The City of Vacaville wants you, our customers to know that your water system has met all water quality standards established by U.S. Environmental Protection Agency (USEPA) and the California State Department of Public Health (DPH) and is a safe and reliable supply.

In 2007 Vacaville distributed over 6 billion gallons of drinking water. This water was subjected to extensive testing, not only for regulated contaminants, but also for non-regulated. More than 57,000 analyses were performed on water samples in 2007.

In order to ensure that tap water is safe to drink, the USEPA and the DPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DPH regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

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 at (1-800-426-4791), or visit the web site at http://www.epa.gov/safewater/.

For a full table of analyses of Vacaville's water and other facts, see our web site at http://www.cityofvacaville.com. We would like to hear your comments on this report and invite you to join our source water protection efforts. Please contact the City of Vacaville Water Quality Lab Supervisor, Tony Pirondini by phone at (707) 469-6400 or by email at tpirondini@cityofvacaville.com.

SOURCES OF WATER & CONTAMINANTS

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.

Vacaville's water supply consists of two surface water sources and twelve deep groundwater wells. Lake Berryessa surface water, conveyed through Putah South Canal (PSC), provided 33% of the City's total consumption and Sacramento Delta surface water, from the North Bay Aqueduct (NBA), provided an additional 31% in the year 2007. Groundwater from the twelve deep wells made-up the balance (36%) of our water needs.

Treatment for surface water is divided between the City's own diatomaceous earth (DE) water treatment plant, located on Allison Drive and the North Bay Regional Water Treatment Plant (NBR), located on Peabody Road. The DE plant treats PSC source water only, while the NBR plant, which is jointly-owned by the cities of Vacaville and Fairfield, treats both PSC and NBA source waters.

The deep groundwater wells are located on or near Elmira Road, Orange Drive, and Vacavalley Parkway.

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

POLICY ON NONDISCRIMINATION ON THE BASIS OF DISABILITY

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990, the City of Vacaville ("City") does not discriminate against qualified individuals with disabilities on the basis of disability in the City's services, programs or activities, or employment. Information, comments, requests for accommodations or barrier removal, and/or complaints concerning the accessibility of City programs, services or activities to persons with disabilities should be directed to the City's ADA Coordinator, 1001 Allison Drive, 469-6572, 469-6578 (TTY), 469-6555 (fax), ada@cityofvacaville.com.

Este informe contiene informaciòn muy importante Sobre su agua bebr. Tradùzcalo ò hable con alguien que lo entienda bien.

Itong ulat ay mayroong mahalagang impormasyon tungkol sa inumin na tubig. Isalin mo o makipagusap sa makaunawa.

For assistance in translating this, please call Mark Mezzaferro, Public Information Officer, at 449-5371.

ARSENIC IN DRINKING WATER Vacaville Meets the Limit

While arsenic levels in your drinking water are significantly less than the current EPA standard of 10 ppb, the groundwater does contain low levels of arsenic. These results are from samples taken in 2005 and 2007. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The DPH continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems

OPERATING CRITERIA FAILURE:

The North Bay Regional Water Treatment Plant (NBR Plant) experienced an "operating criteria failure" according to DPH regulations. Your drinking water is continuously monitored for turbidity (cloudiness) at the treatment plants, which validates the effectiveness of the filtration process. This tells us whether we are effectively filtering the water supply. On December 12, 2007 the NBR Plant had one of eight filters exceed 2.0 turbidity units for 22 minutes. During this incident, the water served by the NBR plant did not exceed 1.0 turbidity units, and was not in violation. Further, the water disinfection processes were functioning properly, minimizing the risk of microbial contamination. Although turbidity has no health effects, high levels can interfere with disinfection and provide a medium for microbial growth. Follow-up monitoring detected no microbial organisms in the water served to you.

CITY OF VACAVILLE MONITORING REQUIREMENT NOT MET

In 2007, the City of Vacaville sampled 11 of our 12 active wells for nitrate as mandated by DPH. One well was not sampled because it was out of service. We have since taken the required sample and the test results show the well is compliant with drinking water standards. Historically, the standard has always been met, indicating that the well would have been in compliance when the sample was scheduled to be collected and that health effects would not have been an issue.

