2021 Consumer Confidence Report

Water System Information

Water System Name: Cathedral Wood Mutual Water Co., Inc. (Cathedral Wood)

Report Date: June 01, 2022

Type of Water Source(s) in Use: Surface, Ground

Name and General Location of Source(s): North Spring, Sugar Valley Road; South Spring, Sugarloaf Road; Well, Carl Drive, Scotts Valley, Santa Cruz County, California

Drinking Water Source Assessment Information: The State Water Board inspected our system/facilities in December 2019 and December 2021. Cathedral Wood shareholders conducted a sanitary survey of the spring watersheds and completed an update to the survey report in January 2020. Associated Reports are available by calling Bonnie Overgaard at 831-539-3201 or sending an email to cathedralwoodmutualca@gmail.com.

Time and Place of Regularly Scheduled Board Meetings for Public Participation: The time, place, and agendas for board meetings and shareholder/resident meetings are published 30 days in advance, if possible. The annual meeting usually is scheduled for late February or early March, prior to the end of the fiscal year (March 31.)

For More Information, Contact: Bonnie Overgaard, 831-539-3201, or by email to cathedralwoodmutualca@gmail.com

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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 Spanish

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse con Cathedral Wood Mutual Water Co., Inc., a Bonnie Overgaard, 831-539-3201, para asistirio en español.

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 *E. coli* 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 and the Appendix 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
E. coli	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) 0	0	1 positive monthly sample (a)	0	Naturally present in the environment
Fecal Coliform and *E. coli*	(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**:** No violations.

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2021. These revisions add the requirements of the federal Revised Total Coliform Rule, effective since April 1, 2016, to the existing state Total Coliform Rule. The revised rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbials (i.e., total coliform and E. coli bacteria). The U.S. EPA anticipates greater public health protection as the rule requires water systems that are vulnerable to microbial contamination to identify and fix problems. Water systems that exceed a specified frequency of total coliform occurrences are required to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the water system. The state Revised Total Coliform Rule became effective July 1, 2021.

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	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	9/15/21	5	ND	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	9/15/21	5	0.31	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)	6/22/21	18 mg/L	17-19 mg/L	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	6/22/21	260 mg/L	180-340 mg/L	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

Please see Appendix

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

Please see Appendix

Table 6. Detection of Unregulated Contaminants

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects

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 Safe Drinking Water 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. Cathedral Wood 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 (1-800-426-4791) or at http://www.epa.gov/lead.

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
None				

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
E. coli	(In the year) 0	Monthly	0	(0)	Human and animal fecal waste
Enterococci	(In the year) 0	NA	TT	N/A	Human and animal fecal waste
Coliphage	(In the year) 0	NA	TT	N/A	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Groundwater Source Samples, Uncorrected Significant Deficiencies, or Violation of a Groundwater TT

Special Notice of Fecal Indicator-Positive Groundwater Source Sample: None

Special Notice for Uncorrected Significant Deficiencies: None

Table 9. Violation of Groundwater TT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
None				

For Systems Providing Surface Water as a Source of Drinking Water

Table 10. Sampling Results Showing Treatment of Surface Water Sources

Treatment Technique [(a)] (Type of approved filtration technology used)	Direct filtration of the combined flow from the sources. Well water is pretreated (filtered) to remove iron and manganese. Then all source water is treated by the addition of a coagulating polymer, running it through a pipeline flocculator and then a sand filter. Finally, chlorine is added for disinfection and the water flow into two potable water storage tanks.
Turbidity Performance Standards [(b)] (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.3 NTU in 95% of measurements in a month. 2 – Not exceed 1 NTU for more than eight consecutive hours. 3 – Not exceed 5 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100
Highest single turbidity measurement during the year	0.270 NTU on October 23, 2021
Number of violations of any surface water treatment requirements	One (1)

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Summary Information for Violation of a Surface Water TT

Table 11. Violation of a Surface Water TT

Violation	Explanation	Duration	Actions Taken to Correct Violation
41 – Residual Disinfection Concentration	On October 24/25, 2021, the residual chlorine level into the distribution system fell below the required 0.2 mg/L.	10 hours	Both potable water storage tanks were “spiked” with disinfectant, and the chlorine feed solution strength was increased.

Table 11. Violation Health Effects Language: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Appendix
Sampling Results for 2021

These tables list the drinking water contaminants that were detected during the most recent sampling of raw, untreated water. Their presence in the water does not necessarily indicate that the water poses a risk. Cathedral Wood well water is pre-filtered to remove iron and manganese, and then the well water as well as the water from the north and south springs is filtered and disinfected.

