

The City of North Las Vegas

# 2002 WATER QUALITY REPORT



**Important Contacts:**

**State Health Division:**  
Bureau of Health Protection  
Services: .....(775) 687-4750

EPA Hotline: ..... (800) 426-4791

SNWA Conservation: ...258-SAVE

Xeriscape Conversion: ...258-SAVE

**City of North Las Vegas:**  
Report Water Waste ...633-1216  
Water Quality Issues ...633-2030

**Noticia en español**

Este reporte contiene información muy importante acerca de la calidad del agua. Para recibir una copia en español por favor hable a City of North Las Vegas Utilities Customer Services Division al 633-2288.

**T**his Water Quality Report is published in accordance with the Federal Safe Drinking Water Act, which establishes drinking water standards and requires purveyors to provide water quality information to their customers.

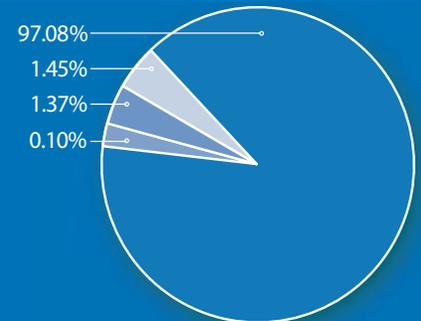
The City of North Las Vegas believes it is essential that our customers know all the facts about Southern Nevada's drinking water. This report, which is issued every year, includes test results, a source water analysis, an overview of the treatment process and other valuable information relating to the quality of our municipal water supply.

If you have any questions or concerns relating to this report, please call 633-1561, Monday through Thursday, 7:00 a.m. to 5:00 p.m.

**CNLV Source Water**

Most of our drinking water comes from Lake Mead. Of that water, about 97 percent is from the Colorado River, which is one of the nation's highest quality sources of drinking water. The Las Vegas Wash, which carries flood water and treated wastewater, accounts for only 1.45 percent of all the water in Lake Mead. Ground water is also blended with treated water from the lake to meet customer demands.

- Colorado River
- Las Vegas Wash
- Virgin River
- Muddy River



**Source:** Lake Mead

**Inflows:**  
Colorado River 97.08%  
Las Vegas Wash 1.45%  
Virgin River 1.37%  
Muddy River 0.10%

**Potential Sources of Contamination:**  
Urban activities (fertilizers, pesticides, etc.), Industrial activities, Wildlife activities

**Source:** Las Vegas Ground Water Aquifer

**Inflows:**  
Spring Mountain recharge, Sheep Range recharge, Artificial recharge (treated Lake Mead water)

**Potential Sources of Contamination:**  
Landfills, Domestic septic systems

Visit the City's Desert Demonstration Garden located next to City Hall at 2200 Civic Center Drive. Learn what plants to use to conserve water while presenting a beautiful landscape.



## TEST RESULTS

SUBSTANCE	UNITS	MINIMUM	MAXIMUM	AVERAGE	MCL	MCLG	POSSIBLE SOURCES
Arsenic	ppb	ND	3	2	50 <sub>2</sub>	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production waste
Barium	ppb	113	113	113	2000	2000	Erosion of natural deposits; discharge from metal refineries; discharge of drilling wastes
Chromium	ppb	ND	7	4	100	100	Erosion of natural deposits
Fluoride	ppb	170	860	701	4,000	4,000	Erosion of natural deposits; water additive
Nitrate (as N)	ppb	368	1073	630	10,000	10,000	Runoff from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Selenium	ppb	ND	1	1	50	50	Erosion of natural deposits; discharge from mines
Free Chlorine Residual	ppm	ND	2.2	0.89	4.0 <sub>4</sub>	4.0 <sub>4</sub>	Water additive used to control microbes
Lead <sub>5</sub>	ppb	ND	15	ND (90th% Value)	15 <sub>4</sub>	0 <sub>4</sub>	Corrosion of household plumbing systems
Copper <sub>5</sub>	ppb	ND	2000	1100 (90th% Value)	1300 <sub>5</sub>	0	Corrosion of household plumbing systems; erosion of natural deposits;
Total Trihalomethanes	ppb	2	70	44 <sub>1</sub>	80	N/A	By-product of drinking water disinfection
Haloacetic Acids	ppb	ND	37	20 <sub>1</sub>	60	N/A	By-product of water disinfection
Gross Beta	pCi/L	8	12	10	50	0	Erosion of natural deposits; decay of man-made deposits

