Chesapeake Ranch Water Company's Annual Water Quality Report

For the Calendar Year 2014

Maryland Public Water System #040004

The Chesapeake Ranch Water Company (CRWC) is pleased to present this report to its member subscribers. In the last year, the Board of Directors and staff have been busy at the job of protecting, defending, and preserving your good water supply.

Safety of Your Drinking Water

In calendar year 2014 your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. CWA vigilantly safeguards its water supplies and strives to provide its members the best quality water possible.

Arsenic

CRWC currently monitors arsenic at the points of entry from Well #1 and Well #3. This is an increased monitoring condition due to the level of arsenic in the raw water. At Well #1 the water is blended with water from other wells to bring it into compliance. Well #3 is now equipped with an arsenic removal system which is working to maintain compliance.

Water Treatment Plant Construction

Due to the increase in arsenic coming from Well #3A, which is the chief contributor to total arsenic content in the system, and the treatment technique (TT) employed at Well #1, the Board of Directors of CRWC/CWA determined that it will be necessary to provide arsenic removal. The facility was constructed on the existing Well #3A property and was commissioned in June of 2014. Arsenic is now extracted from the water and removed to a land fill in accordance with MDE and EPA regulation. The level of arsenic at this location has been slowly increasing since monitoring first began in 2002. Although not in violation at this time, the four quarters ending in September 2013 did produce an average result that exceeded the maximum allowable contaminant level resulting in a violation notice for the running four quarter period ending on September 30, 2013.

Operation and maintenance costs are being monitored but appear below $1.00 per 1000 gallons as expected. At this time, the CRWC Board believes that the operation of this plant may be incorporated into the general operating scheme in such a way that the existing rates will not require modification.

Additional Information for Arsenic

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. CWA employs a treatment technique (TT) to maintain the lowest possible levels of arsenic from our groundwater systems well below the maximum contaminant level. A violation would occur if the running average of any 4 quarterly samples exceeded the MCL.

If you have a medical condition do you need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Giardia and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does our water come from?

Your water comes from deep wells in the Aquia aquifer formation. The Aquia aquifer is the primary source of drinking water for the majority of public water systems in Calvert and St. Mary's counties.

Are there contaminants in my drinking water?

All 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). In order to ensure that tap water is safe to drink, EPA prescribes regulations that 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.

How can I get involved?

Drinking water supply and treatment is everyone's concern. The Board of Directors encourages everyone to get involved in issues concerning your drinking water supply system. The best way to start getting involved is to get informed. Please feel free to contact our office for more information on how you can get involved. Just do it.

Test Information

The table below lists the drinking water contaminants that were detected and that are applicable for the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Attached to this Water Quality Report is the most recent test information containing all of the elements and compounds monitored by this system the Maryland Department of Environment, and the Environmental Protection Agency.

Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report.

Important Water Quality Information for 2013

Contaminant	MCLG	MCL	Range LOW	Range HIGH	Annual Average	PERIOD SAMPLED	VIOLATION	POSSIBLE SOURCE
Inorganic Contaminants **								
Arsenic (mg/L)								
Well #1	0	.010	0.084	0.0112	.0099	2014	NO	Natural Deposits
Well #2A	0	.010	.0047	.0047	.0047	2012	NO	Natural Deposits
Well #3A	0	.010	0*	0.099	0.048	2014	NO	Natural Deposits
Well #4	0	.010	.0033	.0033	.0033	2012	NO	Natural Deposits
Lead (mg/L)	0	15	0	0	NA	2014	NO	Corrosion of Plumbing
Copper (mg/L)	0	1300	0	49	NA	2014	NO	Corrosion of Plumbing
Fluoride (mg/L)	1	4	.29	.44	NA	2014	NO	Natural Deposits
Sodium (mg/L) (unregulated)	----	None	38	44	NA	2014	NO	Natural Deposits
Radionuclide								
Gross Beta (pCi/L)								
Well #1	0	50	4.3	4.3	NA	2009	NO	Decay of Natural Deposits
Well #2	0	50	5.9	5.9	NA	2011	NO	Decay of Natural Deposits
Well #3	0	50	6.0	6.0	NA	2009	NO	Decay of Natural Deposits
Well #4	0	50	2.0	4.8	NA	2011	NO	Decay of Natural Deposits

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Important Water Quality Information for 2014

Contaminant	MCLG	MCL		SAMPLE RESULT	PERIOD SAMPLED	VIOLATION	POSSIBLE SOURCE
Stage 2 Disinfection Byproducts**							
Well #1							
Trihalomethane (ppb)	0	80		6.2	2014	NO	Disinfection Byproduct
Total HAAs (ppb)	0	60		1.0	2014	NO	Disinfection Byproduct
POACRE ADMIN							
Total Trihalomethane (ppb)	0	80		5.9	2014	NO	Disinfection Byproduct
Total HAAs (ppb)	0	60		2.5	2014	NO	Disinfection Byproduct
Bacteriological							
Coliform Bacteria	0	0		0	2014	NO	Fecal matter

* Well #3 not in service due to plant construction

** Additional test information attached

Additional Information for Disinfection Byproducts

The EPA has promulgated the Stage 1 and Stage 2 Disinfection Byproduct Rule (DBPR). This rule affects all drinking water systems that disinfect. CWA has submitted the required documentation to the EPA and MDE in the form of a system management plan (SMP) that will require increased testing until such time regulators decide to place the system on reduced monitoring. Tests conducted to date indicate that there is little potential for byproducts contamination in this system due to its groundwater source. DBP's are most problematic in

systems that utilize chlorine disinfectant with surface water containing organic matter. The CWA does not use surface water sources.

Fluoride

Fluoride is a naturally occurring element and is present in your drinking water. Tests show that the level of fluoride in your drinking water is less than 0.5 ppm.

Lead

There is no health threat from lead in CRWC drinking water.

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. CRWC 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 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 www.epa.gov/safewater/lead.

Additional test information appears in tabular form in the attached appendix which includes an extended list of unregulated contaminants which are periodically tested.

Paper copies of all these reports are available from the CRWC offices at POB 476, 11560 H.G. Truman Rd, Lusby, Md 20657 by request.

Unit Descriptions & Acronyms

Unit/Acronym	DEFINITION
ppm	1 part per million parts water, also expressed as milligrams per liter (mg/l)
mg/L	1 milligram per liter
ppb	1 part per billion parts water, also expressed as micrograms per liter (µg/l)
ug/L	1 microgram per liter
pCi/L	pico-Curies per liter (a measure of radiation
N/A	Not Applicable
ND	Not Detected
NR	Monitoring not required

DBP	Disinfection Byproduct
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.
Range	The minimum and maximum levels of any measured contaminant as recorded during the period of sampling.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other prescribed actions or requirements which a water system must follow.
MRDLG	Maximum residual disinfection 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.
MNR	Monitored But Not Regulated
MPL	State Assigned Maximum Permissible Level

If you have questions regarding this Water Quality Report you may contact the following:

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