

2015 Annual Drinking Water Quality Report Bedford Borough Water Authority

PWSID: 4050002
244 West Penn Street
Bedford, PA 15522
Telephone: (814) 623-8192
E-mail: bedfordborough@bedboro.com
Website: www.bedboro.com

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, ó hable con alguien que lo entienda.
(This report contains important information about your drinking water. Have someone translate it for you, or speak with someone who understands it.)

WATER SYSTEM INFORMATION:

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact Barbara E. Diehl, Bedford Borough Manager, at the above email address or telephone (814) 623-8192, Monday through Friday, 9:00 a.m. to 4:00 p.m. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Monday of each month at 4:00 p.m. in the Borough Office on West Penn Street.

SOURCE(S) OF WATER:

Our water sources consist of two (2) reservoirs (Todd Spring and J.C. Smith) and the Raystown Branch of the Juniata River. The reservoirs are located west of the Borough of Bedford. The intake from the Raystown Branch of the Juniata River is located near Wolfsburg, northwest of the Borough of Bedford. In addition to the above, we have two (2) interconnections with the Bedford Township Municipal Authority's water system that can be utilized during emergency situations.

SOURCE WATER ASSESSMENT:

Reports on our system are available at our office, which will provide more detailed information such as potential sources of contamination. A summary of our water system's susceptibility to potential sources of contamination follows:

A Source Water Assessment of the Raystown Branch of the Juniata River watershed, which supplies water to the Bedford Borough Water Filtration Plant, was completed in 2003 by the firm Spotts, Stevens, and McCoy, Inc. for the PA Department of Environmental Protection (PA DEP). The Assessment has found that the Raystown Branch of the Juniata River watershed is potentially most susceptible to road deicing materials, accidental spills along roads, agricultural runoff, logging, on-lot wastewater disposal, disposal from wastewater treatment plants, quarries, cemeteries, leaks in underground storage tanks, and off road recreational vehicle use that may cause a chemical or biological degradation of the watershed and in turn the water being pumped from the river to the water filtration plant. Overall, the Raystown Branch of the Juniata River watershed has a medium to high risk of significant contamination.

A Source Water Assessment of the Todd Spring and J.C. Smith Reservoirs' watersheds, which also supply water to the Bedford Borough Water Filtration Plant, was completed in 2003 by the PA DEP. The Assessment has found that the Todd Spring and J.C. Smith Reservoirs' watersheds are potentially most susceptible to logging and off road recreational vehicle use that may cause or increase erosion in the watershed and in turn increase sedimentation loads and the turbidity of the raw water collected by the reservoirs. Overall, the Todd Spring and J.C. Smith Reservoirs' watersheds have little risk of significant contamination.

Summary reports of the Assessments are available by writing to the Bedford Borough Water Authority, 244 West Penn Street, Bedford, PA 15522. Copies of the complete reports are also available for review at the PA DEP Southcentral Regional Office, Records Management Unit at (717) 705-4700. Additional information regarding Source Water Assessments is also available from the PA DEP website at www.dep.state.pa.us (Keyword: DEP Source Water). Complete reports were distributed to municipalities, water supplier, local planning agencies, and PA DEP offices.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

MONITORING YOUR WATER:

We routinely monitor for contaminants in your drinking water according to federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2015. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data is from prior years in accordance with the Safe Drinking Water Act. The date has been noted on the sampling results table.

DEFINITIONS:

| | |
|--|--|
| <p><i>Action Level (AL)</i> - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.</p> <p><i>BTMA</i> - Bedford Township Municipal Authority</p> <p><i>CDC</i> - Center for Disease Control.</p> <p><i>DEP</i> - Pennsylvania Department of Environmental Protection</p> <p><i>EPA</i> - US Environmental Protection Agency</p> <p><i>Maximum Contaminant Level (MCL)</i> - 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.</p> <p><i>Maximum Contaminant Level Goal (MCLG)</i> - 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.</p> <p><i>Maximum Residual Disinfectant Level (MRDL)</i> - 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.</p> | <p><i>Maximum Residual Disinfectant Level Goal (MRDLG)</i> - 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.</p> <p><i>Minimum Residual Disinfectant Level (MinRDL)</i> - The minimum level of residual disinfectant required at the entry point to the distribution system.</p> <p><i>Treatment Technique (TT)</i> - A required process intended to reduce the level of a contaminant in drinking water.</p> <p>Mrem/year = millirems per year (a measure of radiation absorbed by the body)</p> <p>pCi/L = picocuries per liter (a measure of radioactivity)</p> <p>ppb = parts per billion, or micrograms per liter (µg/L)</p> <p>ppm = parts per million, or milligrams per liter (mg/L)</p> <p>ppq = parts per quadrillion, or picograms per liter</p> <p>ppt = parts per trillion, or nanograms per liter</p> |
|--|--|

