

## **Water System Information**

**Water System Name:** Highlands Water Company

**Report Date:** June 24, 2021

**Type of Water Source(s) in Use:** Surface Water

**Name and General Location of Source(s):** Pump Island- Clear Lake Intake / 14475 Lakeshore Drive in the City of Clearlake, California.

## **Drinking Water Source Assessment Information**

Clear Lake watershed is vulnerable to many potential contaminating activities (PCAs). The following is a list in alphabetical order of the greatest concerns:

- ***Agricultural/farming***
- ***Aquatic plant management***
- ***Erosion***
- ***Hydrilla eradication***
- ***Lake recreation***
- ***Municipal wastewater***
- ***Quagga and Zebra Mussels***
- ***Septic system areas***
- ***Traffic accidents (herbicide and pesticide spills)***

Specific water quality issues that are associated with each PCA include the following issues:

- ***Turbidity***
- ***Phosphorus***
- ***Simazine***
- ***Methyl tert-butyl ether (MTBE)***
- ***Giardia and Cryptosporidium***
- ***Arsenic***
- ***Mercury***
- ***Boron***

**Time and Place of Regularly Scheduled Board Meetings for Public Participation:** 2:30 PM  
Monthly the last Wednesday of Each Month in the Administrative Business Office located at 14580 Lakeshore Drive in Clearlake, California.

**For More Information, Contact:** Jeff Davis-General Manager Phone: (707) 994-2393

## **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, 2020 and may include earlier monitoring data.

**Language in Spanish:** Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse *Highlands Water Company at 14580 Lakeshore Drive in Clearlake, CA Phone Number (707) 994-2393* para asistirlo en español.

## **Terms Used in This Report**

<b>Term</b>	<b>Definition</b>
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	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

Term	Definition
(MRDLG)	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 ( $\mu\text{g/L}$ )
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 amounts 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 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

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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	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) <u>0</u>	<u>0 months</u>	1 positive monthly sample <sup>(a)</sup>	<u>0</u>	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (State Total Coliform Rule)	(In the year) <u>0</u>	<u>0 months</u>	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	<u>0</u>	Human and animal fecal waste
<i>E. coli</i> (Federal Revised Total Coliform Rule)	(In the year) <u>0</u>	<u>0 months</u>	(b)	<u>0</u>	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**

Lead and Copper	Sample Date	No. of Samples Collected	90 <sup>th</sup> Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	6/16/20	20	ND	0	15	0.2	1	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
<>Lead	12/18/19	20	ND	0	15	0.2	1	
Copper (ppm)	6/16/20	20	0.91	0	1.3	0.3	Not applicable	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<>Copper	12/18/19	20	1.00	0	1.3	0.3		

**<>Special Note:** December 2019 Lead and Copper results were not included per directive in prior Consumer Confidence Report for the year 2019. We are required to include this information above with the current 2020 Consumer Confidence Report.

**Table 3. Sampling Results for Sodium and Hardness**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCL G)	Typical Source of Contaminant
Sodium(ppm): Raw Treated	6/05/20 6/05/20	12 MG/L 15 MG/L		None None	None None	Salt present in the water and is generally naturally occurring
Hardness (ppm): Raw Treated	6/05/20 6/05/20	137 MG/L 141 MG/L		None None	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 (yearly average ppb)	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
20 <sup>th</sup> Tank Total Trihalomethanes [TTHMs] (ppb)	2/12/20 5/20/20 8/12/20 11/12/20	8.60 ug/l	3.81-19.15	80		<i>By-product of drinking water chlorination</i>
Lower Spruce Tank Total Trihalomethanes [TTHMs] (ppb)	2/12/20 5/20/20 8/12/20 11/12/20	28.95	3.11-61.34	80		<i>By-product of drinking water chlorination</i>
20 <sup>th</sup> Tank Haloacetic Acid [HAA5s] (ppb)	2/12/20 5/20/20 8/12/20 11/12/20	55.23 ug/l	37.90-72.60	80		<i>By-product of drinking water chlorination</i>
Lower Spruce Tank Haloacetic Acid [HAA5s] (ppb)	2/12/20 5/20/20 8/12/20 11/12/20	29.18 ug/l	15.40-44.70	60		<i>By-product of drinking water chlorination</i>
Bromate (ppb)	2/19/20 5/20/20 8/12/20 11/18/20	ND	0.00-0.00	10		<i>By-product of water disinfection</i>
Gross Alpha (pCi/L)	4/29/15	.0670	3	15		<i>Found in surface water from erosion of natural deposits</i>

**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
Aluminum (ug/l): Raw	6/05/20	110	50	1	600	<i>Generally found in and surface water from erosion of natural deposits, orchards</i>
Treated	6/05/20	ND	50			

Color:						
Raw	6/05/20	150		15(Color Units)		Naturally occurring organic materials
Treated	6/05/20	ND		15(Color Units)		
Fluoride (mg/l):						<b>Generally found in and surface water from erosion of natural deposits</b>
Raw	6/05/20	0.11	.10 mg/l	2 (mcl)		
Treated	6/05/20	ND	.10 mg/l	2 (mcl)		
Iron (ug/l):						<b>Generally found in ground and surface water from erosion of natural deposits</b>
Raw	6/05/20	200 ug/l	100 ug/l	300 mg/l		
Treated	6/05/20	ND	100 ug/l	300 mg/l		
Odor						<b>Substances that form ions when in water, seawater influence</b>
Raw	6/05/20	1000 TON	1 TON	3 TON		
Treated	6/05/20	ND	1 TON	3 TON		
Sulfate						<b>Runoff/leaching from natural deposits, industrial waste</b>
Raw	6/05/20	6.7 mg/l	.5 mg/l			
Treated	6/05/20	6.8 mg/l	.5 mg/l			
Arsenic (ug/l):						<b>Generally found in ground and surface water from erosion of natural deposits, agricultural runoff</b>
Raw	6/05/20	3.40	2	10		
Treated	6/05/20	ND	2	10		
Fluoride (mg/l):						<b>Generally found in ground and surface water from erosion of natural deposits</b>
Raw	6/05/20	0.11	.10	2		
Treated	6/05/20	ND	.10	2		
Iron (ug/l):						<b>Generally found in ground and surface water from erosion of natural deposits</b>
Raw	6/05/20	200	100	300		
Treated	6/05/20	ND	100	300		

### 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. Highlands Water Company 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>.

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

**Table 6. Violation of a MCL, MRDL, AL, TT or Monitoring Reporting Requirement**

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language
OEL	Exceeded HAA5 MCL	3 <sup>rd</sup> Quarter	Flushed and Turn Over of Tank	Over many years may increase risk of cancer
OEL	Exceeded HAA5 MCL	4 <sup>th</sup> Quarter	Flushed and Turn Over of Tank. Repair aeration pumps. Replace electrical breakers/connections	Over many years may increase risk of cancer

### For Systems Providing Surface Water as a Source of Drinking Water

**Table 7. Sampling Results Showing Treatment of Surface Water Sources**

Treatment Technique <sup>(a)</sup> (Type of approved filtration technology used)	#1 Multi-media pressure
Turbidity Performance Standards <sup>(b)</sup> (that must be met through the water treatment process)	Turbidity of the filtered water must: <b>1 – Be less than or equal to 0.3 NTU in 95% of measurements in a month.</b> <b>2 – Not exceed 0.3 NTU for more than eight consecutive hours.</b> <b>3 – Not exceed 0.3 NTU at any time.</b>
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100 %
Highest single turbidity measurement during the year	0.10
Number of violations of any surface water treatment requirements	0

(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 MCL - NONE**