

## McKinleyville Community Services District

### 2010 Consumer Confidence Report

#### **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 2010 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 Norman Shopay (General Manager) or Greg Orsini (Operations Director) at 839-3251. You may also attend one of the regularly scheduled meetings of our Board of Directors, which are held the third 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).

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.



### **General Water Quality (Continued):**

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 contaminant such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, or industrial processes.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture and residential uses.
- Radioactive contaminants, which are naturally occurring or be the result of oil and gas production and mining activity.
- Organic chemical contaminants which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, 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, may 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 Safe Drinking Water Hotline (1-800-426-4791).

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 testing 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 2010, HBMWD conducted more than 380 water quality tests for 37 contaminants. MCSD also performed approximately 240 water quality tests during 2010. The results from both the HBMWD's and the MCSD's 2010 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 2010. 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.

### **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 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 or PDWS:** MCLs for contaminants that affect health along with monitoring, reporting requirements and water treatment requirements.
- **Regulatory Action Level (AL):** 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**)
- **$\text{mgCaCO}_3/\text{L}$ :** 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



Humboldt Bay Municipal Water District Testing: RAW SOURCE WATER

*McKinleyville Community Services District  
2010 Consumer Confidence Report*

Contaminant and Units	Level Detected	MCL	PHG (or MCLG)	Likely Source and Potential Effects (if above MCL)
<b>Microbiological Contaminants</b>				
Total Coliform Bacteria	One positive	More than one positive sample monthly	Zero positives	Coliform bacteria naturally present in the environment and are used as an indicator that other potentially-harmful bacteria may be present
Fecal Coliform and E. coli.	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 or animal fecal waste
<b>Disinfection Byproducts and Disinfectant Residuals</b>				
TTHMs – Total Trihalomethanes (µg/L)	Average = 7.5	80 µg/L	n/a	By-product of drinking water chlorination
HAA5 (µg/L) Halo acetic Acids	Average = 3.0	60 µg/L	n/a	By-product of drinking water chlorination
Chlorine (mg/L)	Average= 0.68	4 mg/L	4 mg/L	Drinking water disinfection
<b>Inorganic Contaminants</b>				
Copper (mg/L)*	Five sites tested and none were above the AL; 90 <sup>th</sup> percentile=.845	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= 3	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) **	Range = 2.8-2.8 Average = 2.8	500 mg/L	n/a	Runoff/leaching from natural deposits, or seawater influence
Sulfate (mg/L) **	Range = 9.5-9.5 Average = 9.5	500 mg/L	n/a	Runoff/leaching from natural deposits; industrial wastes
Specific Conductance (µS/cm)*	Range = 120-120 Average 120	1600 µS/cm	n/a	Substances form ions in water
Total Dissolved Solids (mg/L) **	Range= 93- 93 Average = 93	1000 mg/L	n/a	Runoff/leaching from natural deposits
Turbidity (NTU)	Range = 0.05-0.73 Average = 0.17	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 2008\*\*, Samples taken in 2007, \*\*\* Samples taken in 2006



McKinleyville Community Services District Testing: DISTRIBUTION SYSTEM

McKinleyville Community Services District  
2010 Consumer Confidence Report

Contaminant and units	Level Detected	MCL	PHG (or MCLG)	Likely Source and Potential Effects (if above MCL)
Microbiological Contaminants -- 211 Samples				
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
Disinfection Byproducts and Disinfectant Residuals				
TTHMs – Total (µg/L) Trihalomethanes	Average= 10	80 µg/L	n/a	By-product of drinking water chlorination
HAA5 (µg/L) Halo acetic Acids	Average=2.3	60 µg/L	n/a	By-product of drinking water chlorination
Chlorine (mg/L)	Average= 0.49	4 mg/L	4	Drinking water disinfection
Lead and Copper				
Copper (mg/L)	Thirty sites tested none above the AL 90 <sup>th</sup> percentile= .721	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= .007	AL = 15 µg/L	0.2 µg/L	Internal corrosion of household plumbing systems; discharges from industrial manufactures, erosion of natural deposits

\*Samples taken in 2007

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) *	Range = 4.4 – 4.5 Average = 4.45
Hardness * (mgCaCO <sub>3</sub> /L)	Range = 57 – 80 Average = 67