# Westchester Joint Water Works
# ANALYTICAL TESTING RESULTS
# 2018

**Definitions:**

| | |
|---|---|
| **Action Level (AL):** | The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. |
| **Maximum Contaminant Level (MCL):** | The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible |
| **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. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination. |
| **Milligrams per liter (mg/l):** | Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm). |
| **Non Detect (ND):** | The contaminant was not detected in the water by laboratory analysis. |
| **No Determined Limit (NDL):** | No level has been established for drinking water. |
| **Nephelometric Turbidity Unit (NTU):** | A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person. |
| **Micrograms per liter (ug/l):** | Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb). |
| **Picocuries per liter (pci/L):** | A measure of the radioactivity in water. |
| **Locational Running Annual Average (LRAA):** | The average value of multiple samples taken over the latest twelve month period at a particular location. |
| **Treatment Technique: (TT):** | A required process intended to reduce the level of a contaminant in drinking water. |
| **UCMR3 and UCMR4:** | Unregulated Contaminant Monitoring Rule Three and Four |

| Contaminant | Violation Yes/No | Date of Sample | Level Detected Max (Range) | Unit Measurement | MCLG | Regulatory Limit MCL, TT, AL, Highest Level Allowed | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| **Regulated Inorganic Contaminants** | | | | | | | |
| Barium | No | 10/24/2018 | 0.020 (0.014-0.020) | mg/l | 2 | 2 | Erosion of natural deposits. |
| Chloride | No | 10/24/2018 | 18.8 (13.4-18.8) | mg/l | - | 250 | Naturally occurring; road salt |
| Fluoride | No | 2018 | 0.79 (0.64-0.79) | mg/l | - | 2.2 | Erosion of natural deposits; Water additive which promotes strong teeth. |
| Cyanide | No | 10/24/2018 | 0.0009 (0.0006-0.0009) (e) | mg/l | - | 0.2 | Discharge from industrial chemical factories. |
| Manganese | No | 10/24/2018 | 32.0 (16.4-32.0) (a) | ug/l | - | 300 | Naturally occurring |
| Nickel | No | 10/24/2018 | 0.76 (0.67-0.76) | ug/l | | 100 | Discharge from industrial chemical factories and or Runoff from fertilizer use |
| Nitrate | No | 10/24/2018 | 0.079 (0.076-0.079) | mg/l | 10 | 10 | Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits |
| Sodium | No | 10/24/2018 | 13.6 (10.2-13.6) (b) | mg/l | - | NDL | Naturally occurring; road salt |
| Sulfate | No | 10/24/2018 | 4.98 (4.90-4.98) | mg/l | 250 | 250 | Erosion of natural deposits |
| Turbidity - Entry Point (Purchase Booster Station) | No | 2018 | 1.52 (0.59 - 1.52) (c) | NTU | N/A | 5 | Soil runoff |
| Zinc | No | 10/24/2018 | 0.0053 (0.005-0.0053) | mg/l | - | 5 | Naturally occurring |
| **Microbiological Contaminants** | | | | | | | |
| Total Coliform - Distribution | No | 2018 | 2 Total / 3% | samples | 0 | 5% in one month | Naturally present in the environment |
| **Radiological Compliance** | | | | | | | |
| Gross Alpha | No | 10/24/2018 | 0.288 +/- 0.29 (d) | pCi/L | - | <15 | Erosion of natural deposits |
| Gross Beta | No | 10/24/2018 | 0.635 +/- 0.459 (d) | pCi/L | - | <5 | Erosion of natural deposits |
| Radium 226 | No | 10/24/2018 | 0.269 +/- 0.349 (d) | pCi/L | - | <5 | Erosion of natural deposits |
| Radium 228 | No | 10/24/2018 | 0.356 +/- 0.286 (d) | pCi/L | - | <5 | Erosion of natural deposits |
| **UCMR3 Detects(f)** | | | | | | | |
| Chromium | No | 7/10/2014 | 0.310 | ug/l | - | NDL | Erosion of natural deposits |
| Strontium | No | 7/10/2014 | 19.700 | ug/l | - | NDL | Naturally occurring mineral |
| **UCMR4 Detects(f)** | | | | | | | |
| Total Organic Carbon | No | Sept. 2018 and Dec. 2018 | (1840-2490) | ug/l | | | |
| Manganese | No | Sept. 2018 and Dec. 2018 | (14.8-126) | ug/l | | 300 | |

| Haloacetic Acid 5 (HAA5): | Violation Yes/No | Date of Sample | Level Detected Max (Range) | Unit Measurement | MCLG | Regulatory Limit MCL, TT, AL, Highest Level Allowed | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Site 1 | No | Sept. 2018 and Dec. 2018 | (41.2-61.2) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 2 | No | Sept. 2018 and Dec. 2018 | (44-81.1) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 3 | No | Sept. 2018 and Dec. 2018 | (48.8-77.7) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 4 | No | Sept. 2018 and Dec. 2018 | (27.8-41.5) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 5 | No | Sept. 2018 and Dec. 2018 | (56-77.5) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 6 | No | Sept. 2018 and Dec. 2018 | (26.4-52.3) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 7 | No | Sept. 2018 and Dec. 2018 | (23.1-35.7) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 8 | No | Sept. 2018 and Dec. 2018 | (42.9-68.6) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Haloacetic Acid 6Br (HAA6): | | | | | | | |
| Site 1 | No | Sept. 2018 and Dec. 2018 | (2.94-3.56) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 2 | No | Sept. 2018 and Dec. 2018 | (3.5-4.5) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 3 | No | Sept. 2018 and Dec. 2018 | (4.1-4.4) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 4 | No | Sept. 2018 and Dec. 2018 | (2.05-2.49) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 5 | No | Sept. 2018 and Dec. 2018 | (3.7-4.4) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 6 | No | Sept. 2018 and Dec. 2018 | (2.3-3.1) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 7 | No | Sept. 2018 and Dec. 2018 | (0.42-3) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 8 | No | Sept. 2018 and Dec. 2018 | (3.6-4.3) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Haloacetic Acid 9 (HAA9): | | | | | | | |
| Site 1 | No | Sept. 2018 and Dec. 2018 | (44.14-64.76) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 2 | No | Sept. 2018 and Dec. 2018 | (47.5-85.6) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 3 | No | Sept. 2018 and Dec. 2018 | (52.9-82.1) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 4 | No | Sept. 2018 and Dec. 2018 | (29.85-43.99) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 5 | No | Sept. 2018 and Dec. 2018 | (59.7-81.9) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 6 | No | Sept. 2018 and Dec. 2018 | (28.7-55.4) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 7 | No | Sept. 2018 and Dec. 2018 | (23.52-38.7) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |
| Site 8 | No | Sept. 2018 and Dec. 2018 | (46.5-72.9) | ug/l | 0 | NDL | Byproduct of drinking water chlorination |

