

Annual Drinking Water Quality Report
City of Bowie
January 1 to December 31, 2014

Public Drinking Water System #016-0002

We are pleased to present to you another in a series of annual water reports that will keep you informed about the City of Bowie's efforts to supply quality water and services to you every day.

An annual report will be available by July 1 of each year that will keep you informed of the previous calendar year's water quality.

This Water Quality Report is for those areas that are served by the City of Bowie Water Plant and should not be confused with areas served by the Washington Suburban Sanitary Commission.

The sources of drinking water (both tap 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:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and minerals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining.

The source waters for the City's consumption is ground water obtained from six wells in three major underground confined aquifers: Well #1 - Magothy formation; Wells #2R, #3, #6 - Patapsco formation; and Wells #4R and #5 - Patuxent formation. These aquifers range in depth from approximately 200 feet to 1,160 feet. To protect this resource, the City has identified potential sources of contamination through the development of a Wellhead Protection Plan. The Wellhead Protection Report also contains information on delineated wellhead protection areas and aquifer recharge areas. The Wellhead Protection Report is available for viewing at the Bowie Branch Library.

Confined aquifers such as those used by the City of Bowie afford very good protection from surface contaminants, but we are constantly monitoring our water supply to maintain high water quality standards. The Maryland Department of the Environment has performed a Source Water Assessment for the City of Bowie. The Summary of the assessment is included with this report. The complete Source Water Assessment can be viewed at the Bowie Branch Library and on the City of Bowie website – www.cityofbowie.org.

The following report is designed to inform you of water quality standards and what they mean. If you have any questions regarding this report, please contact John Illig, City of Bowie Water Plant Superintendent, 301-809-3060.

This Water Quality Report covers the period of January 1 to December 31, 2014. The City of Bowie and the Maryland Department of the Environment routinely monitor your drinking water to detect contaminants, according to Federal and State laws. Drinking water, including bottled drinking water, may be reasonably 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 about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

The City of Bowie's water is tested for over 100 contaminants. Only regulated contaminants or unregulated contaminants that are required to be monitored that are at or above the Minimum Detection Level, are required to be in the Annual Drinking Water Quality Report. If you would like a copy of the complete listing of contaminants that have undergone testing, there will be copies available at the reception desk or the Finance Department at City Hall. The complete listing of tested contaminants and the Annual Drinking Water Quality Report will also be available on the City's website – www.cityofbowie.org.

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 Bowie 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 two 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>.

Citizens are urged to participate in all matters related to the City by attending City Council meetings. This is also true with water related matters, be they infrastructure or water quality. City Council meetings are usually held the first and third Mondays of each month. Check your local newspaper, the City's website – www.cityofbowie.org, or contact City Hall at 301-262-6200 for scheduling. All meetings are held in the Council Chambers at City Hall, located at 15901 Excalibur Road.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised people such as people with cancer undergoing chemotherapy, people 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 provider. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

The chart that follows in this report contains terms and abbreviations that you may not be familiar with. To help provide a better understanding of the terms used, the following definitions and statements are provided:

- Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. The MCLs are set as close to the MCLGs 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 health. MCLGs allow for a margin of safety.
- Parts Per Million (PPM): One PPM is equal to one milligram per liter and is equivalent to one drop in 10 gallons.
- Parts Per Billion (PPB): One PPB is equal to one microgram per liter and is equivalent to one drop in 10,000 gallons.
- picoCuries Per Liter (pCi/L): A unit of measurement used to describe the level of activity or decay of a radioactive element.
- Locational Running Annual Average (LRAA): Is the highest Running Annual Average calculated for each of the four monitoring locations required for testing and is not to be confused with an arithmetic average of all results.

- **Monitoring Frequency:** The State does not require annual monitoring for contaminants because the concentration of these contaminants does not change frequently. Therefore, some of our data, though representative, is more than one year old.

Of Special Note

Beginning in 2014, the City of Bowie Water Quality Report is no longer mailed to all customers but is available online @ www.cityofbowie.org/wqr. Reminders about where to obtain the Water Quality Report will also be printed on your water bill. To request a printed copy of the Report, please call the Water Plant at 301-809-3060.

