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# 2010 ANNUAL WATER QUALITY REPORT



500 Riverside Road  
Mesquite, Nevada 89027

(702) 346-5731

<http://www.vvh2o.com>

Postal Customer



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89027

We are pleased to present the 2010 Water Quality Report. This report is designed to inform you about the quality of the water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water at the lowest cost possible. We want you to understand our efforts to continually improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your water.

## NEVADA SOURCE WATER ASSESSMENT SUMMARY SHEET

State of Nevada Division of Environmental Protection  
Bureau of Safe Drinking Water

Assessor: State  
Summary Date: 7/07/2011

The Federal Safe Drinking Water Act (SDWA) was amended in 1996 to require 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. The 1996 amendments also require a summary of the assessment to be included in the water system's annual Consumer Confidence Report (CCR). The 1996 amendments specifically require states to delineate areas that are sources of public drinking water, identify potential contamination sources within the delineated area, assess the water system's susceptibility to contamination, and inform the public of the results. These results are summarized below.

### WATER SYSTEM CONTACT INFORMATION

WATER SYSTEM NAME: VIRGIN VALLEY WATER DISTRICT		COUNTY: CLARK
BHPS SYSTEM ID NUMBER: NV0000167	NUMBER OF CONNECTIONS: 7,725	POPULATION SERVED: 22,440
OWNER'S REP: KENNETH ROCK	ADDRESS: 500 RIVERSIDE RD. MESQUITE, NV 89027	
TELEPHONE: (702) 346-5731	FAX: (702) 346-2596	E-MAIL: rock@vvh2o.com
OPERATOR: AARON BUNKER	ADDRESS: 500 RIVERSIDE RD. MESQUITE, NV 89027	
TELEPHONE: (702) 346-5731	FAX: (702) 346-2596	E-MAIL: abunker@vvh2o.com

### FEDERAL AND STATE WATER QUALITY STANDARDS COMPLIANCE

If checked, the above referenced water system is in compliance with all State of Nevada and Federal water quality standards.  
If not, then explain:

### WATER SYSTEM CONTAMINATION VULNERABILITY

If checked, the above referenced water system is considered to have low vulnerability potential for contamination.

The above referenced water system is considered potentially vulnerable to the following contaminant groups:

Volatile Organic Compounds (VOC)       Inorganic Compounds (IOC)       Microbiological   
 Synthetic Organic Compounds (SOC)       Radionuclides

The District is mandated to provide the above contaminate list, even if the District water meets the MCL. If trace amount of contaminates do or have existed in the District water, then the contaminant must be checked. **Even though VOC, SOC, IOC, and Radionuclides are checked, levels of each contaminant in the District's water are well below the MCL, or even non-detect.**

Volatile Organic Compounds (VOC) are typically associated with gas stations and dry cleaners; Synthetic Organic Compounds (SOC) are typically associated with herbicides and insecticides; Inorganic Compounds (IOC) are typically associated with natural deposits, fertilizers, septic systems, and asbestos components in the distribution system; Microbiological contaminates are typically associated with lakes, streams, and animal holding facilities; and Radionuclides are typically associated with erosion of natural deposits and industrial activities.

The water system is considered vulnerable to the activities/sources associated with the contaminant groups checked in the boxes above for the following reasons:

Wells located in and north of Mesquite are moderately vulnerable to VOC and SOC contaminants. Several wells are also considered to be moderately to highly vulnerable to IOC and Radionuclide contamination due to prior detections of Arsenic, Chloride, Iron, Manganese, Sulfate, and Gross Alpha above 50% of the Maximum Contaminant Levels.

A copy of the complete source water assessment is available for viewing at the Bureau of Safe Drinking Water (BSDW) Carson City office between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. It is suggested that an appointment be made if you are interested in viewing a report. The BSDW office is located at 901 So. Stewart Street, Suite 4001, Carson City, Nevada 89701. Telephone 1-775-687-9520.

## DETECTED CONTAMINANTS

The following table summarizes results of detected contaminants during the 2010 monitoring period. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. The table analyzes the concentration of contaminants of your water in relation to the Maximum Contaminant Level (MCL). All contaminants were well below the MCL.

A copy of all test results is available upon request at the Water District office.

