RICHMOND'S QUALITY WATER REPORT

INFORMATION ABOUT YOUR DRINKING WATER

PWSID# KY0760370

BILLING INFO 859-623-2323

RICHMOND UTILITIES
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RICHMOND, KY 40475

Richmond Utilities consistently strives to produce water of high quality. We are pleased to report that we have not had any violations of a contaminant level. This brochure is a summary of the quality of water provided to our customers last year (2017). It is also a record reflecting the hard work by our employees to continue to produce water which is equal to or better than state and federal regulations for drinking water.

Included in this report are the details of where your water comes from, what it contains, and how it compares to the standards set by regulatory agencies. Richmond Utilities is committed to providing you with information about your water, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards.

We work around the clock to provide top quality water to every tap. We ask all our customers to protect our water sources, which are the heart of our community and our children's future.

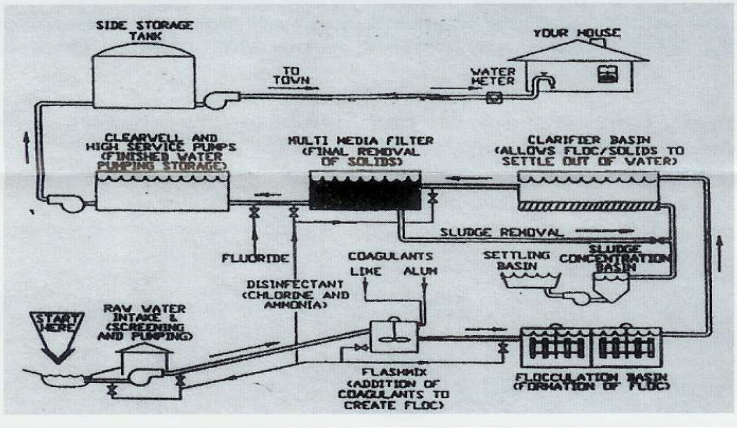
Water Process Improvements in 2017

1. **Replaced 2 inch line on East Walnut**
2. **Updated distribution telemetry system**
3. **Replaced 2500 feet of 6 inch line on Westover with 8 inch line**

Plans for 2018

1. **Install generator at Water Treatment Plant**
2. **Install Automatic Read Meters in the Distribution system**

Representation of The Treatment Process



En Español

Este folleto le muestra como que Richmond Utilities continua proveyéndolo a usted de un servicio de agua segura y confiable. Si tiene usted preguntas acerca de la calidad del agua, llame a Lonnie Banks, al teléfono 858-623-2323 durante las horas regulares de oficina.

Sources of Richmond's Drinking Water

Our source water is the Kentucky River. It is a surface water source. Sources of drinking water, both tap and bottled water, include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and radioactive material, and can be polluted by animals or human activity. Several contaminants that may be found in untreated source water include: biological contaminants (such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife); inorganic contaminants (such as salts and metal, that can be naturally-occurring or result from urban stormwater runoff, 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 stormwater runoff, and residential uses); organic chemicals (including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems); and radioactive materials (which can be naturally-occurring or be the result of oil and gas production and mining activities).

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits in bottled water that shall 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 U.S. Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

The Safe Drinking Water Act Amendments of 1996 require every water system to prepare a source water assessment that addresses the system's susceptibility to potential sources of contamination. This study indicates that our susceptibility is generally moderate. Forested areas comprise 3% or more of the land areas within this zone. Logging within these areas could result in soil erosion, and therefore non-point source pollution, if Best Management Practices (BMP) are not carefully followed. Similarly, areas of row crops pose a potential threat to Richmond's intake, as tillage, the application of pesticides, and the application of fertilizers could become non-point-source pollutants if BMP's are not carefully followed. Two bridges, a segment of the CSX railroad, areas of row crops, and an active Superfund Site also occur within close proximity to the water source. Other potential contaminant sources within Richmond's Zone of Potential Impact include major roads, sewer lines, abandoned and non-permitted oil and gas wells, Superfund sites and pasturelands. The plan is available for review during regular business hours at the Richmond Utilities Office at 300 Hallie Irvine Street.

Special Info Available: *"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 healthcare providers. Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (800-426-4791)."*

For questions about the quality of our drinking water, or of this report, contact Lonnie Banks at the water office. The telephone number is (859) 623-2323. Our board meetings are also open to the public, and we welcome your comments. The meetings normally take place on the 4th Wednesday of each month at 8:30 A.M. These meeting are held at our Utility Office located at 300 Hallie Irvine Street.