**Annual Drinking Water Quality Report
For January 1 to December 31, 2014**

Contaminant	Test Results	MCL	MCLG	Test Date	Sources of Contamination
Nitrate	* N/D	10 PPM	10 PPM	2/19/14	Runoff from Fertilizer
Fluoride	0.61 PPM	4 PPM	4 PPM	1/29/13	Erosion of Natural Deposits; Additive to Drinking Water
Gross Alpha	3.8 pCi/L	15 pCi/L	0	9/20/13	Erosion of Natural Deposits
Gross Beta	6.5 pCi/L	50 pCi/L	0	9/20/13	Erosion of Natural Deposits
Combined Radium (226 & 228)	0.6 pCi/L	5 pCi/L	0	11/08/13	Erosion of Natural Deposits
Total Trihalomethanes		80 PPB	N/A		By-product of Drinking Water Chlorination
Detected Range	0.7 – 21.2 PPB			2014	
Average	11.0 PPB				
LRAA	9.1 PPB				
Haloacetic Acids		60 PPB	N/A		By-product of Drinking Water Chlorination
Detected Range	*N/D – 2.9 PPB			2014	
Average	1.5 PPB				
LRAA	2.3 PPB				

Unregulated Contaminant Monitoring

Contaminant	Test Results	MCL	MCLG	Test Date	Unregulated Contaminant Monitoring helps EPA to determine where certain contaminants occur and whether the agency should consider regulating those contaminants in the future.
Chlorate		N/A	N/A		
Detected Range	24 - 46 PPB			2013	
Average	35 PPB			2013	
Chromium 6		N/A	N/A		
Detected Range	ND - .051 PPB			2013	
Average	.026 PPB			2013	
Strontium		N/A	N/A		
Detected Range	26-31 PPB			2013	
Average	29			2013	

N/A = Where N/A appears, the MCL or MCLG have not been set by the EPA.
 N/D = Where N/D appears, the contaminant monitored for was not detectable.

Maryland Department of the Environment Source Water Summary

The Maryland Department of the Environment’s (MDE) Water Supply Program has conducted a Source Water Assessment for the City of Bowie. The major Components of this report as described in Maryland’s Source Water Assessment Plan (SWAP) are: 1) delineation of an area that contributed water to the source; 2) identification of potential sources of contamination; 3) determination of susceptibility of the water supply to contamination. Recommendations for management of the assessment area conclude this report.

The sources of Bowie’s water supply are three Coastal Plain confined aquifers – the Magothy, Patapsco and Patuxent. Six wells are currently being used to pump the water out of these aquifers. The source water assessment area was delineated by the Water Supply Program using methods approved by the U.S. EPA.

Potential sources of contamination within the assessment were identified based on MDE site visits, a review of MDE’s databases. Well information and water quality data were also reviewed.

The susceptibility analysis for Bowie’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 Bowie’s water supply is not susceptible to contaminants originating at the land surface due to the protected nature of confined aquifers. The water supply is susceptible to naturally occurring iron in the aquifers. The system has installed treatment to remove iron from the raw water.

The following pages contain an analysis of the City of Bowie Drinking Water. The analysis was performed by the Maryland Department of the Environment in 2014.

