Consumer Confidence Report on Water Quality for 2020

Dogwood-Blue Jay Canyon Improvement Association

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Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Dogwood-Blue Jay Canyon Improvement Association a P.O. Box 2625, Blue Jay, CA 92317 or 909-663-4027 para asistirlo en español.

The Dogwood-Blue Jay Canyon Improvement Association is pleased to present our 2020 Consumer Confidence Report (CCR). This annual water quality report provides a snap shot of where our community's water comes from, what it contains, and how it compares to water quality standards set by regulatory agencies. It also summarizes results of analytical tests of our water samples (using tests performed through December 2020) and provides educational information about sources of potential contaminants and what you can do to safeguard water quality. The report is prepared and distributed to Association members each year, as required by the Safe Drinking Water Act.

In 2020, our community's drinking water met all requirements of the U.S. Environmental Protection Agency (USEPA) and State of California.

The Association's Board of Directors welcomes members' participation in issues relating to our community's water system. Board meetings are held every 4 to 6 weeks, and all members are encouraged to attend. For information about scheduled meeting dates and locations, log on to the Association's website at www.dogwoodbluejaycanyon.com, then click on "Events" and "HOA Meetings."

For questions about this CCR, contact Cathie Dunkel (805-844-2600) or Wayne Palmer (909-663-4027).

Where Does our Water Come From?

In 2020, as in previous years, our drinking water originated from groundwater wells in the Dogwood Canyon watershed. Groundwater was produced from 1 vertical well that is 320 feet deep and 3 horizontal wells that extend up to 250 feet laterally. The wells are located south of the pump house on Dogwood Canyon Road. The produced water is pumped from the wells through underground pipes to the pump house, where it is treated with disinfectant (to remove potential microbiological contaminants, such as bacteria) and is then mixed in the adjacent blending tank. (Water from the vertical and horizontal wells must be mixed to reduce radiological contaminants in the vertical well water to acceptable levels.) The mixed water is then pumped from the blending tank up to 4 water-storage tanks near the southernmost boundary of Association property in upper Dogwood Canyon. From the storage tanks, water flows by gravity to the distribution system, which includes main lines and residential service lines in 3 distribution zones: Mershon Zone, Dogwood/Blue Jay Zone, and Lower Blue Jay Zone.

New Water Source

After many years of deliberation and planning to expand our community's water supply, a new groundwater well is scheduled to be drilled in upper Blue Jay Canyon in summer 2021. In addition to reducing our community's dependence on blended water from the Dogwood Canyon wells, the new well (in the Blue Jay Canyon watershed) should increase the reliability and volume of our water supply for consumers and firefighting efforts.

Substances That May Be in 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 USEPA's Safe Drinking Water Hotline (800-426-4791).

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 USEPA and the California State Water Resources Control Board ("State Water 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.

How Substances in Water are Measured

The following describes the units of measure used to report chemicals and other constituents in the water quality tables in this CCR. Concentrations of substances in water are typically measured in units of the mass of substance (milligrams or micrograms) per volume of water (liter). Those concentrations can also be expressed, and are reported in the CCR tables, as parts per million (ppm) or parts per billion (ppb). It can be hard to comprehend the scale of ppm (1 part substance per 1,000,000 parts water) and ppb (1 part substance per 1,000,000,000 parts water), so some approximate comparisons are provided below.

Unit Used in CCR Tables	Equivalent Unit	Unit is a measure of…	Unit is comparable to…
ppm: parts per million	**mg/L**: milligrams per liter	Concentration of a substance	1 drop in a 10-gallon aquarium 1 second in 11.5 days
ppb: parts per billion	**µg/L**: micrograms per liter	Concentration of a substance	1 drop in a 10,000-gallon swimming pool 1 second in nearly 32 years
pCi/L: picoCuries per liter		Radioactivity (a measure of the natural rate of disintegration of radioactive constituents in water)	
µS/cm: micosiemens per centimeter		Electrical conductivity (a measure of a solution's ability to conduct electricity)	

Definitions of Terms

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

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

MCLG: Maximum Contaminant Level Goal
The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

MRDL: Maximum Residual Disinfectant Level
The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Disinfectant Level Goal
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.

NA: Not Applicable

ND: Not Detectable (at testing limit)

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

PHG: Public Health Goal
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 (CalEPA).

Range of Detections: The range of individual sample results, from lowest to highest, that were collected during the sample period.

SDWS: Secondary Drinking Water Standards
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.

