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# 2007 ANNUAL WATER QUALITY REPORT



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<http://www.vvh2o.com>



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We are pleased to present to you the 2007 Water Quality Report. This report is designed to inform you about the water we deliver to you every day. Our constant goal is to provide you with safe and a dependable supply of drinking water at the lowest cost possible. We want you to understand that we are continually making every effort to protect your water resources. We are committed to ensuring the quality of your water.

## NEVADA SOURCE WATER ASSESSMENT PROGRAM SUMMARY SHEET

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

Assessor: State  
Summary Date: 7/07/2008

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 required a summary of the findings of the assessment to be included in the water system's annual Consumer Confidence Report (CCR). The 1996 Amendments specifically required 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 to inform the public of the results. These results are summarized below.

### WATER SYSTEM CONTACT INFORMATION

<b>Water System Name:</b> VIRGIN VALLEY WATER DISTRICT		<b>County:</b> Clark
<b>BHPS System ID Number:</b> NV0000167	<b>Number of Connections:</b> 7120	<b>Population Served:</b> 20,000
<b>Owner's Rep:</b> MICHAEL A. WINTERS <b>Telephone:</b> (702) 346-5731	<b>Address:</b> VIRGIN VALLEY WATER DIST 500 RIVERSIDE, MESQUITE, NV 89027 <b>Fax:</b> (702) 346-2596	<b>E-mail:</b> mike@vvh2o.com
<b>Operator:</b> WILLIAM S. PETERSON <b>Telephone:</b> (702) 346-5731	<b>Address:</b> 500 RIVERSIDE RD, MESQUITE, NV 89027 <b>Fax:</b> (702) 346-2596	<b>E-mail:</b> pete@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:

The Virgin Valley Water District utilizes nine wells. Effective January 23, 2006, the arsenic Maximum Contaminant Level (MCL) for public drinking water was reduced from 50 parts per billion (ppb) to 10 ppb. Public drinking water systems with a Maximum Arsenic Contaminant Level that is less than 51 ppb and greater than 10 ppb are eligible to apply for an exemption. If granted, the exemption allows the water system until January 23, 2009 to come into compliance with the 10 ppb standard. This water system's wells currently exceed the 10 ppb standard. The water system has been granted an exemption by the Nevada Environmental Commission.

### 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

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 contaminants 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 generally located in and north of Mesquite are generally 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.

**INORGANIC CONTAMINANTS**

CONTAMINANT (UNITS)	MCGL	MCL	YOUR WATER	RANGE LOW	RANGE HIGH	SAMPLE DATE	VIOLATION	TYPICAL SOURCES
Arsenic (ppm)	N/A	.010	.032	.004	.071	6/08	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Nitrate (ppm) <i>[Measured as Nitrogen]</i>	10	10	.77	.0	1.5	6/08	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

**MICROBIOLOGICAL CONTAMINANTS**

CONTAMINANT (UNITS)	MCGL	MCL	YOUR WATER	RANGE LOW	RANGE HIGH	SAMPLE DATE	VIOLATION	TYPICAL SOURCES
Total Coliform	0	0	0	N/A		Monthly	Yes	Naturally present in the environment.

**INORGANIC CONTAMINANTS**

CONTAMINANT (UNITS)	MCGL	AL	YOUR WATER	# OF SAMPLES AL	SAMPLE DATE	EXCEEDS AL	TYPICAL SOURCES
Copper (ppm)	1.0	N/A	.0629	10	12/07	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. At this time VVWD is only required to test every 3 years.
Lead (ppm)	0	0	.00036	10	12/07	No	Corrosion of household plumbing systems; Erosion of natural deposits. At this time VVWD is only required to test every 3 years.