Plant Id: 00 DISTRIBUTION SAMPLING

Ref Id	Contaminant	Sample Date	Result Units
016000200101-ROCKLEDGE	TTHM TOTAL TRIHALOMETHANES	27-OCT-14	5.1 ug/L
016000200103-YORKTOWN	TTHM TOTAL TRIHALOMETHANES	27-OCT-14	1.8 ug/L
016000200102-HEATHER	TTHM TOTAL TRIHALOMETHANES	27-OCT-14	1.9 ug/L
016000200104-MCDONALDS	TTHM TOTAL TRIHALOMETHANES	27-OCT-14	2.6 ug/L
016000200101-ROCKLEDGE	TTHM TOTAL TRIHALOMETHANES	16-JUL-14	21.2 ug/L
016000200103-YORKTOWN	TTHM TOTAL TRIHALOMETHANES	16-JUL-14	4.8 ug/L
016000200102-HEATHER	TTHM TOTAL TRIHALOMETHANES	16-JUL-14	5.6 ug/L
016000200104-MCDONALDS	TTHM TOTAL TRIHALOMETHANES	16-JUL-14	3.6 ug/L
016000200101-ROCKLEDGE	TTHM TOTAL TRIHALOMETHANES	23-APR-14	4.9 ug/L
016000200103-YORKTOWN	TTHM TOTAL TRIHALOMETHANES	23-APR-14	2.8 ug/L
016000200102-HEATHER	TTHM TOTAL TRIHALOMETHANES	23-APR-14	1.7 ug/L
016000200104-MCDONALDS	TTHM TOTAL TRIHALOMETHANES	23-APR-14	3 ug/L
016000200101-ROCKLEDGE	TTHM TOTAL TRIHALOMETHANES	28-JAN-14	2 ug/L
016000200103-YORKTOWN	TTHM TOTAL TRIHALOMETHANES	28-JAN-14	.8 ug/L
016000200102-HEATHER	TTHM TOTAL TRIHALOMETHANES	04-FEB-14	1.2 ug/L
016000200104-MCDONALDS	TTHM TOTAL TRIHALOMETHANES	28-JAN-14	.7 ug/L
016000200101-ROCKLEDGE	HAA5 HALOACETIC ACIDS	27-OCT-14	1.34 ug/L
016000200103-YORKTOWN	HAA5 HALOACETIC ACIDS	27-OCT-14	0 ug/L
016000200102-HEATHER	HAA5 HALOACETIC ACIDS	27-OCT-14	0 ug/L
016000200104-MCDONALDS	HAA5 HALOACETIC ACIDS	27-OCT-14	0 ug/L
016000200101-ROCKLEDGE	HAA5 HALOACETIC ACIDS	16-JUL-14	2.92 ug/L
016000200103-YORKTOWN	HAA5 HALOACETIC ACIDS	16-JUL-14	0 ug/L
016000200102-HEATHER	HAA5 HALOACETIC ACIDS	16-JUL-14	0 ug/L
016000200104-MCDONALDS	HAA5 HALOACETIC ACIDS	16-JUL-14	1.04 ug/L
016000200101-ROCKLEDGE	HAA5 HALOACETIC ACIDS	23-APR-14	1.49 ug/L
016000200103-YORKTOWN	HAA5 HALOACETIC ACIDS	23-APR-14	1.06 ug/L
016000200102-HEATHER	HAA5 HALOACETIC ACIDS	23-APR-14	0 ug/L
016000200104-MCDONALDS	HAA5 HALOACETIC ACIDS	23-APR-14	1.26 ug/L
016000200101-ROCKLEDGE	HAA5 HALOACETIC ACIDS	28-JAN-14	0 ug/L
016000200103-YORKTOWN	HAA5 HALOACETIC ACIDS	28-JAN-14	0 ug/L
016000200102-HEATHER	HAA5 HALOACETIC ACIDS	04-FEB-14	0 ug/L
016000200104-MCDONALDS	HAA5 HALOACETIC ACIDS	28-JAN-14	0 ug/L
0160002002140012	CU90 COPPER 90th PERCENTILE	31-DEC-14	.07 mg/L
0160002002140012	PB90 LEAD 90th PERCENTILE	31-DEC-14	0 mg/L

Plant Id: 01 BOWIE WTP FOR WELLS

Ref Id	Contaminant	Sample Date	Result	Units
016000201214BE1402-N	1040 NITRATE	18-FEB-14	<	.5 MG/L
016000201G001003692006	2251 METHYL-TERT-BUTYL-ETHER	03-MAR-10	<	.5 UG/L
016000201G001003692006	2251 METHYL-TERT-BUTYL-ETHER	03-MAR-10	<	.5 UG/L
016000201G001003692006	2980 1,2-DICHLOROETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2979 trans-1,2-DICHLOROETHYLENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2380 cis-1,2-DICHLOROETHYLENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2989 MONOCHLOROBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2987 TETRACHLOROETHYLENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2964 METHYLENE CHLORIDE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2978 1,1-DICHLOROETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2966 p-CHLOROTOLUENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2416 2,2-DICHLOROPROPANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2993 BROMOBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2998 n-PROPYLBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2420 1,2,3-TRICHLOROBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2218 TRICHLOROFLUOROMETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2414 1,2,3-TRICHLOROPROPANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2424 1,3,5-TRIMETHYLBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2428 SEC-BUTYLBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2426 TERT-BUTYLBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2986 1,1,1,2-TETRACHLOROETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2990 BENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2977 1,1-DICHLOROETHYLENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2955 XYLENES, TOTAL	03-MAR-10	<	.5 UG/L
016000201G001003692006	2985 1,1,2-TRICHLOROETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2410 1,1-DICHLOROPROPENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2214 BROMOMETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2210 CHLOROMETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2412 1,3-DICHLOROPROPANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2994 ISOPROPYLBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2962 p-XYLENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2995 m-XYLENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2967 m-DICHLOROBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2969 p-DICHLOROBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2976 VINYL CHLORIDE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2984 TRICHLOROETHYLENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2968 o-DICHLOROBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2992 ETHYLBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2991 TOLUENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2996 STYRENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2942 BROMOFORM	03-MAR-10	<	.5 UG/L
016000201G001003692006	2378 1,2,4-TRICHLOROBENZENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2216 CHLOROETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2965 o-CHLOROTOLUENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2988 1,1,2,2-TETRACHLOROETHANE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2248 NAPHTHALENE	03-MAR-10	<	.5 UG/L
016000201G001003692006	2422 N-BUTYLBENZENE	03-MAR-10	<	.5 UG/L