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

Abbreviations of Units

pCi/L: picoCuries per liter
ppb: parts per billion
ppm: parts per million
µS/cm: micosiemens per centimeter

Water Quality Testing

Every month, samples from our water system are collected and tested for chemical compounds and other potential contaminants; the testing is performed by a laboratory that is certified by the State Water Board. The number of samples and tests varies from month to month because the frequency of required testing varies by sample location and contaminant type. Some tests are done every month; others are done every quarter, year, 3 years, or 6 years. During 2020, nearly 90 samples were collected and laboratory tested.

Also, water from our distribution system is tested each week for residual disinfectant; that testing is performed on-site by our water system manager.

All laboratory and on-site test results are reported to the State Water Board or San Bernardino County Department of Public Health in accordance with regulations.

Water Quality Tables – Summary of Detected Contaminants

Tables 1 through 6 list the contaminants that were detected in samples from our water system during the most recent sampling for the constituent (based on results from water quality testing performed through December 31, 2020). The presence of these contaminants does not necessarily indicate that the water poses a health risk. The State Water Board allows us to monitor for certain contaminants less than once per year because the concentrations of those contaminants do not change frequently. Therefore, some of the data, though representative of the water quality, are more than 1 year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Water samples from our distribution system are tested every month for microbiological contaminants, including Coliforms (bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present) and *E. coli* (bacteria whose presence indicates that the water may be contaminated with human or animal wastes). Every month, 1 sample is collected at the water-testing station in each distribution zone (for a total of 3 samples each month). In 2020, a total of 36 samples were tested and no microbiological contaminants were detected.

Microbiological Contaminants	Highest No. of Detections	No. of Months in Violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (State Total Coliform Rule)	In a month: 0	0	1 positive monthly sample [a]	0	Naturally present in the environment
Fecal Coliform or *E. coli* (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 *E. coli* positive	None	Human and animal fecal waste
E. coli (Federal Revised Total Coliform Rule)	In the year: 0	0	[b]	0	Human and animal fecal waste

(a) Two or more positive monthly samples is a violation of the MCL.

(b) 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

Tap water samples from our distribution system are tested every 3 years for lead and copper to determine if the water in our system may be contributing to corrosion of household pipes. Samples are collected from interior faucets at 5 residences, with at least 1 sample in each distribution zone. The most recent testing was performed in 2020. No lead was detected. Copper was detected in all 5 samples; however, the 90th percentile level did not exceed the Regulatory Action Level (AL), so no corrosion-control measures were required.

Lead and Copper (units)	Sample Date	Sample Location	No. of Samples Collected	90th Percentile Level Detected [c]	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	8-3-2020	Residences	5	ND	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	8-3-2020	Residences	5	0.355	0	1.3	0.3	NA	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

(c) A percentile is a measure of statistical distribution of a group of data points. The 90th percentile is the value for which 90% of the data points are smaller and 10% are larger.

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Water samples from our groundwater wells are tested every 3 years for sodium and hardness. The most recent testing was performed in 2019. There are no drinking water standards for sodium and hardness, so there are no Maximum Contaminant Levels (MCLs). The detected amounts are reported here because they may be of interest to consumers who are concerned about sodium intake and may believe that the hardness of the water could affect their health.

Chemical or Constituent (units)	Sample Date	Sample Location	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	10-3-2019	Vertical Well Horizontal Wells	9.1 9.3	9.1 – 9.3	None	None	"Sodium" refers to the salt present in the water and is generally naturally occurring.
Hardness (as $CaCO_3$) (ppm)	10-3-2019	Vertical Well Horizontal Wells	100 49	49 – 100	None	None	"Hardness" is the sum of polyvalent cations present in the water, generally magnesium and calcium. The cations are usually naturally occurring.

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

Primary drinking water standards are based on health considerations; they set limits for substances that may be harmful to humans if consumed in large quantities over certain periods of time. Water samples from our groundwater wells, treatment system (blending tank), and distribution system are tested for regulated contaminants with a primary standard; the testing frequency varies by sample location and contaminant. Of the many primary-standard contaminants that were tested for, only a few were detected in our most recently tested samples, and none of the contaminants in our drinking water (blending tank and distribution system samples) exceeded the Maximum Contaminant Level (MCL) or Maximum Residual Disinfectant Level (MRDL).

