CITY OF SUFFOLK
DEPARTMENT OF PUBLIC UTILITIES

2020 Water Quality Report — *Providing Quality Service for Quality Customers*

A LOOK AHEAD: WHALEYVILLE

On behalf of the City of Suffolk, I am pleased to present the Whaleyville Community Well System Consumer Confidence Report summarizing data from samples collected throughout 2019. This report details the water quality provided to our valued water utility customers. Mid and long range water planning continues to be a high priority of the City of Suffolk to meet our customers' needs for safe and plentiful water in a cost effective manner. The City's Department of Public Utilities has completed several projects designed to accomplish these needs.

VILLAGE OF WHALEYVILLE:

Water system improvements in the Village of Whaleyville were completed in 2010 and system reliability has been significantly improved. The concentration of fluoride has been lowered to levels well below the federally mandated maximum contaminant level (MCL) of 4.00 milligrams per liter (mg/L). This was accomplished with the installation of two new wells that have lower fluoride levels.

The Quality Control Division samples drinking water throughout the Whaleyville Community Well System. In 2019, Public Utilities installed sampling stations at representative locations in the water distribution system. This allows our technicians access to more sites for monitoring the quality of your water.

FUTURE INITIATIVES:

As a member of the Western Tidewater Water Authority (WTWA), the City of Suffolk has secured sufficient water sources to meet our customer's water demands through 2048. These raw water sources include permitted groundwater withdrawals and Water Sales Contracts with the Cities of Norfolk and Portsmouth. In regards to the Whaleyville system, the City continues to work closely with the Department of Environmental Quality (DEQ) for the re-issuance of the existing Whaleyville groundwater withdrawal permit.

The Department of Public Utilities and our staff continue our commitment to providing you with the highest possible water quality and customer service, in a cost effective manner. We continue to improve our sources of supply, our facilities and work processes to meet these commitments. Should you have any comments or questions in regard to this Consumer Confidence Report or in regard to the Department generally, please contact us at (757) 514-7001.

Sincerely,

Albert Moor II, P. E.,
Director of Public Utilities

CITY OF SUFFOLK COMMUNITY WELL SYSTEM OF WHALEYVILLE REPORT TO CONSUMERS ON WATER QUALITY FROM 2019

The City of Suffolk is pleased to provide a summary of drinking water quality data from 2019 in this report to consumers. Information has been included on the source of the water, its constituents and the treatment processes utilized by the City to ensure that our customers receive water of the highest quality possible produced by the most cost effective methods. All community waterworks are required by the Safe Drinking Water Act (SDWA) to forward a report known as a "Consumer Confidence Report" to all of their customers. These reports are designed to inform you about the quality of your drinking water.

The Whaleyville Community Well System continues to be served by well water from the Aquia Aquifer. Groundwater from this aquifer has been a valuable resource for many years and has characteristics that are typical to the Tidewater region.

SOURCE WATER ASSESSMENT

A Source Water Assessment was completed on March 2, 2018, for the City of Suffolk's Whaleyville Community Well System. The Assessment is available for review by contacting Vicki Smith, Laboratory Manager, at 1.757.514.7041.

IMPORTANT FLUORIDE INFORMATION:

Federal and state regulations recommend that fluoride be present in drinking water in amounts sufficient to prevent cavities. However, many deep-water wells in the Hampton Roads area have naturally occurring fluoride in concentrations that may cause mottling (brown staining) or pitting of children's permanent teeth. Fluoride concentrations in excess of 2.0 milligrams per liter (mg/L) may cause this type of damage. The damage is done to permanent teeth before they erupt from the gums and children remain at risk until the age of ten. If you have questions about the amount of fluoride in your drinking water, you may contact the City's Water Quality Laboratory at 1.757.514.7040.