DETECTED SAMPLE RESULTS:

| Microbiological Contaminant | Contaminant | MCL | MCLG | Level Detected | Sample Date | Violation Y/N | Source of Contamination |
|-----------------------------|-------------|---|------|----------------|-------------|---------------|-------------------------|
| | Turbidity | TT=1 NTU for a single measurement | 0 | 0.056 NTU | 6/28/15 | N | Soil runoff. |
| | | TT= at least 95% of monthly samples ≤ 0.3 NTU | | 100% | | N | |

| Chemical Contaminant | Contaminant | MCL in CCR Units | MCLG | Level Detected | Range of Detections | Units | Sample Date | Violation Y/N | Source of Contamination |
|----------------------|-------------|------------------|------|----------------|---------------------|-------|-------------|---------------|--|
| | Barium | 2.0 | 2.0 | 0.054 | ** | ppm | 2011 | N | Discharge of drilling wastes & from metal refineries; erosion of natural deposits. |
| | Fluoride | 2.0 | 2.0 | 0.654 | ** | ppm | 2011 | N | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories. |
| | Nitrate | 10 | 10 | 0.614 | ** | ppm | 1/6/2015 | N | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |

| Entry Point Disinfectant Residual | Contaminant | MinRDL | Lowest Level Detected | Range of Detections | Units | Sample Date | Violation Y/N | Source of Contamination |
|-----------------------------------|-------------|--------|-----------------------|---------------------|-------|-------------|---------------|--|
| | Chlorine | 0.2 | 0.674 | 0.674-1.725 | ppm | 1/28/15 | N | Water additive used to control microbes. |

| Disinfection Byproducts (DBPs) | Contaminant | MCL in CCR Units | MCLG | Level Detected | Range of Detections | Units | Sample Date | Violation Y/N | Source of Contamination |
|--------------------------------|--------------------------------|------------------|------|----------------|---------------------|-------|-------------|---------------|---|
| | Total Trihalomethanes | 80 | n/a | 53.2 | 28.3 - 91.1 | ppb | 2015 | N | Byproduct of drinking water chlorination. |
| | Haloacetic Acid | 60 | n/a | 47.9 | 41.6 - 56.3 | ppb | 2015 | N | Byproduct of drinking water disinfection. |
| | Chlorine (Distribution System) | 4 | 4 | 1.68 | 0.71 - 1.68 | ppm | 4/2/15 | N | Water additive used to control Microbes. |

| Lead and Copper | Contaminant | Action Level (AL) | MCLG | 90th Percentile Value | Units | Sample Date | Violation Y/N | Source of Contamination |
|-----------------|-------------|-------------------|------|-----------------------|-------|-------------|---------------|---|
| | Lead | 15 | 0 | 0 | ppb | 2013 | N | Corrosion of household plumbing systems; erosion of natural deposits. |
| | Copper | 1.3 | 1.3 | 0.127 | ppm | 2013 | N | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. |

| Radioactive | Contaminant | MCL | MCLG | Level Detected | Sample Date | Violation Y/N | Source of Contamination |
|-------------|--------------|-----|------|----------------|-------------|---------------|------------------------------|
| | Radium - 226 | 5.0 | 0 | 0.2 pCi/L | 2/5/03 | N | Erosion of natural deposits. |

| Total Organic Carbon (TOC) | Range of % Removal Required | Range of % Removal Achieved | Number of Quarters out of Compliance | Violation Y/N | Source of Contamination |
|----------------------------|-----------------------------|-----------------------------|--------------------------------------|---------------|---------------------------------------|
| | 35% | 17% - 31% | 3 | Y | Naturally present in the environment. |

| Microbial | Contaminant | MCL | MCLG | Highest # or % of Positive Samples | Violation Y/N | Source of Contamination |
|-----------|---|---|------|------------------------------------|---------------|---------------------------------------|
| | Total Coliform Bacteria | For systems that collect <40 samples/month: More than 1 positive monthly sample | 0 | 0 | N | Naturally present in the environment. |
| | Fecal Coliform Bacteria or <i>E. Coli</i> | 0 | 0 | 0 | N | Human and animal fecal waste. |

Due to local drought conditions experienced in 2015, the Bedford Borough Water Authority utilized the emergency interconnections with the Bedford Township Municipal Authority's water system. Because of this, we are including with this Report the Detected Regulated Contaminant Table provided to the Borough from the Bedford Township Municipal Authority. See Table Below.

