



LAKE HAVASU CITY ARIZONA

Annual Drinking Water Quality Report For 2010

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LAKE HAVASU CITY SYSTEM I.D. #04-08022

Este reporte contiene información importante sobre su agua para tomar. Si no entiende inglés, por favor busque a alguien que le traduzca el reporte y le explique la información a usted.

The annual Consumer Confidence Report is mandated by the United States Environmental Protection Agency (EPA), as a means of sharing information with residents regarding Lake Havasu City's water quality. This report is designed to give you, the consumer, all pertinent information relative to the production and distribution of safe drinking water for Lake Havasu City. Currently the city utilizes as the primary source of drinking water the horizontal collector well that is capable of producing 24 million gallons a day (mgd). Nine of the city's original wells used prior to the collector well are now maintained as a backup supply capable of producing 20mgd. The groundwater supply draws water from the Colorado River aquifer with an annual allocation of 27,319 acre-feet or 8.9 billion gallons of water a year. Lake Havasu City distributes its water through 483 miles of water distribution lines ranging from 4-inches to 36-inches in diameter serving just over 33,000 residential and commercial water services. Twenty-five water tanks totaling 20.5 million gallons of water storage serve the city's six pressure zones.

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 from human activity. Contaminants that may be present in source water include the following: (A) Microbial contaminants such as viruses and bacteria that may be from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife; (B)

Inorganic contaminants such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (C) Pesticides and herbicides that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; (D) 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 storm water runoff, and septic systems; and (E) Radioactive contaminants that can be naturally occurring or can be the result of oil and gas production and mining activities.

To ensure that tap water is safe to drink, the Arizona Department of Environmental Quality prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The United States Food and Drug Administration regulations establish limits for contaminants in bottled water that must 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. 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, persons 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. The United States Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants as well as more information about contaminants in tap water and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791. Information on bottled water can be obtained from the United States Food and Drug Administration. If a contaminant in sampled water is found to be out of compliance with drinking water standards, Lake Havasu City is required by state and federal regulations to notify customers by letter or through the media of the affected service area(s). If a serious situation occurs that may affect the health and well-being of residents, Lake Havasu City will do whatever is necessary to warn customers and to find an alternate source of drinking water.

WATER TREATMENT PLANT

Lake Havasu City's water treatment plant is designed for a production capability of up to 26 mgd. Water was produced at an average of 12 million gallons per day in 2010 to satisfy the city's potable water needs. The plant is designed primarily to remove manganese from Lake Havasu City's drinking water supply and to reduce arsenic levels to meet the EPA established MCL standard of 10 ppb (ug/L). We are happy to report that manganese is reduced to a virtual "non-detect" level, with the treatment process removing approximately 294,260 pounds of manganese sludge from the city's water in 2010. In addition, the treatment process has now brought arsenic levels down, well under the new federal standard.

WATER SAMPLING

Contaminants in your drinking water are routinely monitored according to Federal and State laws. The State of Arizona 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, or the system is not considered vulnerable to this type of contamination. Some of our data, though representative, may be more than one year old. **We are pleased to report that Lake Havasu City's drinking water sampled for potential contaminants consistently tested well below the maximum allowable levels for all regulated contaminants.**

HEALTH EFFECTS INFORMATION ABOUT THE FOLLOWING TABLES

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

If **arsenic** is less than the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA 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.

Infants and young children are typically more vulnerable to **lead** in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your

water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

Drinking Water Contaminants

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, which 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, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.

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

TERMS & DEFINITIONS

- **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 billion (ppb) or Micrograms per liter (µg/L)**- one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- **Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Action Level Goal (ALG)** - The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health. The ALG allows for a margin of safety.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **Maximum Contaminant Level Goal (MCLG)** - The "Goal" 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.
- **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 feasible using the best available treatment technology.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant, below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Running Annual Average (RAA):** An average of monitoring results for the previous 12 calendar months.

These tables show the results of our monitoring for the period of January 1 to December 31, 2010 unless otherwise noted.

Microbiological Contaminants

Contaminant	MCL	MCLG	Unit	Result	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Total Coliform Bacteria for Systems that collect 40> samples per month	No more than 5% of monthly samples can be positive	0	Absent or Present	0 Absent	No	2010	Naturally present in the environment

Radionuclides

Contaminant	MCL	MCLG	Units	Level Detected & Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Alpha emitters	15	0	pCi/l	6.70 ± 1.95 to 10.3 ± 2.6	No	5-22-06 1-18-06	Erosion of natural deposits
Combined radium	5	0	pCi/l	0.087 ± 0.32 to 0.624 ± 0.40	No	5-22-06 1-18-06	Erosion of natural deposits

Lead and Copper

Contaminant	AL	ALG	Units	90 th Percentile	Number of Sites over AL	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Copper	1.3	1.3	ppm	0.82	0	No	4-16-08	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	15	0	ppb	5.6	1	No	8-22-08	Corrosion of household plumbing systems, erosion of natural deposits

Disinfectants

Contaminant	MRDL	MRDLG	Units	Level Detected & Range	Violation (Yes or No)	Sample Date/Year	Source
Chlorine	4	4	ppm	0.53; 0.00 to 1.23	No	RAA/2010	Water additive used to control microbes

Disinfection Byproducts

Contaminant	MCL	MCLG	Units	Average	Range Detected	Highest RAA	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Halo acetic Acids (HAA5)	60	N/A	ppb	11.1	7.5 to 14.4	12.8	No	2010	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	80	N/A	ppb	62.9	58.4 to 68.5	72.9	No	2010	By-product of drinking water disinfection

Inorganic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected/Range	Violation (Yes or No)	Sample Date/Year	Likely Source of Contamination
Arsenic	.010	0	ppm	<0.003 to 0.0084.3	No	2010	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	2	2	ppm	0.045	No	2-11-08	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride	4	4	ppm	0.78	No	2-11-08	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	10	10	ppm	0.824	No	12-10-10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Chromium	100	100	ppb	1.5	No	2-11-08	Discharge from steel and pulp mills; erosion of natural deposits

Lake Havasu City's drinking water is in compliance with all state and federal drinking water standards.