TREATED WATER QUALITY SUMMARY

Detected Substance (Date)	Highest Level Detected (Range of Detection)	Highest Level Allowed (EPA's MCL)[1]	Ideal Goals (EPA's MCLG)[2]	Sources of Contaminants
Regulated at Treatment Plant				
Arsenic (4/4/17)	.3 ppb	10 ppb	0 ppb	Erosion of Natural Deposits
Nickel (4/4/17)	0.002 ppm	.1 ppm	0 ppm	Erosion of Natural Deposits
Barium (4/4/17)	0.021 ppm (NA)	2 ppm	2 ppm	Erosion of Natural Deposits
Fluoride (4/17)	0.4 ppm	4 ppm	4 ppm	Natural Geology/Sediment
Nitrate (10/19/16)	0.2 ppm (NA)	10 ppm	10 ppm	Erosion of Natural Deposits
Combined Radium (1/3/17) (measured as Radium 228)	1.25 pCi/L (0-1.25)	5 pCi/L	0 pCi/L	Erosion of Natural Deposits
Regulated at Customer's Tap				
Copper (9/16)	0.176 ppm (0.097-90th percentile)	1.3 ppm (Action Level[5])	1.3 ppm	Consumer plumbing & Service connection
Lead (9/16)	4ppb (0-90th percentile)	15 ppb (Action Level)	0 ppb	Consumer plumbing & Service Connection
Regulated in the Distribution System				
Total Trihalomethanes	73ppb avg (5-115)	80 ppb	0 ppb	Disinfection interaction
Haloacetic Acids	34ppb avg (5-55)	60 ppb	0 ppb	Disinfection interaction
Chlorine/Chloramine	1.28ppm avg (1.03-1.62)	MRDL[3] = 4.0 mg/L	MRDLG[4] =4.0 mg/L	Added to control microbes
Particulate Test Results				
Turbidity (12/17/17)	0.15 NTU (≤.15 100%)	Treatment Technique[6]	None	Natural River Sediment
Total Organic Carbon	1.28 ratio avg (1.0-2.35)	Treatment Technique[6]	None	Natural River Sediment

≤.15 100 % indicates that 100 % of the time, the produced water was at or below the maximum allowable level for turbidity. Turbidity has no health effects, but it is used to monitor the effectiveness of the treatment process. However, turbidity can interfere with disinfection and provide an environment for microbial growth. The allowable level is < (less than) .3 NTU 95% of the time or no more than 1 NTU in any representable sample. The test unit NTU actually is a measurement of the clarity of the water. A turbidity value of 5 NTU would be just slightly cloudy in appearance.

The treatment technique for Total Organic Carbon (TOC) is based on the lowest running average for the monthly ratios of the % TOC removal required. A minimum ratio of 1.00 is required to meet this treatment technique. We are pleased to note that we did achieve this removal rate.

Listed above are the contaminants detected in Richmond's drinking water during 2017 or as otherwise noted. Samples for total coliform are monitored on a monthly basis. There were no total coliform positive samples in 2017. NOT LISTED are the non-detected values of the other contaminants monitored for in 2017. The results of all monitoring performed are available at the water office.

DEFINITIONS:

[1]Maximum Contaminant Level (MCL)
"The highest level of contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

[2]Maximum Contaminant Level Goal (MCLG)
"The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety."

[3]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."

[4]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."

[5]Action Level-The concentration of a contaminant which, if exceeded,, triggers treatment or other requirements that a water system must follow.

[6]Treatment Technique- A required process intended to reduce the level of a contaminant in drinking water.

EPA-Environmental Protection Agency
NA-indicates that only one test was performed . A range does not apply.
ND- Not detected. Result was below instrument detection limit.
Pci/l- a measure of radioactivity
NTU- Standard turbidity unit
ppm- part per million (equivalent to one minute in 2 years).
ppb- part per billion (equivalent to one minute in 2000 years).
Ratio- For TOC's, this is obtained by dividing the TOC of the untreated water by the TOC of the treated water.

Lead and Copper values are based on the 90th percentile of monitoring results. We are please to report that no sample result exceeded the action level.

Information About 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. Your local public water system is responsible for providing high quality drinking water, but can not 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 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 or at http://www.epa.gov/safewater/lead.

What is Cryptosporidium?
Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal.
Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks.
People with severely weakened immune systems have a risk of developing life-threatening illness. We encourage such individuals to consult their doctor regarding appropriate precautions to take to avoid infection.
Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.
The U.S. EPA issued a rule in January 2006 that requires systems with higher Cryptosporidium levels in their source water to provide additional treatment. To comply with this rule, Richmond Utilities conducted 24 consecutive months of monitoring for Cryptosporidium in our raw water sources. We detected the no Cryptosporidium organisms in the Kentucky River during that testing, but we did have a detect of 1 organism in July 2015. Based on the results of our Cryptosporidium monitoring, no additional treatment will be required by the U.S. EPA regulation.

Health Effects

Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Haloacetic acids, or HAA. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TTHMs [Total Trihalomethanes]. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Chlorine. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Total organic carbon. Total organic carbon (TOC) has no health effects. However, total organic carbon, provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes, or THMs, and haloacetic acids, or HAAs. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Beta/photon emitters. Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.

Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Combined Radium 226/228. Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.