

BELLA VISTA WATER DISTRICT

2007 CONSUMER CONFIDENCE REPORT

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

The District is pleased to present this year's Consumer Confidence Report. Our constant goal is to provide a safe and dependable supply of drinking water. We want you to understand the efforts that we make to continually improve the water treatment process and to protect our water. This report shows our water quality and what it means.

WHERE OUR WATER COMES FROM

Our water sources include surface water from the Sacramento River, groundwater from five wells, and emergency intertie connections with the City of Redding, and the City of Shasta Lake. With the addition of the two 600 Hp variable speed pumps as part of the recent upgrades at the District's Wintu Pumping Plant (located on the Sacramento River) the District is able to pump and treat river water under conditions that, in the past, had required us to shut the pump station down and run our wells. The ability to pump at much lower flow rates (down to approximately four million gallons per day versus the previous minimum pumping rate of fifteen million gallons per day) and improvements at the Water Treatment Plant have allowed us to pump and treat water during storm events that, previously, would have required us to shut these facilities down and rely on our wells. Therefore, in 2007 the District ran its wells only when the Wintu Pump Station had to be shut down for short periods in order to perform major improvements and scheduled maintenance.

In 2007, with the ability to run the Wintu Pump Station and the Water Treatment Plant throughout the winter, surface water made up 98.8% of the treated water supply, or approximately 4.92 billion gallons (compared to 92.5% of the treated water supply and 4.97 billion gallons in 2006). With the improvements at the Wintu Pumping Plant and the Water Treatment Plant the District can now pump up to 52.5 million gallons per day (mgd) through its treatment facilities (up from 45 mgd).

The District's wells draw from the Redding groundwater basin. Groundwater made up 1.2% of the total supply, or approximately 58.5 million gallons in 2007 (compared to 7.5% of the treated water supply and 405 million gallons in 2006). The treatment process at each of the five wells consists of oxidation of iron and manganese using chlorine, followed by absorption of the iron and manganese oxides in pressure filters. A chlorine residual is carried through the entire process to aid in maintaining a chlorine residual in the distribution system. No iron or manganese was detected in any of the treated well water samples collected in 2007. Well water is warmer than the treated surface water and has a different taste due to its higher mineral content. At times, mixing of chlorinated well water with treated river water in the distribution system generates a more noticeable taste due to the different physical and chemical properties of the waters. To ensure the safety of the water the same microbiological testing is completed weekly at sites in the water distribution system, regardless of the source.

The District received less than 0.003% of its total supply or approximately 0.15 million gallons of water, through its interties during all of 2007.

Source water assessments were performed by the Department of Public Health between January 2002 and April 2003. The District's Sacramento River source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: 1) metal plating/finishing/fabricating, 2) wood/pulp/paper processing and mills, and 3) drinking water treatment plants. The source is considered most vulnerable to the following activities not associated with any detected contaminants: 1) concentrated aquatic animal production facilities, 2) historic waste dumps/landfills, 3) landfills/dumps, 4) historic mining operations, and 5) wastewater treatment plants and disposal facilities (above Shasta Dam). The District's well sources are considered most vulnerable to the following activities not associated with any detected contaminants: 1) lumber

processing and manufacturing, 2) septic systems - low density, 3) sewer collection systems, 4) historic waste dumps/landfills, 5) automobile - gas stations, and 6) utility stations - maintenance areas.

A copy of the complete assessment may be viewed at Bella Vista Water District, 11368 E. Stillwater Way, Redding, CA 96003. You may request a summary of the assessment be sent to you by contacting the District Secretary @ (530) 241-1085, ext. 105.

In 1989 the Federal Surface Water Treatment Rule set forth specific regulations requiring proper treatment of surface waters, as well as specific license requirements for water treatment operators. Although the regulations have changed dramatically, the overall process has not. Currently the District's staff includes 12 individuals with state certification as water treatment operators and 18 with certification as water distribution operators (including 12 individuals with certification as both) who operate and maintain the District's facilities 365 days per year.

CONTAMINANTS IN WATER

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 and can pick up substances resulting from the presence of animals or from 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, that 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.

STATE AND FEDERAL REGULATIONS

In order to ensure that tap water is safe to drink, the U.S; Environmental Protection Agency (USEPA) and the California 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 must provide the same protection for public health.

The tables in this report list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The Department of Public Health allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of our water quality, are more than one year old.

All 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 the 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 at 1-800-426-4791.

A NOTE TO THE IMMUNO-COMPROMISED FROM THE UNITED STATES EPA

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/Center 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 on their website at <http://www.epa.gov/safewater>.