## TEST RESULTS Unregulated Substances

SUBSTANCE	MINIMUM	MAXIMUM	AVERAGE
Perchlorate	ND	17.2 ppb	10.2 ppb
Sulfate	226 ppm	226 ppm	226 ppm

## MICROBIOLOGICAL ANALYSES

Total Coliforms (Includes fecal coliforms and *E. coli*)

HIGHEST MONTHLY % Positive	MCL	MCLG
0.7%	5%*	0

\* No more than 5.0% samples total coliform positive in a month. Every sample that has total coliform must be analyzed for either fecal coliforms or *E. coli* and must be immediately followed with collection of three additional samples. If there are two consecutive total coliform-positive samples and one is also positive for fecal coliforms or *E. coli*, system has an acute MCL violation. The City of North Las Vegas had no violations in 2002.

## TURBIDITY AMSWTF

MCL	MCLG	LEVEL FOUND
TT	0	0.16 NTU (MAXIMUM)
TT= % of SAMPLES < 0.3 NTU	0	100%

(1) This value is the highest quarterly running annual average reported in 2002.

(2) Will be lowered to 10 ppb in January 2006

(3) Action Level: 90 percent of samples must be below this level.

(4) Maximum Residual Disinfectant Level (MRDL).

Maximum Residual Disinfectant Level Goal (MRDLG)

(5) Data not from 2002

## TREATMENT PROCESS

Southern Nevada has two of the most advanced water treatment facilities in the world, and they are designed to do one thing – provide drinking water that meets all Safe Drinking Water Act standards.

All of the water drawn from Lake Mead is sent to the Alfred Merritt Smith or River Mountains water treatment facilities. As it arrives, the water is treated with chlorine to kill any potentially harmful microscopic organisms. A multistage filtration system then is used to remove particles from the water. Near the end of the treatment process, additional chlorine is added to protect it on the way to customers' taps. It also is treated to prevent corrosion of the pipelines.





## DEFINITIONS

**Action level (AL)** - The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow

**AMS WTF** - Alfred Merritt Smith Water Treatment Facility

**Disinfection by-product** - A substance created by the chemicals or processes used to destroy potentially harmful microorganisms

**Maximum contaminant level (MCL)** - The highest level of a contaminant allowed in drinking water. MCLs are set as close to the maximum contaminant level goal as feasible using the best-available treatment technology

**Maximum contaminant level goal (MCLG)** - 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 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

**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 microorganisms

**N/A** - Non Applicable

**ND** - Not detected

**Nephelometric Turbidity Unit (NTU)** - A measurement of water's clarity

**picocuries per liter (pCi/L)** - A measure of the radioactivity in water. Low Levels of radiation occur naturally in many water systems, including the Colorado River

**ppb (parts per billion)** - A unit used to describe the levels of detected contaminants. Equivalent to about 1 cent in \$10 million

**ppm (parts per million)** - A unit used to describe the levels of detected contaminants. Equivalent to about 1 cent in \$10,000

**Treatment technique (TT)** - A required process intended to reduce the level of a contaminant in drinking water

**Turbidity** - A measure of water clarity, which serves as an indicator of the treatment facility's performance

## ARSENIC

Arsenic is a closely regulated contaminant. In 2006, its allowable limit in drinking-water supplies will be reduced to 10 parts per billion (1 part per billion is roughly equivalent to a grain of salt in a swimming pool). Arsenic levels in the Colorado River are very low. The City of North Las Vegas' 2002 test results show an average of 2 ppb, which is well below the current allowable limit of 50 ppb.

## MONITORED SUBSTANCES

The Southern Nevada Water System (SNWS) tests for more than 100 substances, but only those detected in the drinking water are listed in the "Test Results" on these pages. A complete analysis report is available through the SNWS.

