

Nellis AFB 2009 Drinking Water Quality Report Table				NELLIS AIR FORCE BASE DISTRIBUTION SYSTEM ⁽¹⁾			RESERVOIR #491 ⁽¹⁾			RESERVOIR #562 ⁽¹⁾			ALFRED MERRITT SMITH WATER TREATMENT FACILITY ⁽¹⁾			RIVER MOUNTAINS WATER TREATMENT FACILITY ⁽¹⁾			POSSIBLE SOURCES OF CONTAMINATION				
REGULATED CONTAMINANTS	UNIT	MCL (EPA Limit)	MCLG (EPA Goal)	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE	MINIMUM	MAXIMUM	AVERAGE					
Alpha Particles	pCi/L	15	0	Entry Point Monitoring Only				3.8	3.8	3.8	N/D	N/D	N/D	N/D	N/D	N/D	9.6	9.6	9.6	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		1.7	1.9	1.8	3.2	11 ⁽²⁾	5.8 ⁽³⁾⁽⁴⁾	1.3	1.8	1.5	1.8	2.2	1.9	1.8	2.2	1.9	Erosion of natural deposits			
Barium	ppm	2	2		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Erosion of natural deposits; discharge from metal refineries; discharge of drilling wastes			
Beta Particles and Photon Emitters	pCi/L	50 ⁽⁵⁾	0		4.2	4.2	4.2	7.6	7.6	7.6	N/D	N/D	N/D	4.9	4.9	4.9	4.9	4.9	4.9	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		N/A			2.9	8.2	8.2 ⁽⁴⁾	N/D	2.1	7.3	3.8 ⁽⁴⁾	2.9	8.2	8.2 ⁽⁴⁾	N/D	2.1	7.3	3.8 ⁽⁴⁾	By-product of drinking-water disinfection	
Cadmium	ppb	5	5		N/D	1.3	0.7	N/D	1.2	0.6	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Copper ⁽⁶⁾	ppm	1.3 ⁽⁷⁾ (Action Level)	1.3		0.03	0.88	0.69 (90th% value)	DISTRIBUTION SYSTEM MONITORING ONLY										Corrosion of household plumbing systems; erosion of natural deposits					
Dalapon	ppb	200	200	Entry Point Monitoring Only			N/D	1	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	Runoff from herbicides used on rights of way	
Fluoride	ppm	4.0	4.0	0.7	0.8	0.8	0.7	0.7	0.7	0.3	0.3	0.3	0.7	0.8	0.8	0.7	0.9	0.8	0.7	0.9	0.8	Erosion of natural deposits; water additive ⁽⁸⁾	
Free Chlorine Residual	ppm	4.0 ⁽⁹⁾ (MRDL)	4.0 ⁽⁹⁾ (MRDLG)	0.1	1.98	1.09 ⁽⁴⁾	DISTRIBUTION SYSTEM MONITORING ONLY										Water additive used to control microbes						
Haloacetic Acids							DISTRIBUTION SYSTEM MONITORING ONLY																
Stage 1 DBP Rule ⁽¹⁰⁾	ppb	60	N/A ⁽¹¹⁾	14	35	22 ⁽⁴⁾	DISTRIBUTION SYSTEM MONITORING ONLY																
Stage 2 DBP Rule (IDSE) ⁽¹⁰⁾	ppb	N/A	N/A	N/D ⁽¹²⁾	37 ⁽¹²⁾	18 ⁽¹²⁾	DISTRIBUTION SYSTEM MONITORING ONLY										By-product of drinking-water disinfection						
Lead ⁽⁶⁾	ppb	15 ⁽⁷⁾ (Action Level)	0	N/D	3.1	2.4 (90th% value)	DISTRIBUTION SYSTEM MONITORING ONLY										Corrosion of household plumbing systems; erosion of natural deposits						
Nitrate (as Nitrogen)	ppm	10	10	Entry Point Monitoring Only			0.6	0.6	0.6	0.3	0.3	0.3	0.5	1	0.7	0.5	1	0.7	0.5	1	0.7	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Selenium	ppb	50	50	Entry Point Monitoring Only			2	2	2	1.2	1.2	1.2	2.0	2.4	2.1	1.8	2.2	2.0	1.8	2.2	2.0	Erosion of natural deposits; discharge from mines; component of petroleum	
Total Trihalomethanes				DISTRIBUTION SYSTEM MONITORING ONLY																			
Stage 1 DBP Rule ⁽¹⁰⁾	ppb	80	N/A ⁽¹¹⁾	40	100 ⁽¹³⁾	66 ⁽⁴⁾	DISTRIBUTION SYSTEM MONITORING ONLY																
Stage 2 DBP Rule (IDSE) ⁽¹⁰⁾	ppb	N/A	N/A	11 ⁽¹²⁾	88 ⁽¹²⁾	59 ⁽¹²⁾	DISTRIBUTION SYSTEM MONITORING ONLY										By-product of drinking-water disinfection						
Turbidity	NTU	95% of the samples <0.3 NTU ⁽¹⁴⁾	N/A	Treatment Facility Monitoring Only								100% of the samples were below 0.3 NTU. The maximum NTU was 0.12 on 5/30/2009.	100% of the samples were below 0.3 NTU. The maximum NTU was 0.05 on 7/25/09.	Soil runoff									
Xylenes, Total	ppm	10	10	Entry Point Monitoring Only			N/D	N/D	N/D	N/D	0.0007	0.0004	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	N/D	Component of petroleum; discharge from chemical factories	
Uranium	ppb	30	0	Entry Point Monitoring Only			4.6	4.6	4.6	2.2	2.2	2.2	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.6	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 NAFB Reservoirs)
- (2) Maximum levels greater than the MCL are allowable as long as the running annual average does not exceed the MCL.
- (3) While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. 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 or 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.
- (4) This value is the highest running annual average reported in 2009. Reports are filed quarterly.
- (5) 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.
- (6) Samples are from the NAFB 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) Data from 2007-2008.
- (13) 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 trihalomethanes in excess of the MCL over many years may experience problems of the liver, kidneys, central nervous system, and may have an increased risk of cancer.
- (14) 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.

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.