



*Annual Consumer Confidence Report
for the
Sonoma State University Drinking Water System*

Prepared on May 30, 2003

This Consumer Confidence Report is designed to inform the campus community about the quality of water that Facilities Services delivers to the Sonoma State University campus every day. Our goal is to consistently provide a safe and dependable supply of drinking water that meets or exceeds federal and state drinking water standards. We want our customers to understand the effort we make to continually improve the water treatment process and protect our water resources. This report shows the quality of water produced at SSU and explains the data that is collected and reported.

Sonoma State University routinely monitors for contaminants in your drinking water according to Federal and State regulations. The table that follows shows the results of our monitoring for the period of January 1st through December 31st, 2002. All drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

If you have any questions about this report or concerning your water utility, please contact Harvey DeLorm, Director of Engineering (707) 664-2124 or Craig Dawson, Director of Environmental Health & Safety (707) 664-2932.

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

Terms Used in This Report

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

MCL - Maximum Contaminant Level - The “Maximum Allowed” is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG - Maximum Contaminant Level Goal - The level of contaminant in drinking water below which there is no known or expected risk to health. MCLG’s are set by the U.S. Environmental Protection Agency.

mrem/yr - Millirems per year - Measure of radiation absorbed by the body.

MFL - Million Fibers per Liter - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

NTU - Nephelometric Turbidity Unit - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

N/A – Not Applicable – does not apply in this context.

ND - Non-Detect - laboratory analysis indicates that the constituent is not present above the limit of detection for reporting purposes.

NT - Not Tested – testing not required for this contaminant for this water system.

ppb - Parts per billion or Micrograms per liter (ug/L) - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

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

ppq - Parts per quadrillion or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

ppt - Parts per trillion or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

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

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 California Environmental Protection Agency.

Primary Drinking Water Standard – MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

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

Turbidity - The cloudy appearance of water caused by the presence of suspended or colloidal matter. A measure used to indicate the clarity of water.

2002 TEST RESULTS

Microbiological Contaminants

Contaminant	Violation	Highest Number of Detections	Number of months in violation	MCL	MCLG	Likely Source of Contamination
Total Coliform Bacteria	Yes	3	1	More than 1 sample in a month with a detection	0	Naturally present in the environment

Lead and Copper Distribution Point

	Sample Date	Number of Samples	90 th percentile level detected	Number of sites exceeding AL	AL	MCLG	Typical Source of Contaminant
Lead (ppb)	7/26/01	20	ND	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	7/26/01	20	0.54	0	1.3	0.17	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

Regulated Contaminants with Secondary MCL's

	Sample Date	Level Detected	Range of Detections	Unit	MCL	PHG (MCLG)	Typical Source of Contaminant
Odor	1/31/02	1	1 – 1		3	none	Naturally occurring organic materials
Total Dissolved Solids	1/31/02	220	220 – 220	mg/L	500	none	Naturally occurring organic and inorganic materials; soil runoff
Specific Conductance	1/31/02	445	440 – 450	umho/cm	900	none	Naturally occurring inorganic materials; industrial pollutants
Chloride	1/31/02	14	13 – 15	mg/L	250	none	Naturally occurring
Sulfate	1/31/02	6.5	5.0 – 8.0	mg/L	250	none	Naturally occurring

Sodium and Hardness

	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	1/31/02	20	19 - 20	none	none	Generally found in ground and surface water.
Hardness (ppm)	1/31/02	150	140 - 160	none	none	Generally found in ground and surface water.

Radioactive Contaminants

Contaminant	Sample Date	Violation	Average	Range	Unit	MCL	PHG	MCLG	Likely Source of Contamination
Alpha Activity, Gross	1999	No	2.27	1.46-2.90	pCi/L	15	N/A	N/A	Erosion of natural deposits
Uranium	1999	No	0.87	0-3.29	pCi/L	20	N/A	N/A	Erosion of natural deposits

Inorganic Contaminants									
<i>Contaminant</i>	<i>Sample Date(s)</i>	<i>Violation</i>	<i>Average</i>	<i>Range</i>	<i>Unit</i>	<i>MCL</i>	<i>PHG</i>	<i>MCLG</i>	<i>Likely Source of Contamination</i>
Arsenic	1/31/02	No	3.5	3.0 – 4.0	ppb	50	N/A	N/A	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chromium	1/31/02	No	5	5.0	ppb	50	2.5	N/A	Chrome plating; erosion of natural deposits
Fluoride	Jan 1999	No	0.12	0.12-0.13	ppm	2	1	N/A	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as NO ₃)	2002 quarterly	No	9	2 - 20	ppm	45	45	N/A	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Explanation for Test Results Table

General

The table shows that the Sonoma State University water system had no violations for primary inorganic chemicals, asbestos, nitrate, volatile organic chemicals, synthetic organic chemicals, or unregulated volatile organic chemicals. A small number of contaminants have been detected above the detection limit but still fall below the Maximum Contaminant Level established by the Environmental Protection Agency. EPA research has determined that your water is safe to consume where contaminant levels fall below the MCL.

Total Coliform (Violation)

Sonoma State University violated the Maximum Contaminant Level for total coliform during the month of November. Coliform bacteria are not harmful in themselves; rather, they are tested for as an indicator that other more dangerous bacteria may be present such as fecal coliform or E. Coli. Fecal coliform or E. Coli are always tested concurrently with each total coliform sample. Chlorine residual samples are also taken concurrently with each total coliform sample so that lack of adequate chlorine residual can be eliminated as the cause if a positive sample were to result.

The Department of Health Services Office of Drinking Water requires that water suppliers notify the water users by newspaper, television or radio. The following language was posted in the STAR after the November violation:

"The California Department of Health Services sets drinking water standards and has determined that the presence of total coliforms is a possible health concern. Total coliforms are common in the environment and are generally not harmful themselves. The presence of these bacteria in drinking water, however, generally is a result of a problem with water treatment or the pipes which distribute the water, and indicates that the water may be contaminated with organisms that can cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possible jaundice, and any associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organism in drinking water, but also may be caused by a number of factors other than your drinking water. The Department has set an enforceable drinking water standard for total coliforms to reduce the risk of these adverse health effects. Under this standard, no more than 5.0 percent of the

samples collected during a month can contain these bacteria, except that systems collecting fewer than 40 samples per month that have one total coliform-positive sample per month are not violating the standard. Drinking water which meets this standard is usually not associated with a health risk from disease-causing bacteria and should be considered safe."

The Environmental Health & Safety Office worked closely with Facilities Services and the Department of Health Services to identify the cause of the positive total coliform samples. A careful review of internal procedures, disinfection data, and sampling points in the water system ruled out the possibility of false positives resulting from deficiencies therein. It was discovered that the primary laboratory that was under contract with Sonoma State University was not maintaining its operation in accordance with American Water Works Association (AWWA) guidelines for microbiology labs. SSU immediately discontinued utilizing this laboratory in favor of a laboratory that exceeded AWWA operational, procedural, and quality control standards.

Campus Water Source

The campus water source is derived from two active wells located at the northwest corner of campus. A third well is maintained in an active state as a standby source. This water is pumped to a chlorination facility that maintains chlorine residual at a concentration above 0.20 parts per million (ppm) as a means of killing any pathogenic microorganisms that may be present. Chlorine is currently the only chemical added to SSU's drinking water supply.

More Information

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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems; and Radioactive contaminants, that can be naturally-occurring or be 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 State Department of Health Services (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.

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 US EPA'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).