Plant Id: 01 BOWIE WTP FOR WELLS

Ref Id	Contaminant	Sample Date	Result Units
016000201G001003692006	2212 DICHLORODIFLUOROMETHANE	03-MAR-10	< .5 UG/L
016000201G001003692006	2982 CARBON TETRACHLORIDE	03-MAR-10	< .5 UG/L
016000201G001003692006	2981 1,1,1-TRICHLOROETHANE	03-MAR-10	< .5 UG/L
016000201G001003692006	2983 1,2-DICHLOROPROPANE	03-MAR-10	< .5 UG/L
016000201G001003692006	2944 DIBROMOCHLOROMETHANE	03-MAR-10	< .5 UG/L
016000201G001003692006	2941 CHLOROFORM	03-MAR-10	< .5 UG/L
016000201G001003692006	2943 BROMODICHLOROMETHANE	03-MAR-10	< .5 UG/L
016000201G001003692006	2413 1,3-DICHLOROPROPENE	03-MAR-10	< .5 UG/L
016000201G001003692006	2418 1,2,4-TRIMETHYLBENZENE	03-MAR-10	< .5 UG/L
016000201G001003692006	2246 HEXACHLOROBUTADIENE	03-MAR-10	< .5 UG/L
016000201G001003692006	2997 o-XYLENE	03-MAR-10	< .5 UG/L
016000201G001003692006	2408 DIBROMOMETHANE	03-MAR-10	< .5 UG/L
016000201G001003692006	2430 BROMOCHLOROMETHANE	03-MAR-10	< .5 UG/L
016000201G001003692006	2030 P-ISOPROPYLTOLUENE	03-MAR-10	< .5 UG/L
016000201214BE1402-N	1040 NITRATE	18-FEB-14	< .5 MG/L
016000201214BP0110	1085 THALLIUM	10-JAN-13	< .001 MG/L
016000201214BP0110	1005 ARSENIC	10-JAN-13	< .001 MG/L
016000201214BP0110	1075 BERYLLIUM	10-JAN-13	< .0005 MG/L
016000201G001E000794	4010 COMBINED RADIUM (226 & 228)	19-SEP-13	.6 PCI/L
016000201214BP0110	1010 BARIUM	10-JAN-13	< .5 MG/L
016000201G001E000794	4030 RADIUM-228	19-SEP-13	< .9 PCI/L
016000201G001E000794	4100 GROSS BETA	19-SEP-13	6.4 PCI/L
016000201G001E000794	4000 GROSS ALPHA	19-SEP-13	3.8 PCI/L
016000201214BP0110	1036 NICKEL	10-JAN-13	< .005 MG/L
016000201214BP0110	1052 SODIUM	10-JAN-13	< 5 MG/L
016000201214BP0110	1025 FLUORIDE	10-JAN-13	.61 MG/L
016000201214BP0110	1074 ANTIMONY	10-JAN-13	< .002 MG/L
016000201214BP0110	1015 CADMIUM	10-JAN-13	< .0002 MG/L
016000201214BP0110	1020 CHROMIUM	10-JAN-13	< .002 MG/L
016000201214BP0110	1035 MERCURY	10-JAN-13	< .0002 MG/L
016000201214BP0110	1045 SELENIUM	10-JAN-13	< .005 MG/L
016000201G001E000794	4020 RADIUM-226	19-SEP-13	.6 PCI/L

Plant Id: 02 PURCHASED - WSSC - TEN HILL DR

Ref Id	Contaminant	Sample Date	Result Units
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Plant Id: 03 PURCHASED - WSSC - OLD CHAPEL

Ref Id	Contaminant	Sample Date	Result Units
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Plant Id: 99 OTHER SOURCES

Ref Id	Contaminant	Sample Date	Result Units
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