

Annual Drinking Water Quality Report

Parham Landing

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year **2009** 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:

Lawrence A. Dame, Director of Public Utilities @ (804) 966-9678

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

Lawrence A. Dame Director of Public Utilities @ (804) 966-9678

The times and location of regularly scheduled board meetings are as follows:

The second Monday of every month.

GENERAL INFORMATION

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: (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 stormwater 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, urban stormwater runoff, and residential uses; (4) Organic chemical contaminants, 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; (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 regulations establish limits for contaminants in bottled water which must provide the same protection for public health

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(S) and TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is groundwater, as described below:

Well #1 is located on Route 30 just south of Polish Town Road (Rt. 634) and Well #2 is located on Route 33 just east of the Routes 249, 33 and 30 intersection.

Is there any treatment of your drinking water supply? (x) Yes () No If yes, it is described below:

Water from each well is disinfected with sodium hypochlorite solution and poly-phosphate is added as a corrosion control inhibitor.

The Virginia Department of Health conducted a source water assessment of the two wells in 2002. The wells were determined to be of low susceptibility to contamination, using criteria developed by the State in its EPA-approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last 5 years from the date of the assessment.

DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The tables on the next few pages show the results of our monitoring for calendar year 2009. In the tables 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:

Non-detects (ND) - lab analysis indicates that the contaminant is not present

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.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

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.

Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.

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.

Millirems per year (mrem/year) – a measure of radiation absorbed by the body

Maximum Residual Disinfectant Level (MRDL) – the maximum allowable level of the residual of a disinfectant in the distribution system.

Maximum Residual Disinfectant Level Goal (MRDLG) – the goal maximum level of the residual of a disinfectant in the distribution system.

WATER QUALITY RESULTS

I. Lead and Copper Contaminants

Contaminant	Units of Measurement	Action level	MCLG	Results of samples for the 90 th Percentile Value	Action Level Exceedance (Y/N)	Month of Sampling	# of Sampling Sites Exceeding Action level	Typical Source of Contamination
Lead	ppb	15	0	10	No	9/07	0	Corrosion of household plumbing system; Erosion of natural deposits
Copper	ppm	1.3	1.3	0.379	No	9/07	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

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. New Kent County 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 <http://www.epa.gov/safewater/lead>

II. Other Chemical and Radiological Contaminants

Contaminant	Units of Measurement	MCLG	MCL	Level Detected (ppm)	Violation (Y/N)	Range of Detection at Sampling Points	Date of Sample	Typical Source of Contamination
Combined Radium	pCi/L	0	5	0.3	No	0.2-0.3	11/02	Erosion of Natural Deposits
Gross Beta	pCi/L	0	50	4.0	No	3.4 – 4.0	11/02	Decay of natural and man-made deposits
Fluoride	ppm	4	4	2.45	Yes	2.38-2.45	9/09	Erosion of natural deposits
Trihalomethanes	ppb	80	80	13	No	N/A	8/07	By-product of naturally occurring organic matter and chlorine added to the water
Haloacetic Acids	ppb	60	60	1	No	N/A	8/07	By-product of naturally occurring organic matter and chlorine added to the water

- Since Radium-226 is an alpha emitter, Gross Alpha Activity is used in place of Radium-226 when Radium-226 has not been analyzed.
- * The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

III. Unregulated Contaminants

Contaminant	Units of Measurement	Level Detected	Violation (Y/N)	Range of Detection at Sampling Points	Date of Sample	Typical Source of Contamination
Sulfate	ppm	19	No	14.2-19	9/09	EPA and State Regulations require us to monitor this contaminant while EPA reconsiders its MCL.

IV. Disinfectants

Disinfectant	Units of Measurement	MRDLG	MRDL	Level Detected (Annual Average)	Violation (Y/N)	Range of Detection at Sampling Points	Year	Typical Source
Chlorine	ppm	4	4	0.35	No	0.22 – 0.58	2009	Water additive used to control microbes

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. The tables list 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 water quality results in the tables are generally from testing done in 2009. However, 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 the data in Tables I and II, though accurate, is more than one year old.

ADDITIONAL HEALTH INFORMATION

Samples collected on September 1, 2009 indicated that the well water contains sodium at concentrations ranging from 190-214 mg/l. Persons on a strict sodium intake diet should not drink water containing a sodium concentration exceeding 20 ppm.

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.

VIOLATION INFORMATION

Did any MCL or TT violations occur during the year? () yes (x) No

If yes, an explanation of the violation, including length, potential health effects, and actions we are taking to correct the violations, is as follows:

Did any monitoring, reporting, or other violations occur during the year? () yes (x) No

If yes, an explanation of the violation, including potential adverse health effects and steps we are taking to correct the violation, is as follows:

This Drinking Water Quality Report was prepared by:

Department of Public Utilities
7051 Poindexter Road
New Kent, VA 23124
(804) 966-9678

PARHAM LANDING
FLUORIDE PUBLIC NOTICE LETTER

Dear user,

The U.S. Environmental Protection Agency requires that we send you this notice on the level of fluoride in your drinking water. The drinking water in the Parham Landing Waterworks has a fluoride concentration of 2.45 milligrams per liter (mg/l) at Well #1 and 2.38 mg/l at Well #2.

Federal regulation requires that fluoride which occurs naturally in your water supply not exceed a concentration of 4.0 mg/l in drinking water. This is an enforceable standard called a Primary Maximum Contaminant Level (PMCL) and it has been established to protect the public health. Exposure to drinking water levels above 4.0 mg/l for many years may result in some cases of crippling skeletal fluorosis, which is a serious bone disorder.

Federal law also requires that we notify you when monitoring indicates that the fluoride in your drinking water exceeds the Secondary Maximum Contaminant Level (SMCL) of 2.0 mg/l. This SMCL is intended to alert families about dental problems that might affect children under nine years of age.

For further information, you may contact the following individual:

Mr. Lawrence A. Dame
Director of Public Utilities
County of New Kent
7051 Poindexter Road
New Kent, Virginia 23124
(804) 966 9678