Regulated Contaminants with PRIMARY DRINKING WATER STANDARDS

CHEMICAL OR CONSTITUENT	SAMPLE DATE	LEVEL DETECTED	MCL [MRDL]	PHG (MCLG) [MRDLG]	TYPICAL SOURCE OF CONTAMINANT HEALTH EFFECTS
Radioactive Contaminants	Next due in December 2026				
Gross Alpha Particle Activity No. Spring So. Spring Well	12/27/2017 (pCi/L)	 0.216+/-0.682 MDA 1.04 0.491+/-0.886 MDA 1.27 0.140+/-0.751 MDA 1.19	15	(0)	Decay/erosion of natural deposits. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters or Ra-226 or Ra-228 in excess of the MCL over many years may have an increased risk of getting cancer.
Radium 226 No. Spring So. Spring Well	12/27/2017 (pCi/L)	 0.032+/-0.078 MDA 0.304 0.145+/-0.114 MDA 0.304 0.000+/-0.063 MDA 0.304	5 (Ra-226 and Ra-228 Combined)	(0.05)	
Radium 228 No. Spring So. Spring Well	12/27/2017 (pCi/L)	 0.403+/-0.586 MDA 0.400 0.063+/-0.517 MDA 0.505 0.000+/-0.507 MDA 0.400		(0.019)	
Inorganic Contaminants					
Arsenic (ppb) No. Spring So. Spring	6/22/2021	 2.3 ND	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes. Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Fluoride (ppm) No. Spring So. Spring	6/22/2021	 0.16 0.16	2	1	Erosion of natural deposits; water additive that promotes strong teeth (Cathedral Wood does not add); discharge from fertilizer and aluminum factories. Some people who drink water containing fluoride in excess of the federal MCL of 4 ppm over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 ppm may get mottled teeth.

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Disinfection Byproducts (DBPs): TTHMs and HAA5s (Also Primary Drinking Water Standards)

This sampling is done on treated water sampled at the last house in the distribution system: 564 Sugarloaf Road.

Ever since we started monitoring DBPs, the TTHMs have bounced up and down, sometimes to levels above the MCL. Several years ago the County of Santa Cruz asked us to develop a plan to reduce our TTHM levels; HAA5s have not been as much of a problem. Initially we added ventilation to the two potable storage tanks, and while that was successful at reducing the DBPs, it did not reduce them consistently below the MCLs. Consequently, we implemented stage two of the plan, adding an aeration system to the larger potable storage tank, and so far the results have shown significant reduction in these contaminants, consistently below the regulation maximums. After several quarters of satisfactory sampling results, the Water Board gave us permission to resume annual, rather than quarterly, testing. Most recent sampling was done in October 2021. In 2022 and future years, the samples will be drawn in September.

CONSTITUENT	SAMPLE DATE	LEVEL DETECTED	MCL	MAJOR SOURCES IN DRINKING WATER	HEALTH EFFECTS
TTHMs (ppb) (Total Trihalomethanes)	01/28/2019 04/03/2019 07/09/2019 10/08/2019 10/14/2020 10/11/2021	40 36 40 49 77 42	80	Byproduct of drinking water disinfection	Some people who drink water containing TTHMs in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
HAA5s (ppb) (Haloacetic Acids)	01/28/2019 04/03/2019 07/09/2019 10/08/2019 10/14/2020 10/11/2021	38 35 28 34 59 51	60	Byproduct of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Regulated Contaminants with SECONDARY DRINKING WATER STANDARDS

There are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetics.

CHEMICAL OR CONSTITUENT	SAMPLE DATE	LEVEL DETECTED	MCL (MRDL)	TYPICAL SOURCE OF CONTAMINANT HEALTH EFFECTS
Chloride (ppm) No. Spring So. Spring	6/22/2021	 15 14	500	Runoff/leaching from natural deposits; seawater influence
Color (Units) No. Spring So. Spring	6/22/2021	 13 ND	15	Naturally-occurring organic materials
Specific Conductance No. Spring So. Spring	6/22/2021 (uS/cm)	 460 720	1600	Substances that form ions when in water; seawater influence
Sulfate (ppm) No. Spring So. Spring	6/22/2021	 45 130	500	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm) No. Spring So. Spring	6/22/2021	 300 450	1000	Runoff/leaching from natural deposits
Turbidity (NTU) No. Spring So. Spring	6/22/2021	 0.45 0.25	5	Soil runoff. Turbidity refers to suspended particles or sediment in the water. It is important because it can interfere with disinfection and provide a medium for microbial growth. Turbidity has no health effects but may indicate the presence of disease-causing organisms including bacteria, viruses, and parasites that can cause nausea, cramps, diarrhea, and associated headaches. The results here are for untreated source water; our treated water meets all federal and state requirements for turbidity, as noted earlier in this report.

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Source Water Protection Tips for Consumers

Protection of drinking water is everyone's responsibility. You can help protect this community's drinking water sourcse in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water sources.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use the US EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.

Water Conservation Tips for Consumers

Did you know that the average US household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature!

- Take short showers – a 5 minutes shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Use a water-efficient showerhead. They are inexpensive, easy to install, and can save you up to 750 gallons a month.
- Shut off water while brushing your teeth, washing your hair, and shaving – and save up to 500 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Fix leaking toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for leaks, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Water plants only when necessary, outdoors 2 days a week or less. Reimagine your yard by changing landscaping to water-efficient options.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Cover your pool to reduce evaporation.
- Teach your children about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next year's water assessment!
- Visit www.epa.gov/watersense for more information.