Our drinking water source is wells. Our wells draw groundwater from the Kirkwood-Cohansey Watertable Aquifer System, the Mount Laurel-Wenonah Aquifer System, and the Upper-Potomac-Raritan-Magothy Aquifer System. The Borough Water Department’s source water susceptibility ratings and a list of potential contaminant sources is included. You may also contact your public water system at 856-767-0056 to obtain information regarding these water systems Source Water Assessments. Berlin Borough Water Department’s source water susceptibility ratings and a list of potential contaminant sources is included.

Our wells range in depth from 453 to 746 feet deep. Our water system purchases a limited amount of water from New Jersey American Water. The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for this public water system, which is available at WWW.state.nj.us/dep/swap or by contacting NJDEP’s Bureau of Safe Drinking Water at (609) 292-5550. You may also contact your public water system at 856-767-0056 to obtain information regarding these water systems Source Water Assessments. Berlin Borough Water Department’s source water susceptibility ratings and a list of potential contaminant sources is included.

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).

### Berlin Borough Water Department Test Results

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Violation Y/N</th>
<th>Level Detected</th>
<th>Units of Measurement</th>
<th>MC</th>
<th>MCL</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Radioactive Contaminants:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined Radium 228 &amp; 226 Test results Yr. 2017</td>
<td>N</td>
<td>Range = ND – 1.1 Highest detect = 1.1</td>
<td>PCI/L</td>
<td>0</td>
<td>5</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td><strong>Inorganic Contaminants:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic Test results Yr. 2017</td>
<td>N</td>
<td>Range = ND – 0.7 Highest detect = 0.7</td>
<td>ppb</td>
<td>N/A</td>
<td>5</td>
<td>Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes</td>
</tr>
<tr>
<td>Barium Test results Yr. 2017</td>
<td>N</td>
<td>Range = 0.01 – 0.07 Highest detect = 0.07</td>
<td>ppm</td>
<td>2</td>
<td>2</td>
<td>Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits</td>
</tr>
<tr>
<td>Copper Test results Yr. 2017</td>
<td>N</td>
<td>0.19 No samples exceeded the action level</td>
<td>ppm</td>
<td>1.3</td>
<td>AL=1.3</td>
<td>Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives</td>
</tr>
<tr>
<td>fluoride Test results Yr. 2017</td>
<td>N</td>
<td>Range = ND – 0.6 Highest detect = 0.6</td>
<td>ppm</td>
<td>4</td>
<td>4</td>
<td>Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories</td>
</tr>
<tr>
<td>Lead Test results Yr. 2017 Result at 90th Percentile</td>
<td>N</td>
<td>9.4 2 samples out of 32 exceeded the action level</td>
<td>ppb</td>
<td>0</td>
<td>AL=15</td>
<td>Corrosion of household plumbing systems, erosion of natural deposits</td>
</tr>
<tr>
<td><strong>Disinfection Byproducts:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TTHM Total Trihalomethanes Test results Yr. 2019</td>
<td>N</td>
<td>Range = 6 - 52 Highest LRAA = 52</td>
<td>ppb</td>
<td>0</td>
<td>80</td>
<td>By-product of drinking water disinfection</td>
</tr>
<tr>
<td>HAA5 Halocetic Acids Test results Yr. 2019</td>
<td>N</td>
<td>Range = ND - 12 Highest LRAA = 9</td>
<td>ppb</td>
<td>0</td>
<td>60</td>
<td>By-product of drinking water disinfection</td>
</tr>
</tbody>
</table>

Total Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM) compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four yearly quarters of results.

### Regulated Disinfectants

<table>
<thead>
<tr>
<th></th>
<th>Level Detected</th>
<th>MRDL</th>
<th>MRDLG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine Test results Yr. 2019</td>
<td>Average = 0.5 ppm</td>
<td>4.0 ppm</td>
<td>4.0 ppm</td>
</tr>
</tbody>
</table>

The Berlin Water Department and New Jersey American Water routinely monitor for contaminants in your drinking water according to Federal and State laws. The tables show the results of that monitoring for the period of January 1st to December 31st, 2019. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently.
DEFINITIONS

In the “Test Results” tables you may find some terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.
Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one part in 2,000,000,000 parts in the total solution.
Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one part in 1,000,000,000,000 parts in the total solution.
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Turbidity - Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity is measured as an indicator of the effectiveness of the filtration process. The Turbidity Level Goal (TLG) requires that no individual sample exceeds 1 NTU and 95% of the samples do not reflect the benefits of the use of disinfectants to control microbial contamination.
Total Residual Disinfectant Level Goal (TRDLG) - The maximum level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
Total Organic Carbon (TOC) - Total Organic Carbon (TOC) has no health effects. However, TOC provides a medium for the formation of disinfection byproducts. The 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 contamination.
Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
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 as the MCLGs as feasible using the best available treatment technology.
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.
Maximum Residual Disinfectant Level Goal (MRDLG): 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.

