

Annual Drinking Water Quality Report

Madera County Maintenance District 46

Ahwahnee – 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. 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 process and protect our 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.

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 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 an effect on 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 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 six deep wells, drawing from an aquifer approximately 900 to 1160 feet below the surface and is stored in two tanks, designated ACC and MCE. The actual blend of this water is a complex issue involving how water flows, the locations using it at any given time, and at what volume. Because of this, we are including a separate table for each tank. Users served

primarily by the MCE tank are those located on Loch Lomond Court, Loch Lomond Lane, Miami Highlands Circle, Miami Highlands Court and Miami Highlands Drive. The rest of the district is served primarily by the ACC tank. When reviewing the tables, please bear in mind that the results pertaining to you will be somewhere between the values shown.

During 2000, testing revealed violation of the EPA's MCL for Gross Alpha and Uranium. More information is given below.

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 drinking 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 230 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 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 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 (μ MHO/cm) – a measure of the electrical conductivity of water.

Parts per billion (ppb) or Micrograms per liter (μ g/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

Parts per trillion (ppt) 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.

Picocuries per liter (pCi/L) – 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) – a measure of the clarity of water. Turbidity in excess of 5 TU is just noticeable to the average person.

PRIMARY CONTAMINANTS – ACC TANK

Contaminant	Violation Y/N	Level Detected	Range	MCL	PHG (MCLG)	Test Date	Likely Source of Contamination
Radioactive Contaminants							
Gross Alpha (pCi/l)	YES*	17.75	12-24	15*	N/A	10/00 7/00 4/00 1/00	Erosion of natural deposits
Uranium (pCi/l)	N	19	13-26	20*	N/A	Same dates as above	Erosion of natural deposits
Inorganic Contaminants							
Arsenic (ppb)	N	10	10	50	N/A	5/99	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppm)	N	.3	.3	2	1	5/99	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	5.6	5.6	45	45	4/00	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Regulated Contaminants with no MCLs							
Bromodichloromethane (ppb)	N	<. 1	<. 1	N/A	N/A	5/99	Unregulated contaminant monitoring helps EPA and the California Department of Health Services to determine where certain contaminants occur and whether the contaminants need to be regulated. No MCLs have been set at this time.
Bromoform (ppb)	N	<. 5	<. 5	N/A	N/A	5/99	
Chloroform (ppb)	N	<. 1	<. 1	N/A	N/A	5/99	
Dibromochloromethane (ppb)	N	<. 5	<. 5	N/A	N/A	5/99	

PRIMARY CONTAMINANTS – MCE TANK

Contaminant	Violation Y/N	Level Detected	Range	MCL	PHG (MCLG)	Test Date	Likely Source of Contamination
Radioactive Contaminants							
Gross Alpha (pCi/l)	YES*	22.13	21-23.5	15*	N/A	10/00 4/00 4/00 1/00	Erosion of natural deposits
Uranium (pCi/l)	YES*	20.75	18-23	20*	N/A	Same dates as above	Erosion of natural deposits
Inorganic Contaminants							
Arsenic (ppb)	N	3	3	50	N/A	5/99	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppm)	N	<. 1	<. 1	2	1	5/99	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	<2	<2	45	45	4/00	Runoff and leaching from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Regulated Contaminants with no MCLs							
Bromodichloromethane (ppb)	N	5.4	5.4	N/A	N/A	5/99	Unregulated contaminant monitoring helps EPA and the California Department of Health Services to determine where certain contaminants occur and whether the contaminants need to be regulated. No MCLs have been set at this time.
Bromoform (ppb)	N	.66	.66	N/A	N/A	5/99	
Chloroform (ppb)	N	1.6	1.6	N/A	N/A	5/99	
Dibromochloromethane (ppb)	N	1.4	1.4	N/A	N/A	5/99	

***About our violations...**

Gross Alpha: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Uranium: Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Our Environmental Health Department, working in conjunction with the California Department of Health Services, has advised us that when Gross Alpha readings result from the decay of uranium deposits, as is the case in Ahwahnee, the water is safe to drink at levels up to 25 pCi/l. Since our test results were below that level, no health warnings are warranted.

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 - ACC Tank							
Contaminant	Violation	Level Detected	Range	MCL	PHG (MCLG)	Test Date	Likely Source of Contamination
Chloride (ppm)	N	70	70	500	N/A	5/99	Runoff/leaching from natural deposits; seawater influence
Color	N	<5	<5	15	N/A	5/99	Naturally occurring organic materials
Corrosivity	N/A*	-.94 Moderately aggressive	-.94	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
Specific Conductance (µMHO/cm)	N	400	400	1600	N/A	5/99	Substances that form ions when in water; seawater influence
Sulfate (ppm)	N	7	7	500	N/A	5/99	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	N	260	260	1000	N/A	5/99	Runoff/leaching from natural deposits
Turbidity (TU)	N	.1	.1	TT	5	5/99	Soil runoff
Zinc (ppm)	N	.08	.08	5	N/A	5/99	Runoff/leaching from natural deposits; industrial wastes

Secondary Standard Contaminants - MCE Tank							
Contaminant	Violation	Level Detected	Range	MCL	PHG (MCLG)	Test Date	Likely Source of Contamination
Chloride (ppm)	N	6	6	500	N/A	5/99	Runoff/leaching from natural deposits; seawater influence
Color	N	<5	<5	15	N/A	5/99	Naturally occurring organic materials
Corrosivity	N/A*	-1.13 Moderately aggressive	-1.13	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
Specific Conductance (µMHO/cm)	N	200	200	1600	N/A	5/99	Substances that form ions when in water; seawater influence
Sulfate (ppm)	N	<2	<2	500	N/A	5/99	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	N	160	160	1000	N/A	5/99	Runoff/leaching from natural deposits
Turbidity (TU)	N	.1	.1	TT	5	5/99	Soil runoff
Zinc (ppm)	N	3.9	3.9	5	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.

You may also be interested in these **Unregulated Contaminants**. No MCLs, PHGs or MCLGs have been established.

Other Unregulated Contaminants				
Contaminant	Test Date	Range	Results-ACC	Results-MCE
Alkalinity - ppm		98-104	104	98
Bicarbonate - ppm	All tests were performed on 5/18/99.	86-97	97	86
Calcium - ppm		6-20	20	6
Magnesium - ppm		<2 to 3	<2	3
pH		7.3-7.5	7.5	7.3
Potassium - ppm		4	4	4
Sodium - ppm		16-56	56	16
Total Hardness (as CaCO ₃) -ppm		78-80	80	78

As you can see by the two tables, our system had two violations; the concentration of Gross Alpha particles and Uranium. Analysis of both ACC and MCE tanks lead to the conclusion that the MCL for both was exceeded system-wide. We have no plans for gross alpha/uranium treatment facilities at this time.

Other Information

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 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.