ABOUT THE WATER QUALITY TABLES

Bella Vista Water District routinely monitors for constituents in your drinking water according to federal and state laws. The tables in this report show the results of our monitoring for the period through December 31, 2007. Where contaminants are monitored less than once per year, the values included in the report tables represent the results of the most recent analyses. All drinking water, including some bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. The presence of these constituents does not necessarily pose a health risk. In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, the following definitions are provided:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not detectable at current testing limits.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in 1.9 years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter ($\mu\text{g/L}$) - one part per billion corresponds to one minute in 1,900 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Microsiemens per centimeter ($\mu\text{S/cm}$) is a unit for reporting the specific electrical conductance of the water.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements. Turbidity in excess of 5 NTU is just noticeable to the average person.

Maximum Contaminant Level (MCL) - 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 are set to protect the odor, taste, and appearance of drinking water.

Primary Drinking Water Standards (PDWS) - MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS) - MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect health at the MCL levels.

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 (USEPA).

Public Health Goal or 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.

Regulatory Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT) - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

RESULTS OF WATER QUALITY ANALYSES

Sampling Results Showing the Detection of Coliform Bacteria

Contaminant	MCL	Unit of Measurement	PHG (MCLG)	Highest Number of Detections	
				Treated Surface Water	Treated Well Water
1. Total Coliform Bacteria	Presence of coliform bacteria in more than 1 sample in a month.	presence/absence	0	None	None
2. Fecal coliform and <i>E. coli</i>	A routine sample and repeat sample detect total coliform, and either one also detects fecal coliform or <i>E. coli</i> .	presence/absence	0	None	None

Sampling Results Showing Treatment of Surface Water Source (Sacramento River)

Contaminant	Performance Standard / MCL (Treatment Technique)	Unit of Measurement	Level Found	Range	Violations
3. Turbidity	(1) Shall at no time exceed 1 NTU	Based on measurements made at 4 hour intervals while the plant is in operation	Less than 1 NTU at all times	0.022 NTU to 0.342 NTU	None
	(2) Less than 0.3 NTU in 95% of the measurements taken each month	Lowest Monthly % of measurements meeting the standard	99.4	n/a	None
	(3) Reduction in turbidity of 80% or more	Average monthly percentage reduction in turbidity	98.3	97.5 - 98.9	None

Note: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Sampling Results Showing the Detection of Contaminants With a Primary Drinking Water Standard

Contaminant	MCL	PHG (MCLG)	Unit of Measurement	Sacramento River		Well Water	
				Average Value	Range	Average Value*	Range*
4. Gross Alpha	15	(0)	pCi/L	ND	-	0.42	ND - 2.1
5. Aluminum	1	0.6	ppm	ND	-	ND	All ND
6. Arsenic	10	4	ppb	ND	-	3.4	2 - 6.1
7. Barium	1	2	ppm	ND	-	0.164	ND - 0.311
8. Chromium	50	(100)	ppb	ND	-	2.4	ND - 4
9. Fluoride	2.0	1	ppm	ND	-	0.18	0.07 - 0.40
Sacramento River and Well Water							
				Highest Running Annual Average		Range	
10. TTHM [Total trihalomethanes]	80	N/A	ppb	39.4		28.1 - 45.1	
11. HAA5- Haloacetic acids	60	N/A	ppb	25.9		19.0 - 28.0	

* Values shown include the latest data for each of the wells. Not all of the results are from samples collected in 2007.

Note: TTHM and HAA5 results are from samples collected from the Distribution System which may include water from both the river and wells.

Sampling Results Showing the Detection of Contaminants With a Secondary Drinking Water Standard

(Aesthetic standards, established by the California Department of Health Services - Division of Drinking Water)

Contaminant or Analyte	MCL	PHG (MCLG)	Unit of Measurement	Sacramento River		Well Water	
				Average Level Detected	Range	Average Level Detected*	Range*
12. Foaming Agents (MBAS)	500	N/A	ppb	30	-	8	ND - 30
13. Total dissolved solids	1,000	N/A	ppm	93	-	203	167 - 234
14. Specific conductance	1,600	N/A	µS/cm	117	-	318	252 - 399
15. Chloride	500	N/A	ppm	3.0	-	35.3	9.9 - 56.1
16. Sulfate	500	N/A	ppm	2.9	-	2.2	0.7 - 5.1

Sampling Results for Unregulated Contaminants

(Unregulated contaminant monitoring helps the USEPA and the California Department of Health Services to determine where certain contaminants occur and whether the contaminants need to be regulated.)

