Source Water Assessment Summary
A State of New Jersey Commission for the System of Drinking Water

Source Water Assessment
A Source Water Assessment (SWA) has been carried out for all public water systems. The Source Water Assessment and related public notice can be obtained by logging into the NJDEP’s Source Water Assessment portal or sending an email to njswa@dep.nj.gov.

Substance Source Water Pathogens
Water quality data summary

<table>
<thead>
<tr>
<th>Substance</th>
<th>NJ RUL</th>
<th>Typical Source</th>
<th>PVWC</th>
<th>NJDWSC</th>
<th>NEWARK</th>
<th>NUTLEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium (ppm)</td>
<td>2</td>
<td>0.026</td>
<td>Soil runoff; runoff from orchards; erosion of natural deposits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antimony (ppb)</td>
<td>6</td>
<td>0.0007</td>
<td>Runoff from glass and electronic production wastes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selenium (ppb)</td>
<td>50</td>
<td>0.67</td>
<td>Runoff from orchards; erosion of natural deposits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mercury (ppm)</td>
<td>0.002</td>
<td>0.0002</td>
<td>Discharge from steel and pulp mills; erosion of natural deposits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>1</td>
<td>0.01</td>
<td>Discharge from steel and pulp mills; erosion of natural deposits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead (ppm)</td>
<td>5</td>
<td>ND</td>
<td>Discharge from steel and pulp mills; erosion of natural deposits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium (ppb)</td>
<td>0.01</td>
<td>ND</td>
<td>Discharge from steel and pulp mills; erosion of natural deposits</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source Water Assessment Summary

Water Quality Data Table - 2012

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PVWC</th>
<th>NJDWSC</th>
<th>NEWARK</th>
<th>NUTLEY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turbidity (NTU)</td>
<td>NA</td>
<td>0.27</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Coliform Bacteria (%)</td>
<td>0</td>
<td>5%</td>
<td>55%</td>
<td>55%</td>
</tr>
<tr>
<td>Fecal E. coli</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alkalinity (ppm)</td>
<td>NS</td>
<td>23.4</td>
<td>28.2</td>
<td>ND</td>
</tr>
<tr>
<td>Hardness [as CaCO3] (ppm)</td>
<td>250</td>
<td>39.7</td>
<td>42.7</td>
<td>Yes</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>213</td>
<td>39.7</td>
<td>42.7</td>
<td>Yes</td>
</tr>
<tr>
<td>Chloride (ppm)</td>
<td>100</td>
<td>39.7</td>
<td>42.7</td>
<td>Yes</td>
</tr>
<tr>
<td>Sulfate (ppm)</td>
<td>100</td>
<td>39.7</td>
<td>42.7</td>
<td>Yes</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>NA</td>
<td>ND</td>
<td>ND</td>
<td>ND</td>
</tr>
</tbody>
</table>

Water Quality Chart Definitions

- **Bacteria** - pathogenic microorganisms that, if ingested, may result in severe illness, death, or both. Bacterial pathogens include: E. coli, Salmonella, Campylobacter, Shigella, and Vibrio species. These organisms are generally monitored on a routine basis by agencies responsible for ensuring the drinking water supply is safe to use.
- **Viruses** - may be present in source water. Common sources include land application and industrial and domestic wastewater discharge.
- **Protozoa** - including Cryptosporidium and Giardia, are parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches. Symptoms can range from mild to severe, and health risks increase with immunosuppression.
- **Volatile Organic Compounds / Disinfection Byproducts** - Byproducts of drinking water disinfection. These include chlorinated hydrocarbons, aldehydes, and VOCs. The USEPA developed health advisories and health-based standards for selected VOCs.
- **Inorganic Contaminants** - Minerals and their salts that naturally occur in the earth’s crust or are formed by chemical and geologic processes. Examples include strontium, arsenic, and selenium.
- **Radionuclides** - naturally occurring elements that are radioactive. Examples include uranium, thorium, and radium.
- **Radionuclides** - include man-made and naturally occurring radionuclides. Examples include tritium and radon.
- **Organic Matter** - natural and man-made organic compounds that may be present in surface water or ground water. Examples include benzene, toluene, and xylenes.
- **Disinfection** - the process that uses chemicals to kill organisms. Disinfection byproducts are formed during chlorination, bromination, and UV disinfection processes.
- **Purple Valley Water Commission** - The Purple Valley Water Commission was established to ensure the drinking water supply is safe to use.
- **NJDWSC** - New Jersey Division of Water Supply Commission
- **NJDEP** - New Jersey Department of Environmental Protection
- **MRDL** - Maximum Residual Disinfectant Level; the lowest level of a drinking water disinfectant is necessary for control of microbial contaminants. MRDLs are set by the USEPA.
- **MRDLG** - Maximum Residual Disinfectant Goal; the level of a drinking water disinfectant is necessary for control of microbial contaminants. MRDLGs are not enforceable standards.
- **RUL** - Recommended Upper Limit; the highest level of a constituent of drinking water. RULs are set by the USEPA.
- **MCLG** - Maximum Contaminant Level Goal; the level of a drinking water contaminant that should not be exceeded in order to protect public health, even though it may not be medically detectable. MCLGs are not enforceable standards.
- **MCL** - Maximum Contaminant Level; the highest level of a contaminant of drinking water that can be present in drinking water without making health impacts probable. MCLs are enforceable standards.
- **NA** - Not Applicable
- **ppb** - parts per billion (approximately equal to micrograms per liter)
- **THMs** - Total Trihalomethanes; primarily chloroform, bromoform, chlorobenzene, and bromodichloromethane.
- **MTBE** - Methyl Tertiary Butyl Ether
- **VOCs** - Volatile Organic Compounds
- **Radon** - Radon is a naturally occurring radioactive gas that can enter drinking water supplies through soil and rock.
- **Volatile Organic Compounds** - man-made and naturally occurring organic compounds that can enter drinking water supplies through soil, rock, and water.
The Nutley Water Department is a public community water system and purchases its water from the Newark Water Department and the Passaic Valley Water Commission. The City of Newark serves a small area of Nutley with Pequannock Reservoir Water. At these intakes, the water goes into our distribution system. The water is then treated for safety and quality, and meets all federal and state standards before it is delivered to your home.

The standards for these contaminants are set by the Environmental Protection Agency (EPA) and are in place to protect public health. The maximum contaminant level (MCL) is the highest level of a contaminant that is allowed in drinking water. The MCLs are established after extensive review of the available scientific data on the health effects of contaminants in drinking water.

In order to protect tap water to be safe to drink, EPA establishes regulations which set the acceptable levels for contaminants in drinking water. These regulations are based on the results of scientific studies and research. They also take into account the potential health effects of the contaminants in question.

For more information on the contaminants and their health effects, you can visit the following resources:
- Environmental Protection Agency (EPA)
- United States Environmental Protection Agency (EPA)
- United States Food and Drug Administration (FDA)
- American Water Works Association (AWWA)

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