

The Salisbury Water Treatment team and I are proud to present to our citizens the annual Water Quality Report. In 2016, 2.2 billion gallons of clean, delicious water was produced in the City of Salisbury. While other parts of the country are plagued with issues of lead and other contaminants, year after year, Salisbury continues to produce award-winning clean and delicious water. For the **THIRD** year in a row, Salisbury has won “Best Tasting Water in Maryland” in the Maryland Rural Water Association’s “Toasting the Tap” competition. We are now in the running for the national honor as part of the Great American Water Taste Test. Water Plant Superintendent Cori Cameron was honored as the Operations Specialist of the Year as well. Water Treatment Plant staff have been busy maintaining and improving the existing water infrastructure including the wells, water storage tanks and two water treatment plants and the City is planning for future needs. In the next year, we anticipate rehabilitating an existing well and constructing a new well at the Paleo Water Plant. Additionally, we are in the final design phase of a new 24-inch water main in Gordy road. The new water main will convey drinking water from the Paleo Water Plant to the eastern and southern portions of the City’s water system to help improve pressures in the area and provide redundancy for the water transmission system.

The report provides a summary of major water quality testing results. In summary, your water supply meets or exceeds current state and federal requirements... and it tastes good, too! Please contact me with any questions you have about Salisbury’s water supply.

Jacob R. Day  
Mayor of Salisbury, MD

# Water Quality Report

## The City of Salisbury, Maryland

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We are pleased to present you with our **2016** 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 will be provided 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 11 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 one Water Treatment Class T4 Maryland certified Superintendents, four Water Treatment Class T4 Maryland certified Operators, five Water Treatment Class T4 Maryland temporary Operators, and one Water Distribution Operator. The operations staff 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.

Everyone needs to help prevent contaminants from entering source waters in the first place. Protection of the watershed goes hand-in-hand with ensuring the appropriate treatment is provided by your utility. 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, 2016. 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.

*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.

*Maximum Residual Disinfectant Level Goal (MRDLG)* - The level of a 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.

*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.

*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.

**ANNUAL CONTAMINANTS MONITORING REPORT  
CITY OF SALISBURY POTABLE WATER SYSTEM**

**Water Quality Data**

**DETECTED REGULATED CONTAMINANTS**

| SUBSTANCE | UNITS | LEVEL FOUND | DATE | MCL | MCLG | VIOLATION | LIKELY SOURCE OF CONTAMINATION |
|-----------|-------|-------------|------|-----|------|-----------|--------------------------------|
|-----------|-------|-------------|------|-----|------|-----------|--------------------------------|

**MICROBIOLOGICAL CONTAMINANTS**

|                         |  |    |                 |  |      |    |                                       |
|-------------------------|--|----|-----------------|--|------|----|---------------------------------------|
| Total Coliform Bacteria |  | ND | Sampled Monthly | Presence of Coliform bacteria in 5% of monthly samples | Zero | NO | Naturally present in the environment. |
|-------------------------|--|----|-----------------|--|------|----|---------------------------------------|

**INORGANIC CONTAMINANTS**

|                       |     |                                |           |         |        |    |  |
|-----------------------|-----|--------------------------------|-----------|---------|--------|----|--|
| Barium                | ppm | 0.15 ppm                       | 2016      | 2 ppm   | 2 ppm  | NO | Discharge of drilling wastes; metal refineries; erosion of natural deposits.   |
| Fluoride              | ppm | 0.311 ppm                      | 2016      | 4 ppm   | 4 ppm  | NO | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories. |
| Nitrate (as Nitrogen) | ppm | 6 ppm (Annual Range 3.86-6.30) | 2016      | 10 ppm  | 10 ppm | NO | Runoff from fertilizer use; leaching from septic tanks, sewage, erosion of natural deposits.                             |
| Total Chromium        | ppb | 2.40 ppb                       | 12/1/2014 | 100 ppb | Zero   | NO | Discharge from steel & pulp mills; erosion of natural deposits.  |
|                       |     | 0.30 ppb                       | 1/15/2014 |         |        |    |  |

**DETECTED UNREGULATED CONTAMINANTS**

|                        |     |           |           |             |             |    |   |
|------------------------|-----|-----------|-----------|-------------|-------------|----|---|
| Chromium-6             | ppb | 0.14 ppb  | 1/15/2014 | UNREG CONT. | UNREG CONT. | NO | Naturally occurring element; used in making steel & other alloys.   |
|                        |     | 0.32 ppb  | 7/19/2013 |             |             |    |   |
| Total Strontium        | ppb | 123 ppb   | 1/15/2014 | UNREG CONT. | UNREG CONT. | NO | Occurs naturally in the environment.  |
|                        |     | 262 ppb   | 7/19/2013 |             |             |    |   |
| 1,4-Dioxane            | ppb | 0.084 ppb | 1/15/2014 | UNREG CONT. | UNREG CONT. | NO | Used as a solvent or solvent stabilizer in manufacture & processing of paper, cotton, textile products, automotive coolant, cosmetics & shampoos. |
| 1,1-Dichloroethane     | ppb | 0.046 ppb | 1/15/2014 | UNREG CONT. | UNREG CONT. | NO | Used as a solvent.  |
| 1,2,3-Trichloropropane | ppb | 0.073 ppb | 1/15/2014 | UNREG CONT. | UNREG CONT. | NO | Used as an ingredient in paint, varnish remover, solvents &   |

