Pulaski County
Public Service Authority

PWSID # 1155641

2005 Water Quality Report

INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 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 and 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:

Eddie Fisher, Water Treatment Plant Superintendent, at (540) 980-7749

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

The 2nd Monday of every month,
9:00 am in the
Pulaski County Administration
143 Third Street, NW
Pulaski, VA 24301

VIOLATION INFORMATION

Did any MCL or TT violations occur during the year?
( ) Yes (X) No

The water quality results in table I&II are from testing done in 2005. 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 our data, though accurate, is more than one year old.

MCLs 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 described health effects for other contaminants.

ADDITIONAL HEALTH INFORMATION

Certain contaminants (such as, arsenic, nitrate, and lead), if present in your drinking water, may be of special concern to consumers. Are any of those contaminants present at levels of concern that must be reported? ( ) Yes (X) No

ADDITIONAL INFORMATION ABOUT YOUR WATERWORKS

The Pulaski County P.S.A. Water Treatment Plant is a class II Facility, located on Water Plant Road in the Draper Section of Pulaski County. The Plant is rated at 3.0 million gallons per day and current output is approximately 2.15 million gallons per day. The Plant is staffed 15.5 Hours per day, 365 Days a year by (6) highly trained, state licensed operators, whose goal is to provide a safe and abundant supply of drinking water at the lowest possible cost and at the highest level of quality in the industry. Delivering this product to your tap requires teamwork from operators at the water supply treatment facility, from laboratory analyst performing complex analyses on finished water and from public works employees working to keep the distribution system properly maintained. Our mission, as a Customer - focused leader in the drinking water industry, is to provide a safe and abundant supply of drinking water, and to enhance the climate for long-term economic and community development.

GENERAL 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 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. Immunocompromised 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).

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) Presticides 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 precribes 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.

SOURCES AND TREATMENT OF YOUR DRINKING WATER

The source(s) of your drinking water is (x) surface water ( ) groundwater ( ) groundwater under the direct influence of surface water as described below:

The source of supply for the Pulaski County Public Service Authority Water Treatment Plant is Claytor Lake. The raw water intake is located in the Draper section of Pulaski County.

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

The raw water is Chlorinated for disinfecting purposes and fluoridated, to help prevent tooth decay, when it first enters the water treatment plant. It is then mixed with lime, to adjust the pH and alum, to coagulate particles. After mixing, the water flows into settling basins where the particles coagulate, become heavy, and settle to the bottom of the basins. The clearer water flows through filters, which remove the remaining particles. Then it is treated in the clearwell with lime, to adjust pH for corrosion control, sodium polyphosphate, for sequestration of iron and manganese, and chlorine, to maintain a free chlorine residual, before being distributed to our customers throughout the system. All of these processes work together to remove the physical, chemical, and biological contaminants to make the water safe for drinking.

The Pulaski County P.S.A. also has the ability to purchase water from the Radford Army Ammunition Plant to help serve the Belspring, Parrot and Fairlawn areas. This connection is thru a pump station located on Gate 10 road.

A source water assessment of our system was conducted in 2002 by the Virginia Department of Health. The New River was determined to be high susceptibility to contamination using 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 of concern, and documentation of any known contamination within the last 5 years. The report is available by contacting your water system operator at the phone number or address given elsewhere in this drinking water quality report.

WATER QUALITY RESULTS

Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected	Violation (Y/N)	Range	Date of Sample	Typical Source of Contamination
Nitrate + Nitrite (ppm)	10	10	0.98	N	0.82 – 0.98	01/13/2005 & 03/07/2005	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	0.98	N	ND – 0.98	01/13/2005 & 01/18/2005	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Alpha Emitters (pCi/l)	0	15	0.4	N	0.3 – 0.4	07/2001 & 03/2003	Erosion of Natural Deposits
Combined Radium (pCi/l)	0	5	2.0	N	1.2 – 2.0	07/2001 & 03/2003	Erosion of Natural Deposits
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.28	N	0.28 – 2.2	2005	Water additive used to control microbes
TOC [Total Organic Carbon]	NA	TT, met when ≥1	0.95*	N	0.65 – 1.36	2005	Naturally present in the environment
HAA5s [Haloacetic Acids] (ppb)	NA	60	40	N	20 – 59	2005	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	NA	80	48	N	20 – 108	2005	By-product of drinking water disinfection
Turbidity (NTU)	NA	TT, 1 NTU Max	0.50	N	0.02 – 0.50	2005	Soil runoff
		TT, •0.3 NTU 95% of the time	99%	N	N/A		

* In 2005, the PSA water system had an minimum TOC Removal Ratio of 0.95 calculated quarterly as a running annual average. However, the maximum treated water TOC was 0.998 mg/L calculated quarterly running as a annual average. Therefore, your waterworks is in compliance with the treatment technique for control of disinfection byproduct precursors by meeting one of the alternative compliance criteria – having treated water TOC < 2.0 mg/L calculated quarterly as a running annual average.

Lead and Copper Contaminants

Contaminant (units)	MCLG	Action Level	90th Percentile	Date of Sampling	# of Sampling Sites Exceeding Action Level	Typical Source of Contamination
Lead (ppb)	0	AL = 15	6	09/2003	1	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

The Radford Army Ammunition Plant 4330 was issued a Tier III Notice of Violation (NOV) for failure to monitor for Total Organic Carbon and Alkalinity in August 2005 during routine monthly sampling. As a result, we are required to provide public notification to all consumers by November 8, 2006. the attached Notice to Consumers is provided for more information as required by the Virginia Department of Health. This violation occurred in August 2005. We have been collecting the required monthly samples since. There were no adverse health effects associated with this failure to monitor.

The "Entry Point" samples (Nitrate+Nitrite, Fluoride, Alpha Emitters, Combined Radium, TOC, and Turbidity is a combination of both the Arsenal and the PSA...it basically shows the maxium level detected for both waterworks {minimum level detected for TOC}...and the range includes both waterworks). The distribution system samples (Chlorine, HAA5s, TTHMs, Lead, and Copper are only the results for the PSA).

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.

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 contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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.

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

ppb = Parts per billion.

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

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.

Maximum Residual Disinfectant Level Goal or MRDLG- the level of 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.

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 contaminates.