



We are pleased to present you with our 2006 Quality Water Report. This report is designed to educate and inform you about the quality water and services we deliver to you every day. Our constant goal is to provide the consumer with a consistent and reliable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The following report is provided in compliance with federal regulations and is updated annually. This report shows the quality of our finished drinking water and what that quality means.

The source of Salisbury's water supply is a shallow unconfined Coastal Plain aquifer, known as the Quaternary System. The city currently uses 10 wells from two Water Plants to obtain our drinking water. The two northernmost wells draw water from the deeper and highly productive paleochannel sediments within the Quaternary System.

An aquifer is a sort of underground reservoir, which is tapped by drilling wells and pumping the water to the surface for distribution. The earth between surface sources of contamination and these underground reservoirs help to purify the water before it actually reaches the aquifer, making it easier for us to treat before we pump it into the water distribution system. The Water treatment process includes aeration, pre-chlorination, filtration, iron removal, disinfection, corrosion control and fluoride addition. The water storage towers are routinely removed from service to be cleaned and inspected. Our hydrant-flushing program operates on a routine basis to assist in providing a clear and clean product to our consumers.

Reliable drinking water is collected, treated, tested and delivered to your home and business 24 hours a day, seven days a week. The operations staff consists of two Water Treatment Class T4 Maryland certified Superintendents, four Water Treatment Class T4 Maryland certified operators and three Water Treatment operators certified by Maryland Department of Environment as Class T4 temporary operators. Operators carry temporary status until they achieve three years on the job training and pass Maryland certification exam. The operators are members and attend meetings and training seminars of the American Water Works Association (Chesapeake Section), Water and Wastewater Operators Association and the Maryland Rural Water Association. Together they have attended more than 100 hours of Continuing Education training in

the past year in an effort to keep up-to-date with the latest in water treatment techniques, safety and homeland security. Their goal is to provide the consumer with the best water possible.

The Maryland Department of the Environment's Water Supply Program has conducted a Source Water Assessment for the City of Salisbury. The susceptibility analysis for Salisbury's water supply is based on a review of the water quality data, potential sources of contamination, aquifer characteristics, and well integrity. It was determined that all of Salisbury's wells are susceptible to contamination by volatile organic compounds, and synthetic organic compounds. In addition, Salisbury's Park well field is susceptible to contamination by nitrate. The water supply is not susceptible to other regulated inorganic compounds, and radiological or microbiological contaminants. For more information, the Wicomico County Public Library has a copy of Salisbury's Source Water Assessment.

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All drinking water, including **bottled drinking** water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these constituents does **not necessarily** pose a health risk. Maximum Contaminant Levels (MCL's) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. More information about contaminants and potential health effects can be obtained by calling the *Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791*.

The City of Salisbury Water Plants routinely monitor for constituents in your drinking water according to Federal and State laws. The following table, entitled "Annual Contaminants Monitoring Report", shows the results of our monitoring for the period of January 1 to December 31, 2006. In this table, you will find many terms and abbreviations you may not find familiar. To help you better understand these terms we've provided the following definitions:

**Maximum Contaminant Level** - The "Maximum Allowed" (MCL) is 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. MCLs are enforceable standards.

**Maximum Contaminant Level Goal** - The "Goal" (MCLG) is 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 and are non-enforceable public health goals.

**Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present or not detectable with best available technology.

**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.

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

**Unregulated Contaminants** - (UNREG CONT.) are those for which EPA has not established drinking water standards. The purpose of monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Our system monitoring detected Total trihalomethanes (TTHM), considerably **below the MCL**. It is important to understand that the detection of this substance in the drinking water does not constitute a known health threat because it was found only at a level less than the MCL and below the level, that EPA currently feels may constitute a health threat. Some people who drink water containing trihalomethanes in excess of the MCL over many years experience problems with their liver, kidneys, or central nervous systems, and may have increased risk of getting cancer.

The table shows that our system had no problems with Total Coliform Bacteria this year. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Our city lab runs 26 total coliform samples per month. We have not experienced any problems in 2006 and we do not anticipate any problems with coliform bacteria.

Nitrates were detected in our groundwater **below the MCL**. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

The table also shows that all of the contaminants, which were monitored in accordance with State and Federal laws, were of levels less than the MCL and below the level, that EPA currently feels may constitute a health threat. EPA believes the water is safe at these levels.

### **Non-Detected Contaminants**

Following is a list of potential drinking water contaminants the City of Salisbury is required to test for, but which **have not been detected "at any level"** in the water supply. The City is only required to provide information on those contaminants it has detected in the finished water supply, but is providing the complete list in order to inform its customers about the extent of testing that is done to their water supply.

#### **Tested in 2003**

Combined Radium (226 & 228), Radium-226, Radium-228, Gross Beta, and Silver.

#### **Tested in 2005**

Arsenic, Cadmium, Chromium, Mercury, Nickel, Selenium, Antimony, Beryllium, Nitrite, Toxaphene, Decachlorobiphenyl, Turbidity, and Thallium.

