# Western System - PWSID NJ 0327001 2016 Table of Detected Contaminants

## Regulated Substances

| Parameter | Units | Compliance Achieved | MCLG | MCL | Highest Level Detected | Range Detected | Typical Source |
|---|---|---|---|---|---|---|---|
| **Inorganics** | | | | | | | |
| Barium (2014-2016) [1] | ppm | Yes | 2 | 2 | 0.1 | ND to 0.1 | Discharge of drilling watses; discharge from metal refineries; erosion of natural deposits |
| Total Chromium (UCMR 3 2013-2014) [1] | ppb | Yes | 100 | 100 | 1.3 | ND to 1.3 | Naturally - occuring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning and wood preservation |
| Nickel (2014-2016) [1] | ppb | Yes | NA [2] | NA [2] | 8 | ND to 8 | Erosion of natural deposits |
| Nitrate | ppm | Yes | 10 | 10 | 1.75 | ND to 1.75 | Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits |
| **Turbidity** | | | | | | | |
| Turbidity [3] | NTU | Yes | NA | TT = 1 NTU | 0.16 | 0.04 to 0.16 | Soil runoff |
| | % | Yes | NA | TT = % of samples <0.3 NTU | 100% | NA | Soil runoff |
| **Treatment Byproducts Precursor Removal** | | | | | | | |
| Total Organic Carbon (TOC) | % | Yes | NA | TT ≥ 35% Removal | 44% [4] | 44% to 63% | Naturally present in the environment. |
| Ratio of Actual / Required TOC Removal | Ratio | Yes | NA | TT: Running Annual Average ≥ 1.0 | 1.81 | 1.27 to 1.81 | Naturally present in the environment. |
| **Disinfectants** | | | | | | | |
| Chlorine | ppm | Yes | NA | TT = ≥ 0.20 | 0.36 | 0.36 to 1.02 [5] | Water additive used to control microbes |
| **Radiologicals** | | | | | | | |
| Alpha Emitters | pCi/L | Yes | 0 | 15 | 5.94 | ND to 5.94 | Erosion of natural deposits |
| Combined Radium (226/228) | pCi/L | Yes | 0 | 5 | 1.38 | ND to 1.38 | Erosion of natural deposits |

**Footnotes**

[1] The State of New Jersey allows us to monitor for certain contaminants less than once a year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative, are more than one year old.

[2] Nickel monitoring is required. Currently there is no established MCL or MCLG.

[3] 100% of the turbidity readings were below the treatment technique requirement of 0.3 NTU. Turbidity is a measure of the cloudiness of the water and an indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

[4] Data represents the lowest removal of Total Organic Carbon (TOC)

[5] Data represents the lowest and highest chlorine residuals entering the distribution system from our surface water treatment plant

## Unregulated Contaminants Monitoring (UCMR3) 2013 - 2014

| Parameter | Units | Highest Locational Average | Range Detected | Typical Source |
|---|---|---|---|---|
| 1,1-Dichloroethane | ppb | 0.085 | ND to 0.09 | Halogenated alkane; used as a solvent |
| 1,2,3-Trichloropropane * | ppb | 0.035 * | ND to 0.04 * | Halogenated alkane; used as an ingredient in paint, varnish remover, solvents and degreasing agents |
| * 1,2,3-Trichloropropane was detected in purchased water previously used to supply a limited number of customers. This purchased supply was discontinued in 2015. 1,2,3-Trichloropropane was **not** detected in any of New Jersey American Water's sources. | | | | |
| 1,4-Dioxane | ppb | 0.34 | ND to 0.39 | Cyclic aliphatic ether; used as a solvent or solvent stabilizer in manufacture and processing of paper, cotton, textile products, automotive coolant, cosmetics and shampoos |
| Bromochloromethane | ppb | 0.09 | ND to 0.12 | Used as a fire-extinguishing fluid, an explosive suppressant, and as a solvent in the manufacturing of pesticides |
| Chlorate | ppb | 305 | ND to 400 | Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chloride dioxide |
| Chromium (VI) | ppb | 1.3 | ND to 1.3 | Naturally-occuring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation |
| Cobalt | ppb | 4.2 | ND to 7.2 | Naturally-occuring element found in the earth's crust and at low concentrations in seawater, and in some surface and ground water; cobaltous chloride was formerly used in medicine as a germicide |
| Molybdenum | ppb | 1.5 | ND to 1.8 | Naturally-occuring elemental found in ores and present in plants, animals and bacteria; commonly used form molybdenum trioxide used as a chemical reagent |
| Strontium | ppb | 1317 | 74 to 1390 | Naturally-ocurring element; historically comercial use of strontium has been in the faceplate glass of cathode-ray tube televisions to block x-ray emissions |
| Vanadium | ppb | 2 | ND to 3.5 | Naturally-occuring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst |