



DRINKING
WATER
QUALITY
REPORT



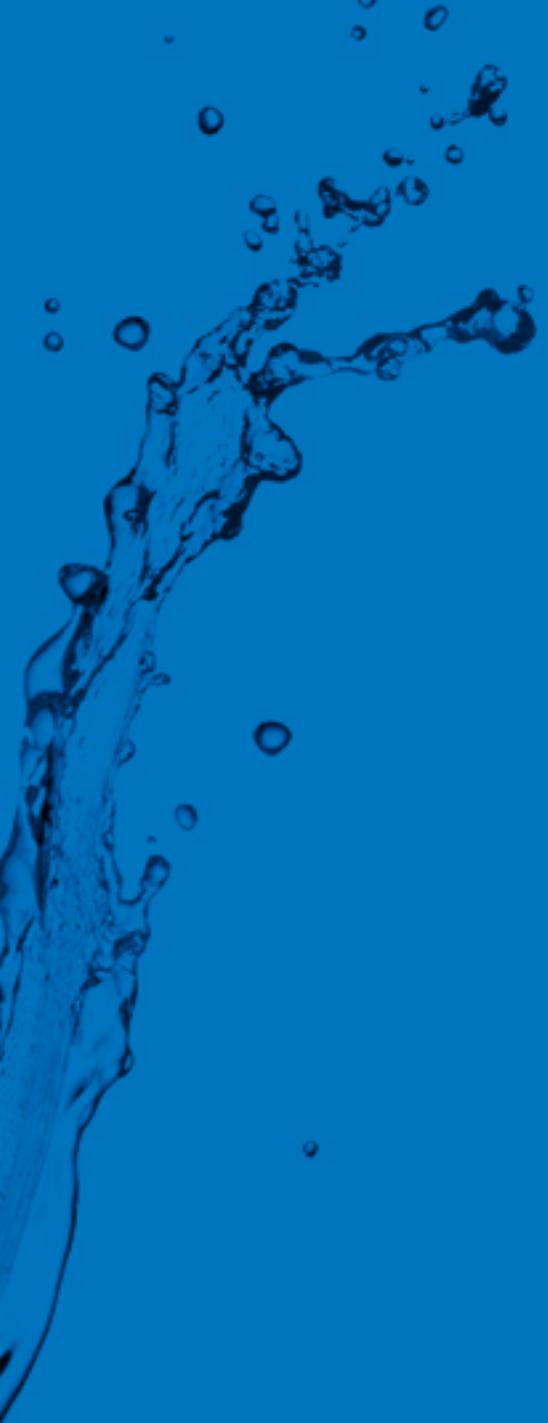
CAPITAL REGION.
WATER

Este informe contiene información importante acerca de su agua potable. Que alguien traduzca este informe para usted ó contacte Capital Region Water llamando **888-510-0606** ó por correo electrónico ***info@capitalregionwater.com*** para recibir una copia traducida del informe.

*This report contains important information about your drinking water. Have someone translate it for you or contact Capital Region Water by phone **888-510-0606** or email ***info@capitalregionwater.com*** to receive a translated copy of the report.*

Capital Region Water's Public Water System Identification Number: 7220049

*If you have any questions about this report or your water please contact Jason Li at **888-510-0606**, Option 3. You can also send an email to ***info@capitalregionwater.com***.*



Dear Customer,

I'm pleased to share our 2016 Drinking Water Quality Report with you summarizing our water quality tests from 2015. Water is essential to health, economic development, and our quality of life. Capital Region Water's over 100 public servants work 24 hours a day to provide our customers some of the highest quality drinking water in the country.

In fact, thanks to the pristine DeHart Reservoir and dedicated water plant operators, your drinking water was awarded Pennsylvania's Best Tasting Water in 2016 by the Pennsylvania American Water Works Association's Best of Pennsylvania Taste Test.



This 2016 report includes water quality information for the 2015 calendar year. The Environmental Protection Agency (EPA) requires all water utilities to produce and distribute water quality reports on an annual basis to help you understand what's in your water.

