

2008 Annual Drinking Water Quality Report

Town of Elkton, Cecil County, Maryland

Mayor Joseph L. Fisona and the Commissioners of the Town of Elkton are pleased to present the *2008 Annual Drinking Water Quality Report* to our citizens and water service customers in the Elkton community. This report is intended to inform you about the quality of our drinking water, and to assure you that we are providing a safe and reliable supply of drinking water to our residents, our business community, and our other customers.

The Town of Elkton's drinking water is derived from two primary sources, surface water from the Big Elk Creek and groundwater from deep within the Potomac aquifer. Water from the Big Elk Creek, a perennial stream supplying the Elkton Water Treatment Plant (*PWSID 0070011*) is chemically treated, filtered, and disinfected, then pumped into the Town's distribution system, which includes both pipelines to all developed areas within the town and to storage facilities that reserve water for times of peak demand and for emergency fire-fighting needs. Groundwater is obtained from two wells (*PWSID 0070022*), *only requiring minimal treatment*, then pumped into the distribution system.

The Town's water treatment plant, its wells, and related facilities are operated and maintained under a contract with *Severn Trent Services*. Severn Trent responsibly oversees the treatment and distribution of drinking water throughout the town, as well as monitoring water quality control operations and sampling from the distribution system to determine and ensure compliance with all federal and state drinking water quality standards. Elkton's drinking water meets all federal and state treatment and quality standards. The information presented in this report demonstrates that Elkton's drinking water does not contain contaminants at levels that are harmful to the public. This report further outlines water quality with respect to specific contaminants present or potentially present in Elkton's drinking water, and includes technical information collected and reported to the Maryland Department of the Environment during 2008.

Definitions

This report contains the following technical terms and abbreviations that we feel should be defined in order to enhance the reader's understanding of the technical information presented in this report:

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

Maximum Contaminant Level - The maximum allowable level (MCL) of a contaminant in drinking water. MCLs are set as close to the maximum contaminant level goal (MCLG), q.v., as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - the level of a contaminant in drinking water below which there is no known or expected risk to human health. MCLGs allow for a margin of safety.

Monitoring not required, but recommended (MNR) – unregulated contaminants not subject to MCL or MCLG.

Most probable number (MPN) – a value used to calculate coliform (bacteria) density.

Non-Detects (ND) - laboratory analysis indicated that a particular substance was not detected.

Nephelometric Turbidity Unit (NTU) – using a nephelometric meter, a specific unit of measurement for water clarity or turbidity, the lower the number indicating proportionately better clarity.

Parts per billion (ppb) or micrograms per liter – an amount indicating one part per billion parts; corresponding, e.g., to one minute in 2,000 years or one cent in \$10,000,000.

Parts per million (ppm) or milligrams per liter (mg/l) – an amount indicating one part per one million parts; corresponding, e.g., to one minute in two years or one cent in \$10,000.

Picocuries per liter (pCi/L) – a measure of radioactivity where one picocurie is one-trillionth of 37 billion disintegrations per second.

Treatment Technique (TT) – a water treatment process intended to reduce the level of contaminant(s) in drinking water.

