

City of North Las Vegas WATER TEST RESULTS

WATER AT A GLANCE: UNDERSTANDING TEST RESULTS

This booklet contains results of water quality monitoring performed by the City of North Las Vegas in 2008:

The EPA sets national standards for tap water to protect public health. The Safe Drinking Water Act requires water agencies to meet these health-based water standards and send customers an annual water quality report.

The City's drinking water meets or surpasses all state and federal Safe Drinking Water Act Standards. Here are a few tips for reading this report.

- Read the table from left to right to learn which contaminants were found in the City of North Las Vegas' water, how they are measured, their detected quantities and how those findings compare to state and federal limits. It shows contaminants' possible sources.
- The EPA requires water agencies to monitor for approximately 90 (primary) regulated contaminants. Federal standards usually measure contaminant levels in extremely tiny quantities such as parts per million or parts per billion. Even small concentrations of certain constituents can be a health concern. That's why many regulatory standards are set at very low levels.
- This report shows results for the regulated contaminants detected in the City of North Las Vegas' water supply. If a contaminant was not detected, it is not reported.
- EPA requirements for monitoring vary. The City of North Las Vegas monitors for each contaminant at required sites (treatment facilities, distribution system and/or groundwater wells) and reports those results.

DEFINITIONS

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

Disinfection by-product (DBP): A substance created by the chemicals or processes used to destroy potentially harmful microorganisms.

Maximum Contaminant Level (MCL): 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 (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 microbial contamination.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Millirem (mrem): one-thousandth of a rem (roentgen-equivalent-man), which is a unit of absorbed radiation dose that is adjusted for the biological effects equal to one rad of 250 kilovolt roentgen rays (dental roentgen rays require less than 100 kilovolts).

N/A: Not applicable

N/D: Not detected. Does not equate to zero, but refers to an amount below analytical reporting limits.

Nephelometric Turbidity Unit (NTU): A measurement of water's clarity.

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

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

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.

Running annual average: Based on the monitoring requirements, the average of 12 consecutive monthly averages or the average of four consecutive quarters.

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



Mayor & Council

Pictured from left to right: Councilman Robert L. Eliason, Mayor Shari Buck, Councilwoman Anita Wood, Councilman-Mayor Pro Tempore William E. Robinson, Councilmember Ward 4 not yet appointed at time of publication.



City Manager
Gregory Rose

CONTACTS:

Water Quality & Conservation:

Bureau of Health Protection Services
(775) 687-4750
www.health2k.state.nv.us

EPA Hotline
(800) 426-4791
www.epa.gov/safewater
SNWA Conservation
(702) 258-SAVE
www.snwa.com

Xeriscape Conversion
(702) 258-SAVE
www.snwa.com

City of North Las Vegas:

Report Water Waste
(702) 633-1216
Water Quality Issues
(702) 633-1484
Water Customer Service
(702) 633-1484
Español
(702) 633-1484

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Para una versión en español acerca del informe sobre la calidad del agua, póngase en contacto con City of North Las Vegas Utilities Department al 633-1484 o visite el portal electrónico www.cityofnorthlasvegas.com.



WATER QUALITY REPORT 2009

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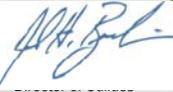
Dear Valued WATER CUSTOMER

This annual report is prepared and distributed to customers in accordance with federal and state regulations of the Safe Drinking Water Act. I encourage you to take the time to become familiar with the information, and know the bottom line:

"WATER DELIVERED BY THE City of North Las Vegas MEETS OR SURPASSES ALL STATE OF NEVADA AND FEDERAL DRINKING WATER STANDARDS."

The City of North Las Vegas' priority is to deliver to our customers safe drinking water with quality customer service. City of North Las Vegas employees work hard every day to ensure the water provided to our community meets the regulatory standards and is delivered at acceptable pressure for your use. We take pride in keeping you informed about the quality of our water and the service we provide.

Sincerely Yours,




Clean water begins at the source: Nearly 90 percent of the water supplied to North Las Vegas customers comes from Lake Mead. Virtually all of the water in Lake Mead originates as snowmelt in the Rocky Mountains that flows down the Colorado River. Lake Mead's water sources include the Colorado River (97 percent), the Las Vegas Wash (1.5 percent), the Virgin River (1.45 percent) and the Muddy River (.05 percent).

The remainder of water supplied to the City of North Las Vegas customers - about 10 percent - comes from wells that tap a deep groundwater aquifer beneath the valley. Groundwater is used primarily between May 1 and October 1 annually to meet peak water demand. During these months, those customers who live in the northwest part of the City, have the potential to receive a blend of treated Lake Mead water and groundwater.

Groundwater in the Las Vegas Valley aquifer is naturally recharged from precipitation in the Spring Mountains and the Sheep Range. The Valley has a recharge program that takes treated water from Lake Mead and places it into the aquifer through recharge wells to keep groundwater levels stable.