SOURCE WATER ASSESSMENTS AND VULNERABILITY SUMMARIES

A Source Water Assessment evaluates the quality of a source water that is used in a community drinking water supply. It is also used to determine the Potential Contributing Activities (PCAs) that occur within and nearby a source water supply. The PCAs are then compiled into a Vulnerability Summary report.

The latest Vulnerability Summary report for the Sacramento Delta, including the Barker Slough North Bay Aqueduct (NBA), was completed in 2003. The source was considered to be most vulnerable to cattle and sheep grazing activities in the watershed associated with turbidity, total organic carbon, and coliform bacteria detected in the water supply. Approximately 85% of the watershed is grazing land or irrigated pastures. The cities treating NBA water, in conjunction with the Solano County Water Agency, have implemented watershed management practices to improve water quality and reduce the significance of the potential contaminant sources.

The latest Vulnerability Summary report for Putah South Canal (PSC) was completed in 2003. PSC was determined to have a physical barrier effectiveness rating of "low." The results of the assessment survey indicated that PSC is most vulnerable to illegal activities/unauthorized dumping and herbicide application. Management measures along the canal have been implemented that mitigate the risk for each of these PCAs. These measures include restricted access to the canal by installation of security fencing, regular patrolling of the canal, reduction of herbicide use, replanting canal walls with grasses, cleaning of the canal during periods of no water deliveries, and diversion of surface drainage around and away from the canal.

The Vulnerability Summaries for Vacaville's groundwater wells were performed in 2002, 2003, and 2005. The wells are considered most vulnerable to automobile gas stations, chemical and petroleum processing and storage, dry cleaners, septic systems, sewer collection systems, agricultural drainage, and agricultural and irrigation wells. The wells offer various levels of protection from PCAs due to factors such as characteristics of the aquifer, deep water table intakes, well construction features and physical barriers. Therefore, although the PCAs listed in the assessment surveys are activities that have the potential to contaminate the wells, the PCAs are not causing nor have historically caused contamination of the water sources.

Additionally, Vacaville has a long-standing Source Control Program, whereby inspectors perform audits of commercial and industrial facilities. This is to ensure that no illicit discharges are taking place or have taken place, and to confirm that pollutant disposal practices conform to guidelines and laws.

A copy of the Source Water Assessment(s) and Vulnerability Summaries can be obtained through the California DPH, Drinking Water Field Operations Branch, San Francisco District Office, 850 Marina Bay Parkway, Bldg P, 2nd Floor, Richmond, California 94804. You may request that a summary be sent to you by contacting Betty Graham, District Engineer, California Department of Public Health, at (510) 620-3474.

PHARMACEUTICALS

The occurrence of trace pharmaceuticals and personal care products in drinking water supplies has been a water quality and public health concern for many years. According to American Water Works Association, the largest organization of water professionals in the world, "[t]oday's advanced technology has allowed scientists to detect more substances– at lower levels– than ever before. To date, however, research throughout the world has not demonstrated an impact on human health from pharmaceuticals in drinking water at the trace levels at which they have been found. People regularly consume or expose themselves to products containing these compounds in much higher concentrations through medicines, food and beverage, and other sources."

Pharmaceuticals and personal care products as pollutants (PPCPs) refers, in general, to thousands of products used by individuals for personal health or cosmetic reasons, including prescriptions, over-the-counter therapeutic drugs, fragrances and lotions, and veterinary drugs.

Our first priority is to protect public health and as part of that commitment, the City of Vacaville provides a safe and reliable supply of drinking water in accordance with strict federal and State requirements. Most of Vacaville's water supply is not subject to PPCP contaminants. Vacaville's groundwater wells are deep and have protective sanitary seals. Of the two surface water supplies, Lake Berryessa is not subject to PPCPs, though the Sacramento Delta surface water supply may be.

The USEPA is researching PPCP compounds to determine how to best remove them from wastewater and drinking water supplies. In addition, these emerging contaminants are under review for regulation and increasing public awareness about product stewardship and pollution prevention. At the City, we encourage confidential disposal of pharmaceuticals at City sponsored collection events and ask that the public not dispose of medications in the landfill or by flushing them down the toilet.

