

Your 2001 Water Quality Report

This report includes data collected from January 1 to December 31, 2001
Metropolitan Utilities District ♦ 1723 Harney St ♦ Omaha NE 68102

Why this report?

The Safe Drinking Water Act requires public water supply systems to send annual water quality reports to all customers, paid for by customers through water rates. For more information about M.U.D. water operations, call 554.6666 or see our website, www.mudomaha.com.

Public meetings

The Board of Directors meets at 9 A.M. the first Wednesday of every month at 1723 Harney St., Omaha. See our website: www.mudomaha.com or call 449.8153 for an agenda.

Requests for special accommodations, alternative formats or sign language interpreters require a minimum of 72 hours advance notice. Call 449.8153 or TDD phone 449.8200.



Your customer-owned utility
e-mail:
customer_service@mudnebr.com

Your drinking water surpasses every federal, state requirement

We are proud to report that as a customer of the Metropolitan Utilities District, you receive a high quality product that continues to surpass every federal and state standard for safe drinking water. Since we do not have the capability or resources to determine health risks of chemical compounds found in water, we rely on the U.S. Environmental Protection Agency (EPA) and Nebraska Health and Human Services to tell us what substances are a health risk—and if they are a health risk, what levels are safe for human consumption.

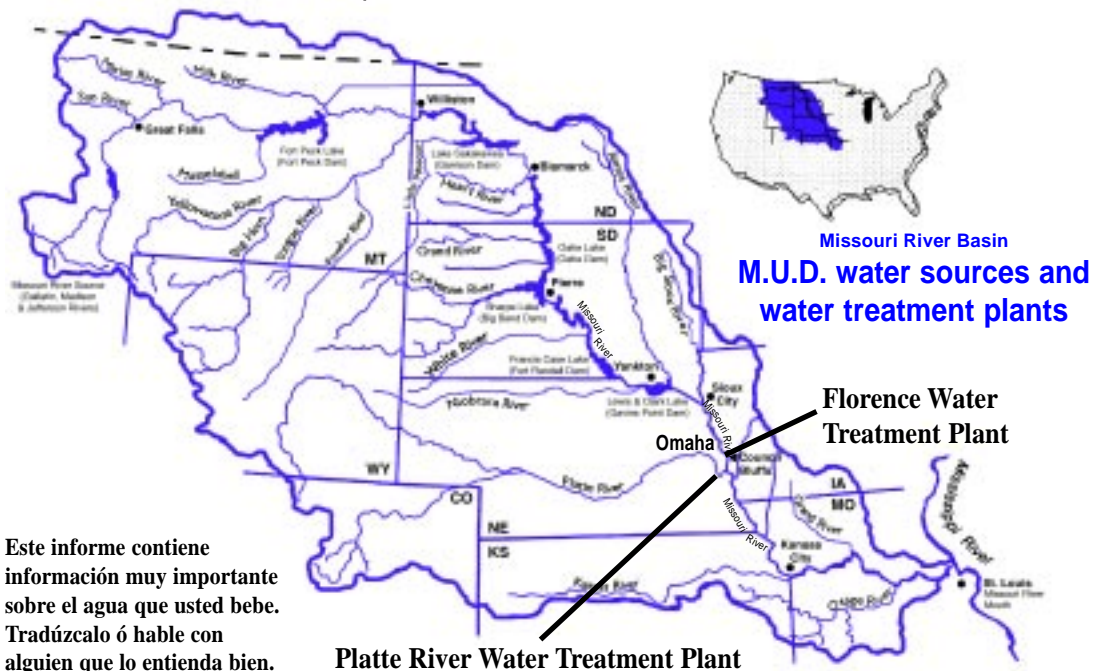
If EPA sets standards our present treatment process is unable to meet, we will take the necessary steps, regardless of capital cost, to modify our system and bring the water treatment process into compliance. Our customers will pay the cost to bring the treatment process into EPA compliance.

Sources of water

We serve more than 175 thousand customers an average of 95.5 million gallons of water per day. Sources of water include the Missouri and Platte Rivers and several groundwater peak-shaving wells in the Dakota sandstone aquifer.

