

Annual Drinking Water Quality Report

Madera County Maintenance District 10A

Madera Ranchos – 2003

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. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to improve the water treatment and delivery process and protect your water resources. We are committed to ensuring the quality of your water.

The 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Possible sources of contamination:

- *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 tapwater is safe to drink, the U. S. Environmental Protection Agency (EPA) and the California Department of Health Services (DHS) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. DHS 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 for regulated contaminants, you should know that a person would have to drink two (2) liters of water every day for a lifetime at the MCL level to have a one-in-a-million chance of affecting their health.

All 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 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 (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as people with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and/or infants, can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Center 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.

Your water is supplied by three of Madera Ranchos' five deep wells. They draw from an aquifer approximately 400 feet below the earth's surface and we are pleased to report that your

drinking water meets all federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact Linda Alexander at (559) 661-6333. We want our customers to be informed about their water utility.

The Madera County Engineering Department routinely monitors for contaminants in your drinking water according to Federal and State laws. Our tables show the results of monitoring for the period of January 1st through December 31st, 2003.

Results of Water Testing

The following tables present results of some of the approximately 300 tests made. Not all testing is reported here. We test for many chemicals that were not detected at a level high enough to be reported. Additionally, the State requires us to monitor for certain contaminants less frequently 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 (MCL) – 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 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.

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

Parts per billion (ppb) or Micrograms per liter ($\mu\text{g}/\text{l}$) – 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) – a measure of the radioactivity in water.

Public Health Goal (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) – a measure of the clarity of water. Turbidity in excess of 5 TU is just noticeable to the average person.

TEST RESULTS FOR PRIMARY CONTAMINANTS

Contaminant / Unit of Measurement	Violation Y/N	Level Detected	Range	MCL	PHG (MCLG)	Test Date	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria	N	1	0-1	More than one positive monthly sample	0	At least 3 tests per month	Naturally present in the environment
Inorganic Contaminants							
Arsenic (ppb)	N	2.52	2.2-2.9	50*	N/A	5/03	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	N	.19	.17-.21	1	2	5/03	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Fluoride (ppm)	N	<.16	<.1-3	2	2	5/03	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)**	N	16	15-17	45	45	5/03	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radioactive Contaminants							
Gross Alpha (pCi/L)	N	.71	<1-2	15	N/A	1/00 4/00 7/00 10/00	Naturally present in the environment
Lead and Copper							
Contaminant	Violation	90 th Percentile	# Sites Above AL	AL	90 th Percentile Goal	Total # Sites Sampled & Year	Likely Source of Contamination
Lead (ppb)	N	5.9	0	15	2	10 samples 8/02	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers, erosion of natural deposits
Copper (ppm)	N	.14	0	1.3	1.7	10 samples 8/02	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

*You may have heard that the EPA recently reduced the MCL and MCLG for Arsenic. The new MCL (set at 14.4 ppb) and MCLG (set at 0) does not become mandatory until January 23, 2006 to allow for the installation of any needed treatment facilities.

**May 2003 testing at the Sparta Well shows continued high Nitrate readings. The well has not been returned to service.

Secondary standards have been set to protect 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)	No	44.8	37-48	500	N/A	5/03	Leaching from natural deposits; industrial wastes
Color (Units)	No	<5	<5	15	N/A	5/03	Naturally occurring organic materials
Corrosivity	N/A*	-1.76 Moderately aggressive	-1.32 to -1.95	Non-Corrosive	N/A	5/03	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water, affected by temperature and other factors
Specific Conductance (µMHO/cm)	No	329.5	320-350	1600	N/A	5/03	Substances that form ions when in water; seawater influence
Sulfate (ppm)	No	3.8	3-5	500	N/A	5/03	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	No	271.7	260-280	1000	N/A	5/03	Runoff/leaching from natural deposits
Turbidity (TU)	No	.11	.1-2	5	N/A	5/03	Soil runoff

*Corrosivity is somewhat tied to Lead and Copper in that, if the 90th percentile of 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 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.

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	Result
Alkalinity – ppm		67-80	73
Bicarbonate – ppm		45-67	52.3
Calcium – ppm	All tests were performed on 2/11, 5/14 and 8/26/03.	14-17	15.1
Chromium, hexavalent-ppb		ND-2	1.7
Magnesium – ppm		8-9	8.3
pH		6.6-7.1	6.7
Potassium – ppm		4-5	4.9
Sodium – ppm		25-28	26.2
Total Hardness (as CaCO ₃) – ppm		87-95	90.7
Vanadium – ppb		22-24	22.83

Summary:

As shown by the tables, the Madera Ranchos system had no violations. We’re proud that your drinking water meets or exceeds all Federal and State requirements. Though we’ve learned through our monitoring and testing that some contaminants have been detected, the EPA has determined that your water IS SAFE at these levels.

Other Information

A source water assessment was conducted for each of the five Madera Ranchos wells in April 2003. The assessments identify several activities as being associated with detected contaminants. These are: historic waste dumps/landfills, military installations, irrigated crops, high-density housing and local septic systems. The contaminants identified are as follows: manganese (identified at the Fender well is naturally occurring, but can be associated with historic dumps, landfills and junkyards), nitrate (identified at the Fender, Fernwood and Sparta wells is often associated with septic systems, but can also be associated with historic agricultural practices) and gross alpha (identified at the Fernwood well is naturally occurring, but can be associated with military installations, medical or veterinary offices).

The levels of nitrate found at the Fernwood and Fender wells are below the drinking water standards. Nitrate concentrations at the Sparta well have exceeded the maximum contaminant level on several occasions in the last three years; however, the Sparta and Fernwood wells are not currently in use and test results for those wells are not included in this annual report. Manganese, identified at the Fender well, and gross alpha, identified at the Fernwood well, both occurred at levels below the maximum contaminant level and, in the case of manganese, even fell below the minimum reporting level.

The assessments also identified the following activities as having the potential for outside contamination, even though no contaminants associated with these activities were found: other wells in the area, gas stations and streets or roads.

A copy of the complete assessment may be viewed at the Madera County Engineering Department, by visiting the State’s website, www.dhs.ca.gov/ps/ddwem/technical/dwp/source_info/source_index.htm, or by requesting a summary of the assessment from Linda Alexander, of the Resource Management Agency, Engineering and General Services, at (559) 661-6333.

In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements to the water system. The costs may 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.