**DETECTED CONTAMINANTS NOT IN VIOLATION
OF THE MAXIMUM CONTAMINANT LEVEL
ELKTON WATER TREATMENT PLANT (PWSID 0070011)**

Contaminant	Level Detected	Unit of Meas	MCLG	MCL	Likely Source of Contamination	Regulated / Un-regulated
*Haloacetic Acids	67.4 (50.8 avg)	ppb	N/A	60 (avg)	By-products of drinking water disinfection	Regulated
Nitrate	3.68	ppm	10	10	Fertilizer, septic tanks, erosion of natural deposits	Regulated
Chloroform	44.1	ppb	N/A	100	By-products of drinking water disinfection.	Regulated
Barium	0.0271	ppm	2	2	Discharge of drilling waste/ metal refineries. Erosion of natural deposits	Regulated
Dibromochloromethane	0.6	ppb	N/A	N/A	By-products of drinking water disinfection	Regulated
Bromodichloromethane	7.7	ppb	N/A	100	By-products of drinking water disinfection	Regulated
Sodium	33.0	ppm	MNR	MNR		Unregulated
Total Trihalomethane	52.1 (48.5 avg)	ppb	N/A	80 (avg)	By-products of drinking water disinfection	Regulated
Total Organic Carbon	2.2	ppm	TT	N/A	By-products of drinking water disinfection	Regulated
Dichloroacetic Acid	21.3	ppb	N/A	60	By-products of drinking water disinfection	Regulated
Trichloroacetic Acid	19.1	ppb	N/A	N/A	By-products of drinking water disinfection	Regulated
Monochloroacetic Acid	5.2	ppb	N/A	N/A	By-products of drinking water disinfection	Regulated
Bromochloroacetic Acid	4.1	ppb	MNR	MNR	By-products of drinking water disinfection	Unregulated
Di(2-ethylhexyl)Phthalate	0.85	ppb	0	6	Discharge from rubber and chemical factories	Regulated
Metolachlor	ND	ppb	MNR	MNR	Herbicide run-off	Unregulated
Simazine	ND	ppb	4	4	Herbicide run-off	Regulated
Atrazine	ND	ppb	0.3	0.3	Herbicide run-off	Regulated
Ethylene Dibromide	ND	ppb	0	0	Discharge from petroleum refineries	Regulated
Radium-228	1.3	Pci/L	0	5	Erosion of natural deposits	Regulated
Combined Radium (226&228)	2.0	Pci/L	0	5	Erosion of natural deposits	Regulated
Gross Alpha	1.0	Pci/L	0	15	Erosion of natural deposits of certain radioactive mineral	Regulated
Radium-226	0.7	Pci/L	0	5	Erosion of natural deposits	Regulated
Gross Beta	4.0	Pci/L	0	50	Decay of deposits of certain radioactive minerals	Regulated

It is important to understand that the detection of these substances in the drinking water does not constitute a known threat to public health because they were found only at levels less than the MCL, and below the level that EPA currently feels may constitute a health threat. MCL's are set at very stringent levels and the Town's water has proved to be below those levels for the contaminants listed above. As you can see by the table, our system had no violations. We are confident that your drinking water meets or exceeds all federal and state requirements. Although some contaminants have been detected in finished water, the EPA has determined that your water **IS SAFE** at these levels.

[* Note: The MCL for haloacetic acids is for an annual running average and the 67.4 ppb detected is the highest level of detection in a series that, when composited, does not exceed the MCL.]

DRINKING WATER TURBIDITY

Turbidity describes the relative clarity of water, ranging from perfectly clear and transparent to cloudy, hazy, or opaque. Turbidity in water is caused by suspended matter, such as clay, silt, finely divided organic and inorganic material, colored organic chemicals, algae and other microscopic organisms. Turbidity is measured by using a *nephelometric turbidity meter* (NTM), and measurements are expressed as *Nephelometric Turbidity Units* (NTUs). The treatment and filtration of water at the Elkton Water Treatment Plant reduces turbidity to very low levels, detectable only to special electronic measuring devices, such as the NTM. The following table indicates turbidity monitoring at the Elkton Water Treatment Plant during 2008:

<i>Contaminant</i>	<i>Units</i>	<i>MCLG</i>	<i>MCL</i>	<i>Level Found</i>	<i>Likely Source of Contamination</i>
Turbidity	NTU	0	TT=1 NTU	0.27 NTU	Soil Runoff
		TT= percentage of samples <0.5 NTU		100 %	

DETECTED CONTAMINANTS NOT IN VIOLATION OF THE MAXIMUM CONTAMINANT LEVEL (MCL) WELL NO. 1 (PWSID 0070022)

The Town found some regulated contaminants present in the groundwater at Well No. 1 at levels below the maximum contaminant level (MCL), determined safe by the USEPA. These contaminants are shown below, along with the MCLG and MCL for each one detected:

Contaminant	Level Detected	Unit of Meas	MCLG	MCL	Likely Source of Contamination	Regulated/ Un-regulated
Nitrate	3.7	ppm	10	10	Fertilizer, septic tanks, erosion of natural deposits	Regulated
Tetrachloroethylene	1.2	ppb	0	5	Textile industry, Dry cleaning	Regulated
MTBE	0.8	ppb	MNR	MNR	Underground storage tanks, pipelines, etc.	Unregulated
Gross Beta	16	Pci/L	0	50	Decay of deposits of certain radioactive minerals	Regulated
Gross Alpha	15	Pci/L	0	15	Erosion of natural deposits of certain radioactive mineral	Regulated
Gross Alpha Adjusted	13.8	Pci/L	0	15	Erosion of natural deposits of certain radioactive mineral	Regulated
Radium-226	1.5	Pci/L	0	5	Erosion of natural deposits	Regulated
Combined Radium (226&228)	3.6	Pci/L	0	5	Erosion of natural deposits	Regulated
Radium 228	2.1	Pci/L	0	5	Erosion of natural deposits	Regulated
Combined Uranium	1.2	Pci/L	0	5	Erosion of natural deposits	Regulated

It is important to note that the detection of these substances in the drinking water does not constitute a known threat to public health because they were found only at levels less than the MCL, and below the level that the USEPA currently feels may constitute a health threat. MCL's are set at very stringent levels, and the Town's water has proved to be below those levels for the contaminants listed above. As you can see by the table, our system had no violations. We are confident that your drinking water meets or exceeds all federal and state requirements.

**DETECTED CONTAMINANTS NOT IN VIOLATION
OF THE MAXIMUM CONTAMINANT LEVEL (MCL)
WELL NO. 3 (PWSID 0070022)**

The Town found some regulated contaminants present in the groundwater from Well No. 3 at levels below the maximum contaminant level (MCL), determined safe by the USEPA. These contaminants are shown below, along with the MCLG and MCL for each one detected:

Contaminant	Level Detected	Unit of Meas	MCLG	MCL	Likely Source of Contamination	Regulated/ Un-regulated
Nitrate	2.58	ppm	10	10	Fertilizer, Septic Tanks, erosion of natural deposits	Regulated
Gross Beta	6	Pci/L	0	50	Decay of deposits of certain radioactive minerals.	Regulated
Gross Alpha	10	Pci/L	0	15	Erosion of natural deposits of certain radioactive mineral	Regulated
Radium-226	0.6	Pci/L	0	5	Erosion of natural deposits	Regulated
Combined Radium (226&228)	2	Pci/L	0	5	Erosion of natural deposits	Regulated
Radium-228	1.4	Pci/L	0	5	Erosion of natural deposits	Regulated

It is important to note that the detection of these contaminants in drinking water does not necessarily constitute a known threat to public health, because the contaminants were found only at levels less than the MCL, and below the level that the USEPA currently determines may constitute a threat to human health. MCLs are set at very stringent levels, and testing of the Town's drinking water has demonstrated results below those levels for contaminants listed above. Consequently, the Town's drinking water meets or exceeds federal and state drinking water standards, and is safe to drink.

SUMMARY

All sources of public drinking water are subject to potential contamination by substances that are naturally occurring or manmade in origin. These substances may include microorganisms, organic and inorganic chemicals, and radioactive materials. Consequently, drinking water, including bottled water, may contain at least small amounts of some of these contaminants, the presence of which may not necessarily pose a threat to human health. More information about the potential human health effects by contaminants in public drinking water and information relating to the Safe Drinking Water Act can be obtained by contacting the United States Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or via the Internet at www.epa.gov/safewater/.

Although the Town of Elkton adheres to all federal and state regulations relating to the treatment, distribution and testing of drinking water to ensure a safe and dependent supply, some people may be more vulnerable to contaminants than the general population. An immune compromised person may be adversely affected by one or more contaminants in drinking water, e.g., a person undergoing chemotherapy, an organ transplant recipient, a person with HIV / AIDS or other immune system disorder, the elderly, and some infants who may be at risk for infections. These people should seek advice about drinking water and potential contaminants that could affect their health from a qualified and knowledgeable health care provider. More information about the potential health effects by contaminants in public drinking water may be obtained by contacting the United States Environmental Protection Agency's *Safe Drinking Water Hotline* at (800) 426-4791 or on the Internet at www.epa.gov/safewater/.

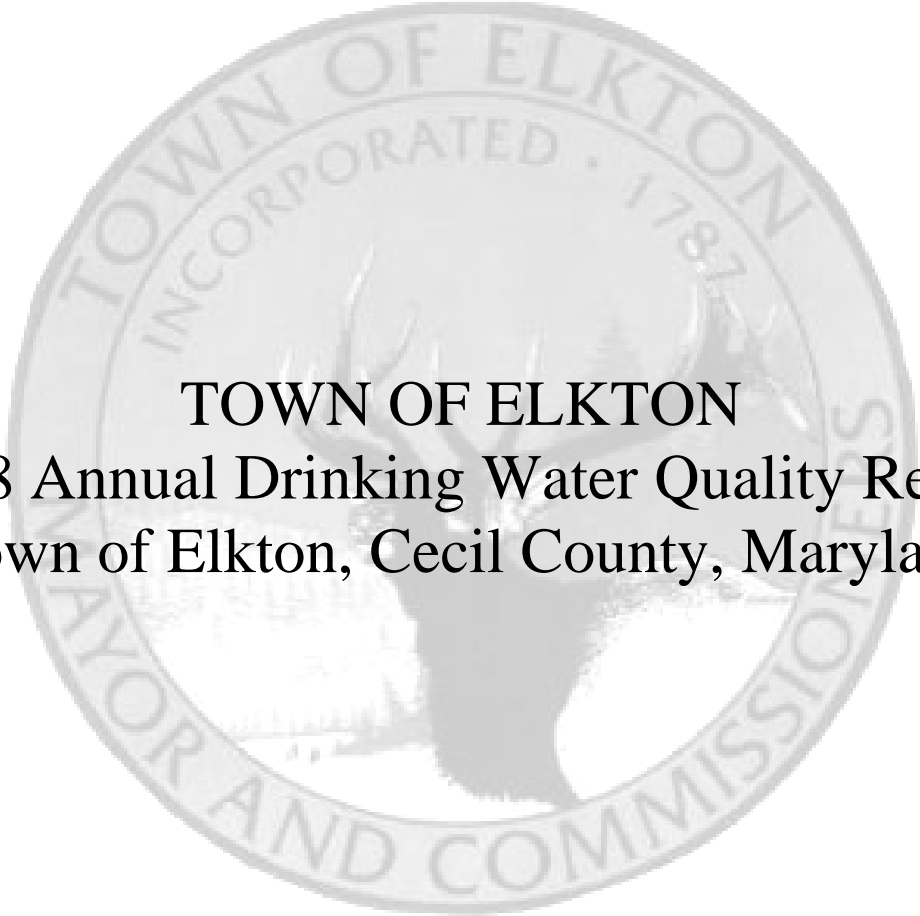
If you have any technical questions regarding the *2008 Annual Drinking Water Quality Report*, please contact the Town of Elkton, Administration Office, Elkton Municipal Building, 100 Railroad Avenue, Elkton, Maryland 21921 Telephone: (410) 398-0970 Facsimile: (410) 392-6633 Email: administration@elkton.org

TTY users should contact the Administration Office through the Maryland Relay Service at (800) 735-2258.

"The Town of Elkton's water resources are critical to the continuing health, prosperity and growth of our community, consequently we will continue to strive toward the goals of maintaining the highest quality of water, and developing additional sources to meet future demands. We encourage our residents and our business community to conserve and respect our most valued natural resource."
Mayor Joseph Fisona

TOWN OF ELKTON
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Elkton, Maryland 21921

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