- The Florence Plant in north Omaha treats Missouri River water, defined by the U.S. Environmental Protection Agency (EPA) as surface water.
- The Platte Plant, south of Omaha in Sarpy County, treats Platte River water from wells, defined as groundwater.

Water from the two treatment plants is blended in the distribution system.



Below are the regulated contaminants detected in your drinking water between January 1 and December 31, 2001. There were no violations. Levels surpassed federal and state requirements.

Level			Millard/Elkhorn	Likely source(s)
Florence Plant	Platte Plant	Peaking Wells		
2.3	3.0	7.0 - <2.0		Runoff from orchards; natural deposits; runoff from glass and electronic production wastes.
<0.08	1.0	<0.08		Runoff from herbicide used on row crops.
0.047	0.120	0.340 - 0.115		Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
1.4	1.0	3.0 - <1.0		Discharge from chemical and agricultural chemical factories.
1.6 - 0.00	1.6 - 0.00	1.6 - 0.00		Bacteria naturally present in the environment; used as an indicator that other potentially harmful bacteria may be present.
1.1 - 0.83	1.1 - 0.83	0.54 - 0.20		Water additive to promote strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
4.4	—	—		Erosion of natural deposits.
0.67	1.6	7.3 - 0.20		Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
<5.0	<5.0	5 - <5.0		Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
86-30	71-31	21 - 18		An element of the alkali metal group found in nature, soil, rocks and other deposits.
135 - 41	135 - 41	135 - 41		By-product of drinking water chlorination.
0.33 - <0.05	N/A	N/A		Soil runoff.

50 samples taken in August, 2001
Number of sites over Action Level

Number of sites over Action Level	Likely source(s)
0	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives.
3	Corrosion of household plumbing; erosion of natural deposits.

propene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,2,4-Trichlorobenzene, 2,3,7,8-TCDD (Dioxin), 2,4,5-TP, 2,4-D, Asbestos, Benzene, Benzo (a) pyrene, Beryllium, Cadmium, Carbofuran, Carbon Tetrachloride, Chlordane, Chlorobenzene, 2-ethylhexyl adipate, Di (2-ethylhexyl) phthalate, Dichloromethane, Dinoseb, Diquat, E. Coli, EDB, Endothall, Endrin, (activity), Heptachlor epoxide, Heptachlor, Hexachlorobenzene, Hexachlorocyclopentadiene, Legionella, Lindane, Mercury, Pentachlorophenol, Picloram, Radium-226 & 228 combined, Simazine, Strontium-90 (e), Styrene, Tetrachloroethylene, Tritium (e), Vinyl chloride, Viruses, Xylenes (total).

contaminants occur and whether it needs to regulate those contaminants. 2001.

Level			Millard/Elkhorn
Florence Plant	Platte Plant	Peaking Wells	
24 -9.2	24 -9.2	24 -9.2	
3.3 - 0.0	3.3 - 0.61	3.3 - 0.61	
120 - 7.5	120 - 7.5	120 - 7.5	
10 - 2.5	10 - 2.5	10 - 2.5	
<0.1	0.24	<0.1	
3.5	1.1	2.6 - <1.0	
214	90.6	115 - 11	

Tested and Not Detected: 1,1-Dichloroethane, 1,1-Dichloropropene, 1,2-Dibromo-3-chloropropane (DBCP), 1,3-Dichloropropane, 1,3-Dichloropropene, 2,2-Dichloropropane, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, Bromobenzene, Bromomethane, Chloroethane, Chloromethane, cis-2,3-Dichloroethylene, Cryptosporidium, Dibromomethane, Ethylene dibromide (EDB), m-Dichlorobenzene, m-Xylene, o-Chlorotoluene, o-Xylene, p-Chlorotoluene, p-Xylene.