SOURCE WATER ASSESSMENT

The Federal Safe Drinking Water Act was amended in 1996 and requires states to develop and implement source water assessment programs, which analyze existing and potential threats to the quality of public drinking water throughout the service area. A summary of the City of North Las Vegas' susceptibility to potential sources of contamination was initially provided by the State of Nevada in 2003. The summary of this source water assessment was first included in the City's 2004 Water Quality Report.

Information pertaining to the initial findings of the source water assessment is available for viewing in person at the offices of the Bureau of Safe Drinking Water, 901 South Stewart St., Ste. 4001, Carson City, NV 89701. Appointments are suggested; please call (775) 687-9520. Office hours are 8 a.m. to 5 p.m., Monday through Friday.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land or through the ground, it dissolves minerals and - in some cases - radioactive material, and can pick up

substances resulting from the presence of animal or human activity.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE (UNTREATED) WATER INCLUDE:

- Microbial contaminants, such as viruses and bacteria which may come from urban runoff, septic systems, wildlife, agriculture and domestic wastewater discharges;
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban runoff, septic systems and industrial or domestic wastewater discharges;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban 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 runoff and septic systems;
- Radioactive contaminants, which can be naturally occurring or the result of industrial activities.

To ensure tap-water safety, 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 (800) 928-3711.

City of North Las Vegas WATER TEST RESULTS

REGULATED CONTAMINANTS	UNIT	MCL (EPA Limit)	MCLG (EPA Goal)	NORTH LAS VEGAS DISTRIBUTION SYSTEM ⁽¹⁾			NORTH LAS VEGAS GROUNDWATER (WELLS) ⁽¹⁾		ALFRED MERRITT SMITH WATER TREATMENT FACILITY ⁽¹⁾			RIVER MOUNTAINS WATER TREATMENT FACILITY ⁽¹⁾			POSSIBLE SOURCES OF CONTAMINATION	
				MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE		
Alpha Particles	pCi/L	15	0	Entry Point Monitoring Only			N/D ⁽²⁾	3.8 ⁽²⁾	N/D	N/D	N/D	N/D	N/D	N/D	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation	
Arsenic	ppb	10	0	Entry Point Monitoring Only			N/D ⁽²⁾	4.9 ⁽²⁾	1.4	2.0	1.7	1.7	2.5	2.1	Erosion of natural deposits	
Barium	ppm	2	2	Entry Point Monitoring Only			0.07 ⁽²⁾	0.11 ⁽²⁾	0.12	0.16	0.14	0.12	0.16	0.14	Erosion of natural deposits; discharge from metal refineries; discharge of drilling wastes	
Beta Particles and Photon Emitters	pCi/L	50 ⁽⁹⁾	0	Entry Point Monitoring Only			N/D ⁽²⁾	N/D ⁽²⁾	3.6	3.6	3.6	3.5	3.5	3.5	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit a form of radiation known as photons and beta radiation	
Bromate	ppb	10	0	Entry Point Monitoring Only			N/A	N/A	4.6	14 ⁽⁴⁾	8.5 ⁽⁵⁾	1.9	7.3	4.2 ⁽⁵⁾	By-product of drinking-water disinfection	
Cadmium	ppb	5	5	Entry Point Monitoring Only			N/D ⁽²⁾	N/D ⁽²⁾	N/D	1.4	N/D	N/D	1.2	N/D	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	
Chromium	ppb	100	100	Entry Point Monitoring Only			N/D ⁽²⁾	2.4 ⁽²⁾	N/D	N/D	N/D	N/D	N/D	N/D	Discharge from steel and pulp mills; erosion of natural deposits	
Copper ⁽⁶⁾	ppm	1.3 ⁽⁷⁾ (Action Level)	1.3	0.01	1.3	0.64 (90th% value)	Distribution System Monitoring Only			Distribution System Monitoring Only			Corrosion of household plumbing systems; erosion of natural deposits			
Di(2-ethylhexyl)phthalate	ppb	6	0	Entry Point Monitoring Only			N/D ⁽²⁾	0.7 ⁽²⁾	N/D	N/D	N/D	N/D	N/D	N/D	Discharge from rubber and chemical factories	
Fluoride	ppm	4.0	4.0	0.16	0.81	0.74	0.16 ⁽²⁾	0.55 ⁽²⁾	0.76	0.85	0.80	0.74	0.88	0.80	Erosion of natural deposits; water additive ⁽⁸⁾	
Free Chlorine Residual	ppm	4.0 ⁽⁹⁾ (MRDL)	4.0 ⁽⁹⁾ (MRDLG)	0.12	1.58	1.00 ⁽⁵⁾	Distribution System Monitoring Only			Distribution System Monitoring Only			Water additive used to control microbes			
Haloacetic Acids				Distribution System Monitoring Only			Distribution System Monitoring Only			Distribution System Monitoring Only			By-product of drinking-water disinfection			
Stage 1 DBP Rule ⁽¹⁰⁾	ppb	60	N/A ⁽¹¹⁾	N/D	28	18 ⁽⁵⁾	Distribution System Monitoring Only			Distribution System Monitoring Only			Corrosion of household plumbing systems; erosion of natural deposits			
Stage 2 DBP Rule (IDSE) ⁽¹⁰⁾	ppb	N/A	N/A	14	21	18	Distribution System Monitoring Only			Distribution System Monitoring Only			Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits			
Lead ⁽⁶⁾	ppb	15 ⁽⁷⁾ (Action Level)	0	N/D	6.1	N/D (90th% value)	Distribution System Monitoring Only			Distribution System Monitoring Only			Erosion of natural deposits			
Nitrate (as Nitrogen)	ppm	10	10	Entry Point Monitoring Only			0.2 ⁽²⁾	1.8 ⁽²⁾	0.53	0.72	0.61	0.52	1.1	0.66	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Radium 226 and Radium 228 (combined)	pCi/L	5	0	Entry Point Monitoring Only			N/D ⁽²⁾	0.87 ⁽²⁾	1.2	1.2	1.2	1.7	1.7	1.7	Erosion of natural deposits	
Selenium	ppb	50	50	Entry Point Monitoring Only			N/D ⁽²⁾	1.7 ⁽²⁾	2.1	3.3	2.8	2.1	3.5	2.9	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines	
Total Coliforms	percent positive per month	5%	0	0%	1.2%	0.3%	Distribution System Monitoring Only			Distribution System Monitoring Only			Naturally present in the environment			
Total Trihalomethanes				Distribution System Monitoring Only			Distribution System Monitoring Only			Distribution System Monitoring Only			By-product of drinking-water disinfection			
Stage 1 DBP Rule ⁽¹⁰⁾	ppb	80	N/A ⁽¹¹⁾	6.6	73	46 ⁽⁵⁾	Distribution System Monitoring Only			Distribution System Monitoring Only			Soil runoff			
Stage 2 DBP Rule (IDSE) ⁽¹⁰⁾	ppb	N/A	N/A	37	64	50	Distribution System Monitoring Only			Distribution System Monitoring Only			Erosion of natural deposits			
Turbidity	NTU	95% of the samples <0.3 NTU ⁽¹²⁾	N/A	Treatment Facility Monitoring Only			Treatment Facility Monitoring Only	100% of the samples were below 0.3 NTU. The maximum NTU was 0.129 on November 24, 2008.			100% of the samples were below 0.3 NTU. The maximum NTU was 0.050 on July 3, 2008.			Soil runoff		
Uranium	ppb	30	0	Entry Point Monitoring Only			N/D ⁽²⁾	5.6 ⁽²⁾	5.0	5.0	5.0	5.1	5.1	5.1	Erosion of natural deposits	

