

Annual Drinking Water Quality Report

Madera County Maintenance District 6

Lake Shore - 2000

We're pleased to present to you this year's *Annual Drinking Water Quality Report*. This report is designed to inform you about the quality of water and services we deliver to you every day. We want you to understand the efforts we make to improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

The sources of 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or 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 runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, which 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, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- *Radioactive contaminants*, which 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 (EPA) and the California 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 must provide the same protection for public health.

Maximum Contamination Limits (MCLs) are set at very stringent levels. To understand the risk of possible health effects described for regulated contaminants, you should know that a person would have to drink two (2) liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

All 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 Environmental Protection Agency's Safe Drinking Water Hotline at 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. EPA/CDC (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline.

Our water is supplied by two deep wells, drawing from an aquifer approximately 450 feet below the surface. During 2000, testing revealed violation of the EPA's MCL for four primary contaminants. More information is given below. **We do not recommend drinking water from this system.**

If you have any questions about this report or concerning your water utility, please contact Linda Alexander at (559) 675-7817. We want our customers to be informed about their water utility. If you want to learn more, please attend any

regularly scheduled meeting of the Board of Supervisors. They are held on Tuesdays (except the fifth Tuesday of a month) in the Board Chambers, 209 W. Yosemite Avenue, Madera, CA 93637.

Madera County Engineering Department routinely monitors for contaminants in your water according to Federal and State laws. Our tables show the results of our monitoring for the period of January 1st through December 31st, 2000.

Results of Water Testing

The following tables present results of some of the approximately 110 tests made. Not all testing is reported here. We test for many chemicals which were not detected at a level high enough to be reported. Additionally, the State requires 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. The results shown are from the most recent testing and test dates are noted. If you have a specific question about a contaminant you do not see listed, we invite you to call our office.

In the table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

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

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

Maximum Contaminant Level Goal – the “Goal” (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Micromhos ($\mu\text{MHO}/\text{cm}$) – a measure of the electrical conductivity of water.

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

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

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

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.

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

Turbidity Unit (TU) – turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 TU is just noticeable to the average person.

TEST RESULTS							
Contaminant	Violation Y/N	Level Detected	Range	MCL	PHG (MCLG)	Test Date	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria	YES*	5	0-5	More than one positive monthly sample	0	At least one test per month	Naturally present in the environment
Radioactive Contaminants							
Gross Alpha (pCi/l)	YES**	154	119-183	15	N/A	1/00 4/00 7/00 10/00	Erosion of natural deposits
Uranium (pCi/l)	YES**	155	130-170	20	N/A	Same as above	Erosion of natural deposits
Inorganic Contaminants							
Arsenic (ppb)	YES***	73	70-75	50	N/A	7/00 10/00	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppm)	N	.57	.57	2	1	5/99	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Thallium (ppb)	N	1	1	2	.1	5/99	Runoff and leaching from fertilizer use; leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Lead and Copper							
		90 th Percentile	# Sites Above AL	AL	90 th Percentile Goal	Total # Sites Sampled	
Lead (ppb)	N	<5	0	15	2	10	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits
Copper (ppm)	N	.10	0	1.3	.17	10	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

About our violations:

***Total Coliform Bacteria:** Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. One of our samples tested positive during the month of June. A repeat test came back negative. In July, another sample tested positive, as did repeat tests at three other locations. Positive samples trigger treatment and an increase in the frequency of sampling. Following chlorination, the next twelve tests in July came back negative. We were unable to determine the source of the contamination, but are pleased to report that it has not recurred.

****Gross Alpha and Uranium:** Certain minerals are radioactive and may emit forms of radiation known as photons and alpha radiation. Some people who drink water containing uranium or alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. This water continues to test high for gross alpha and uranium due to the erosion of natural deposits.

*****Arsenic:** Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer. Arsenic is a naturally occurring mineral known to cause cancer in humans at high concentrations.

Secondary standards were set to protect you against unpleasant aesthetic effects such as color, taste, odor and the staining of plumbing fixtures (e.g., tubs and sinks) and clothing while washing. These do not pose a risk to public health and communities may decide whether or not to treat for them.

Secondary Standard Contaminants							
Contaminant	Violation	Level Detected	Range	MCL	PHG (MCLG)	Test Date	Likely Source of Contamination
Chloride (ppm)	N	53	53	500	N/A	5/99	Runoff/leaching from natural deposits; seawater influence
Color (Color Units)	N	<5	<5	15	N/A	5/99	Naturally occurring organic materials

Secondary Standard Contaminants continued...							
Contaminant	Violation	Level	Range	MCL	PHG	Date	Source
Corrosivity	N/A*	-.46 Moderately Aggressive	-.46	Non-corrosive	N/A	5/99	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water, affected by temperature and other factors
Iron (ppb)	N	170	170	300	N/A	5/99	Leaching from natural deposits; industrial wastes
Manganese (ppb)	Yes**	96	96	50	N/A	5/99	Leaching from natural deposits
Specific Conductance (μ MHO/cm)	N	400	400	1600	N/A	5/99	Substances that form ions when in water; seawater influence
Sulfate (ppm)	N	10	10	500	N/A	5/99	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	N	320	320	1000	N/A	5/99	Runoff/leaching from natural deposits
Turbidity (TU)	N	.5	.5	TT	5	5/99	Soil runoff
Zinc (ppm)	N	.12	.12	50	N/A	5/99	Runoff/leaching from natural deposits; industrial wastes

*Corrosivity is somewhat tied to Lead and Copper in that, if the 90th percentile of our lead and copper levels exceeded the AL, it would indicate that the Corrosivity of the water was causing leaching of the copper, lead, or lead-soldered joints of plumbing systems. While our Corrosivity does fall into the moderately aggressive category, we do not have elevated levels of lead or copper; therefore no treatment is necessary at this time.

**Manganese was found at a level that exceeds the secondary MCL of 50 ppb. The high levels are due to leaching of natural deposits. Violation of this MCL does not pose a risk to public health.

These **Unregulated Contaminants** may also be of interest to you. No MCLs, PHGs or MCLGs have been established.

Other Unregulated Contaminants			
Contaminant	Test Date	Range	Results
Alkalinity - ppm		190	190
Bicarbonate - ppm		171	171
Calcium - ppm	All tests were completed on 5/4/99.	38	38
Magnesium - ppm		5	5
pH		7.4	7.4
Potassium - ppm		3	3
Sodium - ppm		47	47
Total Hardness (as CaCO ₃) - ppm		173	173

As you can see by the tables, our testing revealed violations in four primary areas, as well as one secondary violation. While the Total Coliform Bacteria violation was a short-term occurrence and was quickly corrected, the source water for this system has consistently contained levels of Gross Alpha, Uranium, and Arsenic greater than the EPA's MCL. Long-term exposure to contaminants in concentrations above the MCL has been determined by the EPA to lead to a higher incidence of cancer. No system improvements are planned at this time. **WE DO NOT RECOMMEND YOU DRINK WATER FROM THIS SYSTEM.**

In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements in your water system. The costs would typically be reflected in the rate structure, because rate adjustments may be necessary in order to make these improvements.

We hope you find this report informative and helpful. Please call our office if you have questions. The County of Madera works continually to provide the best available water to every tap. We ask that you, our customers, help us protect our water sources. Water is the heart of our community, our way of life and our future.

Noticia a Los Clientes Que Solo Hablan Español

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