Chemical or Constituent (units)	Sample Date	Sample Location	Average Level Detected	Range of Detections	Primary MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Radiological Contaminants [(d)]							
Gross Alpha Particle Activity (pCi/L)	Monthly 2020 Quarterly 2020 2018	Blending Tank Vertical Well Horizontal Wells	11.3 17.5 3.6	7.6 – 14 15 – 19 ND – 3.6	15	(0)	Erosion of natural deposits that contain radioactive minerals
Uranium (pCi/L)	Monthly 2020 Quarterly 2020 2018	Blending Tank Vertical Well Horizontal Wells	11 20.3 2.9	10 – 12 20 – 21 2.4 – 3.4	20	0.43	Erosion of natural deposits that contain radioactive minerals
Inorganic Contaminants							
Nitrate (as Nitrogen, N) (ppm)	10-5-2020	Vertical Well Horizontal Wells	ND 0.45	ND – 0.45	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Disinfection Byproducts							
Total Trihalomethanes [(e)] (ppb)	9-1-2020	Distribution System	11.0	ND – 11.0	80	N/A	Byproduct of drinking water disinfection
Total Haloacetic Acids [(f)] (ppb)	9-2-2020	Distribution System	8.0	ND – 8.0	60	N/A	Byproduct of drinking water disinfection
Disinfectant Residual							
Chlorine (Sodium Hypochlorite) (ppm)	Weekly 2020	Distribution System	0.7	0.2 – 1.5	[4.0]	[4.0]	Sodium hypochlorite is a chlorine compound used for water disinfection

(d) Radiological contaminants in Vertical Well samples exceeded the Maximum Contaminant Levels (MCLs); however, contaminant levels in drinking water (blending tank) samples were reduced to acceptable levels (below the MCLs) by mixing water from the Vertical Well and Horizontal Wells.

(e) Total Trihalomethanes include four chemicals, two of which were detected in the Mershon Zone sample: Bromodichloromethane (2.7 ppb) and Chloroform (Trichloromethane) (8.3 ppb). No Trihalomethanes were detected in the Dogwood/Blue Jay Zone sample or Lower Blue Jay Zone sample.

(f) Total Haloacetic Acids include five acids, two of which were detected in the Mershon Zone sample: Dichloroacetic Acid (5.4 ppb) and Trichloroacetic Acid (2.6 ppb). No Haloacetic Acids were detected in the Dogwood/Blue Jay Zone sample or Lower Blue Jay Zone sample.

Safeguarding our Water Supply – What You Can Do

Quality drinking water starts upstream! In order to deliver high-quality water to consumers, it is critical to protect drinking water at its source. **It takes a community effort to protect our shared water resources.** Everyone can help protect water supplies by taking these steps:

- Dispose of pharmaceuticals, household chemicals, oils, paints, and other toxic substances at proper waste-collection sites. Contact the San Bernardino County Fire Department, Household Hazardous Waste Section (909-382-5401) to learn how to dispose of those materials properly.
- Regularly inspect and pump septic tanks to minimize the risk of failure and leakage.
- Check for leaks from automobiles and heating fuel tanks. Clean up spills using an absorbent material like cat litter; sweep up the material and put it in a sealed bag in the trash.
- Clean up after pets; put their waste in a sealed bag in the trash.
- Limit the use of fertilizers, pesticides, and other chemicals.

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

Secondary drinking water standards are based on aesthetic considerations; they set limits for substances that could affect the taste, odor, and appearance of water. They are non-enforceable guidelines in place to establish an acceptable aesthetic quality of the water. Water samples from our groundwater wells are tested every 3 years for regulated contaminants with a secondary standard. The most recent testing was performed in 2019, when some of those contaminants were detected in our samples; however, the amounts did not exceed the Maximum Contaminant Levels (MCLs).

Chemical or Constituent (units)	Sample Date	Sample Location	Level Detected	Range of Detections	Secondary MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (ppm)	10-3-2019	Vertical Well Horizontal Wells	2.9 2.8	2.8 – 2.9	500	None	Runoff/leaching from natural deposits; seawater influence
Copper (ppm)	10-3-2019	Vertical Well Horizontal Wells	ND 0.16	ND – 0.16	1	None	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	10-3-2019	Vertical Well Horizontal Wells	5.0 8.1	5.0 – 8.1	15	None	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Specific Conductance (µS/cm)	10-3-2019	Vertical Well Horizontal Wells	220 140	140 – 220	1,600	None	Substances that form ions when in water; seawater influence
Sulfate (ppm)	10-3-2019	Vertical Well Horizontal Wells	1.7 1.2	1.2 – 1.7	500	None	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	10-3-2019	Vertical Well Horizontal Wells	130 82	82 – 130	1,000	None	Runoff/leaching from natural deposits
Zinc (ppm)	10-3-2019	Vertical Well Horizontal Wells	0.06 0.05	0.05 – 0.06	5.0	None	Runoff/leaching from natural deposits; industrial wastes