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) or visiting the web site at http://www.epa.gov/safewater.

HEALTH-BASED PRIMARY DRINKING WATER STANDARDS • Constituents Detected in Water

SUBSTANCE	UNITS	MCL	PHG (MCLG)	RANGE	AVG	MAJOR SOURCES IN DRINKING WATER
GROUNDWATER			**Clarity**			
Turbidity	ntu	tt	na	0.05 - 0.94	0.17	Soil runoff.
			Inorganic Chemicals			
Arsenic	ppb	10	0.004	nd - 9	3	Erosion of natural deposits, glass and electronics production waste.
Barium	ppb	1000	2000	nd - 140	43	Erosion of natural deposits.
Chromium	ppb	50	100	nd - 22	10	Discharge from chrome plating and erosion of natural deposits.
Fluoride	ppm	2	1	0.2 - 0.3	0.2	Erosion of natural deposits.
Nickel	ppb	100	12	nd - 19	2	Erosion of natural deposits.
Nitrate (as N)	ppm	10	10	0.4 - 4.5	2.0	Runoff and leaching from fertilizer use; leaching from septic tanks; erosion of natural deposits.
			Radioactivity			
Gross Alpha Activity	pCi/L	15	none	nd - 3.8	nd	Erosion of natural deposits.

SUBSTANCE	UNITS	MCL	PHG (MCLG)	Highest Detection	Percent in Compliance (<0.5 ntu)	MAJOR SOURCES IN DRINKING WATER
SURFACE WATER - NBR			**Clarity**			
Turbidity (a)	ntu	tt	na	0.05	100%	Soil runoff.
			Regulated Organic Chemicals			
SUBSTANCE	UNITS	MCL	PHG (MCLG)	RANGE	AVG	MAJOR SOURCES IN DRINKING WATER
Total Trihalomethanes	ppb	80	na	0.6 - 4.8	3.7	By-product of drinking water disinfection.
			Inorganic Chemicals			
Aluminum	ppb	1000	600	nd - 94	60	Erosion of natural deposits; residue from some surface water treatment processes. of natural deposits.
Nickel	ppb	100	12	nd - 14	3	Erosion of natural deposits.
Fluoride	ppm	2	1	nd - 0.2	0.1	Erosion of natural deposits.
Nitrate (as N)	ppm	10	10	nd - 0.9	0.4	Runoff & leaching from fertilizer use; leaching from septic tanks; erosion of natural deposits.
Giardia Cysts (2007 NBA Untreated)	Organisms/L	tt	(0)	nd - 0.1	0.06	Naturally present in the environment.

SUBSTANCE	UNITS	MCL	PHG (MCLG)	Highest Detection	Percent in Compliance (<0.5 ntu)	MAJOR SOURCES IN DRINKING WATER
SURFACE WATER - VWTP			**Clarity**			
Turbidity (a)	ntu	tt	na	0.25	100%	Soil runoff.
			Regulated Organic Chemicals			
SUBSTANCE	UNITS	MCL	PHG (MCLG)	RANGE	AVG	MAJOR SOURCES IN DRINKING WATER
Total Trihalomethanes	ppb	80	none	27	27	By-product of drinking water disinfection.
Cryptosporidium Oocysts (2007 PSC Untreated)	Organisms/L	tt	(0)	nd - 0.1	0.06	Naturally present in the environment.

Protect Your Water Supply

Polluted stormwater potentially affects drinking water sources, which can affect public health and increase drinking water treatment costs. Please help protect your water supply by controlling household and automotive products that contain toxic chemicals. Reduce the use of toxic chemicals wherever possible (including fertilizers and pesticides) and be sure to properly recycle or dispose of waste.

Everything that goes down a storm drain or sewer affects your local water. Never dispose of household or automotive products and chemicals down the storm drain or in the sewer.

Glory Hole
Lake Berryessa

GET INVOLVED!

The City Council meets on the second and fourth Tuesdays of each month at 7:00 p.m. in the Council Chambers at City Hall, located at 650 Merchant Street. All residents are encouraged to participate in these meetings. Agendas and minutes for the meeting are available on line at the City of Vacaville web site: http://www.cityofvacaville.com.

