

2017 Consumer Confidence Report

Water System Name:

**RIVER HIGHLANDS
COMMUNITY SERVICES DISTRICT**

Report Date: **March 9, 2018**

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2017 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: **3 groundwater wells**

Name & general location of source(s): **River Highlands CSD – North Side Well, Well #3 (aka South Side Well); and Well #1. These wells are located at the Gold Village Subdivision and on a 32 acre property across Hammonton Smartsville Road in Smartsville.**

Drinking Water Source Assessment information: **A source water assessment was conducted for the River Highlands CSD public water system in October 2002. See page 5 for more information.**

Time and place of regularly scheduled board meetings for public participation: **Not Applicable**

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TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

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 are set by the U.S. Environmental Protection Agency (U.S. EPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

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 contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

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

Variations and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

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 include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that 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, the U.S. EPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of Months in Violation	MCL	MCL G	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	(In a mo.) 1	0	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (state Total Coliform Rule)	(In the year) 0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive		Human and animal fecal waste
<i>E. coli</i> (federal Revised Total Coliform Rule)	(In the year) 0	0	(a)	0	Human and animal fecal waste

(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	No. of Samples Collected	90 th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	9/1/16	5	13.4	1	15	0.2	Not applicable	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	9/1/16	5	0.2475	0	1.3	0.3	Not applicable	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	5/6/16	23.6 (NS) 30.8 (SS) 30.3 (Well #1)	N/A	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	5/6/16	330 (NS) 180 (SS) 179 (Well #1)	N/A	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
NORTH SIDE WELL						
Arsenic (ppb)	3/7, 6/1, 7/3/2017	3.04	0-5.7	10	0.004	Erosion of natural deposits; runoff from orchards; glass & electronics production wastes.
Gross Alpha (pCi/L)	8/8/12	0.035	N/A	15	(0)	Erosion of natural deposits.
Nitrite (ppm)	4/4/16	0.29	N/A	1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Nickel (ppb)	4/4/16	11	N/A	100	12	Erosion of natural deposits; discharge from metal factories.
Barium (ppm)	4/4/16	0.0539	N/A	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits.
WELL #3 (SOUTH SIDE WELL)						
Arsenic (ppb)	4/4/16	2.5	N/A	10	0.004	Erosion of natural deposits; runoff from orchards; glass & electronics production wastes.
Barium (ppm)	4/6/07	0.0373	N/A	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits.
Gross Alpha (pCi/L)	8/8/12	1.75	N/A	15	(0)	Erosion of natural deposits.
Nickel (ppb)	4/4/16	17	N/A	100	12	Erosion of natural deposits; discharge from metal factories.
WELL #1						
Arsenic (ppb)	4/4/16 & 10/4/16	1.7	0-3.4	10	0.004	Erosion of natural deposits; runoff from orchards; glass & electronics production wastes.
Nickel (ppb)	4/4/16	16	N/A	100	12	Erosion of natural deposits; discharge from metal factories.
Gross Alpha (pCi/L)	Quarterly in 2014	0.72	0.638-0.876	15	(0)	Erosion of natural deposits.
Radium-228 (pCi/L)	Quarterly in 2014	0.26	ND-0.432	5	(0)	Erosion of natural deposits.
Nitrite (ppm)	4/4/16	0.16	N/A	1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
NORTH SIDE WELL						
Iron (ppb)	5/1/17	459.3*	N/A	300	N/A	Leaching from natural deposits; industrial wastes.
Manganese (ppb)	5/1/17	140.4*	N/A	50	N/A	Leaching from natural deposits.
Zinc (ppm)	5/6/16	0.0562	N/A	5.0	N/A	Runoff/leaching from natural deposits; industrial wastes.

