

Annual Drinking Water Quality Report

The Town of Cape Charles

INTRODUCTION

This Annual Drinking Water Quality Report for 2005 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report, please contact Mike Thornes, the Director of Utilities, at (757) 331-1018.

If you want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact the Town Office at (757) 331-3259.

The times and location of regularly scheduled Town Council meetings are as 7:30, the second Tuesday of each month, at the Town Hall, at 2 Plum Street (the second floor of the fire house.)

GENERAL INFORMATION

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

All 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

SOURCE and TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater, provided by two deep wells. Both wells are located inside the Cape Charles town limits.

Before being sent to you, the consumer, the water is treated to make it more palatable. First, it goes through Greensand filtration to remove excess Iron and Manganese. Potassium Permanganate is also added to assist this process. As groundwater is naturally quite hard, your drinking water is then softened via Ion Exchange. The water is then disinfected through chlorination, and finally it is fluoridated.

The Virginia Department of Health conducted a Source Water Assessment of the Town of Cape Charles Waterworks in 2001. The East Well and West Well were determined to be of low susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the Source Water Assessment area, an inventory of known Land Use Activities utilized at Land Use Sites in Zone 1, Susceptibility Explanation Chart, and Definitions of Key Terms. The report is available by contacting your waterworks system owner/operator at the phone number or address included in the CCR.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The table on the next page shows the results of our monitoring for the period of January 1st to December 31st, 2005. In the table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

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

Maximum Contaminant Level, or 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, or 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, or 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, or MRDLG - The level of a drinking water disinfectant below which there is not known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

WATER QUALITY RESULTS

Regulated Contaminants

Contaminant	MCLG	MCL	Level Found	Range	Violation	Sample Date	Contamination Source
Fluoride	4ppm	4ppm	0.93ppm	0.76-0.95 ppm	No	monthly sample	Water additive which promotes strong teeth.
Gross Beta	0	***50pCi/L	4.0pCi/L	n/a	No	11/14/01	Decay of natural and man-made deposits.
Gross Alpha	0	15pCi/L	1.0pCi/L	n/a	No	11/14/01	
Lead*	0	15ppb (AL)	6.2ppb	0-29.4ppb	No	10/02	Corrosion of household plumbing systems; erosion of natural deposits.
Copper**	1.3ppm	1.3ppm (AL)	0.193ppm	0-0.21 ppm	No	11/16/05	Same as above
Total Xylenes	10ppm	10ppm	0.5ppb	n/a	No	10/28/05	Discharge from petroleum or chemical sources
TTHMs [Total Trihalometnanes]	0	80ppb	64.1ppb	n/a	No	09/01/05	By product of drinking water chlorination

• Copper. The Copper level was below the Action Level at all ten sites.

• ***The MCL for beta particles is 4 mrem/year, but the EPA considers 50pa/l to be the level of concern.

Unregulated Contaminants

Contaminant Level	Range	Violation Found	Sample Date	Contamination Source
-------------------	-------	-----------------	-------------	----------------------

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

The state 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, though accurate, is more than one year old.

MCL's are set at very stringent levels by the U.S. Environmental Protection Agency. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-a-million chance of having the described health effect for other contaminants.

Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.,

ADDITIONAL HEALTH INFORMATION

In addition to testing for dissolved substances, the Water Department also takes monthly samples for bacteriological contaminants, such as fecal coliforms. Your drinking water has not had a positive test for bacterial contamination in over four years.

The sodium level in your drinking water was found to be 127ppm. There is presently no established standard for sodium in drinking water. Water containing more than 270ppm of sodium should not be used as drinking water by persons whose physician has placed them on moderately restricted sodium diets. Water containing more than 20ppm should not be used as drinking water by persons whose physician has placed them on severely restricted sodium diets.

This Drinking Water Quality Report was prepared by the Cape Charles Water Department. If you have any further questions, please contact us by phone at (757) 331-1018.
Cape Charles Water Treatment Plant
2140 Stone Road
Cape Charles,VA