

WATER QUALITY REPORT | 2016



A Message from the Director of Environmental Services and Water Reclamation

Dear Valued Customer,

The Prince William County Service Authority (PWCSA) is pleased to present our annual Water Quality Report. The Report provides the results of water quality testing performed during calendar year 2015 or the most recent regulatory period. This report is a requirement of the Federal National Primary Drinking Water Regulations and the Virginia Water Works Regulations. The quality of the water PWCSA provided to you met all federal and state water quality requirements.

We are committed to providing high quality water and reliable service to you and all our customers throughout Prince William County.

Sincerely,

A handwritten signature in black ink that reads "Evelyn Mahieu". The signature is written in a cursive, flowing style.

Evelyn Mahieu, Ph.D.

*Director, Environmental Services
and Water Reclamation Division*

What is the source of my drinking water?

During most of the year 2015, your water was drawn from four groundwater wells located within the Occoquan Forest subdivision. As of December 22, 2015, the Occoquan Forest water system has been connected to the PWCSA East System, which is supplied by the Frederick P. Griffith, Jr. Water Treatment Plant operated by Fairfax Water. Although the source of water is different, it must meet the same stringent standards as it has in the past. For more information about the water you now receive, please refer to the PWCSA East System 2016 Water Quality Report, available at www.pwcsa.org.

Source Water Assessment Summary



Drilled groundwater wells, such as those serving PWCSA customers in Occoquan Forest, can be susceptible to contamination if sources of contamination exist within the recharge area of the well and if geology and well construction were to allow contaminants to enter the source.

The Virginia Department of Health (VDH) conducted a Source Water Assessment of the Occoquan Forest wells that identified the Occoquan Reservoir and the Occoquan Forest Water Reclamation Facility as possible sources of contamination for the drinking water. However, the wells are constructed to a standard that guards the well water against contamination from activities above ground. Although the Occoquan Reservoir could have a direct hydraulic (water) connection to the wells, VDH has determined that the wells are not influenced by the Occoquan Reservoir. As mentioned elsewhere in this Report, PWCSA's water quality continues to meet all federal and state requirements.

PWCSA has an ongoing commitment to protecting its drinking water sources. Please report illegal dumping of waste motor oil and other potential contaminants immediately to PWCSA's Environmental Services and Water Reclamation Division (contact information below). Please keep the safety of your water supply in mind when applying fertilizer, herbicides and pesticides to your lawn and disposing of chemicals. If you would like more information about the sources of your water or a copy of the Source Water Assessment, please contact John DeRosa, Regulatory Affairs Officer, at **(703) 335-7976** or at **derosa@pwcsa.org**.

Water Treatment Process

The primary treatment objective is to remove naturally-occurring iron using filtration. This is a unique filtering process, which employs both mechanical filtration and chemical oxidation of the undesirable minerals. Chlorine is added to facilitate the process and for disinfection. PWCSA carefully monitors the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste. Finally, caustic soda (adjusts pH and alkalinity) and a corrosion inhibitor (protects pipes in the distribution system) are added before the water is delivered to customers.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as people with cancer undergoing chemotherapy, people 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 guidelines on appropriate means to lessen the risk of infection by microbial contaminants can be obtained by calling the EPA 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 comes primarily from materials and components associated with service lines and home plumbing. PWCSA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When water has been

sitting in pipes for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. 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 EPA Safe Drinking Water Hotline at **1-800-426-4791** or at

<http://www.epa.gov/safewater/lead>.



What is in my drinking water?

THE SOURCES OF 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.

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

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.

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

ORGANIC CHEMICAL CONTAMINANTS, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

PLEASE NOTE
that drinking 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.

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. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at **1-800-426-4791**.