In 2015, the water we supplied your home or business exceeded all federal and state drinking water standards.

Capital Region Water looks forward to continuing to provide the highest quality drinking water and to invest in our community from raindrop to river.

Shannon Williams, P.E.
CEO, Capital Region Water

INFORMATION ABOUT LEAD

As your drinking water, wastewater, and stormwater service provider, Capital Region Water's top focus is protecting public health. In light of the current crisis facing families in Flint, Michigan, Capital Region Water wants you to be well educated about the threat of lead in drinking water and our lead prevention and monitoring program.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water primarily originates from materials and components associated with service lines and home plumbing. Capital Region Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components.

When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking.

WHAT DOES CAPITAL REGION WATER DO TO KEEP LEAD OUT OF YOUR DRINKING WATER?

Lead is not present in the water Capital Region Water sends into the distribution system. It enters the water when there is corrosion of plumbing systems containing lead. To prevent the corrosion of pipes, Capital Region Water adjusts the pH of our water and also adds a corrosion inhibitor (orthophosphate).

DOES CAPITAL REGION WATER TEST FOR LEAD?

Under strict state and federal regulations, Capital Region Water is required to test for copper and lead in its drinking water every three years. Samples for this testing are taken directly from customer faucets in areas with the oldest water mains and buildings which are more likely to contain lead indoor plumbing. Based on Capital Region Water's service area size, 30 samples are collected each testing period. Capital Region Water last tested for lead in 2013 and will collect another 30 samples for testing in the summer of 2016.

In 2016, Capital Region Water is going beyond state and federal requirements and will begin testing elementary schools and day care centers within our service area.

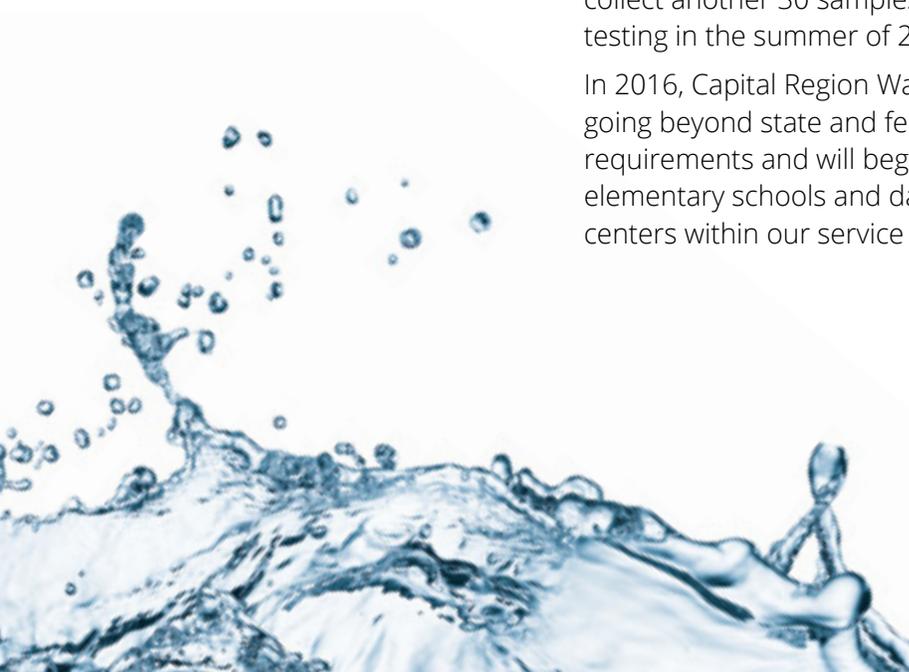
WHAT WERE THE MOST RECENT RESULTS?

Out of the 30 samples collected in 2013, 29 samples were below detectable levels (less than 2 parts per billion) and one sample tested at 5 parts per billion (below the action level). Regulations require remedial action if 10% of the samples are above 15 parts per billion.

HOW DO I KNOW IF I HAVE LEAD IN MY WATER?