LEGEND

- al = Action Level or Notification Level. The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.
- MCL = Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. Set by the USEPA as close as possible to MCLGs as feasible.
- 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 the USEPA.
- MRDL = Maximum Residual Disinfectant Level. The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap. Set at 4.0 mg/L as Cl2 for chlorine disinfection.
- MRDLG = 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. MRDL's are set by USEPA.
- na = Not Applicable or Not Available at this time.
- nd = Not-Detected.
- ntu = Nephelometric Turbidity Units. The standard unit for turbidity measurements.
- pCi/L = Pico Curies per Liter.
- umhos/cm = unit of measure for conductance.
- 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 Cal/EPA.
- ppm = Parts Per Million or Milligrams per Liter (mg/L).
- ppb = Parts Per Billion or Micrograms per Liter (ug/L).
- ton = Total Odor Number.
- tt = Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water. No Public Health Goal is defined.
- (a) = Range is maximum monthly value; 100% represents the lowest percentage of samples which meet monthly compliance limit of 0.5 ntu.
- (b) = This is the State action level for samples collected from inside homes.
- (c) = The 90th percentile reflects the concentration of lead or copper at which 90% of the samples tested were found to have not exceeded. Household lead and copper results are from 2005 analyses. The next sampling is scheduled for 2008.
- (d) = Not possible to differentiate between groundwater or surface water source.
- (e) = Added as required for dental health protection Standard depends upon temperature.
- (f) = Compliance is based on a running annual average of samples collected quarterly.
- (g) = To convert hardness data from ppm to grains per gallon, divide by 17.

PRIMARY CONSTITUENTS REPORTED IN DISTRIBUTION SYSTEM

SUBSTANCE	UNITS	MCL	PHG (MCLG)	RANGE	MAJOR SOURCES IN DRINKING WATER
Lead (b) (c)	ppb	al = 15	2	2.1 ppb reflects the 90th percentile. Of the 32 samples analyzed, none exceeded the action level. Data is from the last required sampling of August of 2005.	Erosion of natural deposits. Internal corrosion of household water plumbing systems.
Copper (b) (c)	ppm	al = 1.3	0.17	0.18 ppm reflects the 90th percentile. Of the 32 samples analyzed, none exceeded the action level. Data is from the last required sampling of August of 2005.	
Fluoride (d) (e)	ppm	0.7 - 1.3	0.8	Distribution system-wide highest monthly average = 0.9 ppm with a minimum of 0.7 ppm and a maximum of 1.1 ppm.	Erosion of natural deposits; Water additive that promotes strong teeth.
Total Coliform Bacteria (1352 samples taken in 2007; no Positive Total Coliforms detected.)		5%	(0)	Distribution system-wide highest monthly value = 0%	Naturally present in the environment.