Total Dissolved Solids (TDS) (ppm)	5/6/16	491	N/A	1000	N/A	Runoff/leaching from natural deposits.
Specific Conductance (uS/cm)	5/6/16	780	N/A	1600	N/A	Substances that form ions when in water; seawater influence.
Chloride (ppm)	5/6/16	17.7	N/A	500	N/A	Runoff/leaching from natural deposits; seawater influence.
Sulfate (ppm)	5/6/16	151	N/A	500	N/A	Runoff/leaching from natural deposits; industrial wastes.
Color (Units)	5/6/16	30	N/A	15	N/A	Naturally-occurring organic materials.
Turbidity (Units)	5/6/16	17	N/A	5	N/A	Soil runoff
WELL #3 (SOUTH SIDE WELL)						
Iron (ppb)	5/1/17	83.6	N/A	300	N/A	Leaching from natural deposits; industrial wastes.
Manganese (ppb)	5/1/17	23.45	N/A	50	N/A	Leaching from natural deposits.
Total Dissolved Solids (TDS) (ppm)	5/6/16	281	N/A	1000	N/A	Runoff/leaching from natural deposits.
Specific Conductance (uS/cm)	5/6/16	511	N/A	1600	N/A	Substances that form ions when in water; seawater influence.
Chloride (ppm)	5/6/16	3.5	N/A	500	N/A	Runoff/leaching from natural deposits; seawater influence.
Sulfate (ppm)	5/6/16	7.1	N/A	500	N/A	Runoff/leaching from natural deposits; industrial wastes.
Color (Units)	5/6/16	3	N/A	15	N/A	Naturally-occurring organic materials.
Copper (ppm)	5/6/16	0.017	N/A	1	N/A	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Turbidity (Units)	5/6/16	.90	N/A	5	N/A	Soil runoff
Zinc (ppm)	5/6/16	1.49	N/A	5	N/A	Runoff/leaching from natural deposits; industrial wastes.
WELL #1						
Manganese (ppb)	5/6/16	53*	N/A	50	N/A	Leaching from natural deposits.
Total Dissolved Solids (TDS) (ppm)	5/6/16	260	N/A	1000	N/A	Runoff/leaching from natural deposits.
Specific Conductance (uS/cm)	5/6/16	525	N/A	1600	N/A	Substances that form ions when in water; seawater influence.
Chloride (ppm)	5/6/16	3.4	N/A	500	N/A	Runoff/leaching from natural deposits; seawater influence.
Sulfate (ppm)	5/6/16	7.1	N/A	500	N/A	Runoff/leaching from natural deposits; industrial wastes.
Color (Units)	5/6/16	3	N/A	15	N/A	Naturally-occurring organic materials.
Copper (ppm)	5/6/16	0.017	N/A	1	N/A	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Turbidity (Units)	5/6/16	1.2	N/A	5	N/A	Soil runoff.
Zinc (ppm)	5/6/16	1.34	N/A	5	N/A	Runoff/leaching from natural deposits; industrial wastes.

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
None					

Additional General Information on Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA’s Safe Drinking Water Hotline (1-800-426-4791).

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. U.S. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the SDW Hotline (1-800-426-4791).

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. River Highlands Community Services 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 do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants. 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 exposure is available from the Safe Drinking Water Hotline (1-800-426-4701) or at <http://www.epa.gov/lead>.

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic’s possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency 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.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
Iron	Iron was found in the North Side well at levels that exceed the secondary MCL of 300 ug/L.	2014 – 2017	Quarterly testing was completed in 2014. The CSD will continue researching treatment strategies in 2017.	The iron & manganese MCLs were set to protect you against unpleasant aesthetic effects (e.g., color, taste and odor) and the staining of plumbing fixtures and closing while washing. The high iron levels are due to leaching of natural deposits.
Manganese	Manganese was found in the North & South Side wells at levels that exceed the secondary MCL of 50 ug/L since 2014.	2014 - 2017	See above	See above

Summary Information from the Source Water Assessment Completed in October 2002

No contaminants have been detected in the water supply, however, the source is considered most vulnerable to the following activities: **Well # 3:** Wastewater treatment plants

North Side Well: Surface water – streams/lakes/rivers; wells – water supply; NPDES/WDR permitted discharges; wastewater treatment plants; housing – high density; and transportation corridors – roads/streets.

Due to its proximity to Well #3, **Well #1** is most vulnerable to the same activities (wastewater treatment plants).

A copy of the complete assessment may be viewed at Yuba County Environmental Health, 915 8th Street, Suite 123, Marysville.

You may request a summary of the assessment be sent to you by contacting: Jodi Bird at 530-749-5450 or jbird@co.yuba.ca.us.