

EBMUD First Half 2023 Data Update

These tables include data for detected water quality parameters from January 1, 2023 to June 30, 2023. EBMUD is providing this semi-annual update in anticipation of new requirements in the America’s Water Infrastructure Act of 2018 (AWIA). EBMUD’s 2022 report, with data from the entire calendar year, is here: www.ebmud.com/wqr



Pardee Reservoir

| 1 | Regulated for public health <i>Primary MCL (Unit)</i> | State or federal goal PHG, MCLG or MRDLG | Highest amount allowed MCL, MRDL or AL | System average | WATER TREATMENT PLANTS | | | | | Typical sources |
|------------------------|--|---|--|------------------|------------------------|-------------|-------------|-----------------|-------------------|--|
| | | | | | Walnut Creek | Lafayette | Orinda | Sobrante | Upper San Leandro | |
| MICROBIOLOGICAL | Turbidity (NTU) | NA | 1 | 0.04 | 0.02 - 0.10 | 0.02 - 0.09 | 0.02 - 0.10 | 0.02 - 0.11 | 0.02 - 0.10 | Soil runoff |
| | | NA | 95% ≤ 0.3 | 100% | 100% | 100% | 100% | 100% | 100% | |
| INORGANIC | Aluminum (ppb) | 600 | 1000 | <50 | <50 | <50 | <50 | <50 - 50 | <50 | Erosion of natural deposits; water treatment residue |
| | Fluoride ^A (ppm) | 1 | 2 | 0.7 | 0.7 - 0.8 | 0.7 | 0.1 - 0.8 | 0.8 | 0.7 | Erosion of natural deposits; water additive that promotes strong teeth |
| D/DBPs | Bromate (ppb) | 0.1 | 10 | 1.2 ^B | NA | NA | NA | <1 - 2.3 | <1 - 1.2 | By-product of drinking water disinfection |
| | Chloramine as chlorine ^C (ppm) | 4 | 4 | 2.5 ^B | 0.3 - 9.1 | | | | | Drinking water disinfectant added for treatment |
| | Control of DBP precursors – TOC | NA | TT | NA | NA | NA | NA | met requirement | | Various natural and man-made sources |
| | Haloacetic acids, 5 species ^D (ppb) | NA | 60 | 41 ^E | 30 - 60 | 36 - 50 | 25 - 60 | 23 - 55 | 15 - 48 | By-product of drinking water disinfection |
| | Trihalomethanes ^D (ppb) | NA | 80 | 60 ^E | 42 - 92 | 37 - 54 | 50 - 92 | 29 - 53 | 29 - 71 | By-product of drinking water disinfection |

| 2 | Regulated for drinking water aesthetics <i>Secondary MCL (Unit)</i> | State or federal goal PHG, MCLG | Highest amount allowed MCL | System average | WATER TREATMENT PLANTS | | | | | Typical sources |
|---|--|------------------------------------|----------------------------|----------------|------------------------|-------------|-------------|-------------|-------------------|--|
| | | | | | Walnut Creek | Lafayette | Orinda | Sobrante | Upper San Leandro | |
| | Aluminum (ppb) | 600 | 1000 | <50 | <50 | <50 | <50 | <50 - 50 | <50 | Erosion of natural deposits; water treatment residue |
| | Chloride (ppm) | NA | 250 | 7 | 4 - 6 | 3 - 5 | 4 - 6 | 14 - 18 | 14 - 15 | Runoff/leaching from natural deposits |
| | Specific conductance (µS/cm) | NA | 900 | 115 | 52 | 51 | 57 - 76 | 310 | 300 | Substances that form ions when in water |
| | Sulfate (ppm) | NA | 250 | 10 | 1 - 2 | 1 - 2 | 1 - 2 | 27 - 46 | 43 - 53 | Runoff/leaching from natural deposits |
| | Total dissolved solids (ppm) | NA | 500 | 75 | 36 - 54 | 35 - 54 | 37 - 62 | 150 - 210 | 66 - 200 | Runoff/leaching from natural deposits |
| | Turbidity (NTU) | NA | 5 | 0.04 | 0.02 - 0.10 | 0.02 - 0.09 | 0.02 - 0.10 | 0.02 - 0.11 | 0.02 - 0.10 | Soil runoff |

Key Terms

| | |
|--|--|
| AL | Regulatory Action Level. The concentration which, if exceeded, triggers treatment or other requirements that a water system must follow. |
| DBP | Disinfection By-Products. These are formed when chlorine and/or ozone reacts with natural constituents in water. Trihalomethanes (THMs), haloacetic acids (HAAs), chlorate, and bromate are disinfection by-products. |
| D/DBPs | Disinfectants and Disinfection By-products. Disinfectant residuals, disinfection byproducts and byproduct precursors. |
| MCL | Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs address odor, taste and appearance of drinking water. |
| MCLG | Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA. |
| MRDL | Maximum Residual Disinfectant Level. 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. |
| MRDLG | Maximum Residual Disinfectant Level Goal. 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. |
| NA | Not Applicable. |
| Primary Drinking Water Standard | These standards regulate contaminants that affect health by setting MCLs, MRDLs, and Treatment Techniques (TT) along with their monitoring and reporting requirements. |
| PHG | Public Health Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA. |
| TOC | Total Organic Carbon. A measure of organic content in the water. |
| Turbidity | A measure of the cloudiness of water. Turbidity is monitored because it is a good indication of the effectiveness of our filtration systems. |
| TT | Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water. |

