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2009 ANNUAL WATER QUALITY REPORT



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Mesquite, Nevada 89027

(702) 346-5731

<http://www.vvh2o.com>



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Mesquite, Nevada
89007

Postal Customer

We are pleased to present the 2009 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: 7/07/2010
<p>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.</p>	
WATER SYSTEM CONTACT INFORMATION	
WATER SYSTEM NAME: VIRGIN VALLEY WATER DISTRICT BHPS SYSTEM ID NUMBER: NV0000167	COUNTY: CLARK POPULATION SERVED: 22,791 NUMBER OF CONNECTIONS: 7,725
OWNER'S REP: WILLIAM PETERSON TELEPHONE: (702) 346-5731	ADDRESS: 500 RIVERSIDE RD. MESQUITE, NV 89027 FAX: (702) 346-2596 E-MAIL: pete@vvh2o.com
OPERATOR: AARON BUNKER TELEPHONE: (702) 346-5731	ADDRESS: 500 RIVERSIDE RD. MESQUITE, NV 89027 FAX: (702) 346-2596 E-MAIL: abunker@vvh2o.com
FEDERAL AND STATE WATER QUALITY STANDARDS COMPLIANCE	
<input type="checkbox"/> If checked, the above referenced water system is in compliance with all State of Nevada and Federal water quality standards. If not, then explain:	
<p>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 was less than 51 ppb and greater than 10 ppb were eligible to apply for an exemption. The Water District water system's wells exceeded the 10 ppb standard, and was granted the exemption to allow the Water District until January 23, 2009 to come into compliance with the new standard. The Water District has been diligently working to complete five new arsenic treatment plants, but did not meet the January 23, 2009 deadline. All five plants were completed before or during September 2009 and are currently producing water well below the new arsenic standard.</p>	
WATER SYSTEM CONTAMINATION VULNERABILITY	
<input type="checkbox"/> 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) <input checked="" type="checkbox"/> Synthetic Organic Compounds (SOC) <input checked="" type="checkbox"/>	Inorganic Compounds (IOC) <input checked="" type="checkbox"/> Radionuclides <input checked="" type="checkbox"/>
Microbiological <input type="checkbox"/>	
<p>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.</p>	
<p>The water system is considered vulnerable to the activities/sources associated with the contaminant groups checked in the boxes above for the following reasons:</p>	
<p>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.</p>	
<p>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.</p>	

DETECTED CONTAMINANTS

The following table summarizes results of detected contaminants during the 2009 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, except arsenic, were well below the MCL. Some arsenic levels were beyond the MCL of 10 ppb until the arsenic treatment plants were put into service. Since treatment commenced, the average level of arsenic has been 2.7 ppb.

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	2009	ppb	19	ND-76	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	8/12/2009	mg/L	0.019	0.019	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	6/16/2009	mg/L	0.89	0.79-1	2	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate	8/12/2009	mg/L	0.62	ND-1.5	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	8/12/2009	µg/L	2.1	2.1	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
Chromium	8/12/2009	µg/L	10	10	100	100	Discharge from steel and pulp mills; erosion of natural deposits.
Xylenes	11/17/2009	mg/L	0.0080	0.0080	10	10	Discharge from petroleum factories; discharge from chemical factories.
Ethylbenzene	11/17/2009	µg/L	1.6	1.6	700	700	Discharge from petroleum refineries.
DISINFECTION BY-PRODUCTS	MONITORING PERIOD	UNIT	YOUR WATER	RANGE	MCL	MCLG	TYPICAL SOURCE
TTHM	2009	µg/L	7	0.5-30	80	n/a	By-product of drinking water chlorination.
HAA5	2009	µg/L	0.5	0-3.9	60	n/a	By-product of drinking water chlorination.
RADIONUCLIDES	MONITORING PERIOD	UNIT	YOUR WATER	RANGE	MCL	MCLG	TYPICAL SOURCE
Combined Radium (226 & 228)	6/28/2007	pCi/L	0.95	0.9-1	5	0	Erosion of natural deposits.
Combined Uranium	2009	µg/L	5.7	5.1-6.4	30	0	Erosion of natural deposits.
Gross Alpha	11/17/2009	pCi/L	6.1	6.1	15	0	Decay of natural and man-made deposits.
Gross Beta	11/17/2009	pCi/L	6.8	6.8	30	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	µg/L	66	12-210	1300	Corrosion of household plumbing systems. Erosion of natural deposits.	
TYPE	CATEGORY	ANALYTE	COMPLIANCE PERIOD				
MCL, Average	MCL Violation	Arsenic	Quarter 1 - 3, 2009				
Public Notice Violation	Failure to Notify the Public	Public Notice	Quarters 1 & 2, 2009				
The public notice violation was due to a failure to notify the public in a timely manner regarding the MCL violation of arsenic.							

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

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 Water District routinely monitors for contaminants in our drinking water in accordance with State and Federal laws. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA hotline at 1-800-426-4791.

WHAT OTHER INFORMATION CAN YOU GIVE ME ABOUT MY WATER?

pH — 7.69
 Fluoride — 0.89 mg/l
 Sodium — 46 - 160 mg/l
 Sulfate — 192 mg/l
 Iron — 0.54 mg/l

Water Temperature — 76°F
 Hardness — 9 - 12 grains/gallon
 Hardness — 153 - 205 mg/l
 Specific Conductance — 886 µS/cm
 Total Dissolved Solids — 544 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 or contacting the Water District at 702-346-5731.

HOW CAN I LEARN MORE ABOUT MY WATER?

If you have any questions regarding water quality or Water District operations, the Water 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.

UNREGULATED CONTAMINANTS MONITORING

The Water Districts water supply was recently tested for 25 various unregulated contaminants. Unregulated contaminants are those that do not yet have a drinking water standard set by the EPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard. The results for the 25 various contaminate tested returned as Non-Detect.

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.

INFORMATION REGARDING ARSENIC

Federal Regulations require that arsenic, which occurs naturally in the water supply, not exceed a concentration of 10 ppb in drinking water. This is an enforceable standard called a Maximum Contaminant Level (MCL) and was established by the U.S. Environmental Protection Agency (EPA) to protect public health. The EPA recently re-evaluated the arsenic MCL and lowered the MCL from 50 ppb to 10 ppb. The 10 ppb is based on studies that suggest 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 set January 2006 as the date to be in compliance with the new standard. The Water District did not meet the 2006 deadline for arsenic, but was given a 3-year extension by the Nevada Division of Environmental Protection (NDEP) Bureau of Safe Drinking Water (BSDW). In order to keep your water bill as low as possible, the Water District has gone to great lengths to secure funds to construct five new arsenic treatment plants. The new arsenic treatment plants have cost approximately 23 million dollars to construct. The Water District did not meet the January 23, 2009 extension deadline set by NDEP BSDW for completion of the treatment plants. Construction of the arsenic treatment plants started in July 2007; but due to today's economy some vendors were not able to supply the necessary equipment for the Water District to meet the January 23, 2009 extension deadline. As a result of the failure to complete the treatment plants before the deadline, the Water District is not in compliance. To return to compliance, the Water District is required to complete the treatment plants and not exceed the arsenic MCL for four consecutive quarters.

Four of the five treatment plants were completed and operating by the end of May 2009, with the fifth treatment plant completed in September 2009. Permitting issues and supply shortages slowed the completion of the fifth and final plant. Since the treatment plants were put into service, levels of arsenic in the water for 2009 have been well below the MCL, with an average level of 2.7 ppb.

The EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The 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.

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.