| SUBSTANCE  | UNITS | DISTRIBUTION SYSTEM |                |  | MCL                       | MCLG      | VIOLATION | LIKELY SOURCE OF CONTAMINATION  |
|--|-------|---------------------|----------------|--|---------------------------|-----------|-----------|---|
|  |       | LEVEL FOUND         | DATE           | Locational Annual Running Average (LRAA) |                           |           |           |   |
| <b>INORGANIC CONTAMINANTS</b>                    |       |                     |                |  |                           |           |           |   |
| Cu 90 Copper 90 <sup>th</sup> %                  | ppm   | .11 ppm             | 8/12/2015      | N/A                                      | TT Action Level=1.3 ppm   | 1.3 ppm   | NO        | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. |
| PB90 Lead 90 <sup>th</sup> %                     | ppm   | ND                  | 8/11/2015      | N/A                                      | TT Action Level=0.015 ppm | Zero      | NO        | Corrosion of household plumbing systems, erosion of natural deposits.                                   |
| <b>DISINFECTANTS AND DISINFECTION BYPRODUCTS</b> |       |                     |                |  |                           |           |           |   |
| Chlorine   | ppm   | 1 - 1               | 2016           | 1.0 ppm                                  | MRDL = 4.0                | MRDLG = 4 | NO        | Water additive used to control microbes.  |
| TTHM (Total Trihalomethanes)                     | ppb   | Range 0-14.7        | Quarterly/2016 | 5.0 ppb                                  | 80 ppb                    | N/A       | NO        | By-product of drinking water disinfection.  |
| HAAS (Haloacetic Acids)                          | ppb   | Range 0-2.0         | Quarterly/2016 | 1.0 ppb                                  | 60 ppb                    | N/A       | NO        | By-product of drinking water disinfection.  |

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 31 total coliform samples per month. We have not experienced any problems in 2016 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.

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 City of Salisbury 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 drinking 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 EPA Safe Drinking Water Hotline at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

Specific to lead, the EPA issued the Lead and Copper Rule, which requires corrosion control treatment at the plant. Houses built before 1986, have an increased risk of lead in the plumbing. You may want to test your water if your home has lead pipes (lead is a dull gray metal that is soft enough to be easily scratched with a house key) or your non plastic plumbing was installed before 1986. Please call our office if you would like to participate in our tri-annual lead and copper sampling program. We drop a sample bottle at your door, you collect a first draw water sample from your plumbing in the morning. Leave the bottle outside the door and we will pick up the bottle and deliver to certified lab. We will send you the lab results.

The table 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. Over 100 additional contaminants were analyzed in our drinking water and all were Non-Detected Contaminants.

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**  
**Availability of Monitoring Data for Unregulated Contaminants for the City of Salisbury**

Our water system has sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. The unregulated contaminants detected in our water are shown on the Contaminants Monitoring Chart. A complete list of all unregulated contaminants that were tested for are listed on the EPA website [EPA.gov/drink/contaminants](http://EPA.gov/drink/contaminants). If you are interested in examining the City of Salisbury results, please contact the City of Salisbury Water Plant.

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).

The City of Salisbury reduced the Fluoride level in the finished drinking water from a 1.0 mg/l to 0.7 mg/l in January 2012. The decrease was recommended by the Environmental Protection Agency, Department of Health and Human Services and the Maryland Department of the Environment. The recommended level of fluoride in drinking water can be set at the lowest end of the current optimal range to prevent tooth decay (0.7 mg/l), and EPA is initiating review of the maximum amount of fluoride allowed in drinking water (4.0 mg/l). These actions will maximize the health benefits of water fluoridation to Americans by continuing to prevent tooth decay while reducing the possibility of children receiving too much fluoride.

You may see our staff at local events around town promoting water conservation. Take time to visit our booth and ask questions. Make conserving water a daily part of your life. And remember when you save water, you save energy and money! If you would like to receive a water conservation packet with water saving tips in the home, garden, or for children, please contact the water plant at 410-548-3199 and one can be mailed to your home.

We are committed to continuing to provide an excellent service that our customers can take for granted. Help us to provide your family with clean, quality water by participating in official City of Salisbury water sampling programs. If you have any questions about this report or concerning your drinking water, please contact **Cori Cameron at the City of Salisbury Water Plant at 410-548-3199.**