

City of Ventura Water Consumer Confidence Report 2005



The City of Ventura welcomes this opportunity to provide you with water quality information. This Water Consumer Confidence Report was prepared

in compliance with regulatory requirements utilizing data gathered in 2004. Ventura's Water Division works to ensure that Ventura's water meets or exceeds state and federal standards.

Ventura's Water Sources

The City has three local water sources; each accounts for approximately one third of the entire water supply. A portion of Ventura's water is from the Ventura River and is pumped from four shallow wells. Water is also distributed from Lake Casitas, which is operated and treated by the Casitas Municipal Water District (CMWD). Additional water is pumped from groundwater wells located in the City's east side. In order to produce, treat and distribute safe water to our customers, the City owns and operates 11 wells, three water treatment plants, 23 booster pump stations, 31 water storage reservoirs and more than 500 miles of distribution pipelines.

Water Treatment

All of the City's water receives treatment. Water from the Ventura River is treated by a method referred to as Conventional Surface Water Treatment. This process involves coagulation (chemical addition), flocculation (gentle agitation), sedimentation (settling particles), filtration, and disinfection with chloramines. The groundwater sources are treated to remove iron, manganese and turbidity. Additional treatment is provided at each plant to help prevent the corrosion of plumbing in your home. CMWD treats the water from Lake Casitas with direct filtration and chloramines for disinfection prior to delivery into the City's system.

The City uses chloramines for disinfection. Chloramines are chemicals that contain chlorine and ammonia. Chloramines were selected as the preferred disinfectant because of their ability to provide disinfection over an extended period of time, and for better taste and fewer odors compared to using chlorine alone. Chloramines have been proven to help treat water to lower levels of trihalomethanes (THMs) and haloacetic acids (HAAs), which

are potentially harmful byproducts of the chlorine disinfection process.

Although Chloramines are desirable in protecting the water distribution system, their use requires additional precautions for some water uses. If a member of your household requires dialysis, you should contact your physician or dialysis service provider to assure proper protective equipment is used. If you use tap water for fish or other aquatic animals that use gills for breathing, you need to test and be sure the chloramines are completely removed before use. Setting water in an open container for 24 hours prior to use will **not** remove all chloramines in the water. Your local pet store can provide information and products for the proper removal of chloramines.

Water Quality Monitoring

Ventura owns and operates a full-scale, state-certified laboratory to monitor water quality. State-certified operators run Ventura's treatment plants. The plants have instrumentation that continuously monitors specific water constituents to ensure that the water is of high quality.



In addition to the water quality constituents listed on the Water Quality Summary Table (see back page), the City sampled in 2003 for many other regulated, and 12 federal and eight state unregulated contaminants all of which were below detection limits, except for Boron and Vanadium.

Water Quality Studies

The City, like other water purveyors in the country, completed a federally mandated review of its water system security. This review evaluated the water facilities and prioritized security measures that can help minimize the risk of damage or contamination. The City already has and will continue to take steps to improve the protection of City water facilities. Since 2002, the City has monitored water quality along the Ventura River and San Antonio Creek at 15 sites for Cryptosporidium,

Giardia, Bacteria, Nutrients, Bromide, Total Organic Carbon, Chloride and Conductivity. The City will update a Sanitary Survey of the Ventura River Lower Watershed in 2006.

A separate Drinking Water Source Assessment for the City's water supplies was completed in January 2002. No contaminants have been detected in the water supply from such surrounding sources as gas stations, agricultural drainage, dry cleaners, urban run off, sewer systems, metal plating/finishing and repair shops.

As a water supplier, the City must complete an evaluation of its drinking water supply with respect to Public Health Goals (PHG) every three years. The goals are not mandatory limits and are based solely on public health risk factors. The City completed an evaluation in 2004, which determined that six chemicals exceeded a PHG. These were lead, copper, uranium, gross alpha & beta particles, and radium 226. Copper and lead can be found in water as a result of the corrosion of plumbing fixtures used in most homes. The City has conducted tests to optimize its treatment with corrosion inhibitors in an effort to further reduce lead and copper levels. High levels of lead can result in kidney problems or high blood pressure, and delays in physical and mental development in children. High levels of copper are known to cause gastrointestinal disturbance and kidney damage. The remaining four chemicals are naturally occurring radioactive isotopes that typically occur in the drinking water by the erosion of natural deposits and are considered carcinogenic. Noncarcinogenic effects of uranium on the kidneys and the liver; and radium to cause tumors have been documented.

Potential Concerns

In order to ensure tap water is safe, the United States Environmental Protection Agency (USEPA) and the California Department of Health Services prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The City of Ventura treats its water according to these regulations. The regulations of the Food and Drug Administration establish limits for contaminants in bottled water, which must provide the same protection for the public health.