DEEP WELL WATER IN HAMPTON ROADS:

Deep groundwater, in some areas of Hampton Roads, is characterized as being soft water, with elevated concentrations of fluoride and sodium. Soft water produces a generous lather with soaps and detergents allowing one to cut back on the amount of cleaning products used.

The elevated levels of fluoride and sodium are caused by geographical and geological factors. Most of the Hampton Roads' deep wells have elevated levels of fluoride and sodium due to stratifying layers of the aquifer (water bearing layer of permeable rock, sand or gravel).

The sodium in your drinking water is naturally occurring just as it is in table salt and baking soda. The majority of the sodium that an individual consumes is in the food they eat. The Environmental Protection Agency (EPA) has not set a maximum contaminant level (MCL) for sodium. Individuals with high blood pressure should consult with their physician about the amount of sodium to consume on a daily basis.

The fluoride in your drinking water is also naturally occurring. High concentrations of fluoride may cause mottling of children's permanent teeth and other osteopathic health concerns. There is an EPA mandated MCL for fluoride due to the health concerns associated with it.

LEAD AND COPPER MONITORING:

Lead can come from a variety of sources including: paint, pottery, gasoline, porcelain, and in some cases from plumbing fixtures in homes and buildings. Lead and copper from plumbing fixtures have been known to dissolve into the drinking water. The EPA and the Commonwealth of Virginia's Department of Health require us to have a Lead and Copper Monitoring Program for your drinking water to ensure that it is safe to drink. Lead and Copper Monitoring Programs for community well systems were implemented in 1993. These programs require that homes with lead service lines and homes having copper pipes with lead solder are targeted for sample sites. Our program utilizes volunteers from the community who provide us with samples from their homes. The EPA has established Action Levels of 15 ppb for lead and 1.3 ppm for copper.

Following the installation of two new wells in the Village of Whaleyville, the Virginia Department of Health required Lead and Copper sampling in two consecutive six month monitoring periods. Samples were collected in 2010, 2011, 2013, and 2016. All test results were well below the required action levels for lead and copper.

Please review the important information below about lead and drinking water.

IMPORTANT LEAD INFORMATION:

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. The City of Suffolk's Department of Public Utilities 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. If you are concerned about lead in your drinking 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 at 1.800.426.4791 or at http:www.epa.gov/safewater/lead.

ADDITIONAL HEALTH INFORMATION:

Drinking water, including bottled 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. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (1.800.426.4791).

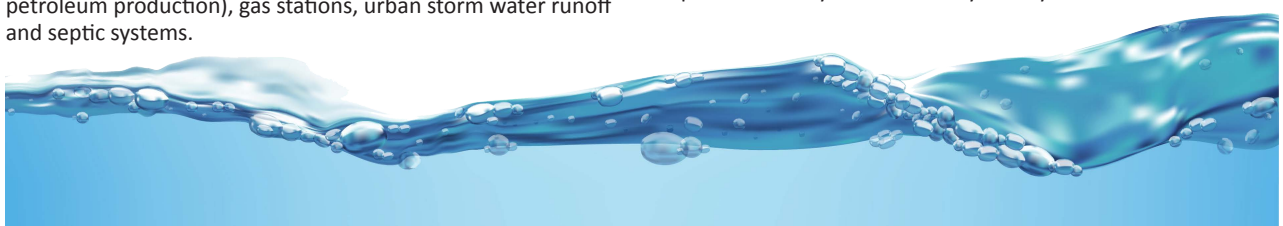
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material and can pick up substances resulting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

1. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
2. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
3. Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
4. Organic chemical contaminants can come from synthetic and volatile organics (by-products of industrial processes and petroleum production), gas stations, urban storm water runoff and septic systems.
5. 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 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.

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. EPA/Center for Disease Control (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 (1.800.426.4791).

The Department of Public Utilities performs testing on the Whaleyville Community Well System for other substances for which no standards have as yet been set. We take the initiative to watch for things that have concerned people in our area even though we are not required to do so. These extra steps are taken to ensure the highest quality of drinking water possible from your community well system.