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at www.epa.gov/safewater/lead.

Customers can contract with a local environmental testing lab or purchase in-home test kits at their local hardware store. Capital Region Water cannot recommend or endorse any specific laboratory or in-home test kit.



CONSIDER THE SOURCE: FROM RAINDROP TO TAP

The place where your drinking water comes from is called its source. Your primary source of drinking water comes from The William T. DeHart Dam and Reservoir, located 20 miles northeast of Harrisburg in the pristine Clarks Valley. The DeHart Reservoir holds six billion gallons of water when full and impounds water flowing from Clark Creek and 23 smaller tributaries.

The area of land draining to the source is called a watershed. The DeHart Reservoir watershed is almost 22 square miles, more than 95% of which is publically owned.

Roughly 8.5 million gallons per day of raw water from the reservoir flows by gravity through 23 miles of 36 to 42 inch diameter pipe to our water treatment facility.

The Susquehanna River is our secondary source and is only utilized in case of severe drought or emergency. The Susquehanna River Intake and Pump Station can transfer up to 15 million gallons per day of raw water from the river to the water treatment facility when required.

PROTECTING THE SOURCE

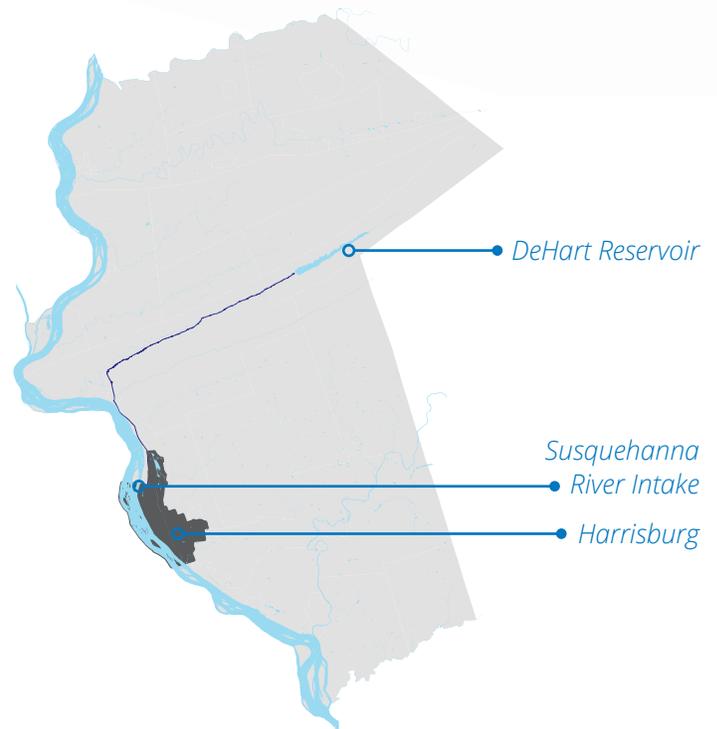
A Source Water Assessment of our sources was completed by the PA Department of Environmental Protection (DEP) in 2003. The Assessment found that our primary source is most susceptible to on-lot septic systems and fuel oil storage facilities.

A Source Water Protection Plan was completed by Capital Region Water and approved by DEP in 2015. This Plan inventories potential sources of regulated contaminants in the assessment area and identifies management options for best protecting our water sources.

More information on the Source Water Assessment and Source Water Protection Plan can be found at www.capitalregionwater.com/sourcewaterprotection.

In 2016, Capital Region Water's Board of Directors unanimously approved an agreement to conserve its 8,200-acre DeHart Property by easement in partnership with the Ward Burton Wildlife Foundation, The Nature Conservancy, and Fort Indiantown Gap. Under the agreement, Capital Region Water will

receive approximately \$9 million through the Fort Indiantown Gap Army Compatible Use Buffer program for granting a conservation easement restricting development on the property.