Drinking water, including bottled water, may 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

Ventura's water meets or exceeds state and federal standards

obtained by calling the USEPA's Safe Drinking Water Hotline at 1-800-426-4791.

Sources 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 or through the ground, it dissolves naturally occurring minerals and can pick up contaminants 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 from sewage treatment plants, septic systems, agriculture and livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals which 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 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 and septic systems.
- Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities.

Some people are more vulnerable to contaminants in drinking water than the general population. Immuno-compromised individuals, such as people with cancer, those undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people and infants can be particularly at risk from infections and are at greater risk of developing life-threatening illnesses. The City encourages immuno-compromised individuals

to consult their doctors regarding appropriate precautions to avoid infection.

The City takes precautions to eliminate the risk of infection from microbial contaminants, including Giardia and Cryptosporidium, from its water system. These organisms are found in surface water throughout the United States and ingesting them may cause an abdominal infection. Symptoms of infection include nausea, diarrhea and abdominal cramps. The City has been sampling for possible risks present in the Ventura River Watershed since 2000. The City's treatment processes for surface water include coagulation, filtration and Chloramine disinfection to remove these organisms. The USEPA and the Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial contaminants are available from the Safe Drinking Hotline at 1-800-426-4791.

Water Quality Terminology

The Ventura's Water Quality Summary, on the back page, shows constituents measured in Ventura's water and reported to the State Department of Health Services, and in some cases the USEPA. Some of the terminology used is described below:

Maximum Contaminant Level (MCL):

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

Maximum Contaminant Level Goal (MCLG):

The level of contaminant in drinking water below which there is no known or expected risk to one's health. MCLGs are set by the USEPA.

Public Health Goal (PHG):

The level of a contaminant in drinking water below

which there is no known or expected risk to one's health. The California Environmental Protection Agency sets PHGs.

Maximum Residual Disinfectant Level (MRDL):

The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

Maximum Residual Disinfectant Level Goal (MRDLG):

The level of a disinfectant added for water treatment below, which there is no known or expected risk to health. MRDLs are set by the USEPA.

Primary Drinking Water Standard (PDWS):

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

Regulatory Action Level (RAL):

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

For More Information

 If you would like more information regarding the City's water quality or studies, please contact Ventura's Water Superintendent at 652-4500. This Water Consumer Confidence Report is also available on the City's website at www.cityofventura.net

 You are invited to express your opinions at City Council meetings held each Monday at 7 p.m. in the Council Chambers at Ventura City Hall, 501 Poli Street.

 Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Para más información, por favor llame 658-4785. Copias del informe de agua en español pueden ser obtenidas llamando al 658-4785.

Ventura City Council

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Neal Andrews, Councilmember

Bill Fulton, Councilmember

James L. Monahan, Councilmember

Sandy E. Smith, Councilmember

Christy Weir, Councilmember

City Councilmembers may be reached by email at council@ci.ventura.ca.us or by calling 654-7827.

Rick Cole, City Manager

654-7740 • citymanager@ci.ventura.ca.us

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Please send any comments to:

Editor, *FutureFocus* Newsletter • P.O. Box 99 • Ventura, CA 93002

nicely@ci.ventura.ca.us

Civic Engagement Division • 677-3914

Editor: Kelly V. Nicely • Graphic Design: Karen Grahek Moser
Masthead Photo: Kristen Hook

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Ventura's Water Quality Summary 2005

Utilizing data collected in 2004.

Only water quality constituents detected by laboratory testing appear in the chart.

