

Valley Grove Subdivision Public Water System Consumer Confidence Report for 2014

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is a snapshot of last year's water quality. Its intent is to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. Your drinking water quality meets all federal and state standards.

System Information

Your water system is regulated by the State of Montana as a community water system and is designated Public Water System (PWS) No. MT0003780. For questions or service problems, please contact Rusty Roberts at 388-9805 or call one of the HOA Board members. Water quality or service issues can also be brought to the HOA Board's attention at their regular monthly meeting. Please see the HOA web site for Board contact information and for the meeting time and location (<http://www.vghoa.org/>).

Water Source

The Valley Grove Subdivision PWS draws water from four wells. Wells 1, 2 and 4 tap a semi-confined alluvial aquifer, while Well 3 taps an unconfined alluvial aquifer. These types of aquifers underlie much of the Gallatin Valley and generally produce high quality water.

The Valley Grove Subdivision PWS wells are however potentially susceptible to being contaminated by several pollution sources including failing or overloaded septic systems and improper use or disposal of agricultural and household chemicals. A source water assessment report that provides more information is available on line at <http://nris.mt.gov/wis/swap/swapquery.asp>

Water drawn from Wells 1, 2 and 3 is not filtered or treated in any manner before distribution. Water drawn from Well 4 is passed through a sand separator but is not treated before distribution.

Compliance with Drinking Water Regulations

Your drinking water quality currently meets all federal and state standards. There was one violation of the maximum contaminant level (MCL) for total coliform bacteria last year.

Total coliform group bacteria were detected in the monthly water quality sample taken in December 2014 at the storage tank. Total coliform group bacteria were also detected in repeat samples taken from the tank and at one location in the distribution system. A public health advisory notice was sent out at that time. This problem was resolved by adding chlorine to the water in the storage tank and flushing the system mains. No bacteria were detected in 5 samples taken from around the system in January 2015.

The detection of di(2-ethylhexyl) phthalate in Well #4 in 2013, at a concentration less than the MCL, triggered a quarterly monitoring requirement. Results from the quarterly monitoring tests show that the contamination in that well was intermittently above the laboratory detection limit, but consistently below the MCL. No further monitoring is required.

Water Quality Monitoring Results

The Valley Grove Subdivision PWS follows a testing protocol established by the Montana Department of Environmental Quality (DEQ) to monitor the microbiological, chemical and radiological quality of the water supply. A listing of required tests and historical test results is available on line at <http://deq.mt.gov/wqinfo/pws/montanadrinkingwaterwatch.mcp>

Results from the most recent water quality tests are summarized in Tables 1 and 2 below.

Educational Information

All sources of drinking water are subject to potential contamination from microbes, organic and inorganic chemicals or radioactive materials. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Drinking water sources for both tap water and bottled water may 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 materials and it can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in drinking water sources include:

- *Microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, which 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*, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations also establish limits for contaminants in bottled water which must provide the same protection for public health.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 providers. EPA/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).

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 materials and components associated with service lines and home plumbing. The Valley Grove Subdivision PWS is responsible for providing high quality drinking water, but can not 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 the water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize your exposure is available for the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Regulatory Definitions:

NSDWR: A National Secondary Drinking Water Regulation is a non-mandatory water quality standard regarding contaminants that may cause cosmetic effects such as taste, odor or color

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water

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

Not-Detected (ND) - laboratory analysis indicates that the constituent is not present above reporting limits.

mg/L- milligram per liter, also equals one part per million (ppm)

ppb - one part per billion

pCi/L - picocuries per liter is a measure of the radioactivity in water

90th percentile – 90 percent of measured values are equal to or less than indicated value