SHARED RESPONSIBILITY

Pollution that occurs in the DeHart Reservoir or in the Susquehanna River watershed can contaminate your drinking water. Do your part to protect drinking water:

- *Don't litter. Anything that falls in the watershed could end up in our drinking water.*
- *Pick up trash. If you see litter, pick it up.*
- *Report vehicle spills by calling 911.*
- *Dispose household hazardous wastes properly. Contact Dauphin County for more information at 800-449-7587.*



Visit our Youtube channel to see the **Consider the Source** video: www.youtube.com/CapitalRegionWater

DRINKING WATER TREATMENT

The Robert E. Young Water Services Center was built in 1994 and is capable of producing 20 million gallons of drinking water a day.

As raw water enters the treatment facility, an electric turbine slows the water down and creates renewable electricity.

Next, lime and alum are added causing small particles to adhere together. This flocculation process creates heavier particles that will settle in the sedimentation basins.

After sedimentation, chlorine is added for disinfection of pathogenic (disease causing) organisms. The water is then filtered to remove any remaining particulate matter.

After filtration, caustic soda and soda ash are added to adjust pH and fluoride is added as a tooth decay preventative.

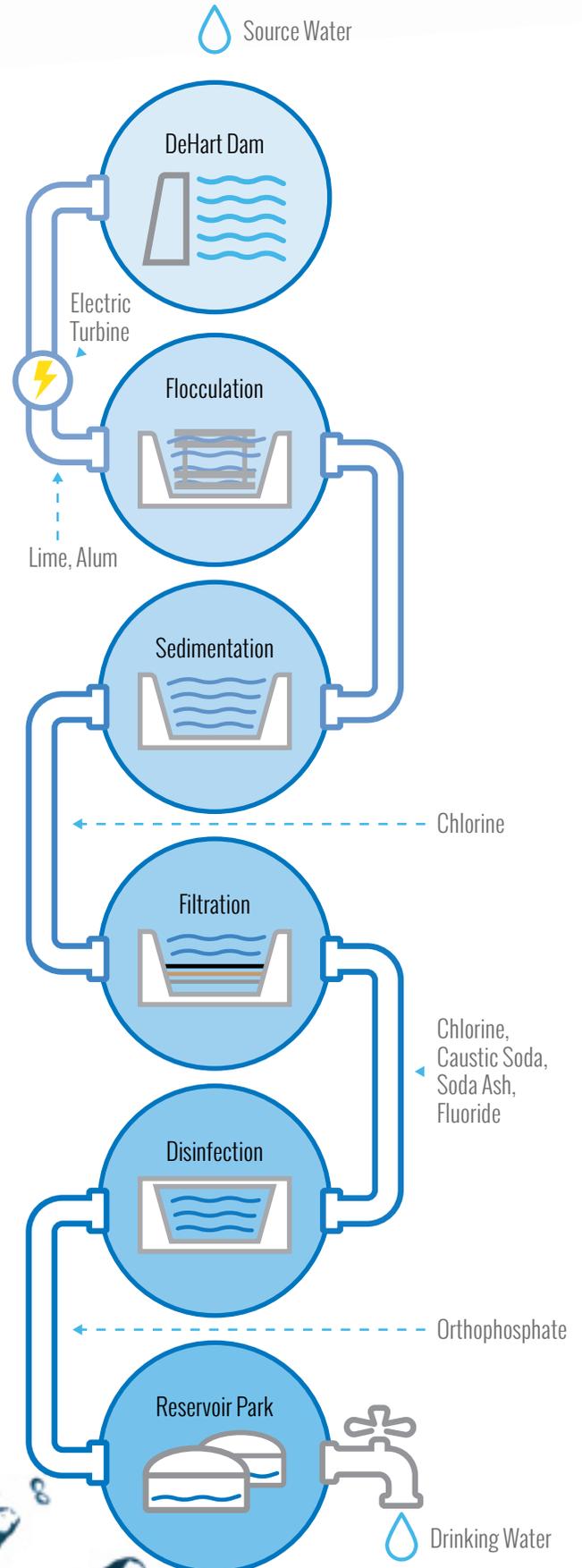
Next, the water goes into an underground storage tank, called a clear well, to allow more contact time with chlorine for disinfection. Zinc orthophosphate is then added to control corrosion in the distribution system and the treated water is pumped to three finished water storage reservoirs in Reservoir Park. These reservoirs bring water to your home through the distribution system using gravity.