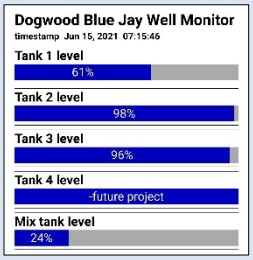
TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Some chemicals and constituents do not have a primary or secondary drinking water standard. The purpose of monitoring these unregulated contaminants is to help the USEPA and State Water Board determine where certain contaminants occur and whether the contaminants need to be regulated. The most recent testing was performed in 2019, when some unregulated contaminants were detected in water samples from our groundwater wells.

Chemical or Constituent (units)	Sample Date	Sample Location	Level Detected	Range of Detections	Notification Level	Typical Source of Contaminant
Alkalinity (as $CaCO_3$) (ppm)	10-3-2019	Vertical Well Horizontal Wells	120 67	67 – 120	None	Naturally soluble mineral salts
Calcium (ppm)	10-3-2019	Vertical Well Horizontal Wells	37 16	16 – 37	None	Naturally occurring element
Magnesium (ppm)	10-3-2019	Vertical Well Horizontal Wells	2.0 2.0	2.0	None	Naturally occurring mineral
pH	10-3-2019	Vertical Well Horizontal Wells	7.3 6.7	6.7 – 7.3	None	Measure of corrosivity of water
Potassium (ppm)	10-3-2019	Vertical Well Horizontal Wells	ND 1.5	ND – 1.5	None	Naturally occurring element

NEW! Remote Monitoring System

In 2020, at the request of Association Director **Andy Macdonald**, community resident **Jim O'Donnell** designed and built an internet-based system that allows us to remotely monitor the performance of our water system in real time from a computer or cell phone. The system uses sensors and video devices to display the level of water in our storage tanks and the status of valves and pumps — information that can significantly help with the diagnosis and repair of leaks and other problems.

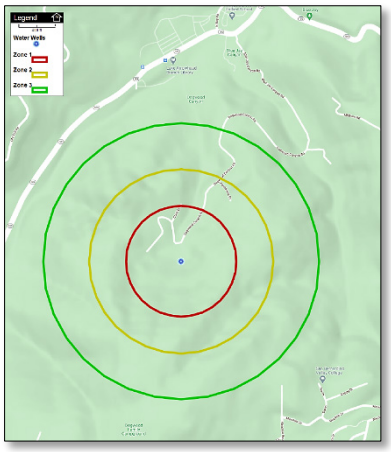


Important Health Information

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. USEPA/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 (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. Dogwood-Blue Jay Canyon Improvement Association 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 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/lead.

Dogwood Canyon Source Water Assessment



Community water systems must periodically conduct an assessment of their drinking water sources to identify potential sources of contamination. The assessment includes:

- Delineating the area around a water source through which contaminants might move and reach that water supply
- Identifying possible contaminating activities (PCAs) that might lead to the release of microbiological or chemical contaminants within the delineated area
- Determining the PCAs to which the water source is most vulnerable

A drinking water source assessment of the Dogwood-Blue Jay Canyon Improvement Association's groundwater wells in the Dogwood Canyon watershed was conducted by the California Rural Water Association in 2020-2021. The assessment covers two sources: Vertical Well and Horizontal Wells. It found that the Vertical Well is most susceptible to PCAs relating to septic systems, managed forest, and wells water supply, and the Horizontal Wells are most susceptible to PCAs relating to septic systems, abandoned wells, managed forest, and wells water supply.

The assessment reports are scheduled to be finalized and filed with the San Bernardino County Department of Public Health in summer 2021, and will be available to Association members at that time. To request a copy of the reports, contact Cathie Dunkel (cathie.dbjcia@gmail.com, 805-844-2600).

For information about the California State Water Resources Control Board's Drinking Water Source Assessment and Protection (DWSAP) Program, see https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/DWSAP.html

Questions about this Consumer Confidence Report or any aspect of our community's water quality can be directed to:

Cathie Dunkel (cathie.dbjcia@gmail.com; 805-844-2600) or **Wayne Palmer** (palmersconst@yahoo.com; 909-663-4027)