

Your 2000 Water Quality Report

This report includes data collected from January 1 to December 31, 2000
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 meet 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.

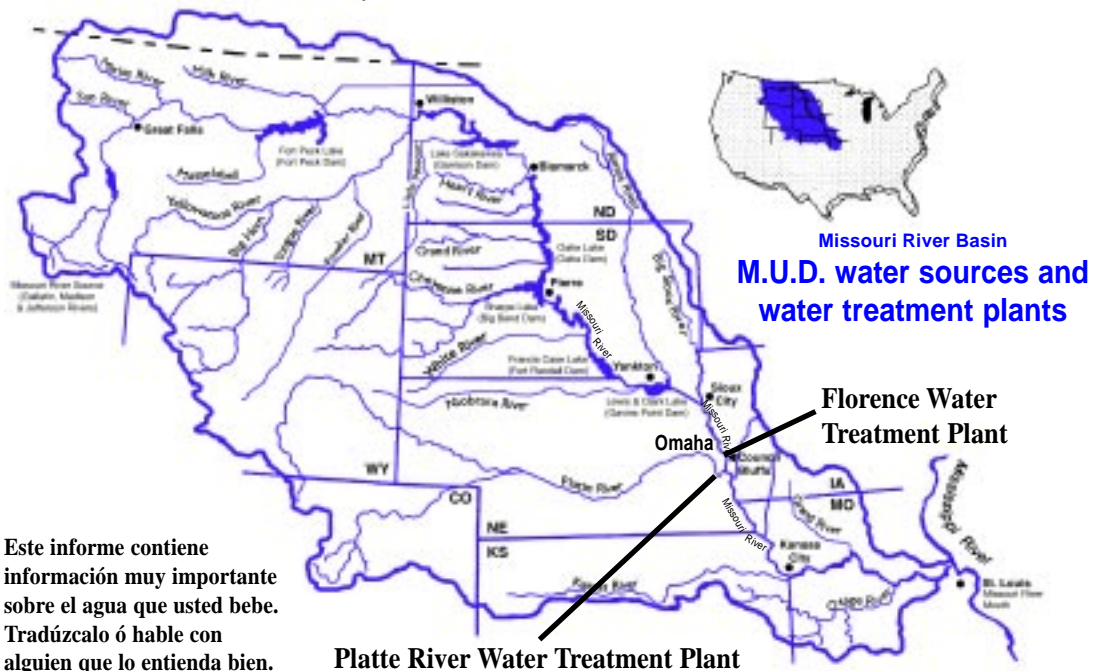
If EPA sets standards our present treatment process is unable to meet, we will take the necessary steps, regardless of capital cost, to modify our system and bring the water treatment process into compliance. Our customers will pay the cost to bring the treatment process into EPA compliance.

Sources of water

We serve more than 170 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.



Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien.

Below are the regulated contaminants detected in your drinking water between January 1 and December 31, 2019. There were no violations. Levels surpassed federal and state requirements.

Millard/Elkhorn			Likely source(s)
Florence Plant	Platte Plant	Peaking Wells	
<1.0	1.0	1.0 - <1.0	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder.
<2.0	4.0 - 3.0	7.0 - <2.0	Runoff from orchards; natural deposits; runoff from glass and electronic production wastes.
0.12 - <0.08	0.94 - <0.08	<0.08	Runoff from herbicide used on row crops.
0.028	0.120	0.340 - 0.115	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
1.1	1.0	3.0 - <1.0	Discharge from steel and pulp mills; erosion of natural deposits.
<0.35	0.95 - <0.35	<0.35	Discharge from chemical and agricultural chemical factories.
1.1 - 0.00	1.1 - 0.00	1.1 - 0.00	Bacteria naturally present in the environment; used as an indicator that other potentially harmful bacteria may be present.
0.04 - <0.025 (f)	0.04 - <0.025 (f)	0.04 - <0.025 (f)	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives.
<0.59	1 - <0.59	<0.59	Discharge from industrial chemical factories.
<0.87	1.1 - <0.87	<0.87	Discharge from industrial chemical factories.
0.11	0.25 - <0.11	<0.11	Discharge from industrial chemical factories.
2.5 - <2.5 (f)	2.5 - <2.5 (f)	2.5 - <2.5 (f)	Corrosion of household plumbing; erosion of natural deposits.
0.93 - 0.81	0.93 - 0.71	0.54 - 0.20	Water additive to promote strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
0.83	2.5 - 0.5	7.9 - 0.13	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.
84 - 64	66 - 49	21 - 18	An element of the alkali metal group found in nature, soil, rocks and other deposits.
65 - 32	65 - 32	65 - 32	By-product of drinking water chlorination.
0.30 - <0.05	N/A	N/A	Soil runoff.

Chloroethylene, 1,2,4-Trichlorobenzene, 1,2-Dichloropropane, 2,3,7,8-TCDD (Dioxin), 2,4,5-TP, 2,4-D, Acrylamide, Anthracene, Benzene, Benzofuran, Benzothiazole, Benzothiazolone, Benzothiazolone (a) pyrene, Beryllium, Cadmium, Carbofuran, Carbon, Carbon Tetrachloride, Chlordane, cis-1,2-Dichloroethylene, cis-1,2-Dichloroethane, cis-1,2-Dichloroethane (a) hexyl phthalate, Dichloromethane, Dinoseb, Diquat, E. Coli, EDB, Endothall, Endrin, Epichlorohydrin, Ethylbenzene, Ethylene glycol, Heptachlor, Heptachlor epoxide, Heptachlor, Hexachlorobenzene, Hexachlorocyclopentadiene, Legionella, Lindane, Mercury, Methoxychlor, Methylmercury, Nonyl phenol, Oxydemeton-methyl, Simazine, Strontium-90 (e), Styrene, Tetrachloroethylene, Thallium, Toluene, Toxaphene, trans-1,2 Dichloroethylene,

contaminants occur and whether it needs to regulate those contaminants.