DISTRIBUTION SYSTEM: BRINGING WATER TO HOMES AND BUSINESSES

Capital Region Water operates almost 250 miles of water mains that range from 2 inches to 36 inches in diameter and 1,780 hydrants. Please report issues with water mains and fire hydrants by calling 888-510-0606, Option 3. This Option is monitored 24 hours a day.

In 2015, Capital Region Water replaced 637 feet of water mains and repaired 30 water main breaks and 60 fire hydrants to maintain reliable service.

Property owners are responsible for the line that runs between the main and their building.



WATER CONTAMINANTS

The sources of all drinking water (both tap water and bottled 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 animals or from human activity. Contaminants that may be present in source water include:

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

Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

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

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.

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

In order to ensure that tap water is safe to drink, EPA and DEP prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP 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 EPA's Safe Drinking Water Hotline (800-426-4791).

SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to drinking water contaminants than the general population.

People with compromised immune systems, such as those with cancer who are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. EPA/CDC 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).



MONITORING YOUR WATER

Capital Region Water routinely monitors over 80 contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2015. You can visit www.capitalregionwater.com/waterqualityreport or give us a call (888-510-0606) to see the full list of contaminants that were monitored in 2015 but not detected.

State law allows us to monitor for some contaminants less than once

per year because the concentrations of these contaminants do not change frequently. Some of our data is from prior years in accordance with the Safe Drinking Water Act. The date has been noted on the sampling results table.

MICROBIOLOGICAL SAMPLING & ANALYSES

Our Water Quality Laboratory collects and analyzes over 80 drinking water samples each month from the

distribution system to test for total coliform and E. coli bacteria, which are naturally present in the environment. Their presence is an indicator that other potentially harmful pathogens may be present.

The maximum contaminant level for coliform bacteria is less than 5% positive samples and our maximum contaminant level goal is zero.

DEFINITIONS

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

Disinfection By-Products - Results from reactions between organic and inorganic matter in water with chlorine during the disinfection process.

Distribution Disinfection Residual - Represents the chlorine level in the water sampled from several locations in the distribution system.

Entry Point Disinfection Residual - Represents the chlorine level in the water leaving the water treatment facility and entering the distribution system.

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

Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Minimum Residual Disinfectant Level (MinRDL) - The minimum level of residual disinfectant required at the entry point to the distribution system.

Nephelometric Turbidity Unit (NTU) - A measurement of water clarity due to the presence of suspended particulates.

pCi/L - picocuries per liter (a measure of radioactivity)

ppb - parts per billion, or micrograms per liter ($\mu\text{g/L}$)

ppm - parts per million, or milligrams per liter (mg/L)

Turbidity - A measure of the clarity of water related to its particle content. Turbidity serves as an indicator for the effectiveness of the water treatment process.

Total Organic Carbon (TOC) - A measure of the carbon content of organic matter. This measure is used to indicate the amount of organic material in the water that could potentially react with a disinfectant to form disinfection by-products.

2015 SAMPLING RESULTS TABLES

INORGANIC CONTAMINANTS

Contaminant	MCL	MCLG	Level Detected	Units	Sample Date	Violation	Sources of Contamination
Barium	2	2	.014	ppm	2015	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2*	4	0.62	ppm	2015	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

*EPA's MCL for fluoride is 4 ppm. However, Pennsylvania has set a lower MCL to better protect human health.

DISTRIBUTION DISINFECTANT RESIDUAL

Contaminant	MRDL	MRDLG	Highest Levels Detected	Range of Detections	Units	Sample Date	Violation	Sources of Contamination
Chlorine	4	4	1.13	0.72-1.13	ppm	2015	No	Water additive used to control microbes.

