

# Only Tap Water Delivers®

The City of Brentwood is proud to produce high quality water that continues to comply with or do better than every federal and state standard for safe drinking water. The tables included in this report have been compiled to show what substances were detected in Brentwood's drinking water during 2012. Although the average readings on all of the substances listed within these tables are under the Maximum Contaminant Level (MCL), the Water Operations Division feels it is important that City water consumers know exactly what was detected and how much of the substance was present in the water.

As your water provider, our goal is to make sure there's an adequate supply of safe water to meet your day-to-day needs—and an abundant supply in the event of a fire or other catastrophic event. It's part of what you pay for through your water bill. Only tap water delivers fire protection, public health protection, support for the economy, and the overall quality of life we enjoy. Our job is to ensure that your water keeps flowing not only today, but well into the future. It's all part of our commitment to serve you and everyone in our community.

**Consumers who would like more information on water quality should contact Jaci Parsons, Regulatory Compliance Supervisor, at (925) 516-6060.**

Would you like to receive this report by email in the future? Let us know by sending your email address to [dwilliford@brentwoodca.gov](mailto:dwilliford@brentwoodca.gov).

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Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

PWS ID #0710004

Water Testing Performed in 2012

**A BROKEN SPRINKLER HEAD CAN WASTE 384 OF THESE BOTTLES IN TEN MINUTES.**

Learn more at [neverwaste.org](http://neverwaste.org).



PUBLIC WORKS DEPARTMENT

## Where Does My Water Come From?

The City of Brentwood utilizes ground water and surface water for its fresh water sources. The ground water is pumped from the City's operations of seven ground water wells. Surface water originates from rivers within the Sierra Mountain Range; the water flows into the Sacramento - San Joaquin Delta. The surface water is treated at the City of Brentwood's Water Treatment Plant and/or Contra Costa Water District's Randall-Bold Water Treatment Plant. The average Brentwood water customer receives a blend of surface and ground water from these sources.

In 2012, the City of Brentwood delivered water to more than 17,000 connections; the Brentwood Water Treatment Plant provided over 2.4 billion gallons, and City wells supplied 1.0 billion gallons. An additional 248 million gallons were purchased from the Randall-Bold Water Treatment Plant.

The City of Brentwood's distribution system consists of six water tanks with a total storage capacity of 18.8 million gallons, three pressure zones, and six water booster pump stations located within the city limits.

Brentwood Wastewater Treatment Plant supplied over 33 million gallons of recycled water to City parkways and medians for irrigation. An additional 433 million gallons of untreated surface water was used to irrigate golf courses and medians. This wise use of non-potable water is one of the many ways that Brentwood is able to conserve water and help the City meet the new State requirement of a 20% reduction in water use by 2020.

## Educational Information

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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).



Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791) or visit EPA's web site <http://water.epa.gov/drink/standards/hascience.cfm>.

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

**Contaminants that may be present in source water include:**

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

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California State



Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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. The City of Brentwood is responsible for providing high quality drinking water, but cannot control the variety of 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 or at <http://www.epa.gov/safewater/lead>.



Regulated Substances				City of Brentwood Ground Water (Wells)		City of Brentwood Surface Water		Randall-Bold Surface Water			
Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	PHG (MCLG) [MRDLG]	Average	Range Low-High	Average	Range Low-High	Average	Range Low-High	Violation	Typical Source
Arsenic (ppb)	2012	10	0.004	ND	ND – 3.4	n/a	ND	n/a	ND	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chloramines (ppm)	2012	[4.0 (as Cl <sub>2</sub> )]	[4.0 (as Cl <sub>2</sub> )]	1.7	1.0 – 2.1	n/a	n/a	n/a	n/a	No	Drinking water disinfectant added for treatment
Chromium (ppb)	2012	50	(100)	ND	13.0	n/a	ND	n/a	ND	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2012	2.0	1	0.3	0.2 – 0.4	ND	ND – 0.2	0.8	0.7 – 1.0	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2012	15	(0)	ND	ND – 3.0	ND <sup>1</sup>	ND – 3.1 <sup>1</sup>	ND <sup>1</sup>	ND – 3.1 <sup>1</sup>	No	Erosion of natural deposits
HAA5 [Haloacetic Acids] (ppb)	2012	60	n/a	2.8 <sup>2</sup>	ND – 9.9	n/a	n/a	n/a	n/a	No	By-product of drinking water disinfection
Nitrate [as NO <sub>3</sub> ] (ppm)	2012	45	45	12.3	5.5 – 20.0	n/a	ND	ND	ND – 4.0	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium (ppb)	2012	50	30	5.4	ND – 17.0	n/a	ND	n/a	ND	No	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)
TTHMs [Total Trihalomethanes] (ppb)	2012	80	n/a	24.0 <sup>2</sup>	23.1 – 62.9	n/a	n/a	n/a	n/a	No	By-product of drinking water disinfection
Uranium (ppb)	2008	20	0.43	ND	ND – 4.43	n/a	n/a	n/a	n/a	No	Erosion of natural deposits