WHALEYVILLE COMMUNITY WELL SYSTEM

REGULATED CONTAMINANTS
THESE CONTAMINANTS HAVE LIMITS CALLED MAXIMUM CONTAMINANT LEVELS (MCL), WHICH CANNOT BE EXCEEDED

INORGANIC

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Source	Health Effects	Violation
Barium	2017	ppm	2	2	0.005	ND - 0.005	Erosion of natural deposits.	N/A	NO
Fluoride	2018	ppm	4	4	Average Detected Level: 2.25	1.76 - 2.74	Erosion of natural deposits; Water additive, which promotes strong teeth.	N/A	NO
Chlorine	2018	ppm	MRDL: 4	MRDLG: 4	Your Water: 2.36	1.00 - 3.50	Water additive used to control microbes.	N/A	NO

FLUORIDE PUBLIC NOTICE TO CONSUMERS OF WHALEYVILLE WATERWORKS

This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 ppm of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community well system's two wells has a fluoride concentration of 1.76 to 2.74 ppm.
Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of permanent teeth. This problem occurs only in development of teeth before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.
Drinking water containing more than 4 ppm of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 ppm of fluoride, but we're required to notify you annually when we discover that the fluoride levels in your drinking water exceed 2 ppm because of this cosmetic dental problem.
For more information, please call Vicki Smith of the City of Suffolk at 757.514.7041. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call the NSF International at 1.877.NSF.HELP (1.877.673.4357).

RADIOLOGICAL

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Source	Health Effects	Violation
Gross Alpha	2017	pCi/L	15	0	6.9	3.2 - 6.9	Erosion of natural deposits.	N/A	NO
Combined Radium	2017	pCi/L	5	0	0.2	ND - 0.2	Erosion of natural deposits.	N/A	NO
Uranium	2017	pCi/L	30	0	0.6	<0.6 - 0.6	Erosion of natural deposits.	N/A	NO

LEAD AND COPPER
REQUIRED TO MEET ACTION LEVELS AT CUSTOMER'S TAP

Contaminant	Date Tested	Unit	Action Level	MCLG	90th Percentile	Number of Homes Excedding Action Level	Major Source	Health Effects	Violation
Copper	2019	ppm	1.3	1.3	0.093	0	Corrosion of household plumbing systems.	N/A	NO
Lead	2019	ppb	15	0	2	0	Corrosion of household plumbing systems.	N/A	NO

ORGANIC

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Source	Health Effects	Violation
Haloacetic Acids	2019	ppb	60	N/A	4	N/A	By-product of drinking water disinfection.	N/A	NO
Total Trihalomethanes	2016	ppb	80	N/A	0.9	N/A	By-product of drinking water disinfection.	N/A	NO

SECONDARY MONITORED CONTAMINANTS

Contaminant	Date Tested	Unit	SMCL	MCLG	Detected Level	Range	Major Source	Health Effects	Violation
Aluminum	2017	ppm	0.05 - 0.2	NONE	<0.050	N/A	Naturally present in the environment	N/A	NO
Chloride	2017	ppm	250	NONE	N/A	5.9 - 12	Naturally present in the environment	N/A	NO
Color	2017	pcu	15	NONE	N/A	10	Naturally present in the environment	N/A	NO
Copper	2017	ppm	1	NONE	N/A	0.002 - 0.028	Naturally present in the environment	N/A	NO
Iron	2017	ppm	0.3	NONE	N/A	<0.010 - 0.018	Naturally present in the environment	N/A	NO
pH	2017	s.u.	6.5 - 8.5	NONE	N/A	8.14 - 8.29	Naturally present in the environment	N/A	NO
Sulfate	2017	ppm	250	NONE	N/A	<5.0 - 7.5	Naturally present in the environment	N/A	NO
Sodium	2017	ppm	N/A	NONE	N/A	150 - 168	Naturally present in the environment	N/A	NO
Zinc	2017	ppm	5	NONE	N/A	<0.005 - 0.010	Naturally present in the environment	N/A	NO
Total Dissolved Solids	2017	ppm	500	NONE	N/A	426 - 448	Naturally present in the environment	N/A	NO

MICROBIAL SUBSTANCES

Contaminant	Date Tested	Unit	MCL	MCLG	Number of Positive Samples	Months Present	Major Sources	Violation
Fecal Coliform or E. Coli Bacteria	2017	N/A	1 Positive Sample per Month	0	0	N/A	Human and animal fecal waste	NO

THE CITY'S DISINFECTION PROCESS:

Note: The following disinfection process does not affect consumers at the Whaleyville Community Well System; this information is provided for your benefit.

The City of Suffolk's disinfection process is designed to improve drinking water quality. Disinfection is achieved by the use of chloramines, a process in which ammonia is added to chlorinated water. Chloraminated water is completely safe for drinking, cooking, and bathing and other normal water use. **Kidney dialysis patients and owners of fish and aquatic animals** will need to take special care with their particular uses of chloraminated water. Chloramines, like chlorine, must be removed from water before it is used for kidney dialysis, or for indoor and outdoor fish tanks and ponds. Dialysis patients should contact their physician or their local kidney dialysis center for specific instructions. Owners of fish and aquatic animals should contact their supplier or a local fish store for information.

DISINFECTION OF YOUR COMMUNITY WELL SYSTEM:

The Whaleyville Community Well System's primary disinfectant is chlorine. The system is frequently monitored to ensure adequate levels of disinfectant in the system.

WATER QUALITY LABORATORY:

The Department of Public Utilities' Water Quality Laboratory, a certified drinking water laboratory, performs hundreds of tests per day to ensure that the City has the safest drinking water possible. Quality control testing is performed on the City's water during all stages of the treatment process and the laboratory maintains an intensive program of chemical and bacteriological testing for all distribution systems. The Department of Public Utilities' staff works diligently to provide the City with safe, clean water.

CONTACT INFORMATION:

We will be happy to answer any questions about your water quality. Please call Vicki Smith, Laboratory Manager at 1.757.514.7041. You may consult our web site at www.suffolkva.us/233/Water-Quality for further information regarding the City's drinking water. You may also contact the U.S. Environmental Protection Agency's (EPA) web site at www.epa.gov/safewater/ for additional information about drinking water.

In order to receive information about the next opportunity for public participation in decisions about our drinking water, contact the Department of Public Utilities at 1.757.514.7000.

THE VIRGINIA DEPARTMENT OF HEALTH, OFFICE OF DRINKING WATER, HAS APPROVED THIS WATER QUALITY REPORT.

AN EXPLANATION OF WATER QUALITY DATA TABLES:

This report is based on tests conducted during the calendar year of 2019, or from the most recent testing done in accordance with regulations. There are many tests performed during the year to meet the requirements of the EPA and the Virginia Department of Health and to ensure that your water is safe to drink. The EPA dictates that water systems report only the contaminants detected. The majority of the required tests performed on each individual community well system have results that are below detectable levels. The following terms will help you to have a better understanding of the results presented in the Water Quality Data Tables.

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

Aquifer: Water bearing layer of permeable rock, sand or gravel.

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): 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.

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

N/A (Not Applicable)

ND (Not Detected): Laboratory analysis indicates that the contaminant is not present or was below the level of detection.

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

ppb (parts per billion): 1 part per billion corresponds to 1 gallon of water in 1 billion gallons of water (comparable to 1 minute in 2,000 years).

ppm (parts per million): 1 part per million corresponds to 1 gallon of water in 1 million gallons of water (comparable to 1 minute in 2 years).

SMCL (Secondary Maximum Contaminant Level):
Non-mandatory water quality standards established only as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor; are not considered to present a risk to human health.

>: Greater than

<: Less than