

2018 Consumer Confidence Report

Water System Name:	McKinleyville Community Services District (MCSD)	Report Date:	5/8/19
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The District tests 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, 2018 and may include earlier monitoring data. Last year, as in years past, your tap water met all United State Environmental Protection Agency (USEPA) and State drinking water health standards. MCSD vigilantly safeguards its water infrastructure and once again, we are proud to report that our system did not violate a maximum contaminant level or any other water quality standard in 2018.

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

Type of water source(s) in use:	Drinking water delivered by the McKinleyville Community Services District (MCSD) is supplied by the Humboldt Bay Municipal Water District (HBMWD). The District's source water has been classified by the State Water Resources Control Board (SWRCB) as groundwater. The classification is important with respect to the regulations that a water system must follow to ensure water quality.
Name & general location of source(s):	<p>The Humboldt Bay Municipal Water District is a regional water wholesaler that supplies the drinking water to MCSD. Drinking water delivered to the District is drawn from wells below the bed of the Mad River northeast of Arcata. This water-bearing ground below the river is called an aquifer. These wells, called Ranney Wells, draw water from the sands and gravel of the aquifer at depths of 60 to 90 feet, thereby providing a natural filtration process. During the summer, this naturally filtered water is disinfected via chlorination and delivered to the District.</p> <p>In the late 1990s heavy winter rainfalls and high river levels were accompanied by increased turbidity (cloudiness) in the District's water. While turbidity itself is not a health concern, there is concern that it may interfere with the disinfection process. In 1997, DHS mandated that the District take steps to control the turbidity in its drinking water. Together with its wholesale customers, the new Turbidity Reduction Facility (TRF) was constructed and became operational in late 2002. For the first time in many years the District met the State's secondary maximum contaminant level standard for turbidity of less than 5 NTU (the unit which turbidity is measured). The TRF operates only during winter months.</p>

Drinking Water Source Assessment information:	<p>HBMWD treats its water and performs annual monitoring and testing, in accordance with SWRCB regulations and requirements, to ensure its water is safe to drink. In 2018, HBMWD conducted approximately 450 water quality tests for over 100 contaminants, including over 60 microbiological contaminant tests throughout HBMWD's distribution system. The results from the 2018 monitoring and testing program indicate that the water quality is very high, as has consistently been the case in past years.</p> <p>MCSD performs separate monitoring and testing, in accordance with the USEPA and the State Board regulations and requirements, to ensure that the water quality remains high within the MCSD storage and distribution systems. MCSD also performed approximately 230 water quality tests during 2018. The results from both the HBMWD's and the MCSD's 2018 monitoring and testing programs indicate that our water quality is very high, as has consistently been the case in past years.</p> <p>The tables below list the drinking water contaminants detected during 2018. A detected contaminant is any contaminant detected at or above its Detection Limit for Purposes of Reporting (DLR) (limit is established by SWRCB) or for unregulated contaminants, the Minimum Reporting Level (MRL). The tables show the level of detected contaminants. Contaminants that are not detected, or are detected below the DLR or MRL, are not required to be reported. The tables also show the maximum contaminant levels (MCL) and public health goals (PHG). Definitions for terms used in this report are listed on the next page.</p>
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Time and place of regularly scheduled board meetings for public participation:	First Wednesday of each month at 7:00 p.m. at Azalea Hall, 1620 Pickett Road, McKinleyville, Ca. 95519
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For more information, contact:	Gregory Orsini, General Manager	Phone:	(707) 839-3251
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Definitions of Terms Used in This Report:

You will find many terms and abbreviations in the table below. To help you understand these terms, the following definitions are provided:

- **Public Health Goal (PHG):** The level of a contaminant in drinking water, below 9 which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.
- **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.
- **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 cover the aesthetic quality of the water such as odor, taste and appearance.
- **Primary Drinking Water Standard (PDWS):** MCLs for contaminants that affect health along with monitoring, reporting requirements and water treatment requirements.
- **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.
- **Regulatory Action Level (RAL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow.
- **Treatment Technique (TT):** A Required process intended to reduce the level of a contaminant in drinking water.
- **Variances and Exemptions:** State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.
- **n/a:** not applicable
- **ND:** not detectable at testing limit
- **ppb:** parts per billion or micrograms per liter ($\mu\text{g/L}$)
- **ppm:** parts per million or milligrams per liter (mg/L)
- **pCi/l:** picocuries per liter (**a measure of radiation**)
- **mgCaCO₃/L:** milligrams of calcium carbonate per liter (**a measure of hardness**)
- **microseimens/ cm :** a measure of specific conductance ($\mu\text{S/cm}$)
- **NTU:** Nephelometric Turbidity Units
- **Detection Limit for Purposes of Reporting (DLR):** The DLR is a parameter that is set by state regulation for each reportable contaminant. The presence of these contaminants in the drinking water at its DLR does not necessarily indicate that the water poses a health risk and can be below its MCL.
- **Minimum Reporting Level (MRL):** The MRL is defined by the USGS National Water Quality Laboratory as the smallest measured concentration of a substance that can be reliably measured by using a given analytical method.
- **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.