REGULATED SUBSTANCES 2015: OCCOQUAN FOREST 6153575

SUBSTANCE (UNITS)	YEAR SAMPLED	MCLG	MCL	AMOUNT DETECTED	RANGE LOW-HIGH OR MAXIMUM	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2012	0	15	2	2	No	Erosion of natural deposits.
Beta Photon Emitters (pCi/L)	2012	0	50	2.7	2.7	No	Erosion of natural deposits.

Radiological substances such as Alpha Emitters and Beta Photon are monitored every 6 years in accordance with the Virginia Waterworks Regulations.

SUBSTANCE (UNITS)	YEAR SAMPLED	MCLG	MCL	AMOUNT DETECTED	RANGE LOW-HIGH OR MAXIMUM	VIOLATION	TYPICAL SOURCE
Haloacetic Acids [HAAs] (ppb)	2014	N/A	60	4.3	4.3	No	Byproduct of drinking water disinfection.
Total Trihalomethanes [TTHMs] (ppb)	2014	N/A	80	17.7	17.7	No	Byproduct of drinking water disinfection.

Disinfection byproducts such as HAAs and THMs are monitored every 3 years in accordance with the Virginia Waterworks Regulations.

SUBSTANCE (UNITS)	YEAR SAMPLED	MRDLG	MRDL	AMOUNT DETECTED	RANGE LOW-HIGH OR MAXIMUM	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)	2015	4.0	4.0	1.3	0.7 - 2.5	No	Water additive used to control bacteria and microbes.

SUBSTANCE (UNITS)	YEAR SAMPLED	MCLG	AL	90TH PERCENTILE DETECTION	SITES ABOVE AL	VIOLATION	TYPICAL SOURCES
Copper (ppm)	2013	1.3	1.3	0.82	0	No	Corrosion of household plumbing.
Lead (ppb)	2013	0	15	ND	0	No	Corrosion of household plumbing.

Lead and copper samples were collected in 2013. Lead and copper monitoring takes place every 3 years in accordance with Virginia Waterworks Regulations.

Table Definitions

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

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.

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

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

N/A: Not applicable; **ND:** Not detected at testing limit.

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

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

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

>: Greater than.

Biological Testing: The Service Authority is pleased to report that no coliform bacteria or E.coli was detected in our water system during the 2015 calendar year.

An Aquatic Adventure

Where does water go when it leaves your home?

The Prince William County Service Authority's "From Source to Tap and Back Again" educational exhibit at the Durward E. Grubbs Jr. Environmental Center answers that question and much more.

Situated next to the state-of-the-art laboratory on the campus of the H.L. Mooney Advanced Water Reclamation Facility in Woodbridge, the exhibit details the life cycle of treated water and wastewater as well as PWCSA's critical role in keeping waterways healthy. The Mooney Facility discharges cleaned wastewater into Neabsco Creek, which is a tributary of the Potomac River and part of the Chesapeake Bay Watershed.

With informative and interactive displays, the exhibit educates visitors about the many ways that PWCSA helps to protect the health of its customers and the environment every day.

The Grubbs Environmental Center was named in honor of Durward E. Grubbs, Jr., a founding member of PWCSA's Board of Directors. Grubbs spent 27 years on the Board, serving as chairman on multiple occasions.

The exhibit is free and open to the public for self-guided tours Monday through Friday from 9:00 a.m. to 12:00 p.m.





Learn More About Your Water

For more information about your drinking water, please contact John DeRosa, Regulatory Affairs Officer, at **(703) 335-7976** or at **derosa@pwcsa.org**. Regular monthly meetings of the PWCSA Board of Directors are held on the second Thursday of each month at 7:30 p.m. in the Board Room at PWCSA headquarters, 4 County Complex Court, Woodbridge, Virginia, 22192, adjacent to the County Stadium Complex and McCoart Building. Public hearings are advertised in newspapers of local circulation. For more information, please call **(703) 335-7900**.

Este informe contiene información muy importante sobre su agua potable. Para ver este reporte en español, visite el sitio web: www.pwcsa.org/water-quality/calidad-del-agua



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