REGULATED CONTAMINATES	MONITORING PERIOD	UNIT	YOUR WATER	RANGE	MCL	MCLG	TYPICAL SOURCE
Arsenic	2010	ppb	5.5	*1-25	10	0	Erosion of natural deposits.
Barium	2010	mg/L	0.04	0.017-0.057	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2010	mg/L	0.94	0.73-1.4	2	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	2010	mg/L	0.95	0.7-1.4	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
DISINFECTION BY-PRODUCTS	MONITORING PERIOD	UNIT	YOUR WATER	RANGE	MCL	MCLG	TYPICAL SOURCE
TTHM	2010	µg/L	3.8	2.4-5.1	80	n/a	By-product of drinking water chlorination.
HAA5	2010	µg/L	0	0	60	n/a	By-product of drinking water chlorination.
RADIONUCLIDES	MONITORING PERIOD	UNIT	YOUR WATER	RANGE	MCL	MCLG	TYPICAL SOURCE
Combined Radium (226 & 228)	7/20/2010	pCi/L	0.5	0.4-0.6	5	0	Erosion of natural deposits.
Combined Uranium	7/20/2010	µg/L	6	1.7-10.7	30	0	Erosion of natural deposits.
Gross Alpha	7/20/2010	pCi/L	7.2	4.4-11	15	0	Decay of natural and man-made deposits.
LEAD & COPPER	MONITORING PERIOD	UNIT	YOUR WATER	RANGE	AL		TYPICAL SOURCE
Lead	2008-2010	µg/L	2	0-14	15		Corrosion of household plumbing systems. Erosion of natural deposits.
Copper	2008-2010	mg/L	0.066	0.012-0.21	1.3		Corrosion of household plumbing systems. Erosion of natural deposits.

\*For a brief period of time, 1 of the 5 arsenic treatment plants that the District operates produced water above the arsenic MCL and is not indicative of regular treatment plant operation. The issue was quickly addressed and corrected. The water from this time frame was blended to produce finished water that was below the MCL.

## LEAD:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from plumbing fittings and pipelines associated with home plumbing. The Water District is responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

## WHERE DOES MY WATER COME FROM?

Our water supply currently comes from the hydrologic basin known as basin 222, the lower Virgin River basin. The Water District draws the water from eight deep wells located throughout the valley. Depths of wells range from 650' to 2,250'.

## WHY ARE THERE CONTAMINANTS IN MY DRINKING WATER?

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. 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 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's treated include:

*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 storm water run-off, agriculture, and residential users.

*Radioactive contaminants*, can be naturally occurring or the result of mining activity

*Organic contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, may also come from gas stations, urban storm water run-off, and septic systems.

The Water District routinely monitors for contaminants in our drinking water in accordance with State and Federal laws.

More information about contaminants and potential health effects can be obtained by calling the EPA hotline at 1-800-426-4791.

## ARSENIC TREATMENT PLANTS

The District has 5 arsenic treatment plants that have been in operation for approximately 2 years. The treatment plants are state of the art facilities that can remove the natural occurring arsenic in our ground water to non-detect levels. The District and its staff are dedicated to providing the highest quality and dependable drinking water.

## IMPORTANT DRINKING WATER DEFINITIONS

**MCLG (Maximum Contaminant Level Goal)**—The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's 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 MCLG's as feasible using the best available treatment technology.

**AL (Action Level)**—The concentration of a contaminant, which if exceeded, triggers treatment or other corrective action to mitigate the contaminant.

**ND (Non-Detect)** —The concentration of a specific contaminant is below the detection limits of the EPA's accepted monitoring method.

**ppm (parts per million) / mg/L (milligrams per Liter)**—one ppm compares to one minute in two years or a single penny in \$10,000.

**ppb (parts per billion) / µg/L (micrograms per Liter)**—one ppb compares to one minute in 2,000 years, or a single penny in \$10,000,000.

**pC/L (picocuries per Liter)**—A picocurie is one-trillionth of a curie, which is a unit of measure used to express the results of radioactivity.

## WHAT OTHER INFORMATION CAN YOU GIVE ME ABOUT MY WATER?

pH — 7.92	Water Temperature — 76°F
Fluoride — 0.94 mg/L	Hardness — 9 - 12 grains/gallon
Sodium — 47 - 150 mg/L	Hardness — 153 - 205 mg/L
Sulfate — 164 mg/L	Specific Conductance — 886 µS/cm
Iron — 0.54 mg/L	Total Dissolved Solids — 448 mg/L

Each water source is tested quarterly, annually, or once every three years depending on the constituent for 133 different contaminants as required by State and Federal agencies. Results of those tests can be obtained at the Water District's website at [vvh2o.com](http://vvh2o.com) or contacting the Water District at 702-346-5731.

## DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 for infections. These people should seek advice about drinking water from their health care provider. EPA/Center for Disease Control (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.

## HOW CAN I LEARN MORE ABOUT MY WATER?

If you have any questions regarding water quality or Water District operations, please visit the Water District's office at 500 Riverside Road or call (702) 346-5731. The Water District Board of Directors meets every 1<sup>st</sup> and 3<sup>rd</sup> Tuesday at 5:00 p.m at the District's office.