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 land or through the ground, it dissolves naturally-occurring minerals and, in some cases, organic compounds, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:• Recreational contaminants, such as viruses and bacteria, which may come from sewage discharges, oil and gas production, mining or forestry. • Pathogenic and toxigenic, which may come from a variety of sources such as agriculture, algal blooms, raw sewage, runoff, and rainfall. •Radionuclide contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that a water system is safe to drink, EPA and SDW require that a number of contaminants in water provided by public water systems be monitored. EPA and SDW 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).
Inorganic Chemicals (IOC)

- Antimony
- Beryllium
- Cadmium

Perfluorinated Compounds (PFCs)

- Perfluorononanoic acid (PFNA)
- Perfluorobutanesulfonic acid (PFBS)
- Perfluoroheptanoic acid (PFHpA)
- Perfluorohexanesulfonic acid (PFHxS)

Perfluorooctanesulfonic acid (PFOS)

Perfluorooctanoic acid (PFOA)

Coliform Bacteria

- E. Coli
- Total Coliform Bacteria

Synthetic Organic Chemicals (SOCs)

- 1,2-Dibromo-3-chloropropane
- Dalapon
- Ethylene dibromide
- Oxybenzone
- 2,4-D
- Di(2-ethylhexyl) adipate
- Glyphosphate
- Pentachlorophenol
- 2,4,5-TP
- [Silvex]
- Hexachlorobenzene
- Simazine
- Toxaphene
- Atrazine
- Dioxin [2,3,7,8-TCDD]
- Hexachlorocyclopentadiene

Volatile Organic Chemicals (VOCs)

- 1,1,1-Trichloroethane
- Chlorobenzene
- Ethylene dibromide
- Oxybenzone
- 1,1,2-Trichloroethane
- Dichloromethane
- Glyphosphate
- Pentachlorophenol
- 1,1-Dichloroethylene
- Ethylbenzene
- Heptachlor
- Picloram
- Alachlor
- Endothall
- Hexachlorobenzene
- PCBs [Polychlorinated biphenyls]
- Carbofuran
- Endrin
- Hexachlorocyclopentadiene
- Methoxychlor
- Chlorodane
- Ethylbenzene
- Heptachlor epoxide
- PCBs [Polychlorinated biphenyls]
- Methylene chloride
- Vinyl Chloride
- Benzene
- Xylenes, total

To enhance water quality, NPWA performs an annual hydrant flushing program which takes place in the spring of each year. This flushing program helps improve water quality by removing any possible build-up of mineral deposits from the inside of water distribution pipes. NPWA also has an aggressive water main replacement program to improve the quality of water that we deliver to our customers. Old unlined cast iron mains, that can affect water quality and restrict flow, are replaced on a regular basis. These projects are scheduled when PennDOT or our member municipalities are doing work on the roads to reduce inconvenience to the community.

In 2017, NPWA received the Directors Award for its efforts with the Partnership for Safe Water’s Distribution System Optimization Program (DSOP). NPWA became the first public water utility in Pennsylvania to join the DSOP and among the first in North America to receive this prestigious honor for successfully completing a comprehensive self-assessment of water distribution system operations. The assessment involves an evaluation of distribution system operations and performance, including factors such as chlorine residuals, pressure levels and frequency of water main breaks. The final report is reviewed by water resource professionals from across the United States. This award acknowledges the Authority’s commitment to excellence in distribution system operations in providing high quality safe drinking water to the customer’s tap above and beyond regulatory standards.

**HOW NPWA IS PROTECTING THE WATER YOU DRINK**

Here is a list of parameters which NPWA monitored for in 2017 but DID NOT DETECT:

- Ethylene dibromide
- Oxybenzone
- Glyphosphate
- Pentachlorophenol
- Heptachlor epoxide
- PCBs [Polychlorinated biphenyls]
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Lindane
- Toxaphene
- Atrazine
- Dioxin [2,3,7,8-TCDD]
- Hexachlorocyclopentadiene
- Methoxychlor
- Alachlor
- Endothall
- Hexachlorocyclopentadiene
- Methoxychlor

**FOREST PARK WATER**

Forest Park is a state of the art water treatment facility that combines conventional treatment processes with advanced techniques, which include ozone disinfection and membrane filtration. Membrane filtration is a leading-edge technology capable of consistently producing very high quality water and ensuring that plant can reliably meet the more stringent federal and state water quality regulations that will be required in the near future. This combination of traditional and innovative water treatment allows Forest Park to produce the safest, highest quality water possible. In 2017, the American Water Works Association presented the Forest Park Water Treatment Plant with the highly prestigious 5-Year Presidents Award of recognition from the Partnership for Safe Water. The 5-Year Presidents Award recognizes achieving very stringent individual filter performance turbidity goals over a five-year period, signifying the outstanding operation and maintenance practices of the high-performing water treatment plant. The Forest Park Water Treatment Plant has been involved in the Partnership for Safe Water since 1995 and is a Directors Award recipient since 2002.

**PHONE: 215-855-3617 • www.npwa.org**
Maximie Residual Disinfectant Level Goal (MRDLG): The level of a drinking water contaminant below which there is no known or expected risk to health. MCLGs allow for a margin of safety reflecting the best available treatment technology.

