All Drinking Water May Contain Contaminants

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. In order to ensure that tap water is safe to drink, EPA regulations prescribe limits which the amount of contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in water provided by public water systems. 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.

Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water can occur from 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 (1-800-426-4791).

Food and Drug Administration regulations establish limits for certain contaminants in water provided by public water systems. 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 (1-800-426-4791).

The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, EPA regulations prescribe limits which the amount of contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in water provided by public water systems. 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 (1-800-426-4791).

The East Orange Water Department (EOWD) is proud to continue delivering high-quality drinking water to you, our customers. As new challenges to drinking water safety emerge, the EOWD will remain vigilant in meeting the goals of safe drinking water, source water protection, water conservation, and community education. The EOWD will uphold the needs of all our water users, with the highest levels of integrity and professionalism.

We encourage you to share your thoughts with us on the information contained in this report. Should you have any questions or concerns about your water, please contact us at (973) 266-8609.
Our Drinking Water Is Regulated

The City of East Orange Water Department is pleased to share this report with you. This report is a summary of the quality of the water we provide for your community. The analysis covers January 1 through December 31, 2014, and was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what’s in your drinking water.

Where Do We Get Our Drinking Water?

The source of drinking water for the Township of South Orange Village Water System is from groundwater derived through Well No. 17, located in Grove Park, Township of South Orange Village, and the balance obtained from the East Orange Water Reserve located in Livingston, Millburn, and Florham Park. In addition, water was purchased from the City of Newark to meet customer demand. In rare instances when an emergency should arise, the Township of South Orange Village Water System has water interconnections with the New Jersey American Water Company.

To learn more about our watershed, go to the U.S. EPA’s Surf Your Watershed at www.epa.gov/surf.

Source of Drinking Water

The sources of drinking water (both tap water and bottled water) include reservoirs, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, the water 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 your water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic chemicals, such as metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or road salt.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban runoff, and residential use.
- 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 stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of the production and mining activities.

Source Water Assessment

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 the City of East Orange Water Department’s Customer Service Division at (973) 266-8869 to obtain information regarding your water system’s Source Water Assessment.

Susceptibility Ratings for South Orange Water System

The information below illustrates the susceptibility ratings for the seven contaminant categories (and radon) for each source in the system. The information 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.

Susceptibility to the seven contaminant categories is defined as:

- Low: Does not warrant concern
- Medium: Warrant concern
- High: Highly susceptible

The following categories were rated with high potential to contaminate our water supply: pathogens, pesticides, and radon.

The following categories were rated with medium potential to contaminate our water supply: nutrients, disinfection by-product precursors, and pesticides.

The following categories were rated with low potential to contaminate our water supply: pathogens, pesticides, and radon.

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The following categories were rated with low potential to contaminate our water supply: pathogens, pesticides, and radon.

We encourage you to share your thoughts with us on the quality of our drinking water. We will remain vigilant in delivering the best quality drinking water.

The City of East Orange Water Department is responsible for providing protection for public health. More information about contaminants and their potential health effects can be obtained by calling the EPA’s Office of Water at (800) 426-4791.

The information below illustrates the susceptibility ratings for the seven contaminant categories for each source in the system. The information 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.

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Definitions
• Action Level (AL) – the concentration of a contaminant with or exceeding, triggers some or other requirements which a water system must follow.
• Action Level Goal (ALG) – the level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
• Arg. – Regulatory compliance with some MCLs is based on running annual average of monthly samples.
• Maximum Contaminant Level (MCL) – the highest level of a contaminant that a drinking water system is allowed to exceed without violating the drinking water standard.
• 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.
• Maximum Residual Disinfectant Level (MRDL) – 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.
• 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 contaminants.
• MCL, MCLG – the maximum contaminant level or maximum contaminant level goal, respectively, for each contaminant in drinking water issued by the USEPA.
• NA – not applicable.
• ND – not detected.
• NTU – Nephelometric Turbidity Units.
• Parts per billion (ppb) – micrograms per liter (µg/L) or one part in 1,000,000,000,000,000 (1 x 10⁻¹⁵).
• Parts per million (ppm) – milligrams per liter (mg/L) or one part in 1,000,000,000 (1 x 10⁻⁹).
• pc/L (picocuries per liter) – A measure of radioactivity.
• RUL (Recommended Upper Limit) – RULs are established to regulate the aesthetics of drinking water (i.e., taste and odor).
• TT – treatment technique.