Lead: 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 Berlin Borough Water Department 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 second to 2 minutes before using water for drinking and 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 . However, for those served by a lead service line, flushing times may vary based on the length of the service line and plumbing configuration in your home. If your home is set back further from the street a longer flushing time may be needed. To conserve water, other household water usage activities such as showering, washing clothes, and running the dishwasher are effective methods of flushing out water from a service line. To determine if you have a lead service line, please call 856-767-0056

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained from the Environmental Protection Agency’s Safe Drinking Water Hotline at 1-800-426-4791.

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 the 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 storm-water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts 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 activities.
- Pesticides and herbicides, which can come from a variety of sources such as: agriculture, urban storm-water runoff, and residential uses.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. To insure the continued quality of our drinking water supply we use sodium hypo-chloride for disinfection. We use aeration, filtration to guarantee the removal of potential contaminants, and we also do pH adjustment.

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. Our system received monitoring waivers for asbestos and synthetic organic chemicals.

If you have questions about this report or concerning your water utility, please contact John Allsebrook at 856-767-0056. 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 Borough Council meetings at Borough Hall, 59 South White Horse Pike. Meetings are held on the first Monday of each month at 7:30 p.m.

We at the Berlin Borough Water Department work hard to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children’s future. Thank you.
## New Jersey American Water

### Western / Delaware System PWS ID # NJ0327001

#### Year 2019 Test Results

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Violation Y/N</th>
<th>Level Detected</th>
<th>Units of Measurement</th>
<th>MCLG</th>
<th>MCL</th>
<th>Likely Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Microbiologicals:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Turbidity                   | N             | Range = 0.06 – 0.08  
100% of samples < 0.3 | NTU                  | N/A   | TT  | Soil runoff, Naturally present in the environment                               |
| Total Organic Carbon        | N             | Range = 1.40 – 2.02%  
Average removal = > 1.0% | NTU                  | N/A   | TT  | Soil runoff, Naturally present in the environment                               |
| **Inorganics:**             |               |                                       |                      |      |     |                                                                                |
| Copper Result at 90th Percentile | N          | 0.31  
No samples exceeded the action level   | ppm               | 1.3  | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Barium Test results yr. 2017 | N          | Range = ND – 0.1  
Highest detect = 0.1 | ppm               | 2    | 2   | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Lead Result at 90th Percentile | N          | 1  
No samples exceeded the action level   | ppb               | 0    | AL=15 | Corrosion of household plumbing systems, erosion of natural deposits           |
| Nickel Test results Yr. 2017 | N          | Range = ND – 64  
Highest detect = 64 | ppb               | N/A  | N/A | Erosion of natural deposits                                                  |
| Nitrates                    | N            | Range = ND – 1.6  
Highest detect = 1.6 | ppm               | 10   | 10  | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| **Radiologicals:**          |               |                                       |                      |      |     |                                                                                |
| Gross Alpha Test results Yr. 2018 | N           | Range = 4.6 – 4.8  
Highest detect = 4.8 | pCi/l              | 0    | 15  | Erosion of natural deposits                                                  |
| Combined Radium 226 & 228 Test results Yr. 2018 | N           | Range = ND – 1.49  
Highest detect = 1.49 | ppb               | 0    | 5   | Erosion of natural deposits                                                  |
| **Disinfection Byproducts:**|               |                                       |                      |      |     |                                                                                |
| TTHM [Total trihalomethanes] | N           | Range = 5 – 46  
Highest LRAA = 32 | ppb               | 0    | 80  | By-product of drinking water disinfection                                      |
| HAA5 Haloacetic Acids       | N            | Range = ND - 21  
Highest LRAA = 12 | ppb               | 0    | 60  | By-product of drinking water disinfection                                      |
| **Regulated Disinfectants** |               |                                       |                      |      |     |                                                                                |
| Chlorine                    |               | Range = 0.5 – 1.1 ppm                  | ppm                 | 4.0  | 4.0 |                                                                                |

Total Haloacetic Acids (HAA5) and Total Trihalomethanes (TTHM) compliance is based on a Locational Running Annual Average (LRAA), calculated at each monitoring location. The LRAA calculation is based on four yearly quarters of results.

### Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at a greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

### Waivers

The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for asbestos, volatile organic chemicals and synthetic organic chemicals. New Jersey American Water received a monitoring waiver for synthetic organic contaminants.
IMPORTANT INFORMATION ABOUT OUR DRINKING WATER

Our water system violated a drinking water standard in February 2018. Even though this was not an emergency, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether, or not our drinking water meets health standards. We are required to take fifteen (15) Total Coliform Bacteria (TC) samples per month in the drinking water distribution system. In February 2018 we inadvertently took only Fourteen (14) samples and therefore cannot be sure of the quality of our drinking water during that time. At that time, we also did not take the correct number of Chlorine Residual (CR) samples. We did take fifteen (15) TC and (15) CR samples in January 2018. All TC and CR sample results were in compliance. In all subsequent months, the correct number of samples were taken.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Chlorine residual in drinking water indicates a sufficient amount of chlorine was added initially to inactivate harmful bacteria and/or viruses. It is a measurement of the potability of drinking water.

What should I do?

There is nothing you need to do at this time.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

IMPORTANT INFORMATION ABOUT OUR DRINKING WATER

Starting in January 2018, we have been required to monitor for pH and alkalinity every six months at twenty (20) different sampling points in the drinking water distribution system. During the monitoring period of 1/1/2019 – 6/30/2019 we inadvertently monitored at nineteen (19) sampling points instead of the required 20. We have corrected this issue and are monitoring for pH and Alkalinity regularly at all 20 sampling points. All prior and subsequent monitoring results have been taken correctly and were and are in compliance.

pH is a measure of how acidic/basic water is. The range goes from 0 to 14, with 7 being neutral. pH’s of less than 7 indicate acidity, whereas a pH of greater than 7 indicates a base. The pH of water is a very important measurement to determine water quality and optimum corrosion control.

Alkalinity is the capacity of water to resist changes in pH that would make the water more acidic.

There is nothing you need to do at this time.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.
Berlin Water Department- PWSID # NJ0405001

Berlin Water Department is a public community water system consisting of 4 active wells.

This system’s source water comes from the following aquifers: Kirkwood-Cohansey Watertable Aquifer System, Mount Laurel-Wenonah Aquifer System, Upper-Potomac-Raritan-Magothy Aquifer System.

This system can purchase water from the following water systems: New Jersey American Water, Winslow Township Water Department.

Susceptibility Ratings for Berlin Water Department Sources

The table below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The table provides the number of wells and intakes that rated high (H), medium (M), or low (L) for each contaminant category. For susceptibility ratings of purchased water, refer to the specific water system’s source water assessment report.

The seven contaminant categories are defined at the bottom of this page. DEP considered all surface water highly susceptible to pathogens, therefore all intakes received a high rating for the pathogen category. For the purpose of Source Water Assessment Program, radionuclides are more of a concern for ground water than surface water. As a result, surface water intakes’ susceptibility to radionuclides was not determined and they all received a low rating.

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, DEP may customize (change existing) monitoring schedules based on the susceptibility ratings.

<table>
<thead>
<tr>
<th>Sources</th>
<th>Pathogens</th>
<th>Nutrients</th>
<th>Pesticides</th>
<th>Volatile Organic Compounds</th>
<th>Inorganics</th>
<th>Radionuclides</th>
<th>Radon</th>
<th>Disinfection Byproduct Precursors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wells - 4</td>
<td>H</td>
<td>M</td>
<td>L</td>
<td>H</td>
<td>M</td>
<td>L</td>
<td>H</td>
<td>M</td>
</tr>
</tbody>
</table>

Pathogens: Disease-causing organisms such as bacteria and viruses. Common sources are animal and human fecal wastes.

Nutrients: Compounds, minerals and elements that aid growth, that are both naturally occurring and man-made. Examples include nitrogen and phosphorus.

Volatile Organic Compounds: Man-made chemicals used as solvents, degreasers, and gasoline components. Examples include benzene, methyl tertiary butyl ether (MTBE), and vinyl chloride.

Pesticides: Man-made chemicals used to control pests, weeds and fungus. Common sources include land application and manufacturing centers of pesticides. Examples include herbicides such as atrazine, and insecticides such as chlordane.

Inorganics: Mineral-based compounds that are both naturally occurring and man-made. Examples include arsenic, asbestos, copper, lead, and nitrate.

Radionuclides: Radioactive substances that are both naturally occurring and man-made. Examples include radium and uranium.

Radon: Colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to http://www.nj.gov/dep/rpp/radon/index.htm or call (800) 648-0394.

Disinfection Byproduct Precursors: A common source is naturally occurring organic matter in surface water. Disinfection byproducts are formed when the disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example leaves) present in surface water.