North Penn Water Authority (NPWA): PWSID # 1460034
Hilltown Township Water and Sewer Authority (HTWSA) operates 3 groundwater supply wells. Well No. 1 is located in the East Branch Perkiomen watershed. Well No. 2 is located in South Palmyra Township, and Well No. 3 is located in Route 522. HTWSA's wells are located in the East Branch Perkiomen watershed and treated surface water from the Forest Park Water Treatment Plant, in Chalfont, Pennsylvania. Water is pumped from the Delaware River at Point Pleasant and diverted into the North Branch Neshaminy Creek near Garnetville, Pennsylvania. The treatment center controls the level of lead for decades. The Authority's staff of 119 people work 365 days a year to ensure a safe, economic, and continuous supply of water.

Some people may be more vulnerable to contaminants in drinking water than the general population. This may be the case for children, some elderly, and individuals with immune system disorders, cancer patients, and others with compromised immune systems who require chemotherapy or radiation therapy. Non- point sources of potential contamination include major transportation corridors and runoff from areas of urban development, livestock farming, and industrial parks. The most serious potential source is related to accidental releases by facilities that handle hazardous materials.

ppb: parts per billion, or micrograms per liter (μg/L)
pCi/L: picocuries per liter (a measure of radioactivity)
N/A: Not Applicable

For information about other sources of water and how they may affect your drinking water, please contact your local water utility, community or state governmental contacts, or the U.S. Environmental Protection Agency (EPA) at (800-426-4791).

DEFINITIONS

In the following tables you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms, we’ve provided the following definitions:

ppb: parts per billion, or micrograms per liter (μg/L)
pCi/L: picocuries per liter (a measure of radioactivity)
N/A: Not Applicable

For information about other sources of water and how they may affect your drinking water, please contact your local water utility, community or state governmental contacts, or the U.S. Environmental Protection Agency (EPA) at (800-426-4791).
While many water suppliers continue to monitor nickel levels in water, there is currently no EPA maximum contaminant level (MCL) for nickel in drinking water. EPA is reconsidering the limit on nickel.

**CHEMICAL CONTAMINANTS**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>MCL</th>
<th>MCLG</th>
<th>Highest Level Detected</th>
<th>Range of Detections</th>
<th>Units</th>
<th>Sample Date</th>
<th>Violation Yes/No</th>
<th>Sources of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride</td>
<td>2 2</td>
<td>0.148 (T)</td>
<td>3.7</td>
<td>2.3 – 3.7</td>
<td>ppb</td>
<td>2017</td>
<td>No</td>
<td>Byproduct of drinking water chlorination</td>
</tr>
<tr>
<td>Barium</td>
<td>2 2</td>
<td></td>
<td></td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chromium</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uranium</td>
<td>30</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined Radium</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>70</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine (in distribution system) MCLD=4 MLCGD=4</td>
<td>1.01</td>
<td>0.75 – 1.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bromate</td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrate</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>1.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perfluorinated Compounds (PFCs):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFOS + PFOA</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERFLUORINATED COMPOUNDS (PFCs):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFOS</td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFOA</td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *PFOS + PFOA has a combined HAL Health Advisory Level of 70 ppt*

**ENTRY POINT DISINFECTANT RESIDUAL**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Minimum Disinfectant Residual</th>
<th>Lowest Level Detected</th>
<th>Range of Detections</th>
<th>Units</th>
<th>% of Sites</th>
<th>Sample Date</th>
<th>Violation Yes/No</th>
<th>Sources of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorine – Wells</td>
<td>0.4</td>
<td>0.11 – 0.3 (T)</td>
<td>0.11 – 0.4 (T)</td>
<td>ppm</td>
<td>2017</td>
<td>No</td>
<td>Water additive used to control microbes</td>
<td></td>
</tr>
<tr>
<td>Chlorine – FPW Treatment Plant</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Chlorine levels did not drop below the maximum residual level required for 4 hours.</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TURBIDITY AT FOREST PARK WATER TREATMENT PLANT**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>MCL</th>
<th>MCLG</th>
<th>Highest Level Detected</th>
<th>Range of Detections</th>
<th>Units</th>
<th>Sample Date</th>
<th>Violation Yes/No</th>
<th>Sources of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbidity</td>
<td>TT=1 NTU for a single measurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbidity</td>
<td>TT of at least 95% of monthly samples ≤0.3 NTU</td>
<td>N/A</td>
<td>0.04</td>
<td>0.01 – 0.04</td>
<td>2017</td>
<td>No</td>
<td>Soil runoff</td>
<td></td>
</tr>
</tbody>
</table>

**LEAD AND COPPER**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Action Level (AL)</th>
<th>PCD</th>
<th>Permissible Value</th>
<th>Units</th>
<th>% of Sites Above AL</th>
<th>Total Sites</th>
<th>Sample Date</th>
<th>Violation Yes/No</th>
<th>Sources of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>15</td>
<td>0.2</td>
<td></td>
<td>ppm</td>
<td>2 out of 34</td>
<td>2017</td>
<td>No</td>
<td>Corrosion of household plumbing</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>1.3</td>
<td>0.698</td>
<td></td>
<td>ppm</td>
<td>2 out of 34</td>
<td>2017</td>
<td>No</td>
<td>Corrosion of household plumbing</td>
<td></td>
</tr>
</tbody>
</table>

**FOREST PARK WATER TREATMENT PLANT**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Average Level Detected</th>
<th>Range of Detections</th>
<th>Units</th>
<th>Sample Date</th>
<th>Violation Yes/No</th>
<th>Sources of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perfluorosulfonamide acid (PFOS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perfluorooctanoic acid (PFOA)</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>