- (a) This maximum contaminant level is based on a system-wide running annual average of several samples.
- (b) This number is based on a running average for one year.
- (c) Source water does not contain lead or copper. Tests for lead and copper are done at the customer's tap to ensure the substances have not been dissolved from the customer's service or interior piping system.
- (d) Fluoride is added in treatment to bring the natural level of about 0.5 ppm to the optimum of 1.0 ppm.
- (e) State requirement only.
- (f) **We meet all standards for lead in drinking water. There is no lead in the water when it leaves our treatment plants.**

Infants and young children typically are more vulnerable to lead in drinking water than the general population.

It is possible lead levels in your home may be higher than at other homes in the community as a result of materials used in your home's plumbing.

If you are concerned about elevated lead levels in your home's plumbing, you may want to have your water tested. Also flush your tap for 30 seconds to two minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline, 800.4264791.

† Action Level is the concentration of a contaminant which triggers treatment or another requirement which a water system must follow.

< means less than.

> means more than.

**Safe Drinking
Water Hotline**
800.426.4791
www.epa.gov/safewater

Treatment process

- 1. Sedimentation:** At the Florence Plant, water is pumped from the Missouri River into three large sedimentation basins where sand and silt are removed and returned to the river. The clean water proceeds to further treatment. The sedimentation process is not needed at the Platte River Plant due to the natural filtration of the groundwater aquifer from which the water is pumped.
- 2. Softening and Clarification:** Water flows into four primary treatment basins. In two basins, lime is added to remove dissolved minerals, softening the water. Alum is mixed with water in the other two basins. Alum causes fine suspended particles of silt to cling together, so they can be removed, clarifying the water.
- 3. Disinfection:** Chlorine is added in precise amounts through automatic feeders. Chlorine destroys bacteria and ensures the health of our community. As required by law, a small quantity of fluoride is added to help prevent tooth decay.

In Fall 2002, we will add chloramines (a combination of chlorine and ammonia) to reduce disinfection by-products. The change will provide better-tasting water and better position us to meet future drinking water standards.

Chloraminated water is safe for everyone (including pregnant women, infants, diabetics, people on kidney dialysis and pets) to drink because the digestive process neutralizes the chloramines before they reach the bloodstream. Chloraminated water also is safe for bathing, cooking and all normal uses we have for water.

Centers and hospitals providing kidney dialysis, people who maintain fish tanks, and some businesses with processes affected by drinking water disinfection agents may need to change pretreatment steps to remove chloramines.

We will notify our customers, including all medical facilities, before chloramine use begins. Pet and fish supply stores have products to neutralize chloramines in aquariums.

- 4. Filtration:** Water flows through sand filters trapping fine particles. Every 120 hours, the filter beds are cleaned by a process called back-washing. Except for chlorine and fluoride, every chemical is removed before the finished water leaves the plants.

After the treated water leaves our water plants, we test it daily in the distribution system. In fact, we conduct a minimum of 300 tests a month for bacteria alone. Each test is conducted in strict accordance with every requirement of the EPA and Nebraska Health and Human Services.

Why are there contaminants?

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and radioactive material and can pick up substances resulting from the presence of animal or human activity. Source waters may contain microbes, organic or inorganic chemicals, pesticides, herbicides or radioactive materials.

Tap water comes from surface waters (*rivers, lakes, streams, ponds or reservoirs*) and groundwater (*springs, wells*). Bottled waters generally are from springs, wells and public water systems. Bottled water is regulated by the U.S. Food and Drug Administration while tap water is regulated by EPA.

To ensure tap water is safe to drink, EPA prescribes limits for the amount of certain contaminants in tap water. In cases where contaminants cannot be readily measured, EPA sets treatment techniques to reduce the amount of contaminants to acceptable levels.

All drinking water, including bottled water, may reasonably be expected to contain naturally-occurring minerals and at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate the water poses a health risk.

More information about contaminants and potential health effects may be obtained by calling the **EPA Safe Drinking Water Hotline** or Nebraska Health and Human Services, 402.471.2541.

Lawn Watering Guide

From: UN Cooperative Extension, Douglas/Sarpy Counties (444.7804)

- 💧 Water every other day, unless you have new sod.
- 💧 Water during the cool part of the day. Avoid watering on windy days. Water lawn, not streets and sidewalks.
- 💧 Raise mower height one inch in June, July and August.

