

## McKinleyville Community Services District (MCSD)

### 2013 Consumer Confidence Report

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

Last year, as in years past, your tap water met all Federal and State Environmental Protection Agency (EPA) 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 2013.

#### **Introduction and Background**

For a number of years, California State Law has required that water systems prepare an *Annual Water Quality Report* for its customers providing information regarding the quality of water delivered to them. The 1996 amendments to the federal Safe Drinking Water Act introduced new reporting requirements - namely preparation of a *Consumer Confidence Report* - with essentially the same purpose as that of the California *Water Quality Report*. Since 1999, California water systems must comply with federal reporting requirements. This report represents the McKinleyville Community Service District's 2013 Consumer Confidence Report. It is a snapshot of the quality of the water we provided last year. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or the quality of your drinking water, please call Greg Orsini, General Manager at 839-3251. You may also attend one of the regularly scheduled meetings of our Board of Directors, which are held the first Wednesday of each month at 7:00 p.m. at Azalea Hall (1620 Pickett Road).

#### **Water Source**

Drinking water delivered by the McKinleyville Community Services District (MCSD) is supplied by the Humboldt Bay Municipal Water District (HBMWD). HBMWD water is drawn from wells located in the bed of the Mad River northeast of Arcata along Highway 299. These wells, called Ranney Wells, extract water from the sands and gravel of the riverbed at depths of 60 to 90 feet, thereby providing a natural filtration process. In low rainfall periods, this naturally filtered water is then disinfected via chlorination and delivered, without further treatment, to the HBMWD's wholesale municipal and retail customers in the greater Eureka/Arcata area. The District's source water has been classified by the State Department of Health Service as groundwater. The classification is important with respect to the regulations that a water system must follow to ensure water quality.

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.

### **General Water Quality**

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 EPA's Safe Drinking WATER hotline (1-800-426-4791) or visiting their website (<http://water.epa.gov/drink/index.cfm>).

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.

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. EPA 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 Safe Drinking Water Hotline (1-800-426-4791) or visiting their website (<http://water.epa.gov/drink/index.cfm>).

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.

### **Water Quality Testing Results**

In order to ensure that tap water is safe to drink, the California Department of Health Services (DHS) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. HBMWD treats its water and performs annual monitoring and testing, in accordance with the DHS regulations and requirements, to ensure its water is safe to drink. In addition, MCSD performs separate monitoring and testing, in accordance with the DHS regulations and requirements, to ensure that the water quality remains high within the MCSD storage and distribution systems. Additional monitoring performed by MCSD includes laboratory analysis for coliform bacteria, disinfection byproducts and lead/copper. Test results for disinfection byproducts and lead/copper are included in the MCSD test results table. The MCSD testing for coliform produced no positive results and test results for disinfection byproducts have been below the Maximum Contaminant Level (MCL).

In 2013, HBMWD conducted approximately 408 water quality tests for 60 contaminants. MCSD also performed approximately 320 water quality tests during 2013. The results from both the HBMWD's and the MCSD's 2013 monitoring and testing programs indicate that our water quality is very high, as has consistently been the case in past years.

The tables enclosed in the newsletter list all the drinking water contaminants that were *monitored* during 2013. 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.

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>).

During 2013, the District was also required to test for unregulated contaminants as part of the Unregulated Contaminant Monitoring Rule (UCMR) 3. This testing and results are described on the next page. It is important to note that the presence of contaminants does not necessarily indicate that the water poses a health risk.

### **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.
- **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 ( $\text{mg/L}$ )
- **pCi/l:** picocuries per liter (**a measure of radiation**)
- **mgCaCO<sub>3</sub>/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.

**Humboldt Bay Municipal Water District Testing: RAW SOURCE WATER**

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Contaminant and Units	Level Detected	MCL	PHG (or MCLG)	Likely Source and Potential Effects (if above MCL)
<b>Disinfection Byproducts and Disinfectant Residuals</b>				
TTHMs – Total Trihalomethanes (µg/L)	Average = 6.6	80 µg/L	n/a	By-product of drinking water chlorination.
HAA5 (µg/L) Halo acetic Acids	Average = ND	60 µg/L	n/a	By-product of drinking water chlorination.
Chlorine (mg/L)	Average= 0.67	4 mg/L	4 mg/L	Drinking water disinfection added for treatment.
<b>Inorganic Contaminants</b>				
Copper (mg/L)*	Five sites tested and none were above the AL; 90 <sup>th</sup> percentile= 0.965	AL = 1.3 mg/L	0.3 mg/L	Internal corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives
Lead (µg/L)*	Five sites tested none above the AL 90 <sup>th</sup> percentile= 8	AL = 15 µg/L	0.2 µg/L	Internal corrosion of household plumbing systems; discharges from industrial manufactures, erosion of natural deposits
Aluminum (mg/L)****	0.16	1 mg/L	0.6 mg/L	Discharges form industrial manufactures, erosion of natural deposits
<b>Regulated Contaminants with Secondary MCLs</b> (as defined above, secondary MCLs address aesthetic quality of the water such as odor, taste and appearance)				
Chloride (mg/L) ***	Average = 2.8	500 mg/L	n/a	Runoff/leaching from natural deposits, or seawater influence
Sulfate (mg/L) ***	Average = 9.5	500 mg/L	n/a	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)**	Average 140	1600 µS/cm	n/a	Substances form ions in water
Total Dissolved Solids (mg/L) ***	Average = 93	1000 mg/L	n/a	Runoff/leaching from natural deposits
Turbidity (NTU)	Range = 0.03-0.15 Average = 0.07	5 NTU	n/a	Turbidity has no direct health effect. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that cause symptoms such as nausea, cramps, diarrhea and associated headaches.