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 can pick up substances resulting from the presence of animals or human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which 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.
- Radioactive contaminants that can be naturally-occurring or be the result of oil and gas production and mining activities.
- Organic chemical contaminants including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, agriculture application, and septic systems.

Water Quality Testing Results

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency and the State Water Resources Control Board (State Board) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. State Board regulations and U.S. Food and Drug also established limits for contaminants in bottled water that provide the same protection for public health. The MCSD testing for coliform produced zero results. Test results for disinfection byproducts have been below the Maximum Contaminant Level (MCL).

The tables enclosed in the newsletter list all the drinking water contaminants that were monitored during 2018. Additionally, the State requires that both Districts monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Therefore, results from prior years are included if such a contaminant was detected. There are very few entries in the tables because very few contaminants were actually detected in prior years. It is once again important to note that the presence of these contaminants does not necessarily indicate that the water poses a health risk.

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 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) or visiting the USEPA website. Additional information on bottled water is available on the California Department of Public Health website.

(<https://www.cdph.ca.gov/Programs/CEH/DFDCS/Pages/FDBPrograms/FoodSafetyProgram/Water.aspx>)

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, persons 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 and the Center for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the USEPA's Safe Drinking Water Hotline (1-800-426-4791) or visiting their website (<http://www.epa.gov/dwstandardsregulations/drinking-water-standards-and-health-advisory-tables>)

HBMWD consistently and frequently monitors for the presence of giardia and cryptosporidium in its drinking water. Since the mid-1990s, when the EPA approved the testing technique for these contaminants, HBMWD has never had a confirmed detection of either contaminant.

Special Language for Lead: 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. MCSD 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 or at (<http://www.epa.gov/safewater/lead>).

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Humboldt Bay Municipal Water District Testing: RAW SOURCE WATER

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	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	(In a month) 0	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	0	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)	2017	5	0	0	15	0.2	1	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2017	5	1.1	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)	2016	3.7	N/A	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2016	87	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
TTHMs (µg/L) – (Total Trihalomethanes)	2018	9.4	N/A	80	N/A	Byproduct of drinking water disinfection
HAA5 (µg/L) (Haloacetic Acids)	2018	5.1	2.0-5.1	60	N/A	Byproduct of drinking water disinfection
Chlorine (mg/L)	2018	Average=0.66	0.39-1.36	[MRDL = 4.0 (as Cl ₂)]	[MRDLG = 4.0 (as Cl ₂)]	Drinking water disinfectant added for treatment
Aluminum (mg/L)	2015	0.011	N/A	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes
Turbidity	2018	1.03	0.03-1.03	TT=5.0 NTU	N/A	Soil runoff
		99.7%	N/A	TT=90% of sample ≤1.0 NTU	N/A	

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
Color (units)	2016	5.0	N/A	15	N/A	Naturally-occurring organic materials
Chloride (mg/L)	2016	3.9	N/A	500	N/A	Runoff/leaching from natural deposits; seawater influence
Sulfate (mg/L)	2016	10.0	N/A	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)	2018	130	N/A	1,600	N/A	Substances that form ions when in water
Total Dissolved Solids (mg/L)	2016	90	N/A	1,000	N/A	Runoff/leaching from natural deposits
Turbidity (NTU)	2018	Average=0.13	0.03-1.03	5	N/A	Soil runoff

Unregulated Contaminant Monitoring Rule (UCMR)4 – 2018 Testing Results

As part of the federal drinking water program, USEPA issues a list of currently unregulated contaminants to be tested by Public Water Systems throughout the nation. This process occurs every five years pursuant to the Unregulated Contaminant Monitoring Rule (UCMR). The purpose of the UCMR program is to determine the prevalence of unregulated contaminants in drinking water. Results of this testing help USEPA determine whether or not to regulate new contaminants for protection of public health.