TYPE	CATEGORY	ANALYTE	COMPLIANCE PERIOD	TYPE	CATEGORY	ANALYTE	COMPLIANCE PERIOD
Monitoring, Routine Major	Failure to Monitor	CD IOC PH 5 CYANIDE	1/1/2005 – 12/31/2007	Monitoring, Routine Major	Failure to Monitor	CD VOCS PHASE 2 & 5	2007
Monitoring, Routine Major	Failure to Monitor	CD IOC FLOURIDE	1/1/2007 – 3/31/2007	Monitoring, Routine Major	Failure to Monitor	VOCs REG & UNREG	10/1/2007 – 12/31/2007
Monitoring, Routine Major	Failure to Monitor	CD NITRATE	1/1/2007 – 12/31/2007	Monitoring, Routine Major	Failure to Monitor	ZC SOC P5 GLYPHOSATE	10/1/2007 – 12/31/2007
Monitoring, Routine Major	Failure to Monitor	CD RADIONUCLIDES	1/1/2007 – 3/31/2007	Monitoring, Routine Major	Failure to Monitor	XCDPHTHALATE	10/1/2007 – 12/31/2007
Monitoring, Routine Major	Failure to Monitor	CD SOCS PHASE 2 & 5	2007	Monitoring, Routine Major	Failure to Monitor	ZCD SOC PH5 SIMAZINE	1/1/2007 – 3/31/2007

Our follow up sampling for coliforms all came back absent in 2007, returning us to compliance. Other constituents were either tested in other quarters in 2007, or early in 2008 which returns us to compliance. As these were failure to monitor violations and not exceedances, no known health effects are believed to have resulted due to the missed samples.

**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 nine (9) deep wells located throughout the valley. Depths of the wells range from 600’ to 3,300’.

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

- PH — 7.85      Water Temperature — 76°
- Fluoride — 1.0 mg/l      Sodium — .27 mg/l
- Sulfate — 203 mg/l      Hardness — 9-12 grains/gallon
- Iron — 1.5 mg/l

Each water source is tested either on a quarterly or annual basis for 76 different contaminants as required by State and Federal agencies. Results of those tests can be found by contacting the Water District at 702-346-5731 or on the Water District’s website at [www.vvh2o.com](http://www.vvh2o.com).

**WHY ARE THERE CONTAMINANTS IN MY DRINKING WATER?**

All drinking water, including the less regulated bottled water, may be reasonably expected to contain at least small amounts of some contaminants. It is important to remember that 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 EPA hotline at 1-800-426-4791.

The Virgin Valley Water District routinely monitors for contaminants in your drinking water according to State and Federal laws. This report shows the quality of the water as monitored during the period of January 1st to December 31st of 2007. A copy of all test results is available upon request at the District Offices.

**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 from 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 at 1-800-426-4791.

**INFORMATION REGARDING ARSENIC**

Federal Regulations currently require that arsenic, which occurs naturally in the water supply, not exceed a concentration of 50 ppb in drinking water. This is an enforceable standard called a Maximum Contaminant Level (MCL) and was established by the EPA to protect public health. The 50 ppb MCL was based on studies, which suggest that long-term exposure to arsenic might cause skin lesions known as hyperkeratosis. People who drink water containing arsenic in excess of the allowable standard over many years could experience skin damage or problems with their circulatory system, and could have an increased risk of getting cancer. The National Research Council’s report has concluded that arsenic in drinking water may cause bladder, lung and skin cancer, and may also cause other types of cancer. The EPA re-evaluated the arsenic MCL, and determined it to be too high and lowered the MCL to 10 ppb. The EPA has set January 2006 to be in compliance with the new standard. Engineering estimates to treat the District’s water for arsenic is 17 million dollars. The Water District is doing everything possible to find other means of funding for arsenic treatment in order to keep your water bill as low as possible. The Water District did not meet the 2006 deadline for arsenic, but has been given a three year extension by the Bureau of Safe Drinking Water. The Water District is anticipating starting construction of the five (5) new arsenic treatment plants in July of 2007 with a completion date of January of 2009.

Your drinking water does not meet EPA's standard for arsenic. It contains low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effects of low levels of 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.

**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. 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 available treatment technology.

**AL (Action Level)** — The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.

**HOW CAN I LEARN MORE ABOUT MY WATER?**

If you have any questions regarding the Water Quality or District operations, the District Board of Directors meets every 1st and 3rd Tuesday at 3:00 p.m. at 500 Riverside Road. These meetings are open to the public.