

2021 Consumer Confidence Report

Water System Information

Water System Name: Hay Kingdom

Report Date: 6/8/2022

Type of Water Source(s) in Use: Groundwater Well

Name and General Location of Source(s): 26888 CR 90 Winters, Ca 95694

Drinking Water Source Assessment Information: NA

Time and Place of Regularly Scheduled Board Meetings for Public Participation: NA

For More Information, Contact: Larry Lu (530) 795-5888

About This Report

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 to December 31, 2021 and may include earlier monitoring data.

Importance of This Report Statement in Five Non-English Languages (Spanish, Mandarin, Tagalog, Vietnamese, and Hmong)

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse [Enter Water System's Name] a [Enter Water System's Address or Phone Number] para asistirlo en español.

Language in Mandarin: 这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 [Enter Water System Name] 以获得中文的帮助: [Enter Water System's Address][Enter Water System's Phone Number].

Language in Tagalog: Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa [Enter Water System's Name and Address] o tumawag sa [Enter Water System's Phone Number] para matulungan sa wikang Tagalog.

Language in Vietnamese: Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ [Enter Water System's Name] tại [Enter Water System's Address or Phone Number] để được hỗ trợ giúp bằng tiếng Việt.

Language in Hmong: Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau [Enter Water System's Name] ntawm [Enter Water System's Address or Phone Number] rau kev pab hauv lus Askiv.

Terms Used in This Report

Term	Definition
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 <i>E. coli</i> MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
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).
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.
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.
Regulatory Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
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.
Variances and Exemptions	Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.
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)

Sources of Drinking Water and Contaminants that May Be Present in Source Water

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.

Regulation of Drinking Water and Bottled Water Quality

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

About Your Drinking Water Quality

Drinking Water Contaminants Detected

Tables 1, 2, 3, 4, 5, 6, and 8 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

Complete if bacteria are detected.

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
<i>E. coli</i>	(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 1.A. Compliance with Total Coliform MCL between January 1, 2021 and June 30, 2021 (inclusive)

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a month) 5	1	1 positive monthly sample (a)	0	Naturally present in the environment
Fecal Coliform and <i>E. coli</i>	(in the year) 0	0	0	None	Human and animal fecal waste

(a) For systems collecting fewer than 40 samples per month: two or more positively monthly samples is a violation of the total coliform MCL

For violation of the total coliform MCL, include potential adverse health effects, and actions taken by water system to address the violation:

Coliform bacteria do not always cause illness. Most of these bacteria are harmless to humans. If disease-causing bacteria are present, the most common symptoms are gastrointestinal upset and general flu-like symptoms such as fever, abdominal cramps, and diarrhea.

A level 1 assessment was performed on the entire water system. The well and distribution system was chlorinated and repeat coliform samples were taken. Repeat samples were negative for coliform. A water operator was hired to oversee the water system.

Table 2. Sampling Results Showing the Detection of Lead and Copper

Complete if lead or copper is detected in the last sample set.

Lead and Copper	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)	6/30/2020	5	0	0	15	0.2	NA	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	6/30/2020	5	0.170	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)	12/19/2018	60	1.0	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	12/19/2018	209	1.0	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
Nitrate (ppm)	01/06/21-12/08/21	16 ppm	12-16 ppm	10 ppm	10 ppm	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Nitrite	12/08/2018	ND		1 ppm	1 ppm	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.
Barium (ppm)	12/08/2021	0.14 ppm		1 ppm	2 ppm	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits
Chromium (ppb)	12/05/2021	15 ppb		50 ppb	100 ppb	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Arsenic (ppb)	12/08/2021	ND		10 ppb	0.004 ppb	Erosion of Natural deposits; runoff from orchards; glass and electronics production waste.
Cyanide	12/08/2021	ND		0.15 ppm	0.15 ppm	Release in soil or water from landfills,

						finishing industries, iron and steel mills and organic chemical industries.
Cadmium	12/08/2021	ND		0.005 ppm	0.00004 ppm	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Perchlorate (ppb)	06/19/2019	ND		6 ppb	1 ppb	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.
Fluoride (ppm)	12/08/2021	0.27 ppm		2 ppm	1 ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from

						fertilizer and aluminum factories
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Table 5. Detection of Contaminants with a Secondary Drinking Water Standard

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
Specific Conductance (µS/cm)	06/19/2019	1100 µS/cm		1600 µS/cm	N/A	Substances that form ions when in water; seawater influence
Sulfate (ppm)	12/19/2018	60 ppm		500 ppm	N/A	Naturally occurring element in water, most often found as a component of salt.
Chloride (ppm)	12/19/2018	40 ppm		500 ppm	N/A	Naturally occurring element in water, most often found as a component of salt.

Table 6. Detection of Unregulated Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects
Hexavalent Chromium (1) (ppb)	12/19/2018	18 ppb		N/A	Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.

(1) There is currently no MCL for hexavalent chromium. The previous MCL of 0.010 mg/L (10 ppb) was withdrawn on September 11, 2017.

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 Safe Drinking Water Hotline (1-800-426-4791).

Lead-Specific Language: 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. [Enter Water System's Name] 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. [Optional: 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 (1-800-426-4791) or at <http://www.epa.gov/lead>.

Nitrate- Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

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

Table 7. Violation of a MCL, MRDL, AL, TT or Monitoring Reporting Requirement

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
Positive Coliform Exceedance	Five out of five samples analyzed in October 2021 were positive for total coliform bacteria.	10/2021-11/2021	A level 1 assessment was performed on the entire water system. The well and distribution system was chlorinated and repeat coliform samples were taken. Repeat samples were negative for coliform. A water	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking

			operator was hired to oversee the water system.	water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.
Nitrate Maximum Contaminate Level	The nitrate monthly average exceeds the nitrate MCL of 10.0 mg/L.	8/2020- 6/2022	Bottle water was provided while a nitrate removal system was installed. A nitrate removal system was installed in June 2022.	Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

For Water Systems Providing Groundwater as a Source of Drinking Water

Table 8. Sampling Results Showing Fecal Indicator-Positive Groundwater Source Samples

Microbiological Contaminants (complete if fecal-indicator detected)	Total No. of Detections	Sample Dates	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
<i>E. coli</i>	(In the year) 0		0	(0)	Human and animal fecal waste
Enterococci	(In the year) 0		TT	N/A	Human and animal fecal waste
Coliphage	(In the year) 0		TT	N/A	Human and animal fecal waste

During the past year we were required to conduct 1 Level 1 assessment. One Level 1 assessment were completed. In addition, we were required to chlorinate the well and distribution system and collect 4 repeat coliform samples which was completed in November 2021. All four samples were negative for coliform.