There have been four cycles of monitoring: UCMR 1 (2001-2003), UCMR 2 (2008-2010), UCMR 3 (2013-2015), and UCMR 4 (2018-2020). HBMWD participated in UCMR 1 through UCMR 3, which tested for a total of 65 constituents and were reported on previous CCRs. The UCMR 4 consists of testing for 10 cyanotoxins, 20 additional contaminants, and 2 indicators. HBMWD has not started cyanotoxin testing. HBMWD has tested for the 20 additional contaminants and 2 indicators. Below are the 4 contaminants with test results above their minimum reporting levels (MRL) and the test results for the 2 indicators. Information on the likely source and potential health effects are also included.

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Manganese (µg/L)	2018	2.0	N/A	500 µg/L	Manganese exposures result in neurological effects. High levels of manganese in people have been shown to result in adverse effects to the nervous system.
HAA5 [Sum of 5 Haloacetic Acids] (µg/L)	2018	5.1	2.0-5.1	60 µg/L	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
HAA6Br [Sum of 6 Haloacetic Acids] (µg/L)	2018	2.28	N/A	N/A	Some people who drink water containing haloacetic acids in excess over many years may have an increased risk of getting cancer.
HAA9 [Sum of 9 Haloacetic Acids] (µg/L)	2018	4.28	N/A	N/A	Some people who drink water containing haloacetic acids in excess over many years may have an increased risk of getting cancer.
Bromide (µg/L)	2018	14	11-18	N/A	Indicator of the potential to form haloacetic acids during water treatment. Bromide itself has low human toxicity
Total Organic Carbon (µg/L)	2018	0.55	0.53-0.57	N/A	Indicator of the potential to form haloacetic acids during water treatment. Total Organic Carbon has no known health effect

McKinleyville Community Services District

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	MCLG	Typical Source of Bacteria
Total Coliform Bacteria (state Total Coliform Rule)	(In a month) 0	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	0	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	90th Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (µg/L)	2016	30	.30	0	15	0.2	0	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (µg/L)	2016	30	1.73	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)	2007	3.7	N/A	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2005	67	57-80	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
TTHMs (µg/L) – (Total Trihalomethanes)	2018	21	12-21	80	N/A	Byproduct of drinking water disinfection
HAA5 (µg/L) (Haloacetic Acids)	2018	8	4.3-8	60	N/A	Byproduct of drinking water disinfection
Chlorine (mg/L)	2018	Average=0.49	0.30-.80	[MRDL = 4.0 (as Cl ₂)]	[MRDLG = 4.0 (as Cl ₂)]	Drinking water disinfectant added for treatment

Unregulated Contaminant Monitoring Rule (UCMR) 3 – 2014 Testing Results

As part of the federal drinking water program, USEPA issues a list of currently unregulated contaminants to be tested by Public Water Systems throughout the nation. This process occurs every five years pursuant the Unregulated Contaminant Monitoring Rule (UCMR). The purpose of the UCMR program is to determine the prevalence of unregulated contaminants in drinking water. Results of this testing help USEPA determine whether or not to regulate new contaminants for protection of public health.

The District participated in the current UCMR 3 testing in 2014. The District tested 28 constituents on USEPA's List 1 (Assessment Monitoring). Of the 28 constituents tested, 24 were non-detected and four had results. The table below shows the four constituents with results above their minimum reporting levels (MRL). Although unregulated by USEPA, two of the four have MCL's established or proposed by CDPH. Information on the likely source and potential health effects is also included.

The District will be participating in the UCMR 4 in 2019.

DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	Health Effects Language
Chromium 6 + (µg/L)	2014	.45	.34 - .45	10	Naturally occurring from geological formations, also from manufacturing of textile dyes, wood preservation, leather tanning, and anti-corrosion coatings
Chromium, Total (µg/L)	2014	.34	.25 - .34	50	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits. Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.
Strontium, Total (µg/L)	2014	348	347 - 348	N/A	Strontium is a silvery metal that rapidly turns yellowish in air. Strontium is found naturally as a non-radioactive element. Strontium has 16 known isotopes. Naturally occurring strontium is found as four stable isotopes Sr-84, -86, -87, and -88. Twelve other isotopes are radioactive.
Vandium, Total (µg/L)	2014	.70	.68 - .70	N/A	Naturally-occurring; the primary possible contaminating activity is steel manufacturing and in association with hazardous waste sites. The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals..