

# WATER QUALITY 2008

The Moapa Valley Water District is very pleased to provide you with the 2008 "Quality Water" Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide a safe and dependable supply of drinking water. We are pleased to report that our drinking water is safe and exceeds federal requirements. This report is provided to you to further explain our water quality and what it means.

## YOUR WATER

The Muddy River and Lake Mead provide none of your drinking water. In fact, no surface water of any sort is delivered to your tap. The District's spring collection systems at the Baldwin and the Jones Spring, in addition to the MX Well and the Arrow Canyon Well provide an average of 3,293,250 gallons per day to our customers. Flowing through over 177 miles of pipeline in the District's distribution system, the water from these groundwater sources arrives at your home having been disinfected using chlorine. Because our water supply is protected within the ground water aquifer, it does not require the level of treatment associated with surface water sources.

## TAP VS. BOTTLED

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 Safe Drinking Water Hotline at 1-800-426-4791.

## VIOLATIONS

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially-harmful bacteria may be present. Coliforms were found in more samples than allowed in November, 2007. This was a warning of potential problems. Usually, Coliforms are a sign that there could be a problem with the systems treatment or distribution system (pipes). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if any other bacteria of greater concern, such as fecal coliform or E coli, are present. Water District Staff collects and tests for bacteria on a monthly basis from nine sites throughout the distribution system. The five sites that showed the failed bacteria test have no history of failed tests. District Staff

feels the failed tests are the result of either contaminated sample bottles or "lab error".

## WHAT DO WE TEST FOR?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, 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 before it is treated are microbial contaminants, inorganic contaminants, pesticides and herbicides, radioactive contaminants, and organic chemical contaminants.

Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants, such as salts and metals, can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides may come from a variety of sources, such as agricultural and residential uses.

Radioactive contaminants are naturally occurring.

Organic chemical contaminants, including synthetic and volatile organic chemicals, are byproducts of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff, and septic systems.

## HEALTH INFORMATION

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.

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 guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791)

## QUESTIONS?

If you have any questions about this report or concerning your water utility, please contact Brad Huza at (702) 397-6893. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Board of Directors meetings. They are held on the second Thursday of each month at 4:00 p.m. in the Moapa Valley Water District office. Any variance from this will be noted on agendas posted at the Overton, Logandale, and Moapa Post Offices or the Overton Library.

Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Moapa Valley Water District has a fluoride variance to the state secondary standard of 2.0 parts per million (mg/L). The drinking water in our community has a fluoride concentration of 2.12 mg/L. Fluoride in children's drinking water at levels of approximately 1 mg/L reduces the number of cavities. However, some children exposed to levels of fluoride greater than about 2.0 mg/L may develop dental fluorosis. Dental fluorosis in its moderate and severe forms is a brown staining and/or pitting of the permanent teeth. Because dental fluorosis occurs only when developing teeth (before they erupt from the gums) are exposed to elevated fluoride levels, households without children are not expected to be effected by this level of fluoride. Families with children under the age of nine are encouraged to seek other sources of drinking water for their children to avoid the possibility of staining and pitting.

The Federal Safe Drinking Water Act (SDWA) was amended in 1996 and requires states to develop and implement source water assessment programs (SWAP) to analyze existing and potential threats to the quality of public drinking water throughout the state. A summary of a system's susceptibility to potential sources of contamination was initially provided by the State of Nevada to the water system in 2004. This summary was included in the water system's 2004 Consumer Confidence Report. Additional or updated information the waster system may have regarding significant sources of contamination in the source water area may also be available. A copy of the SWAP summary and additional or updated information may be available through your water system by contacting Bradley Huza at 702-397-6893. Information pertaining to the initial findings of the source water assessment is also available for viewing at the Bureau of Safe Drinking Water (BSDW) Carson City office between the hours of 8:00 am and 5:00 pm, Monday through Friday. It is suggested that an appointment be made if you are interested in viewing this information. The office is located at 901 South Stewart Street, Suite 4001, Carson City, Nevada, 89701, telephone number (775) 687-9520.

The District performed the monitoring required for the period of January 1 to December 31, 2007. You may review below the complete list of 19 constituents for which there were tests performed with all analytical results meeting Drinking Water Standards.

**MCLG/Maximum contaminant level goal** - 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.

**MCL/Maximum contaminant level** - the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best treatment technology. MCLs are set at very stringent levels.

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

**ppm** - parts per million

**mg/L** - milligrams per litre / the same as parts per million

**ppb** - parts per billion

The table below represents routine water analysis conducted annually in order to further the Districts effort to provide the most current, meaningful information to our customers.

### WATER ANALYSIS

SUBSTANCE	SOURCE ("W" = Well "S" = Spring)					FED / STATE MCL (mg/L)
	Arrow Canyon "W"	Arrow Canyon #2 "W"	Baldwin "S"	Jones "S"	MX-6 "W"	
Arsenic	.015	.013	.015	.015	.015	0.01
Calcium	.48	.47	.53	.51	.49	N/A
Copper	.010	ND	ND	ND	ND	1.3
Iron	.11	ND	ND	ND	ND	0.60
Magnesium	26	28	28	27	26	150
Manganese	ND	ND	ND	ND	ND	0.10
Sodium	31	30	32	31	31	Advisory Level 20 mg/L
Zinc	ND	ND	ND	ND	ND	5.0
Total Dissolved Solids	563	564	614	575	551	1000
Hardness, Total (asCaCO <sub>3</sub> )	210	210	230	230	220	N/A
Alkalinity, Total	210	190	200	190	200	N/A
Alkalinity - Hydroxide	ND	ND	ND	ND	ND	N/A
Alkalinity - Carbonate	ND	ND	ND	ND	ND	N/A
Alkalinity - Bicarbonate	210	190	200	190	200	N/A
Fluoride	2.11	2.10	2.05	2.00	1.97	4.0 / 2.0
Chloride	48.6	47.2	56.2	54.5	46.8	400
Sulfate	148	144	167	167	152	500
Nitrate, as N *	.410	.402	.399	.384	.360	10

Results in milligrams per litre (mg/l), same as parts per million

\*\*ND - Not Detected

\*Requires annual testing

PARAMETER	RESULT (units)					FED/STATE (units)
	Arrow Canyon #1	Arrow Canyon #2	Baldwin	Jones	MX-6	
pH	7.08 pH Units	7.16 pH Units	7.16 pH Units	7.15 pH Units	7.09 pH Units	Between 6.5 - 8.5