Regulated Substances

### Lead and Copper Contaminants – Township of South Orange Village

<table>
<thead>
<tr>
<th>Substance (Unit of Measure)</th>
<th>Year Sampled</th>
<th>Year Water</th>
<th>Yea</th>
<th>Violation</th>
<th>No. of sites found</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (ppm) (90th percentile)</td>
<td>2013</td>
<td>2013</td>
<td>8.82</td>
<td>1/33</td>
<td>No</td>
<td>Corrosion of household plumbing system; erosion of natural deposits</td>
</tr>
<tr>
<td>Lead (ppm) (90th percentile)</td>
<td>2013</td>
<td>2013</td>
<td>0.39</td>
<td>0/33</td>
<td>No</td>
<td>Corrosion of household plumbing system; erosion of natural deposits</td>
</tr>
</tbody>
</table>

### Secondary Substances

<table>
<thead>
<tr>
<th>Substance (Unit of Measure)</th>
<th>Year Sampled</th>
<th>Year Water</th>
<th>Violation</th>
<th>No. of sites found</th>
<th>Likely Source of Contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>22 &amp; 4</td>
<td>NA</td>
<td>Naturally present in the environment</td>
</tr>
<tr>
<td>Aluminum (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>100-200</td>
<td>NA</td>
<td>Erosion of natural deposits; residual from some water treatment processes</td>
</tr>
<tr>
<td>Chloride (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>22-35</td>
<td>NA</td>
<td>Naturally occurring</td>
</tr>
<tr>
<td>Color (units)</td>
<td>2014</td>
<td>2014</td>
<td>10</td>
<td>NA</td>
<td>Naturally occurring organic materials</td>
</tr>
<tr>
<td>Forming Agents (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>0.032</td>
<td>NA</td>
<td>Detergents/similar substances when water is saturated</td>
</tr>
<tr>
<td>Hardness (as CaCO3) (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>50-90</td>
<td>NA</td>
<td>Naturally occurring</td>
</tr>
<tr>
<td>Iron (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>0.3</td>
<td>NA</td>
<td>Naturally present in the environment</td>
</tr>
<tr>
<td>Manganese* (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>0.04</td>
<td>NA</td>
<td>Leaching from natural deposits</td>
</tr>
<tr>
<td>pH (units)</td>
<td>2014</td>
<td>2014</td>
<td>6.5-8.5</td>
<td>NA</td>
<td>Naturally occurring</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>14.3</td>
<td>18.9</td>
<td>Naturally occurring</td>
</tr>
<tr>
<td>Sulfate (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>23.8</td>
<td>10.7</td>
<td>Naturally occurring</td>
</tr>
<tr>
<td>Total Dissolved Solids (ppm)</td>
<td>2014</td>
<td>2014</td>
<td>509</td>
<td>119</td>
<td>Naturally occurring</td>
</tr>
</tbody>
</table>

### About Our Violations

#### City of East Orange

During the monitoring period of December 2014, monthly chloride residuals were submitted late to the NJ Department of Environmental Protection (NJDEP). This late submission was an oversight and did not have any impact on public health and safety.

#### Township of South Orange Village

During the monitoring period of April & May 2014, monthly chloride residuals were submitted late to the NJ Department of Environmental Protection (NJDEP). This late submission was an oversight and did not have any impact on public health and safety.
We routinely monitor for contaminants in your drinking water according to Federal and State laws. The test results table shows the results of our monitoring for the period of January 1 to December 31, 2014. In the table you might find terms and abbreviations you are not familiar with. To help you better understand these terms we’ve provided the following definitions:

- **Action Level (AL)** – the concentration of a contaminant in drinking water, if exceeded, triggers health or other requirements which a water system must follow.
- **Action Level Goal (ALG)** – the level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
- **Arg.** – Regulatory compliance with some MCLs is based on running annual average of monthly samples.
- **Maximum Contaminant Level (MCL)** – the highest level of a contaminant in drinking water which is allowed by law. MCLs ensure public health protection.
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- **NA** – not applicable.
- **ND** – not detected.
- **NTU** – Nephelometric Turbidity Units.
- **Parts per billion (ppb)** – micrograms per liter (µg/L) or one part in 1,000,000,000,000,000,000,000 gallons of water.
- **Parts per million (ppm)** – milligrams per liter (mg/L) or one part in 1,000,000,000 gallons of water.
- **ppC/L (picocuries per liter)** – A measure of radioactivity.
- **RUL (Recommended Upper Limit)** – RULs are established to regulate the aesthetics of drinking water (i.e., taste and odor).
- **TT** – treatment technique.

**About Our Violations**

City of East Orange

During the monitoring period of December 2014, monthly chlorine residuals were submitted late to the NJ Department of Environmental Protection (NJDEP). This late submission was an oversight and did not have any impact on public health and safety. We have already taken the steps to ensure that all water quality results are reported and submitted on time to the NJDEP.

City of Newark

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**Regulated Substances**

**Substance (Unit of Measure)** | **Year Sampled** | **City of East Orange** | **Towson Town of South Orange Village** | **City of Newark** | **Amount Detected** | **Range** | **Amount Detected** | **Range** | **Violations Yes/No** | **Likely Source of Contamination**
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Alpha Emitters (pCi/L) | 2014 85 | ND | ND | ND | 24.4 | NA | ND | NA | No | Erosion of natural deposits
Arsenic (ppm) | 2014 5 | 0.466 | NA | 1.48 | NA | ND | NA | No | Erosion of natural deposits; runoff from glass and electronics production wastes
Barium (ppm) | 2014 2 | 0.573 | NA | 0.995 | NA | 0.0065 | ND | 0.0165 | No | Discharge of drilling waste, discharge from metal refiners; erosion of natural deposits
Chlorine2 (ppm) | 2014 4 | 0.721 | 0.22-1.19 | 0.685 | 0.22-1.19 | 0.321 | NA | No | Water additive used to control microbes

2. RUL (Recommended Upper Limit) – RULs are established to regulate the aesthetics of drinking water (i.e., taste and odor).

**Lead and Copper Contaminants – Township of South Orange Village**

**Substance (Unit of Measure)** | **Year Sampled** | **RUL** | **Amount Detected** | **Range** | **Violation Yes/No** | **Likely Source of Contamination**
--- | --- | --- | --- | --- | --- | ---
Aluminum (ppm) | 2013 8.82 1/33 | ND | 0.011 | NA | No | Naturally present in the environment
Copper (ppm) | 2014 0.3 10 0 | ND | 0.011 | NA | No | Naturally present in the environment
Lead (ppm) | 2014 0.3 10 0 | 2.8-4 | 2.8-4 | NA | Yes | No | Corrosion of household plumbing systems; erosion of natural deposits

**Lead and Copper Contaminants – Township of South Orange Village**

**Secondary Substances**

**Substance (Unit of Measure)** | **Year Sampled** | **RUL** | **Amount Detected** | **Range** | **Amount Detected** | **Range** | **Violations Yes/No** | **Likely Source of Contamination**
--- | --- | --- | --- | --- | --- | --- | --- | ---
Arsenic (ppm) | 2013 0.04 | ND | 0.001 | NA | No | Naturally present in the environment
Barium (ppm) | 2013 0.25 | ND | 0.25 | NA | No | Naturally occurring in the environment
Chloride (ppm) | 2013 300 | ND | 400 | NA | No | Naturally occurring
Iron (ppm) | 2013 0.3 | ND | 0.3 | NA | No | Naturally occurring
Lead (ppm) | 2013 0.05 | ND | 0.05 | NA | No | Naturally occurring
Magnesium (ppm) | 2013 0.5 | ND | 0.5 | NA | No | Naturally occurring
Sulfate (ppm) | 2013 0.5 | ND | 0.5 | NA | No | Naturally occurring

**About Our Violations**

City of East Orange

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