**Table 1
2014 Secondary Drinking Water Regulation Test Results**

Contaminant	Last Tested	Result (max)	NSDWR
pH	Oct. 2013	7.5	6.5-8.5
Calcium	Oct. 2013	80 mg/L	
Chloride	Oct. 2013	9 mg/L	250 mg/L
Fluoride	Oct. 2013	0.1 mg/L	2 mg/L
Iron		not tested	0.3 mg/L
Magnesium	Oct. 2013	19 mg/L	
Manganese		not tested	0.05 mg/L
Potassium	Oct. 2013	5 mg/L	
Sodium	Oct. 2013	8 mg/L	<20 mg/L
Sulfate	Oct. 2013	19 mg/L	250 mg/L
Total Dissolved Solids	Oct. 2013	291 mg/L	500 mg/L
Zinc		not tested	5 mg/L
Alkalinity	Oct. 2013	250 mg/L	
Hardness	Oct. 2013	280 mg/L	

**Table 2
2014 Primary Drinking Water Regulation Compliance**

Contaminant	Last Tested	Result	Violation	MCLG	MCL or Action Level	Likely Source
Total Coliform ¹⁾	monthly	3 detects Dec. 2014	Yes	zero detects	1 detect/mo.	Possible air borne contamination through storage tank vents
Fecal Coliform ¹⁾	monthly	Not detected	No	zero detects	1 detect/mo.	
Nitrate & Nitrites	Aug. 2014	1.25 to 2.36 mg/L	No	10 mg/L N	>5 mg/L –action 10 mg/L –MCL	Runoff from fertilizer use; Leaks from septic tanks or sewage mains, leaching of septic drain fields
Copper – Range – 90 th percentile – # samples > action level	Sept. 2012	0.09 to 0.44 mg/L 0.4 mg/L 0	No	1.3 mg/L	1.3 mg/L	Corrosion of household plumbing and fixtures
Lead – Range – 90 th percentile – # samples > action level	Sept. 2012	ND to 0.0034 mg/L 0.0014 mg/L 0	No	0.0 mg/L	0.015 mg/L	Corrosion of household plumbing and fixtures
Inorganics • Fluoride • Arsenic • Barium • 8 other regulated elements	Oct. 2013 Oct. 2013 Oct. 2013 Oct. 2013	ND to 0.1 mg/L 0.001 mg/L ND to 0.06 mg/L Not detected	No No No No	4.0 mg/L 0.0 mg/L 2.0 mg/L Varies w/ contaminant	4.0 mg/L 0.01 mg/L 2.0 mg/L Varies w/ contaminant	Erosion of natural deposits Erosion of natural deposits Erosion of natural deposits
Volatile Organics • Phthalate ²⁾ • Other regulated compounds	Oct. 2013 Jan. 2014 Apr. 2014 Aug. 2014 Oct. 2013	0.0028 mg/L ND 0.0026 mg/L ND Not detected	No No	0.0 mg/L Varies w/ contaminant	0.006 mg/L Varies w/ contaminant	Leached from plastic and rubber materials
Synthetic Organics • Regulated compounds	Oct. 2013	Not detected	No	Varies w/ contaminant	Varies w/ contaminant	
Radiological • Radium 226 & 228 • Uranium ³⁾ • Gross alpha ³⁾	Jan. 2006 Dec. 2013 Dec. 2013	1.0 pCi/L 2.6 pCi/L 5.2 pCi/L	No No No	0 pCi/L 0 pCi/L 0 pCi/L	5 pCi/L 20 pCi/L 15 pCi/L	Erosion of natural deposits Erosion of natural deposits Erosion of natural deposits

- 1) The presence of Total and Fecal coliform bacteria is tested for monthly. There were zero detections in January through November of 2014
- 2) No di(2-ethylhexyl) phthalate was detected in Wells #1, 2 & 3. The detected concentration of di(2-ethylhexyl) phthalate in Well #4, while less than the MCL was greater than the detection limit and has triggered quarterly monitoring until it was shown that the contamination in that well is consistently below the MCL
- 3) Gross alpha radiation in Well #4 is high enough to require monitoring every 6 years versus every 9 years for the other wells