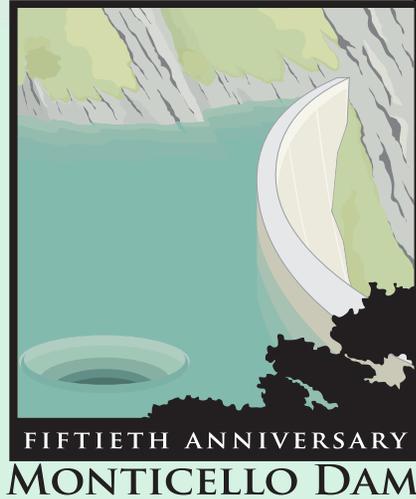




City of Fairfield 2007 Drinking Water

CONSUMER CONFIDENCE REPORT



Water releasing from the power plant at the base of Monticello Dam into Putah Creek.

Photo by Gayle Foster

Water Quality Concerns

Sensitive Populations — Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons (such as people with HIV/AIDS, people who are undergoing chemotherapy and people who have undergone organ transplants), infants, and some elderly people can be particularly at risk for serious health impacts from infections. These people should seek advice about drinking water from their health care providers.

Lead & Copper — Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels may be higher in some homes in the community as a result of materials used in house plumbing. None of the samples Fairfield tested in 2005 exceeded the Action Levels for lead or copper. The next round of testing is in 2008.

Cryptosporidium — is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead

or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease and it may spread through means other than drinking water. One of the most effective ways of killing cryptosporidium in drinking water is through ozonation; both of the City's treatment plants use this new process.

Arsenic — The California Department of Health Services continues to research the health effects of low levels of arsenic, a mineral known to cause cancer in humans at high concentrations and linked to other health effects such as skin damage and circulatory problems. No arsenic has been found in Fairfield's drinking water.

Security — The City of Fairfield has performed a comprehensive vulnerability assessment for the water system resources. If you should see any items of

concern or notice anything suspicious, please contact the City of Fairfield at (707) 428-7594. ■

For More Information Call

For questions regarding this report
(707) 428-7594x105

Water Billing Questions
(707) 428-7346

Water Repairs (707) 428-7415
After Hours Water Repairs
(707) 428-7300

EPA Safe Drinking Water Hotline
(800) 426-4791

Para información en Español
(707) 428-7680x107

Este folleto contiene información muy importante sobre su agua potable. Si quiere una copia en Español llame a **Sandra Gonzalez** al **707-428-7672**. Para recibir más información en Español comuníquese con **Laura de Ribidress** al **707-428-7680** extensión **107**.

Cover: This is an historic year in Fairfield and Solano County as water began to be stored at Lake Berryessa fifty years ago upon completion of Monticello Dam. The impact of this reliable source of water has shaped the City of Fairfield dramatically.

Logo Design by Seventh Surface, Brand Development and Design, Davis, CA

Drinking Water

In order to ensure that tap water is safe to drink, the US Environmental Protection Agency (USEPA) and the California Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. This report includes details about where your tap water comes from, what it contains, and how it compares to State and Federal standards.

The tables below list the drinking water contaminants that were detected for the period of January 1 - December 31, 2007. The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Their presence does not necessarily indicate that water poses a health risk. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Source 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.

Fairfield's source water originates from Lake Berryessa and the Sacramento Delta. Water is transported for treatment through the Putch South Canal and the North Bay Aqueduct.

Treatment of source water is divided between two conventional water treatment plants, the Waterman Treatment Plant and the North Bay Regional Water Treatment Plant, (NBR) is jointly owned by the Cities of Fairfield and Vacaville).

Contaminants that may be present in source water before treatment include:

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, can be naturally-occurring or result from 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, include synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.

Radioactive contaminants, can be naturally-occurring or be the result of oil and gas production and mining activities.



Davicle Gate before Monticelli Dam was constructed. Coville Museum VM1994.011.003



After the dam was constructed and Lake Berryessa was filled. City of Fairfield file photo.

Source Water Assessment

Under State law, water utilities are required to check water supplies for possible contaminating activities which may put the source water at risk. This assessment does not mean that the water is necessarily affected by those activities at this time, but that the utility should be aware of these potential concerns and take necessary measures to protect the drinking water sources.

Lake Berryessa (Completed February 2003): A Source Water

Assessment has been completed and shows that the most significant potential sources of contamination are illegal activities/ unauthorized dumping, herbicide application, storm drain discharge points, and recreational use.

Sacramento Delta (Completed May 2003): A Source Water Assessment has been completed and shows that the most significant potential sources of contamination are recreational use, urban & agricultural runoff, grazing animals, herbicide application, and seawater intrusion.

A copy of the complete assessments and associated vulnerability summaries can be obtained through the **California Department of Public Health, Drinking Water Field Operations Branch, San Francisco District Office, 850 Marina Bay Parkway, Building P 2nd floor, Richmond, CA 94804 or Ms. Betty Graham, Senior District Engineer, California Department of Public Health at (510) 620-3454.**

Abbreviations

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

MCL - Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHG (or MCLG) as is economically and technologically feasible. Secondary MCLs are set to protect the 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. Set by USEPA.

MARD - Maximum Residual Disinfectant Level: The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

MRRDL - Maximum Residual Disinfectant Level Goal: The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLs are set by USEPA.

NR - Not Applicable

ND - Not Detected

NL - Notification Level

NTU - Nephelometric Turbidity Units: The standard unit for turbidity measurements.

