

# Town of Dublin

# Water Department

## 2014 Water Quality Report

### INTRODUCTION

This Annual Drinking Water Quality Report for calendar year 2014 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).

Since September 11, 2001, we have made efforts to up-grade the security of our water system. Watchful neighbors can be very helpful to a security program. In the event of an emergency or suspicious activity call 540-674-4731 or local police at 911. If you have questions about this report contact: Garnett Lyons, Utility Supt. 540-674-5791.

The time and location of our regularly scheduled board meeting is as follows: Council meets on the third Thursday of each month on the second floor of the Dublin Town Hall at 7:00 p.m.

### 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 storm-water 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 storm-water 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 storm-water 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 of infection. 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.

## SOURCES & TREATMENT OF YOUR DRINKING WATER

The source(s) of your drinking water is (X) surface water.

The Town of Dublin purchases treated water from Pulaski County PSA. Claytor Lake is the water source for Pulaski County PSA.

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, as 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.

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 report is available by contacting your water system operator at the phone number or address given elsewhere in this report.

## DEFINITIONS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The following table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2014. 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 (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 (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 penny in \$10,000.

**Parts per billion (ppb) or Micrograms per liter (mc/L)** – one part per billion corresponds to one minute in 2,000 years or a penny in \$10,000,000.

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

**Action Level** – 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.

**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 (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 (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.

## I. Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected	Violation (Y/N)	Range	Date of Sample	Typical Source of Contamination
Fluoride (ppm)	4	4	0.47	N	N/A	1-24-2014	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer.
Nitrate (ppm)	10	10	0.89	N	N/A	1-24-2014	Runoff from fertilizer use; Leaching from septic tanks / sewage erosion of natural deposits
Turbidity (NTU)	N/A	TT1 NTU MAX	0.01	N	0.01-0.1	2014 Daily	Soil runoff
		TT ≤ 0.3 NTU 95% of time	100%	N	N/A		
Combined Radium	0	5	1.1	N	N/A	11-21-2014	Erosion of natural deposits
Barium (ppm)	2	2	0.0222	N	N/A	1-24-2014	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine (ppm)	MRDLG=4	MRDL=4	1.21	N	0.27 – 1.8	2014	Water additive used to control microbes
Haloacetic Acids (ppb)	N/A	60	28	N	9-33	2014	Byproduct of drinking water disinfectant
Total Trihalomethane (ppb)	N/A	80	27	N	7-40	2014	Byproduct of drinking water disinfectant
Total Organic Carbon (ppm)	N/A	TT, met when ≥1 or alternate criteria is met *	1.18	N	1.00-1.70	2014	Naturally present in the environment

## II. Lead Contaminants

Contaminant (units)	MCLG	Action Level	90 <sup>th</sup> Percentile	Date of Sampling	# of Sampling Sites Exceeding Action Level	Typical Source of Contamination
Lead (ppb)	0	AL=15	2.7	08-2014	0	Corrosion of household plumbing system; Corrosion of natural deposits; Leaching from wood preservatives
Copper (mg/l)	1.3	1.3	0.45	08-2014	0	Leaching from wood preservatives

The water quality results in Tables I & II are from testing done in 2014. However, the state allows us to monitor for *some* contaminants less than once per year because the concentration of these contaminants does 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.

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

**VIOLATION INFORMATION** – There were no violations during this monitoring period in 2014.

### ADDITIONAL HEALTH INFORMATION

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. The Town of Dublin 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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 (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

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# Annual Drinking Water Quality Report Calendar Year 2014