FOOTNOTES:

(1) Some Safe Drinking Water Act (SDWA) regulations require monitoring from the distribution system, while other SDWA regulations require monitoring at the entry points to the distribution system. (Alfred Merritt Smith WTF, River Mountains WTF, and North Las Vegas Wells) (2) Data from 2004 through 2008. (3) The actual MCL for beta particles is 4 mrem/year. The U. S. Environmental Protection Agency (USEPA) considers 50 pCi/L to be the level of concern for beta particles. (4) Maximum levels greater than the MCL are allowable as long as the running annual average of all locations does not exceed the MCL. Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer. (5) This value is the highest running annual average reported

in 2008. Reports are filed quarterly. (6) Annual monitoring not required, data from 2006. Samples are from the North Las Vegas customers' taps. (7) Lead and copper are regulated by a Treatment Technique (TT) that requires systems to control the corrosiveness of their water. If more than 10% of tap-water samples exceed the action level, water systems must take additional steps. For copper the action level is 1.3 ppm, and for lead it is 15 ppb. (8) By state law, the Southern Nevada Water Authority (SNWA) is required to fluoridate the municipal water supply. This law is not applicable to groundwater. (9) Chlorine is regulated by MRDL, with the goal stated as a MRDLG. (10) The Stage 1 Disinfectants and Disinfection By-products (DBP) Rule regulates current data collection and monitoring for Haloacetic

Acids and Total Trihalomethanes in the distribution system. The Stage 2 DBP Rule was finalized on January 4, 2006 and collects Initial Distribution System Evaluation (IDSE) data designed to assist in selection of new, future sample locations for DBP testing. (11) No collective MCLG but there are MCLGs for some of the individual contaminants. Haloacetic Acids: dichloroacetic acid (0), trichloroacetic acid (300 ppb); Trihalomethanes: bromodichloromethane (0), bromoform (0), dibromochloromethane (60 ppb). (12) Turbidity is regulated by a Treatment Technique (TT) requirement - 95% of all samples taken after filtration each month must be less than 0.3 NTU. Maximum turbidity cannot exceed 1.0 NTU.