Secondary Substances											
<i>There are no PHGs, MCLGs or mandatory standard health effects for these constituents because secondary MCLs are set on the basis of aesthetics.</i>											
Chloride (ppm)	2012	500	NS	172	91 – 290	103	33 – 200	73	33 – 120	No	Runoff/leaching from natural deposits; seawater influence
Odor (TON)	2012	3	NS	ND	ND	n/a	2.0	n/a	2.0	No	Naturally-occurring organic materials
Specific Conductance (µS/cm)	2012	1600	NS	1253	820 – 1700	521	270 – 870	447	280 – 640	Yes	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2012	500	NS	205	110 – 310	50	33 – 81	46	33 – 64	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2012	1000	NS	785	490 – 1100	288	158 – 495	250	162 – 342	Yes	Runoff/leaching from natural deposits

\* California Department of Public Health considers 50 pCi/L to be the level of concern for beta particles.

<sup>1</sup> Analyzed in 2010.

<sup>2</sup> Average based on running annual average from 1st quarter 2012.

Regulated Substances				City of Brentwood Ground Water (Wells)		City of Brentwood Surface Water		Randall-Bold Surface Water			
Substance (Unit of Measure)	Year Sampled	MCL [MRDL]	PHG (MCLG) [MRDLG]	Average	Range Low-High	Lowest monthly % of samples that meet requirements	Maximum effluent value	Lowest monthly % of samples that meet requirements	Maximum effluent value	Violation	Typical Source
<b>Turbidity</b> Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.	2012	TT=1 NTU TT=95% of samples ≤ 0.3 NTU 5 NTU	n/a			100%	0.22	100%	0.12	No	Soil Runoff

Substance (Unit of Measure)	Year Sampled	Action Level	PHG (MCLG)	Amount Detected (90th Percentile)	Sites Above Action Level	Violation	Typical Source
Copper (ppm)	2012	1.3	0.3	0.12	None	No	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2012	15	0.2	ND	None	No	Internal corrosion of household plumbing systems; discharge from industrial manufacturers; erosion of natural deposits

Lead and Copper: 34 sites sampled.

Unregulated Substance		City of Brentwood Ground Water (Wells)		City of Brentwood Surface Water		Randall-Bold Surface Water	
Substance (Unit of Measure)	Year Sampled	Average	Range Low-High	Average	Range Low-High	Average	Range Low-High
Alkalinity (ppm)	2012	193	170 – 220	55	49 – 71	65	51 – 88
Ammonia (ppm)	2012	n/a	n/a	n/a	0.4	n/a	0.6
Bromide (ppm)	2012	n/a	n/a	0.11	ND – 0.3	0.13	ND – 0.30
Calcium (ppm)	2012	73	48 – 92	16	12 – 20	17	12 – 45
Hardness (ppm)	2012	322	190 – 420	95	66 – 130	91	64 – 120
Hardness is the sum of positive ions present in the water, generally magnesium and calcium. The cations are usually naturally-occurring.							
Hardness in grains	2012	18.8	11.1 – 24.6	5.6	3.9 – 7.6	5.3	3.7 – 7.0
Magnesium (ppm)	2012	34	18 – 46	13	7.8 – 20	11	8.0 – 15
pH (units)	2012	8.2	8.0 – 8.2	8.6	7.6 – 8.9	8.7	8.4 – 9.1
Potassium (ppm)	2012	3.1	2.6 – 3.7	3.5	1.8 – 5.6	3.0	1.8 – 4.3
Sodium (ppm)	2012	140	85 – 220	68	31 – 130	56	33 – 79
Sodium refers to the salt present in the water and is generally naturally-occurring.							

### Definitions, Acronyms, and Units

#### Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

#### 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 are set by the U.S. Environmental Protection Agency.

**Public Health Goal (PHG):** 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 Environmental Protection Agency.

#### Primary Drinking Water Standard (PDWS):

MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, as well as water treatment requirements.

#### 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. However, MRDLGs do not reflect the beneficial use of disinfectants to control microbial contaminants.

**Regulatory Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**TON:** Threshold Odor Number.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**n/a:** Not applicable

**ND (Not Detected):** Indicates that the substance was not found by laboratory analysis.

**NS:** No standard

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

### Assessment

An assessment of the drinking water sources for the Brentwood Water System was completed in 2002. A copy of the assessment is available by contacting the City offices at (925) 516-5400. The sources are considered most vulnerable to the following activities not associated with any detected contaminants: gas stations and septic systems.

### Community Participation

The City Council meets at 7 p.m. on the second and fourth Tuesday of each month at the City Council Chambers located at City Hall, 150 City Park Way.