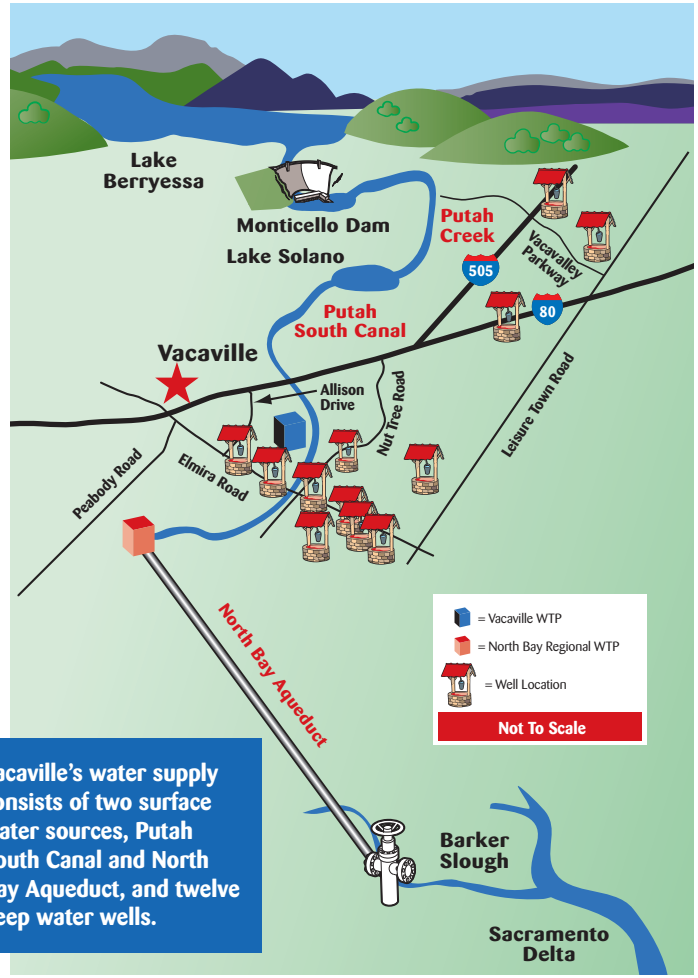
SUBSTANCE	UNITS	MCL or MRDL	MCLG or MRDLG	LEVEL DETECTED	MAJOR SOURCES IN DRINKING WATER
Disinfectants & Disinfection By-Products (DBP)					
Total Trihalomethanes (d) (f)	ppb	80	na	Average = 13.7 ppb Minimum = nd Maximum = 46.3 ppb	By-product of drinking water chlorination.
Haloacetic Acids	ppb	60	na	Average = 4.5 ppb Minimum = nd Maximum = 20.3 ppb	By-product of drinking water chlorination.
Chlorine	ppm	4	4	Average = 0.82 ppm Minimum = 0.02 ppm Maximum = 1.39 ppm	Drinking water disinfectant added for treatment.
Bromate	ppb	10	0	All samples were nd for bromate for 2007	Drinking water disinfectant added for treatment.
Control of DBP Precursors (TOC)	ppm	tt	-	Average = 1.7 Minimum = 1.1 Maximum = 2.3	Various natural and man made sources.

AESTHETIC-BASED DRINKING WATER SECONDARY STANDARDS
Constituents Detected in Treated Water

SUBSTANCE	UNITS	MCL	GROUNDWATER		SURFACE WATER NBR		SURFACE WATER VWTP	
			RANGE	AVG	RANGE	AVG	RANGE	AVG
Aluminum	ppb	200	nd	nd	nd - 94	60	nd	nd
Chloride	ppm	250	8 - 32	14	8 - 13	10	6	6
Color	units	15	nd	nd	nd	nd	3	3
Manganese	ppm	50	nd	nd	nd	nd	2	2
Odor - Threshold	ton	3	nd - 1	nd	1 - 2	1.5	2	2
Silver	ppb	100	nd	nd	12 - 18	15	nd	nd
Sulfate	ppm	250	21 - 65	40	27 - 38	32	20	20
Specific Conductance	umhos/cm	1600	416 - 741	521	285 - 367	339	336	336
Total Dissolved Solids	ppm	1000	280 - 530	359	183 - 239	206	190	190

UNREGULATED CONSTITUENTS REPORTED IN DRINKING WATER

Alkalinity	ppm	No Std	198 - 331	226	82 - 157	137	141	141
Boron	ppb	al = 1000	nd - 410	200	110 - 180	150	170	170
Calcium	ppm	No Std	13 - 87	43	12 - 20	16	17	17
Hardness (g)	ppm	No Std	78 - 333	187	88 - 168	141	166	166
Magnesium	ppm	No Std	11 - 28	19	12 - 29	24	30	30
pH	units	6.5 - 8.5	7.0 - 8.3	7.3	8.2 - 8.4	8.3	8.4	8.4
Potassium	ppm	No Std	2.2 - 5.6	3.9	1.1 - 1.8	1.4	1.2	1.2
Sodium	ppm	No Std	41 - 85	54	17 - 28	20	9.8	9.8
Vanadium	ppb	al = 50	nd - 42	26	nd - 4	0.9	4	4



Vacaville's water supply consists of two surface water sources, Putah South Canal and North Bay Aqueduct, and twelve deep water wells.

HEALTH RELATED INFORMATION

PRECAUTIONS FOR PEOPLE WITH WEAKENED IMMUNE SYSTEMS:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as those with cancer undergoing chemotherapy, people 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 and Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants can be obtained by calling USEPA's Safe Drinking Water Hotline (800-426-4791) or visiting the web site at www.epa.gov/.