17. Boron	Action Level = 1000 ppb	N/A	ppb	ND	-	498	208 - 996
18. Vanadium	Action Level = 50 ppb	N/A	ppb	4	-	0.4	ND - 1

Sampling Results for Sodium, Hardness and pH

19. Sodium	N/A	N/A	ppm	5.79	-	40	18 - 60
20. Hardness	N/A	N/A	ppm	42	-	57	40 - 75
21. pH	6.5 - 8.5	N/A	pH units	7.8	-	7.7	7.5 - 7.9

* Values shown include the latest data for each of the wells. Not all of the results are from samples collected in 2007.

Sampling Results Showing the Detection of Lead and Copper

Contaminant	PHG (MCLG)	Action Level (AL)	90 th percentile level detected	No. of samples collected	No. Sites exceeding AL	Typical Source of Contaminant
Lead (ppb)	2	15	ND	31	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppb)	170	1300	202	31	0	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives

Note: The District is required to conduct lead and copper sampling every three years. These results are from the most recent round of sampling conducted in 2007.

TYPICAL SOURCES OF DETECTED CONTAMINANTS

Contaminant	Typical Source of Contaminant
1. Total Coliform Bacteria	Naturally present in the environment
2. Fecal Coliform and <i>E. coli</i>	Human and animal fecal waste
3. Turbidity	Soil runoff
4. Gross Alpha	Erosion of natural deposits
5. Aluminum	Erosion of natural deposits; residue from some surface water treatment processes
6. Arsenic	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
7. Barium	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
8. Chromium	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
9. Fluoride	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
10. TTHM [Total trihalomethanes]	By-products of drinking water chlorination
11. Haloacetic Acids	By-products of drinking water chlorination
12. Foaming Agents (MBAS)	Municipal and industrial waste discharges
13. Total dissolved solids	Runoff/ leaching from natural deposits
14. Specific conductance	Substances that form ions when in water; seawater influence
15. Chloride	Runoff/leaching from natural deposits; seawater influence
16. Sulfate	Runoff/leaching from natural deposits; seawater influence
17. Boron	Laundry products, sewage, agricultural chemicals and fertilizers, coal combustion mining and glass and ceramics manufacturing
18. Vanadium	Natural sources and from the burning of fuel oils

OTHER TEST RESULTS OF INTEREST

Constituent	Description and Source Information
19. Sodium	Refers to the salt present in the water and is generally naturally-occurring
20. Hardness	Is the sum of polyvalent cations present in the water, generally magnesium and calcium. These cations are generally naturally-occurring.
21 . pH	The pH of a water is a measure of its hydrogen ion activity or acidity. By definition the pH of pure water is 7.0. The pH range of most natural waters is about 6.0 to 8.5.

Disinfectant Residuals found in the Distribution System

Contam- inant	MCL [MRDL]	Unit of Measure- ment	PHG (MCLG)	Average Value	Range	Major Sources in Drinking Water	Health Effects
Chlorine	4.0 (as Cl ₂)	ppm	4 (as Cl ₂)	0.75	0.02 to 1.30	Drinking water disinfectant added for treatment	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

MRDL = Maximum Residual Disinfectant Level

PHARMACEUTICALS IN DRINKING WATER

Protecting the health of our customers is our mission. While we understand that pharmaceuticals are an issue of interest, to date research has not demonstrated an impact on human health from pharmaceutical compounds at the trace levels discovered in drinking water. We conduct hundreds of analyses every year to ensure the water we provide meets or surpasses state and federal Safe Drinking Water Act standards, which were created to protect customers. Unfortunately there is no “blanket” water test, and there are literally tens of thousands of individual compounds for which we could search. With the absence of any known health benefit and given the amount of resources required to conduct tests for pharmaceutical compounds, we have chosen not to conduct these tests on our water at this time. We will continue to work closely with others in the drinking water community to advance the science and understanding of this issue and will take whatever steps are necessary to protect the health of our customers.

YOUR VIEWS ARE WELCOME

If you have any questions about this report, please contact Don Groundwater, your District Engineer, at (530) 241-1085, ext. 114. We want our valued customers to be informed about their water district. If you want to learn more, please visit the District’s web site: www.bvwd.org or attend any of our regularly scheduled Board of Directors meetings. The meetings are held on the fourth Monday of each month at 5:30 p.m. at the District office, located at 11368 E. Stillwater Way, Redding, CA 96003.

Bella Vista Water District is an Equal Opportunity Provider