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 California EPA.

ppb - Parts per billion: or micrograms per liter (ug/L)

ppm - Parts per million: or milligrams per liter (mg/L)

TC - Total Organic Carbon

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

µS/cm - microsiemens per centimeter

Treated Water

DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Substance (reporting units)	MCL	Drinking Water		Contaminant Sources	
		PHG (MCLG)	Average		
Aluminum (ppm)	1	0.6	ND-0.130	0.095	Erosion of natural deposits; residue from some surface water treatment processes.
Cadmium (ppb)	5	0.04	ND-1.17	0.58	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal.
Nickel (ppb)	100	12	ND-0.0137	0.007	Erosion of natural deposits; discharge from metal factories.
Nitrate (ppm) (as nitrate)	45	45	ND-3.06	1.32	Runoff and leaching from fertilizer use, leaching from septic tanks and sewage; erosion of natural deposits.
Fluoride (ppm) (Natural Source)	2.0	1.0	ND-0.199	0.111	Erosion of natural deposits.

DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Substance (reporting units)	MCL	Drinking Water		Contaminant Sources	
		PHG (MCLG)	Average		
Aluminum (ppb)	300	NA	ND-130	95	Erosion of natural deposits; residue from some surface water treatment processes.
Chloride (ppm)	500	NA	8.0-13	9.3	Runoff/leaching from natural deposits; seawater influence.
Color (Units)	15	NA	ND-4	<2	Naturally-occurring organic materials.
Copper (Units)	3	NA	1.0	1.5	Naturally-occurring organic materials.
Silver (ppb)	100	NA	10.3-17.8	13.6	Industrial discharges.
Sulfate (ppm)	500	NA	27.2-38.3	33.1	Runoff/leaching from natural deposits; industrial wastes.
Specific Conductance (µS/cm)	1600	NA	246-487	357	Substances that form ions when in water; seawater influence.
Total Dissolved Solids (ppm)	1000	NA	159-299	302	Runoff/leaching from natural deposits.
Turbidity (NTU)	5	NA	0.035-0.320	0.045	Soil runoff

SAMPLING RESULTS FOR SODIUM AND HARDNESS

Substance (reporting units)	MCL	Drinking Water		Contaminant Sources	
		PHG (MCLG)	Average		
Hardness (ppm)	NA	NA	75-176	141	Generally found in ground and surface water.
Sodium (ppm)	NA	NA	15.3-27.7	18.2	Generally found in ground and surface water.

DETECTION OF UNREGULATED CONTAMINANTS

Substance (reporting units)	NL	Drinking Water		Contaminant Sources	
		PHG (MCLG)	Average		
Boron (ppb)	1000	NA	110-200	160	Unregulated contaminant monitoring helps EPA and the State determine where certain contaminants occur and whether the contaminants need to be regulated.
Vanadium (ppb)	50	NA	ND-3.6	1.98	Unregulated contaminant monitoring helps EPA and the State determine where certain contaminants occur and whether the contaminants need to be regulated.
Substance (reporting units)	MCL	PHG (MCLG)	Source Water	Average	Contaminant Sources
Cryptosporidium (organisms/mL)	TT	NA	ND-0.1	0.06	Naturally present in the environment.

DETECTION OF COLIFORM BACTERIA

Substance	MCL	MCLG	Distribution System	Contaminant Sources
Total Coliform Bacteria	5%	0	0.72% (Highest monthly value)	Naturally present in the environment

For 2007, the City of Fairfield on average collected 54 samples each week to monitor the bacteriological integrity of the distribution system.

DISINFECTION BYPRODUCTS PRECURSORS, DISINFECTION BYPRODUCTS AND DISINFECTANT RESIDUALS

Substance	Compliance Ratio	Range		Average	Contaminant Sources
		PHG (MCLG)	Highest Running Annual Percentage		
DIP Precursors (TOC)	More than or equal to 1.0	1.74-5.08	2.29	2.29	Various natural and man-made sources.
Trihalomethanes (ppb)	80	NA	10.5-45.0	30.0	By-product of drinking water chlorination.
Halocacetic Acids (ppb)	60	NA	3.8-12.0	7.6	By-product of drinking water chlorination.
Substance (reporting units)	MARD	MARD/G	Range	Average	Contaminant Sources
Chlorine (ppm)	4.0	4.0	ND-1.29	0.63	Drinking water disinfectant added for treatment.

TURBIDITY AS A MEASURE OF FILTER PERFORMANCE (Measures the relative clarity of the water produced.)

Substance (reporting units)	MCL	PHG (MCLG)		Entry Point to Distribution System	Contaminant Sources
		NTU	0.32 (Highest Level)		
* Turbidity (NTU)	TT = 1	NA	0.32 (Highest Level)	99.4%	Soil runoff

Filter Performance Violation: On December 12, 2007 the NorthBay Regional Water Treatment Plant had a water system violation by exceeding 2.0 turbidity units for 22 minutes on one of its eight filters. The combined filter effluent turbidity did not exceed 1.0 turbidity units and was not in violation. Further water disinfection processes before filtration and following filtration were functioning properly, minimizing the risk of microbial contamination.

Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

RESULTS OF DRINKING WATER FLUORIDATION

Substance (reporting units)	MCL	MCL	Range	Average	Contaminant Sources
Fluoride (ppm)	Control Range	Optimal Level	Detected	Detected	
	0.7-1.3	0.8	0.75-0.9%	0.863	Water additive that promotes strong teeth.

DETECTION OF LEAD AND COPPER IN CUSTOMER TRAPS

Substance (reporting units)	RL	MCLG	No. of Samples Collected in 2005	90th Percentile Detected	No. Sites exceeding RL	Contaminant Sources
Lead (ppb)	15	2	50	ND	0	Plumbing corrosion; erosion of natural deposits.
Copper (ppm)	1.3	0.17	50	0.1	0.06	Plumbing corrosion; erosion of natural deposits.