PRIMARY STANDARDS (PDWS)				Units	Maximum Level MCL	State Goal PHG	Ventura River Average	Ventura River Range	Ground Water Average	Ground Water Range	CMWD Average	CMWD Range	Major Sources of Contamination in Drinking Water	
Water Clarity Treated Turbidity				NTU	TT	NA	0.9 (a)	0.07-0.12(a)	NA	NA	0.07 (b)	0.01-0.07 (b)	Process and source variations.	
Radioactive Contaminants (e) Gross Alpha particle activity				pCi/l	15	NA	4.65	1.7 - 10.0	7.5	1.9 - 17.5	1.1	0.3 - 2.1	Erosion of natural deposits.	
Radium 226				pCi/l	5	NA	0.10	ND - 0.23	0.50	0.12 - 0.89	NA	NA	Erosion of natural deposits.	
Uranium (c)				pCi/l	20	0.5	3.13	2.1 - 4.0	4.8	3.8 - 6.8	NA	NA	Erosion of natural deposits.	
Inorganic Contaminants Arsenic				ppb	50	0	ND	ND	ND	ND	2.0	2.0	Erosion of natural deposits; runoff from orchards; glass and electronics production waste.	
Fluoride				ppm	2	1	0.45	0.34-0.50	0.49	0.35 - 0.67	0.4	0.4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories.	
Selenium				ppb	50	NA	ND	ND	9.3	ND - 25	ND	ND	Discharge from refineries or manufacturers; erosion of natural deposits.	
Nitrate (as Nitrogen)				ppm	10	10	0.6	0.4 - 0.9	0.9	ND - 2.8	ND	ND	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.	
PRIMARY STANDARDS for Distribution System				Units	MCL MRDL	PHG (MCL) MRDLG	Distribution System Average		Distribution System Range		Major Sources of Contamination in Drinking Water			
Disinfection Chloramine Residual				ppm	4	4	2.7		1.9 - 2.8		Drinking water disinfectant added for treatment.			
Disinfection By Products Total Trihalomethanes				ppb	80	NA	32 (c)		5 - 62		By-product of drinking water chlorination.			
Total Haloacetic Acids				ppb	60	NA	21 (c)		ND - 64		By-product of drinking water chlorination.			
Microbiological Contaminants Total Coliform Bacteria				NA	5%	0	0		0		Naturally present in the environment.			
Fecal Coliform Bacteria				NA	0	0	0		0		Human and animal fecal waste.			
Lead and Copper Samples				Units	RAL	PHG	Samples Collected		Above RAL		90th Percentile		Major Sources of Contamination in Drinking Water	
Lead				ppb	15	2	2		36 (d)		0		Internal corrosion of household plumbing systems.	
Copper				ppm	1.3	0.17	0.17		36 (d)		1		Internal corrosion of household plumbing systems.	
SECONDARY STANDARDS				Units	Maximum Level MCL		Ventura River Average	Ventura River Range	Ground Water Average	Ground Water Range	CMWD Average	CMWD Range	Conserve Our Water (COW) 2004 Annual Poster Contest Entry  Hang Yuan Cabrillo Middle School, 8th Grade, First Place	
Aesthetic Standards Color				Color	15	ND	ND - 5	ND	ND - 4	10	10			
				Odor	3	ND	ND - 1	ND	ND	1	1 - 2			
				Chloride	500	43	37 - 51	69	50 - 93	13	13			
				Corrosivity	ppb	Non corrosive	0.19	-0.07 - 0.36	0.55	0.04 - 0.89	0.1	0.1		
				Iron (TT)	ppb	300	ND	ND	ND	ND - 400	NS	NS		
				Total dissolved solids	ppm	1000	548	412 - 644	1242	952 - 1680	350	350		
				Specific conductance	umhos	1600	800	739 - 849	1451	1365 - 2380	537	537		
				Sulfate	ppm	500	195	168 - 222	592	423 - 880	138	138		
				Additional Constituents pH				pH units	6.5 - 8.5	7.6	7.4 - 7.8	7.6		
Hardness	ppm	NS	356					305 - 405	662	550 - 816	219	219		
Calcium	ppm	NS	94					79 - 111	180	154 - 216	50	50		
Magnesium	ppm	NS	29					26 - 33	52	40 - 74	23	23		
Manganese (TT)	ppb	50	ND					ND	ND	ND - 170	ND	ND		
Sodium	ppm	NS	38					30 - 46	133	85 - 188	26	26		
Phosphate	ppm	NS	0.53					0.19 - 1.29	0.24	0.05 - 0.72	1.6	0.33 - 2.87		
Potassium	ppm	NS	2.4					1.7 - 2.7	5.1	4.1 - 6.6	3.0	3.0		
Total Alkalinity	ppm	NS	172					133 - 212	260	226 - 295	120	120		
Unregulated Contaminant Monitoring (e) (UCMR)				Units	Maximum Level MCL	Ventura River Average	Ventura River Range	Ground Water Average	Ground Water Range	CMWD Detection	CMWD Range			
Boron				ppb	NS	440	400 - 460	620	520 - 730	200	200			
Vanadium				ppb	NS	1.8	ND - 4.3	3.9	ND - 6.1	ND	ND			

LEGEND

NA: Not applicable

ND: Not detectable

NS: No standard

NTU: Turbidity, a measure of the clarity or cloudiness of the water.

ppb: Parts per billion or micrograms per liter.

ppm: Parts per million or milligrams per liter.

pCi/l: Picocuries per liter; a measure of radioactivity in water.

CMWD: Casitas Municipal Water District

TT: Treatment Techniques. The approved filtration technology used for performance standards that must be met through the water treatment process.

Footnotes: (a) Average is maximum reading. Avenue Plant Surface Filtration (TT) = 0.3 NTU in 95% of samples not to exceed 1.0 NTU for more than one hour. (b) Average is maximum reading. CMWD Direct Filtration (TT) = 95% of samples equal or below 0.2 NTU (c) Highest running average cannot exceed the MCL. (d) Samples were taken at selected households on a first draw in August 2002. (e) Monitoring completed in 2003.