**Undetected Conventional Physical And Chemical Parameters**

Antimony, Arsenic, Beryllium, Bromate, Cadmium, Chlorite, Chromium, Ethylene glycol, Iron, Mercury, Selenium, Silver, Thallium, Nitrite, Propylene glycol, Lead and Color

**Undetected Organic (Principal, Specified and Unspecified) Contaminants**

Carbamate pesticides (EPA method 531.1), Pesticides (EPA method 508), Endothall, Glyphosate, MTBE, Nitrobenzene, Herbicides (EPA method 515.1), Microextractables (EPA method 504.1)
Volatile organic compounds (EPA method 524.2), Organic chemicals (EPA method 525.2).

(a) If iron and manganese are present, the total concentration of both should not exceed 500 ug/l
(b) Water with > 20 mg/l of sodium should not be consumed by those on a severely restricted sodium diet. Water with >270 mg/l of sodium should not be consumed by people on a moderately restricted diet.
(c) Turbidity is a measure of cloudiness of the water. We test it because it is a good indicator of water quality. The highest monthly average turbidity measurement for the year (1.52 NTU) occurred in August 2017. High turbidity can hinder the effectiveness of disinfectants. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. MCL is the average of two consecutive days.
(d) This level represents the highest locational running annual average calculated from the data collected.
(e) Detected but below the MCL.
(f) For further information related to the UCMR3 and UCMR4 results please contact Frank Arcara Chief Water Treatment Plant Operator at 914-698-3500.

**Contaminants Monitored Under Interim Enhanced Surface Water Treatment Rule (Stage 2 Disinfection Byproducts)**

| Total Trihalomethanes: | Violation Yes/No | Date of Sample | Level Detected Max (Range) | | Unit Measurement | MCLG | Regulatory Limit MCL, TT, AL, Highest Level Allowed | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| Site 1 | No | 2018 | 46 (d) | (26-59) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Site 2 | No | 2018 | 29 (d) | (22-40) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Site 3 | No | 2018 | 40 (d) | (25-51) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Site 4 | No | 2018 | 48 (d) | (38-57) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Site 5 | No | 2018 | 34 (d) | (27-46) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Site 6 | No | 2018 | 17 (d) | (13-25) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Site 7 | No | 2018 | 25 (d) | (15-30) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Site 8 | No | 2018 | 30 (d) | (14-48) | ug/l | 0 | 80 | Byproduct of drinking water chlorination |
| Haloacetic Acid 5 (HAA5): | | | | | | | | |
| Site 1 | No | 2018 | 40 (d) | (32-46) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 2 | No | 2018 | 43 (d) | (29-59) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 3 | No | 2018 | 51 (d) | (31-70) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 4 | No | 2018 | 52 (d) | (39-75) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 5 | No | 2018 | 54 (d) | (30-71) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 6 | No | 2018 | 34 (d) | (34-45) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 7 | No | 2018 | 27 (d) | (18-36) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |
| Site 8 | No | 2018 | 46 (d) | (22-69) | ug/l | 0 | 60 | Byproduct of drinking water chlorination |

(d) This level represents the highest locational running annual average calculated from the data collected.

**Lead and Copper Rule Sampling Results**

| Contaminant | 95th percentile | Date of Samples | Number Of Samples Collected | Number Above Action Level | Level Detected Max (Range) | Unit Measurement | MCLG | Regulatory Limit MCL, TT, AL, Highest Level Allowed | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 7.3 | June-Sept.2018 | 84 | 0 | 5.9 (g) (ND-14.4) | ug/l | 0 | AL: 15 | Corrosion of household plumbing systems; Erosion of natural deposits |
| Copper | 263 | June-Sept.2018 | 84 | 0 | 259 (g) (9.2-304) | ug/l | 0 | AL: 1,300 | Corrosion of household plumbing systems; Erosion of natural deposits |

(g) The level presented represents the 90th percentile of the 84 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the values detected at your water system. In the case of lead, 84 samples were collected at your water system and the 90th percentile value was 5.9 ug/l, the 11th highest value of the samples taken. In the case of copper, 84 samples were collected from your water system and the 90th percentile value was 259.0 ug/l, the 11th highest value of the samples taken.
Of the 84 sites tested, zero sites exceeded the action level for lead and zero sites exceeded the action level for copper.
(h) Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and you should flush your tap for 30 seconds to 2 minutes before using your tap water. Additional information regarding lead in drinking water is available from the Safe Drinking Water Hotline (I-800-426-4791).