April and May

Roots of cool season lawns (*blue grass, fescue*) are deep now. Apply supplemental water in the absence of natural rainfall—about an inch per week. Water deeply and infrequently.

June

Roots of cool season lawns begin to slough off for the summer. Apply supplemental water in the absence of rainfall—about 1.25 inches per week. Water more frequently and more shallow than in spring.

July and August

Roots of cool season lawns are at their shallowest point of the season. Apply supplemental water in the absence of rainfall—about 1.5 inches per week. Water to the depth of the root system (*usually about 2 inches deep*). Water more frequently and more shallow than in spring.

September and October

Roots of cool season lawns are deep now. Water deeply and infrequently. Apply supplemental water in the absence of rainfall—about an inch per week.

Level One Water Alert

A Level One Water Alert asks lawn care people and businesses to voluntarily use an odd/even watering schedule.

If your address ends in with an odd number (1, 3, 5, 7, 9), water on the day of the month ending in 1, 3, 5, 7 or 9. If your address ends with an even number (2, 4, 6, 8, 0), water on the day of the month ending in 2, 4, 6, 8 or 0.

More restrictive measures may become necessary due to extra-ordinary water use or other emergency situations. We will notify you via the news media.

Backflow prevention

According to the Safe Drinking Water Act, Nebraska Health and Human Services requires M.U.D. to make sure backflow preventors are installed and tested every year. We keep records of these tests and issue notices when testing is due. **This requirement does not apply to lawn sprinkler systems unless they use booster pumps or chemical injection systems.** Also check your city's plumbing code for their regulations.

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Mineral Analysis (averages for 2001)

	Unit	Florence Plant	Platte Plant	Millard/Elkhorn Peaking Wells
pH (<i>in pH units</i>)		8.87	9.00	7.20
Alkalinity (<i>total</i>) as CaCO ₃	ppm	71	131	264
Aluminum	ppm	0.23	< 0.03	< 0.03
Calcium	ppm	47	43	89.5
Chloride	ppm	18	45	8.6
Color (<i>in cobalt platinum units</i>)	ppm	2	5	1
Dissolved Solids (<i>total, calculated</i>)	ppm	463	412	574
Hardness (<i>total</i>) as CaCO ₃	grains per gallon	11	9	17.2
Iron	ppm	< 0.02	< 0.02	0.03
Magnesium	ppm	17	12	20
Manganese	ppm	< 0.02	< 0.02	< 0.02
Phosphate	ppm	0.05	0.38	0.56
Silica	ppm	7.9	20.8	32.1
Spec. Conductance (@ 25 Deg.C.)	umhos	531	496	560
Temperature	degrees Celsius	14.3	14.6	—
Zinc	ppm	< 0.01	< 0.01	< 0.01

Crypto and turbidity

Cryptosporidium (crypto), a protozoan parasite and one-celled animal, is too small to be seen without a microscope. It's common in surface waters (lakes and rivers), especially when these waters contain sewage or animal waste.

Crypto must be ingested to cause infection. Symptoms include diarrhea, nausea and abdominal cramps. Most healthy individuals can overcome the infection within a few weeks. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection.

Crypto may be spread through means other than drinking water.

We tested raw and treated water for crypto at our two water treatment plants every month during 2001. We did not find Crypto in any of the raw or finished water samples.

With current technology, producing water with low turbidity is the best available indicator for particulate and Crypto removal.



Nitrates in drinking water at levels above 10 ppm are a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.



Home water treatment devices are not needed since M.U.D. water surpasses all federal and state Safe Drinking Water standards. However, if you're considering the purchase of a system to enhance the aesthetics of the water:

- Look for the Underwriters Laboratory (UL) label,
- Find out what the device will remove, and
- Find out the total cost of maintenance.

Some units can harbor disease-causing bacteria if not properly maintained and serviced.

Notice to immuno-compromised people

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people—such as those with cancer undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some older adults 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 Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the **Safe Drinking Water Hotline, 800.426.4791**

(www.epa.gov/safewater), or Nebraska Health and Human Services, 402.471.2541.

Safe Drinking Water Hotline

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