\*Samples taken in 2011\*\*, Samples taken in 2007, \*\*\*\*Samples taken in 2006

*Although sodium and hardness do not have MCLs, they are of interest to many consumers.*

***Hardness** is the sum of polyvalent cations present in water, generally magnesium and calcium. The cations are, usually naturally occurring. Hardness test resulted in 68 mg CaCO3/L (Sample taken in 2007)*

***Sodium** refers to salt present in water and is generally naturally occurring. Sodium test resulted in 3.6 mg/L (Sample taken in 2007)*

**Unregulated Contaminant Monitoring Rule (UCMR) 3 – 2013 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 Contaminanat Monitoring Rule (UCMR). The purpose of the UCMR program is to determine the prevelence of unregualted 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 three cycles of monitoring: UCMR 1 (2001–2003), UCMR 2 (2008-2010), and UCMR 3 (2013-2015). The District participated in UCMR 1 and UCMR 2 in which 37 contituents were tested; all results were non-detected. The District also participated in the current UCMR 3 testing in 2013. The District tested 28 constituents on USEPA’s List 1 (Assessment Monitoring) and List 2 (Screening Survey). 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.

**Humboldt Bay Municipal Water District Testing: UCMR 3**

Contaminant and Units	Level Detected	Levels & Goals (see last page for definitions)			Likely Source and Potential Effects (if above MCL)
		MRL	MCL	PHG	
Unregulated Contaminant Monitoring Rule 3 – Detected Chemicals					
Chromium 6 +	Range = 0.18 – 0.23 µg/L	0.03 µg/L	0.10 µg/L (proposed but not yet adopted)	0.02 µg/L	Naturally occurring from geological formations, also from manufacturing of textile dyes, wood preservation, leather tanning, and anti-corrosion coatings.
Chromium, Total	Range = 0.20 – 0.39 µg/L	0.20 µg/L	50 µg/L	n/a	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	Range = 240 – 310 µg/L	0.30 µg/L	n/a	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	Range = 0.38 – 0.65 µg/L	0.20 µg/L	n/a	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.

*Note: Vanadium has Notification level of 50 µg/L*

**McKinleyville Community Services District Testing: DISTRIBUTION SYSTEM**

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Contaminant and units	Level Detected	MCL	PHG (or MCLG)	Likely Source and Potential Effects (if above MCL)
<b>Microbiological Contaminants -- 211 Samples</b>				
Total Coliform Bacteria	Zero positive	More than one positive sample monthly	Zero positives	Naturally present in the environment
Fecal Coliform And E. coli. Bacteria	Zero positive	A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform positive	Zero positive	Fecal coliform and E. coli. are bacteria whose presents indicates that water may be contaminated with human waste or animal fecal waste
<b>Disinfection Byproducts and Disinfectant Residuals</b>				
TTHMs – Total (µg/L) Trihalomethanes	Average= 8.4	80 µg/L	n/a	By-product of drinking water chlorination
HAA5 (µg/L) Halo acetic Acids	Average=3.1	60 µg/L	n/a	By-product of drinking water chlorination
Chlorine (mg/L)	Average= 0.49	4 mg/L	4	Drinking water disinfection
<b>Lead and Copper</b>				
Copper (mg/L)	Thirty sites tested none above the AL 90 <sup>th</sup> percentile= 1.21	AL = 1.3 mg/L	0.3 mg/l	Internal corrosion of household plumbing; erosion of natural deposit
Lead (µg/L)	Thirty sites tested none above the AL 90 <sup>th</sup> percentile= 2.63	AL = 15 µg/L	0.2 µg/L	Internal corrosion of household plumbing systems; discharges from industrial manufactures, erosion of natural deposits

*Additional Water Characteristics*  
*Sodium and Hardness*

*Although sodium and hardness do not have MCLs, they are of interest to many consumers who are concerned about sodium intake.*

***Hardness*** is the sum of polyvalent cations present in water, generally magnesium and calcium. The cations are, usually naturally occurring.

***Sodium*** refers to salt present in water and is generally naturally occurring.

Sodium (ppm) *	Average = 3.6	Samples Taken in 2007
Hardness * (mgCaCO <sub>3</sub> /L)	Range = 57 – 80 Average = 67	Samples Taken in 2005

**Unregulated Contaminant Monitoring Rule (UCMR) 3 – 2013 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 Contaminanat Monitoring Rule (UCMR). The purpose of the UCMR program is to determine the prevelence of unregualted 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 2013. 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.

**McKinleyville Community Services District Testing: UCMR 3**

Contaminant and Units	Level Detected	Levels & Goals (see last page for definitions)			Likely Source and Potential Effects (if above MCL)
		MRL	MCL	PHG	
Unregulated Contaminant Monitoring Rule 3 – Detected Chemicals					
Chromium 6 +	Range = 0.23 – 0.29 µg/L	0.03 µg/L	0.10 µg/L (proposed but not yet adopted)	0.02 µg/L	Naturally occurring from geological formations, also from manufacturing of textile dyes, wood preservation, leather tanning, and anti-corrosion coatings.
Chromium, Total	Range = 0.26 – 0.29 µg/L	0.20 µg/L	50 µg/L	n/a	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	Range = 270 – 283 µg/L	3.00 µg/L	n/a	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	Range = 0.41 – 0.48 µg/L	0.20 µg/L	n/a	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.

*Note: Vanadium has Notification level of 50 µg/L*