#### **Tested in 2006**

P-Isopropyltoluene, Chloromethane, Dichlorodifluoromethane, Bromomethane, Chloroethane, Trichlorofluoromethane, Hexachlorobutadiene, Naphthalene, 1,2,4-Trichlorobenzene, Cis-1, 2-Dichloroethylene, Dibromomethane, 1,1-Dichloropropene, 1,3-Dichloropropane, 1,3-Dichloropropene, 2,2-Dichloropropane, 1,2,4-Trimethylbenzene, 1,2,3-Trichlorobenzene, N-Butylbenzene, 1,3,5-Trimethylbenzene, Tert-Butylbenzene, Sec-Butylbenzene, Bromochloromethane, Bromodichloromethane, Xylenes-Total, P-Xylene, Methylene Chloride, o-Chlorotoluene, p-Chlorotoluene, m-Dichlorobenzene, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, cis-1,2-Dichloroethylene, 1,1-Dichloroethane, Trans-1,2-Dichloroethylene, 1,2-Dichloroethane, Carbon Tetrachloride, Trichloroethylene, 1,1,2-Trichloroethane, 1,1,1,2-Tetrachloroethane, Tetrachloroethylene, 1,1,2,2-Tetrachloroethane, Monochlorobenzene, Benzene, Toluene, Ethylbenzene, Bromobenzene, Isopropylbenzene, M-Xylene, Styrene, O-Xylene, n-Propylbenzene, 1,1,1-Trichloroethane, Endrin, Hexachlorobenzene (HCB), Benzo(a)Pyrene, Pentachlorophenol, Aldrin, Dicamba, Metribuzin (Sencor), Chlordane, BHC-Gamma (Lindane), Methoxychlor, Di (2-Ethylhexyl) Adipate, Simazine, Picloram, Dinoseb, Hexachlorocyclopentadiene, Metolachlor, Atrazine, Alachlor (Lasso), Heptachlor, Heptachlor Epoxide, Dieldrin, Butachlor (Machete), Propachlor (Ramrod), 2,4-D, 2,4,5-TP (Silvex), 2,4,5-T, Carbaryl, Methomyl, Dalapon, Oxamyl (Vydate), Aldicarb Sulfoxide, Aldicarb Sulfone, Carbofuran, Aldicarb, 3-Hydroxycarbofuran, methyl-tert-butyl-ether, and Ethylene Dibromide (EDB), 1,2-Dibromo-3-chloropropane, 1,2-Dichloropropane, and Haloacetic Acids (HAA5).

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).

# ANNUAL CONTAMINANTS MONITORING REPORT CITY OF SALISBURY POTABLE WATER SYSTEM

<i>Regulated at the Park Water Treatment Plant</i>							
Contaminant	Violation Y/N	Level Detected Distribution System	Date Sampled	Unit Measurement	MCL or TT	MCLG	Likely Source of Contamination
<b>MICROBIOLOGICAL CONTAMINANTS</b>							
Total Coliform Bacteria	N	ND	monthly		presence of coliform bacteria in 5% of monthly samples.	Zero	Naturally present in the environment.
<b>RADIOACTIVE CONTAMINANTS</b>							
Gross Alpha	N	1 pCi/L	1/27/03	pCi/L	15 pCi/L	None	Erosion of natural deposits.
<b>INORGANIC CONTAMINANTS</b>							
Barium	N	0.125 ppm	12/27/05	ppm	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	N	1.11 ppm	12/28/05	ppm	4 ppm	4 ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	N	4.33 ppm	11/20/06	ppm	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Sodium	N	12.9 ppm	12/27/05	ppm	UNREG CONT.	UNREG CONT.	Naturally occurring or result from urban stormwater runoff.
<b>ORGANIC CHEMICAL CONTAMINANTS</b>							
Di (2-Ethylhexyl) Phthalate	N	1.3 ppb	2/27/06	ppb	6 ppb	Zero	Discharge from rubber and chemical factories.
<i>Regulated in the Distribution System</i>							
Contaminant	Violation Y/N	Level Detected Distribution System	Date Sampled	Unit Measurement	MCL	MCLG	Likely Source of Contamination
<b>INORGANIC CONTAMINANTS</b>							
Cu 90 Copper 90th Percentile	N	.114 ppm	12/31/06	ppm	TT	1.3 ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
PB90 Lead 90th Percentile	N	.004 ppm	12/31/06	ppm	TT Action level=0.015	Zero	Corrosion of household plumbing systems, erosion of natural deposits.
<b>DISINFECTION BYPRODUCTS</b>							
TTHM (total trihalomethanes)	N	5.80 ppb	4/26/06	ppb	100 ppb	n/a	By-product of drinking water disinfection.
<i>Regulated at the Paleo Water Treatment Plant</i>							
Contaminant	Violation Y/N	Level Detected Distribution System	Date Sampled	Unit Measurement	MCL	MCLG	Likely Source of Contamination
<b>MICROBIOLOGICAL CONTAMINANTS</b>							
Total Coliform Bacteria	N	ND	monthly		presence of coliform bacteria in 5% of monthly samples	Zero	Naturally present in the environment.
<b>RADIOACTIVE CONTAMINANTS</b>							
Gross Alpha	N	2 pCi/L	2/11/03	pCi/L	15 pCi/L	None	Erosion of natural deposits.
Radium 226	N	.3 pCi/L	2/11/03	pCi/L	5 pCi/L	None	Erosion of natural deposits.
<b>INORGANIC CONTAMINANTS</b>							
Barium	N	.055 ppm	12/27/05	ppm	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	N	.61 ppm	12/28/05	ppm	4 ppm	4 ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	N	4.36 ppm	11/20/06	ppm	10 ppm	10 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.
Sodium	N	33.5 ppm	12/27/05	ppm	UNREG CONT.	UNREG CONT.	Naturally occurring or result from urban stormwater runoff.
<b>ORGANIC CHEMICAL CONTAMINANTS</b>							
Di (2-Ethylhexyl) Phthalate	N	0.7 ppb	2/02/06	ppb	6 ppb	Zero	Discharge from rubber and chemical factories.