Millard/Elkhorn			Tested and Not Detected: 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,1-Dichloroethane, 1,1-Dichloropropene, 1,2,3-Trichloropropene, 1,2-Dibromo-3-chloropropane (DBCP), 1,3-Dichloropropene, 1,3-Dichloropropene, 2,2-Dichloropropene, Bromobenzene, Bromomethane, Chloroethane, cis-2,3-Dichloroethylene, Cryptosporidium, Dibromomethane, Ethylene dibromide (EDB), m-Dichlorobenzene, m-Xylene, o-Chlorotoluene, o-Xylene, p-Chlorotoluene, p-Xylene.
Florence Plant	Platte Plant	Peaking Wells	
11 -1.9	11 -1.9	11 -1.9	
1.2 - 0.72	1.2 - 0.72	1.2 - 0.72	
23 - 0.74	23 - 0.74	23 - 0.74	
<0.78	1.8 - <0.78	<0.78	
7.1 - 0.97	7.1 - 0.97	7.1 - 0.97	
0.22	0.29	<0.1	
2.0	1.1	2.0 - <1.0	
241	90.6	115 - 11	

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.
- Beginning in early 2002, chloramines will be added to reduce disinfection by-products. The change will provide better-tasting water and better position us to meet future drinking water standards. Chloramines do not dissipate through boiling or exposure to the air in open containers as rapidly as chlorine. Fish tank, aquarium and pond owners will need to use appropriate filtration equipment or water treatment products to neutralize chloramines. These products are available at pet supply stores.**
- 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. Every test is conducted in strict accordance with every requirement set by EPA and Nebraska Health and Human Services.



Tour the Florence Water Treatment Plant, 9100 Pershing Dr., for a firsthand look at the treatment process. With advance reservations, groups of 10 to 40 people are welcome weekdays, between 9 A.M. and 2:45 P.M., May 1-September 30. (1 hour: 1st grade-adult) Call 449-8156 for reservations.

Requests for special accommodations, alternative formats or sign language interpreters (signers) require a minimum of 72 hours advance notice.

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

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 that 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.

Notice

A drinking water standard was violated at the Florence Water Treatment Plant for a 10-hour period, December 5-6, 2000. This was not an emergency, however we want to tell you what happened, what you may wish to do and what we have done to be sure that this will not happen again.

Description

To ensure proper disinfection (which makes bacteria, viruses, parasites, and other microscopic organisms harmless to people consuming the water), water must be in contact with chlorine for a minimum amount of time.

From 10 p.m. December 5, to 8 a.m. December 6, 2000, the water at the Florence Water Treatment Plant was in contact with chlorine for less than the minimum amount of time required.

The disinfection process continued to take place in the water lines as the water left the plant. Proper disinfection was reached on the high service mains within one-third of a mile of piping from the plant filters. Once proper disinfection occurred, no future potential risk existed.

This is the only treatment violation in our history as a water system.

The Platte River Water Treatment Plant was not involved and continued to provide treated, safe drinking water to the system.

What should I do?

You do not need to take immediate action. This was not an acute violation. Tests taken during this same period did not indicate the presence of bacteria in the water.

Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses and parasites that may cause symptoms such as nausea, cramps, diarrhea and associated headaches. These symptoms are not caused only by organisms in drinking water. If you experienced any of these symptoms and they persist, you may want to seek medical advice.

You do not need to boil your water or take other corrective action. People with severely compromised immune systems, infants, and some elderly may have been at increased risk. These people should seek advice

about drinking water from their health care providers.

What happened? What has been done to prevent a reoccurrence?

Because of a delay in monitoring the water that was being treated and an increase in pumpage during a period of cold weather, water leaving the plant had not yet achieved an adequate disinfection level.

We have taken several steps to prevent a similar situation from occurring in the future. The minimum chlorine residual has been set with an additional margin of safety so the period of time when the water and chlorine are in contact does not move below the minimum required time.

All operating staff have received additional training to assure compliance.

Additional monitoring has been established to assure compliance including continuous monitoring of water temperature and flow to assure necessary changes in treatment will be made as soon as conditions may require.

If you have any questions or want additional information concerning this notice, call Jerry Radek, 449.8155, or e-mail: jerry_radek@mudnebr.com.

For general information about drinking water you can contact the Environmental Protection Agency's "Safe Drinking Water Hotline" 800.426.4791.

Mineral Analysis (averages for 2000)

	Unit	Florence Plant	Platte Plant	Millard/Elkhorn Peaking Wells
pH (<i>in pH units</i>)		8.97	9.08	7.20
Alkalinity (<i>total</i>) as CaCO ₃	ppm	69	121	264
Aluminum	ppm	0.27	< 0.03	< 0.03
Calcium	ppm	41	41	89.5
Chloride	ppm	17	47	8.6
Color (<i>in cobalt platinum units</i>)	ppm	1	3	1
Dissolved Solids (<i>total, calculated</i>)	ppm	476	422	574
Hardness (<i>total</i>) as CaCO ₃	grains per gallon	10	9	17.2
Iron	ppm	< 0.02	< 0.02	0.03
Magnesium	ppm	16	13	20
Manganese	ppm	< 0.02	< 0.02	< 0.02
Phosphate	ppm	< 0.05	0.32	0.56
Silica	ppm	6.3	22	32.1
Spec. Conductance (@ 25 Deg. C.)	umhos	559	522	560
Temperature	degrees Celsius	14.2	15.2	—
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 2000. 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
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