ENTRY POINT DISINFECTANT RESIDUAL

Contaminant	MinRDL	Lowest Level Detected	Range of Detections	Units	Sample Date	Violation	Sources of Contamination
Chlorine	0.2	.81	0.81-1.56	ppm	2015	No	Water additive used to control microbes.

DISINFECTION BY-PRODUCTS

Contaminant	MCL	MCLG	Average Level Detected	Range of Detections	Units	Sample Date	Violation	Sources of Contamination
Total Trihalo-methanes	80	NA	36.4	16.7-61.5	ppb	2015	No	By-product of drinking water chlorination.
Haloacetic Acids	60	NA	34.3	19.6-52.1	ppb	2015	No	By-product of drinking water chlorination.

LEAD AND COPPER

Contaminant	Action Level (AL)	MCLG	90% of Samples Were Less Than	Units	# of Sites Above AL	Violation	Sources of Contamination
*Lead	90% of samples must be below 15	0	0	ppb	0	No	Corrosion of household plumbing.
*Copper	90% of samples must be below 1.3	1.3	.079	ppm	0	No	Corrosion of household plumbing.

*Lead and copper results are from 2013. The next testing cycle will take place in 2016.

RADIOACTIVE CONTAMINANTS

Contaminant	MCL	MCLG	Level Detected	Units	Sample Date	Violation	Sources of Contamination
Radium-226	5	0	.117	pCi/L	2014	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.

MICROBIAL CONTAMINANTS

Contaminant	MCL	MCLG	% of Positive Samples	Violation	Sources of Contamination
Total Coliform Bacteria	At most 5% of monthly samples test positive	0	1.12	No	Naturally present in the environment.
Fecal Coliform Bacteria or E. coli	0	0	0	No	Human and animal fecal waste.

TURBIDITY

Contaminant	MCL	MCLG	Level Detected	Sample Date	Violation	Sources of Contamination
Turbidity	1 NTU for a single measurement	0	.281 NTU highest level detected	6/22/2015	No	Soil runoff.
	At least 95% of monthly samples <0.3 NTU		99.86% of samples <.3 NTU	12 months	No	

TOTAL ORGANIC CARBON

Contaminant	Range of % Removal Required	Range of % Removal Achieved	Number of Quarters Out of Compliance	Violation	Sources of Contamination
Total Organic Carbon	35-45	32.0-60.9	0	No	Naturally present in the environment.

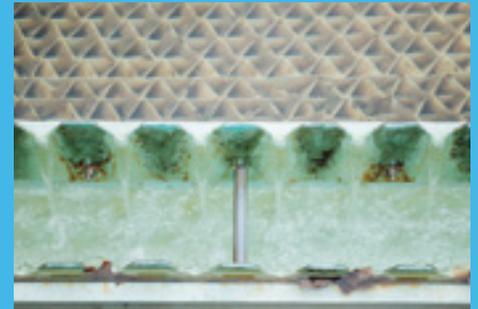
We had no detections of volatile organic compounds or synthetic organic compounds.

UNREGULATED CONTAMINANT MONITORING RULE 3

Starting in February 2015, Capital Region Water sampled quarterly for a list of 21 new unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these

contaminants is to help EPA decide whether the contaminants should have a standard. The following table lists the contaminants that we have detected in 2015. You can find the full list of unregulated contaminants online at www.epa.gov/dwucmr.

Unregulated Contaminant	Average Level Detected	Range of Detection	Units	Source of Contamination
Chromium-6	0.017	ND - 0.038	ppb	Naturally occurring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation.
Chromium	0.123	ND - 0.28	ppb	
Strontium	14.99	12.3 - 17.0	ppb	Naturally occurring elemental metal; historically used for faceplate glass of cathode-ray tube televisions to block x-ray emissions.



PARTICIPATE

This is your water system. Capital Region Water strongly encourages your participation in decisions that impact your water.

Capital Region Water's Board of Directors meetings are held at 6:00PM on the 4th Wednesday of every month at 212 Locust Street with the exception of November and December which are held on the third Wednesday.

888-510-0606

info@capitalregionwater.com

www.capitalregionwater.com