Notes

| | |
|----------|--|
| A | See page 11 of 2022 Annual Water Quality Report for additional information about fluoride in drinking water. |
| B | Shown under System Average is the highest running annual average (RAA), and includes data from 2022. Shown under each water treatment plant is the range of values from January through June 2023. |
| C | Chloramine residuals in the distribution system are measured as an equivalent quantity of chlorine. When the chloramine residual cannot be detected, the sample is further analyzed to ensure that microbiological water quality is in compliance with regulations. |
| D | Compliance is determined based on the highest locational running annual average (LRAA) result. |
| E | Shown under system average is the highest LRAA and includes data from 2022. Shown under the water treatment plant is the range of values from distribution sample location for January through June 2023. These locations are assigned to the most representative water treatment plant, but the data may also represent water from another plant. |

Units

| | |
|--------------|--|
| gpg | grains per gallon |
| NTU | Nephelometric Turbidity Unit. A measure of the cloudiness of water |
| ppm | parts per million. One ppm is like 1 second in 11.5 days. (mg/L) |
| ppb | parts per billion. One ppb is like 1 second in nearly 32 years. (µg/L) |
| ppt | parts per trillion. One ppt is like 1 second in nearly 32,000 years. (ng/L) |
| TON | Threshold Odor Number. A measure of odor in water |
| µS/cm | microsiemens per centimeter. A measure of electrical conductance |

Key Terms

NL
Notification Level A health-based advisory level established by the State Water Board for contaminants in drinking water that lack MCLs.

Notes

F These data are collected in the distribution system. The sample locations are assigned to the most representative water treatment plant, but the data may also represent water from another plant.

G **Grains per gallon (gpg)** is a measure of water hardness. Knowing the amount can help improve the function of dishwasher, cooling equipment and other industrial processes. Refer to your appliance manufacturer's instruction manual for the optimum grains per gallon level.

H Walnut Creek, Lafayette, and Orinda water treatment plants are not required to monitor TOC. Their treated water TOC values are similar to their source water.

| 3 | Unregulated contaminants <i>No established MCL (Unit)</i> | Year sampled | State NL | System average | WATER TREATMENT PLANTS | | | | |
|---|--|--------------|----------|----------------|------------------------|-----------|----------|-----------|-------------------|
| | | | | | Walnut Creek | Lafayette | Orinda | Sobrante | Upper San Leandro |
| | Chlorate (ppb) | | 800 | 94 | 71 | 79 | 81 - 93 | 100 - 220 | 74 - 130 |
| | N-Nitrosodimethylamine (NDMA) ^F (ppt) | | 10 | 1.8 | <1 - 2.7 | 2 | <1 - 2.7 | 3.4 | 4.4 |

| 4 | Other parameters of interest to customers <i>(Unit)</i> | WATER TREATMENT PLANTS | | | | | |
|---|--|------------------------|-----------|-----------|-----------|-------------------|----------|
| | | Walnut Creek | Lafayette | Orinda | Sobrante | Upper San Leandro | |
| | Alkalinity, Total as CaCO ₃ (ppm) | 18 - 29 | 17 - 28 | 18 - 29 | 69 - 90 | 66 - 89 | |
| | Calcium (ppm) | 4 - 6 | 4 - 6 | 4 - 6 | 17 - 24 | 21 - 24 | |
| | Hardness as CaCO ₃ | (gpg) ^G | 1 | 1 | 1 | 4 - 7 | 5 - 6 |
| | | (ppm) | 12 - 24 | 12 - 24 | 16 - 25 | 64 - 120 | 88 - 100 |
| | Magnesium (ppm) | 1 - 2 | 1 - 2 | 1 - 2 | 6 - 9 | 8 - 9 | |
| | pH (pH) | 9.2 - 9.4 | 9.1 - 9.3 | 8.8 - 9.4 | 8.3 - 8.8 | 8.2 - 8.5 | |
| | Potassium (ppm) | 1 | 1 | 1 | 2 | 2 | |
| | Silica (ppm) | 9 - 12 | 9 - 12 | 9 - 13 | 9 - 13 | 12 - 14 | |
| | TOC in source water (ppm) | 2.2 - 3.0 | 2.2 - 3.0 | 2.2 - 4.6 | 3.7 - 8.6 | 4.3 - 8.6 | |
| | TOC in treated water ^H (ppm) | | | | 2.2 - 5.0 | 2.4 - 4.0 | |
| | Sodium (ppm) | 5 - 7 | 5 - 6 | 5 - 8 | 22 - 29 | 25 - 27 | |



Pardee Reservoir