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that 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.

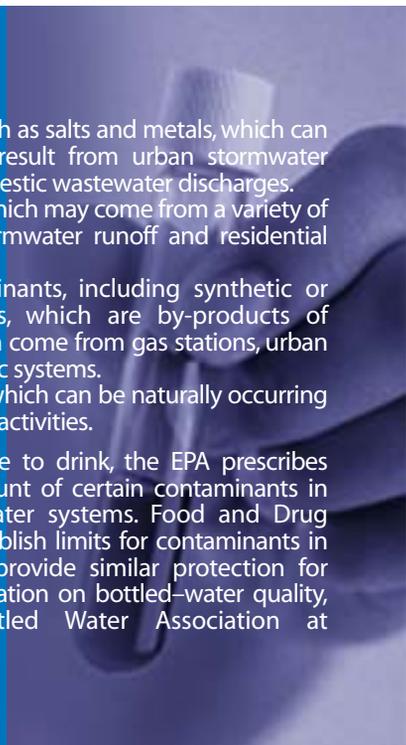
The sources of drinking water (both tap water and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from wastewater treatment plants, septic systems and wildlife.

- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff and industrial or domestic wastewater discharges.
- Pesticides and herbicides, which may come from a variety of sources such as urban stormwater runoff and residential uses.
- Organic chemical contaminants, including synthetic or volatile organic chemicals, which are by-products of industrial processes and can come from gas stations, urban stormwater runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of industrial activities.

To ensure tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide similar protection for public health. For more information on bottled-water quality, call the International Bottled Water Association at 1-800WATER11.



## ADDITIONAL HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer under going 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 microbial contaminants are available from the Safe Drinking Water Hotline (800) 426-4791.

**VIOLATIONS**  
The City of North Las Vegas had  
NO violations of the Safe Drinking  
Water Act in 2002

## WATER CONSERVATION CAMPAIGN

From May 1 through October 1, 2003 ordinances prohibit the irrigation of landscaping between the hours of 11 a.m. and 7 p.m. To report water waste, please call the Conservation Hotline at (702) 633-1216 or the Southern Nevada Water Authority at (702) 258-SAVE. Let's work together to save our most precious resource.

### FREQUENTLY ASKED QUESTIONS

**Q: What accounts for tap water taste?**

**A:** When you "taste" tap water, what you're probably tasting is the chlorine. Chlorine is added at the treatment plant for disinfection purposes. Our tap water also contains naturally occurring calcium and magnesium which may contribute to the water's taste. These two harmless minerals are what cause "cloudy" ice.

**Q: Can you make the water taste better?**

**A:** Yes. The technology exists to make tap water taste better. Unfortunately, that treatment comes at a high price, considering that less than one percent of all water used in Southern Nevada homes is actually consumed. Keeping in mind that tap water meets all federal water quality standards, the public may not want to absorb the cost of additional treatment. That said, ozonation may improve the taste of tap water because less chlorine will be required for disinfection. Refrigerating tap water overnight in a glass pitcher or adding a slice of lemon should improve the water's flavor.

**Q: Why does tap water leave a residue on my kitchen and bathroom fixtures?**

**A:** Ninety-seven percent (97%) of Lake Mead's water comes from the mountains via the Colorado River. Along the way, it dissolves harmless minerals from the river banks, particularly calcium and magnesium. These minerals remain dissolved in the water all the way to your tap. When the water finally evaporates, it leaves the minerals behind. The average hardness of the water in North Las Vegas is approximately 290 ppm (17 grains per gallon). Water is considered "hard" if the hardness is 100 ppm (5.84 grains per gallon) or more and is considered "soft" if the hardness is less than 100 .

**Q: Do water treatment devices really work?**

**A:** There are a wide variety of water treatment systems and filters available to consumers. Most of these will affect the aesthetic qualities of tap water. Advertiser's claims about safety concerns, however, are not as clear. Purchasing a home water treatment system is strictly a personal decision which should be based solely on preference.

**City of North Las Vegas**

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