| 2015 Detected Regulated Contaminant Table Bedford Township Municipal Authority | | | | | | | |
|---|-----|------|------------------------|------------------|---------------|-----------|---|
| Contaminant (Unit of Measure) | MCL | MCLG | Highest Level Detected | Range | Sample Period | Violation | Likely Source of Contamination |
| Inorganic Contaminants | | | | | | | |
| Barium (ppm) [BTMA system] | 2 | 2 | 0.0268 | 0.0142 to 0.0268 | 2015 | No | Discharge of drilling waste, discharge from metal refineries, erosion of natural deposits |
| Barium (ppm) [Bedford Boro system] | 2 | 2 | 0.054 | NA | 2011 | No | Discharge of drilling waste, discharge from metal refineries, erosion of natural deposits |
| Fluoride (ppm) [Bedford Boro system] | 2 | 2 | 0.654 | NA | 2011 | No | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories |

| | | | | | | | | |
|--|-------------------|-----------|-----------------------------------|---------------------------------|---------------|-----------|---|--|
| Nitrates (ppm) [Bedford Boro system] | 10 | 10 | 0.614 | NA | 1/6/15 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits | |
| Disinfectant Residuals | | | | | | | | |
| Chlorine (ppm) [BTMA distribution system] | MRDL = 4 | MRDLG = 4 | Max Level Detected= 1.53 | 1.39 to 1.53 | 2015 | No | Water additive used to control microbes | |
| Chlorine (ppm) – Entry Point BTMA Sources | | | | | | | | |
| Bowman Wells | MinRDL=0.4 | NA | Min Level Detected =1.21 | 1.21 to 1.9 | 3/15/15 | No | | |
| Bedford Springs | | NA | Min Level Detected = 0.95 | 0.95 to 1.3 | 10/3/15 | No | | |
| Shaffer Wells | | NA | Min Level Detected= 1.19 | 1.19 to 1.63 | 5/24/15 | No | | |
| Radioactive Contaminants | | | | | | | | |
| Radium-228 (pCi/L) | 5 | 0 | 1.95 (Shaffer Wells) | 1.02 to 1.95 | 2010 | No | Erosion of natural deposits | |
| Lead and Copper | | | | | | | | |
| <i>Contaminant (Unit of Measure)</i> | Action Level (AL) | MCLG | 90 th Percentile Value | # Sites Above AL of Total Sites | Sample Period | Violation | Likely Source of Contamination | |
| Lead (ppb) | 15 | 0 | 2.49 | Zero out of 10 samples | 2013 | No | Corrosion of household plumbing systems; Erosion of natural deposits | |
| Copper (ppm) | 1.3 | 1.3 | 1.19 | One out of 10 samples | 2013 | No | Corrosion of household plumbing systems; Erosion of natural deposits. Leaching from wood preservatives. | |

VIOLATIONS:

In December 2015, the Authority did not sample for Alkalinity in accordance with the Pennsylvania Safe Drinking Water Regulations and the Disinfection Byproducts Rule. The Authority is required to sample and test water for Total Organic Carbon (TOC) and Alkalinity once each month. The TOC sample was collected and analyzed; however, due to an administrative error, the Alkalinity sample was not. Sampling and testing for TOC and Alkalinity in accordance with regulations resumed in January 2016. The Authority also did not meet the minimum required percent (%) removal requirement for TOC during 2015. Alkalinity and TOC in the water have no health effects. However, TOC provides a medium for the formation of disinfection byproducts. These byproducts include THMs and HAAs. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer; however, the Authority DID NOT exceed the MCLs for disinfection byproducts including THMs and HAAs during 2015.

EDUCATIONAL 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:

- 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 metals, which can be naturally-occurring or result from urban stormwater run-off, 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 stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- 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 and DEP prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. FDA and DEP regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled 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 about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s Safe Drinking Water Hotline (800-426-4791).

INFORMATION ABOUT LEAD:

No samples tested for lead exceeded the established Action Level (AL). 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 Bedford Borough Water Authority 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 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 or at <http://www.epa.gov/safewater/lead>.

SYSTEM SECURITY:

Please report any suspicious activity observed in the vicinity of the Water Authority’s reservoirs, water intake plant, water treatment plant and water storage tanks to the Authority at 814-623-8192, Monday through Friday, 9:00 a.m. to 4:00 p.m. or the Bedford County Communication Center at 814-623-1105.

PLEASE CONSERVE OUR WATER RESOURCES: The Bedford Borough Water Authority requests that customers conserve our water resources by conserving water in the home and at places at work. Water conservation information, tips, and suggestions can be found at the following websites:

- <http://eartheasy.com/>
- <https://www3.epa.gov/watersense/>
- <http://www.dep.pa.gov/citizens/my-water/waterconservation>

Please help the Bedford Borough Water Authority find leaks, save water and reduce water service costs ...Because water lines are located underground, leaks may go unnoticed for days and even years resulting in a considerable waste of our valuable water resource and additional costs for all customers. Please help us locate these leaks by reporting to the Authority office any occurrences of: water running in locations that are normally dry; wet spots in yards and streets; the sound of water running in your home when water is not in use; the sound of water trickling or running in a storm inlet when it is not raining; sudden or unusually low water pressure; and slugs of discolored or cloudy water.

When an occurrence such as this is reported, a representative of the Authority will make contact and investigate the situation.