewater/lead

(Enclosure 1)

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 to improve water quality?

As a tenant, 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.

Table 1. 2016 Water Quality Data Table

The table below lists all of the drinking water contaminants detected that are applicable for the calendar year of this report.

Microbial Indicators							
	Units	EPA Limits		JBAB-Bolling Drinking Water		Violations	Description/Typical Sources of Contaminants
		MCLG	MCL or TT	Highest	Range		
Total Coliform Bacteria	# of positive samples	0	1 positive sample/month	1*	positive	No	Naturally present in the environment
E. coli Bacteria	Number Positive	0	0	0	0	No	Human and animal fecal waste

*The positive hit was resampled at the original location, upstream, and downstream. All resample results came back negative.
For a system that collects fewer than 40 samples/month, if two or more samples during the month are positive, the system has a MCL violation for total coliform.

Disinfectants							
	Units	EPA Limits		JBAB-Bolling Drinking Water		Violations	Description/Typical Sources of Contaminants
		MRDLG	MRDL	Highest Annual Average	Range		
Chlorine	ppm	4 running annual average	4.0 running annual average	2.52	0.10-3.0 (range of single site results)	No	Water additives that protects against microbial contamination. Chlorine is combined with ammonia to form chloramine.

Disinfection byproducts							
	Units	EPA Limits		JBAB-Bolling Drinking Water		Violations	Description/Typical Sources of Contaminants
		MCLG	MCL or TT	Highest Annual Average	Range		
Total Trihalomethanes	ppb	N/A	80	53	18 to 75 (range of single site results)	No	Trihalomethanes are a byproduct of drinking water disinfection
Haloacetic Acids	ppb	N/a	60	36.0	3 to 48 (range of single site results)	No	Haloacetic acids are a byproduct of drinking water disinfection

Asbestos

	Units	EPA Limits		JBAB-Bolling Drinking Water		Violations	Description/Typical Sources of Contaminants
		MCLG	MCL or TT	Average	Range		
Asbestos	MFL	7	7	<0.694	<0.694	No	Decay of asbestos cement water mains; erosion of natural deposits

Asbestos result is from 2011 monitoring year, which is the most recent sampling completed in accordance with Federal regulations. The next asbestos required monitoring period is in 2020. Nitrite result is from 2015 monitoring year, which is the most recent sampling completed in accordance with Federal regulations. The next required nitrate sampling will occur in 2018.

Nitrite and Nitrate

	Units	EPA Limits		JBAB-Bolling Drinking Water		Violations	Description/Typical Sources of Contaminants
		MCLG	MCL or TT	Average	Range		
Nitrite	ppm	1	1	0.24	0.06 to 0.42	No	Runoff from fertilizer use; erosion from natural deposits
Nitrate	ppm	10	10	1.83	1.66 to 1.94	No	Runoff from fertilizer use; erosion from natural deposits

Nitrite result is from 2015 monitoring year, which is the most recent sampling completed in accordance with Federal regulations. The next required nitrate sampling will occur in 2018.

Lead and Copper

	Units	EPA Limits		JBAB-Bolling Drinking Water		Violations	Description/Typical Sources of Contaminants
		MCLG	Action Level (AL)	Samples Above AL	Range and 90th Percentile		
Lead- Monitoring Period June to Sept 2015	ppb	0	15	0	ND to <2 90th percentile is ND	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper- Monitoring period June to Sept 2015	ppm	1.3	1.3	0	ND to 0.279 90th percentile is 0.137	No	Corrosion of household plumbing systems; erosion of natural deposits

Lead and Copper results are from June to September 2015 monitoring period, which is the most recent sampling completed in accordance with Federal regulations. The next required sampling will occur in 2018.

Data Table Key: Unit Descriptions

AL	Action Level
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MRDL	Maximum Residential Disinfectant Level
MRDLG	Maximum Residential Disinfectant Level Goal
TT	Treatment Technique
ppb	Parts per billion
ppm	Parts per million

Important Drinking Water Definitions

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.
MCL	This highest level of contaminant that is allowed in drinking water. MCLs are set as close as feasible using the best available treatment technology.
TT	A required process intended to reduce the level of contaminant in drinking water.
AL	The concentration of a contaminant, which, if exceeded triggers treatment or other requirements which a water systems must follow.
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 the disinfectants to control microbial contaminants.
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.

For More Information Please Contact:
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