# 2016 DRINKING WATER QUALITY REPORT

# CITY OF PASADENA PWS 1010293

THE CITY OF PASADENA DRINKING WATER MEETS OR EXCEEDS ALL FEDERAL (EPA) DRINKING WATER REQUIREMENTS

This Annual Water Quality Report is for the period of January 1, 2016 to December 31, 2016. This report is intended to provide you with important information about your drinking water and the efforts made by the City of Pasadena to provide safe drinking water.

For more information regarding this report contact Rick Helton at (713)-475-4935

Este Reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar at telfono (713)475-7286

**Public Participation Opportunities**

A Public Hearing concerning this report will be held:
Date: June 20, 2017
Time: 6 P.M.
Location: City Council Chambers

**Source of Drinking Water**

The Source of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land and through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity.

**Where do we get our Drinking Water**

The source of drinking water used by the City of Pasadena includes purchased surface water and ground water from our wells. A Source Water Susceptibility Assessment for your drinking water is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based upon human activities and natural conditions. The information contained in the assessment allows us to focus source water protection strategies.

| Source Water Name | Address | Type of Water |
|---|---|---|
| Southeast Water Treatment Plant | 2631 Genoa Red Bluff | Surface |
| Richey Metering Station | 210 Richey | Surface |
| Allen Genoa Metering Station | 5215 Allen Genoa | Surface |
| Cascade Water Well | 1201 Southmore | Groundwater |
| Deepwater Water Well | 3200 Flamborough | Groundwater |
| El jardin Water Well | 519 El Jardin | Groundwater |
| Guthrie Water Well | 3705 Guthrie | Groundwater |
| Pansy Water Well | 2710 Pansy | Groundwater |
| Red Bluff Water Well | 1729 Red Bluff | Groundwater |
| Sycamore Water Well | 6302 Sycamore | Groundwater |
| Tulip Water Well | 33361/2 Tulip | Groundwater |
| Westside Water Well | 2939 Westside | Groundwater |

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 EPAs Safe Drinking Water Hotline at (800)426-4791.

Contaminants that may be present in source water include: **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. **Inorganic contaminates**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses. **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems. **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Many constituents, such as calcium, sodium, or iron, which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas not the EPA. These constituents are not causes for health concern. Therefore, secondary's are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

**Required Additional Health Information for Lead**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Pasadena is responsible for providing high quality drinking water but cannot control the variety of minerals 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 it tested. Information on lead in drinking water in drinking water testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline 800-426-4791 or at http://www.epa.gov/safewater,lead.

**Special Notice**

**Required language for all community water supplies:**

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly or immune compromised persons such as those undergoing chemotherapy for cancer, those who have undergone organ transplants, those who are undergoing treatment with steroids, and people with HIV/Aids or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at 800-426-4791.

**Water Quality Test Results**

**Coliform Bacteria**

| Maxim Contaminant Level Goal | Total Coliform Maximum Contaminant Level | Highest No. of Positive | Fecal Coliform or E Coli Maximum Contaminant Level | Total No. of Positive E Coli or Fecal Coliform Samples | Violation | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| 0 | 5% of monthly samples are positive | 3.7 | 0 | 0 | None | Naturally Present in The environment |

**Lead and Copper**

**Definitions:**
Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health.
Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

| Lead and Copper | Date Sampled | MCLG | Action Level | 90th Percentile | # Sites Over AL | Units | Violation | Likely Source of contamination |
|---|---|---|---|---|---|---|---|---|
| Copper | 2016 | 1.3 | 1.3 | 0.64 | 1 | ppm | N | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing |
| | | | | | | | | |
| Lead | 2016 | 0 | 15 | 4.8 | 1 | ppm | N | Corrosion of household plumbing systems; Erosion of natural deposits |

**Water Quality Test Results**

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

| | |
|---|---|
| Level 1 Assessment: | A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system. |
| Maximum Contaminant Level Goal or 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. |
| Level 2 Assessment: | A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions. |
| Maximum residual disinfectant level or 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 or 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. |
| MFL | million fibers per liter (a measure of asbestos) |
| na: | not applicable. |
| mrem: | millirems per year (a measure of radiation absorbed by the body) |

| | |
|---|---|
| NTU | nephelometric turbidity units (a measure of turbidity) |
| pCi/L | picocuries per liter (a measure of radioactivity) |
| ppb: | micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water. |
| ppm: | milligrams per liter or parts per million - or one ounce in 7,350 gallons of water. |
| Treatment Technique or TT: | A required process intended to reduce the level of a contaminant in drinking water. |
| ppt | parts per trillion, or nanograms per liter (ng/L) |
| ppq | parts per quadrillion, or picograms per liter (pg/L) |

**Regulated Contaminants**

| **Disinfectants and Disinfection By-Products** | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|---|
| **Haloacetic Acids (HAA5)** | 2016 | 27 | 1.2 - 41.2 | No goal for the total | 60 | ppb | N | By-product of drinking water disinfection. |
| **Total Trihalomethanes** | 2016 | 35 | 14.9 - 45.2 | No goal for the total | 80 | ppb | N | By-product of drinking water disinfection. |
| **Inorganic Contaminants** | Collection Date | Highest Level Detected | Range of Levels | MCLG | MCL | Units | Violation | Likely Source of Contamination |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Arsenic** | 2016 | 2.2 | 0 - 2.2 | 0 | 10 | ppb | N | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes. |
| **Barium** | 2016 | 0.127 | 0.0504 - 0.127 | 2 | 2 | ppm | N | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. |
| **Fluoride** | 2016 | 1.61 | 1.42 - 1.61 | 4 | 4.0 | ppm | N | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| **Nitrate [measured as Nitrogen]** | 2016 | 1 | 0 - 0.55 | 10 | 10 | ppm | N | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| **Nitrite [measured as Nitrogen]** | 2016 | 1 | 0 - 0.55 | 1 | 1 | ppm | N | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| **Selenium** | 2016 | 4 | 0 - 4 | 50 | 50 | ppb | N | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines. |
| **Radioactive Contaminants** | Collection Date | Highest Level Detected | Range of Levels | MCLG | MCL | Units | Violation | Likely Source of Contamination |
| **Combined Radium 226/228** | 07/08/2011 | 2.1 | 2.1 - 2.1 | 0 | 5 | pCi/L | N | Erosion of natural deposits. |
| **Gross alpha excluding radon and uranium** | 2016 | 3.1 | 0 - 3.1 | 0 | 15 | pCi/L | N | Erosion of natural deposits. |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Synthetic organic contaminants** | Collection Date | Highest Level Detected | Range of Levels | MCLG | MCL | Units | Violation | Likely Source of Contamination |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Atrazine** | 2016 | 0.23 | 0 - 0.23 | 3 | 3 | ppb | N | Runoff from herbicide used on row crops. |
| **Simazine** | 2016 | 0.17 | 0 - 0.17 | 4 | 4 | ppb | N | Herbicide runoff. |

**Violations Table**

| **Lead and Copper Rule** | | | |
|---|---|---|---|
| The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials. | | | |
| **Violation Type** | **Violation Begin** | **Violation End** | **Violation Explanation** |
| FOLLOW-UP OR ROUTINE TAP M/R (LCR) | 10/01/2015 | 10/21/2016 | We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. This violation was corrected when we did test our drinking water |