Your 2006 Water Quality Report

This report includes data collected from January 1 to December 31, 2006
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 our water operations, call 554.6666 or visit 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. Visit our website or call 504.7147 for an agenda.

Requests for special accommodations, alternative formats or sign language interpreters require a minimum of 72 hours advance notice. Call 504.7147 or TDD phone 504.7724.

metropolitan UTILITIES DISTRICT

Customer-Owned
customer_service@mudnebr.com

Your drinking water continues to surpass every federal and state requirement

We are proud to report you receive a high quality product that continues to surpass every federal and state standard for safe drinking water. M.U.D. serves 191,893 customers an average of 97 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 South 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. We also are building a third water treatment plant at 216 and Q streets that will go on-line in 2008. This facility will form a triangle of reliable water supply for the Omaha metro area.

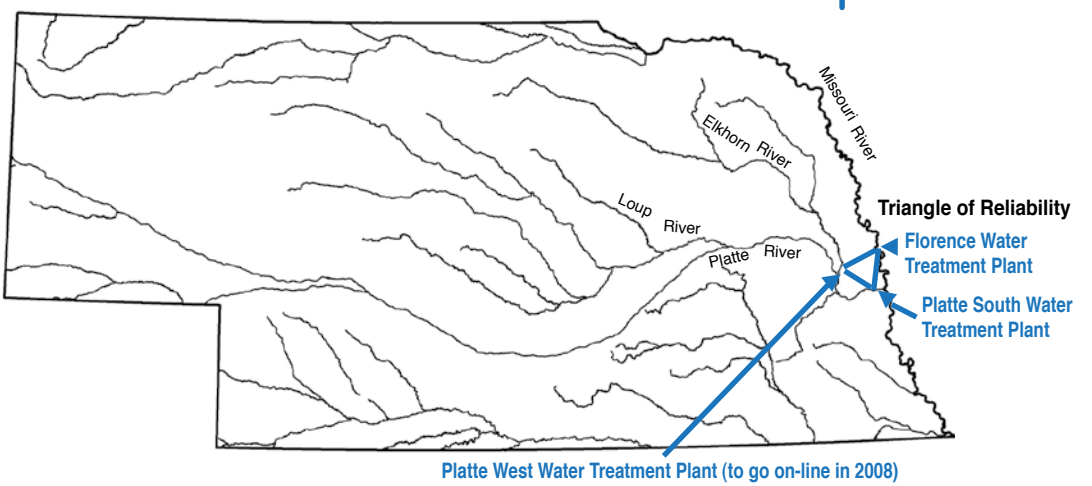
Source water assessment

The Nebraska Department of Environmental Quality (DEQ) completed a source water assessment of our water supply. The assessment includes a wellhead protection area map, potential contaminant source inventory, vulnerability rating and source water protection information.

A condensed report is posted on our website, www.mudomaha.com. If you have questions, contact **Joel Christensen,** vice-president of Water Operations, 402.504.7774, or e-mail joel_christensen@mudnebr.com. You also may schedule an appointment to view the source water assessment in its entirety by contacting Mr. Christensen.

Additional information about the source water assessment is available from DEQ at 402.471.6988. Program information also is available at the DEQ website: http://www.deq.state.ne.us.

M.U.D. water sources and water treatment plants



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

How to read the report

Maximum Contaminant Level (MCL) Highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) Level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

N/A means not applicable.

NTU means nephelometric turbidity units. Turbidity is a measure of the cloudiness of the water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants.

pCi/L means picocuries per liter; a measure of radiation.

ppm *(parts per million)* means 1 part per million *(or milligram per liter)* and corresponds to 1 minute in 2 years or 1 penny in $10 thousand.

ppb *(parts per billion)* means 1 part per billion *(or microgram per liter)* and corresponds to 1 minute in 2,000 years or 1 penny in $10 million.

Peaking wells produced 0.59 percent of the water consumed in 2006.

TTHMs —Some people, who drink water over many years containing TTHMs in excess of the maximum contaminant level, may experience problems with their liver, kidneys or central nervous system, and may have an increased risk of getting cancer.

(a) This maximum contaminant level is based on a system-wide running annual average of several samples.

Drinking water analysis

EPA requires monitoring of more than 80 drinking water contaminants. Below are ranges are listed under each facility. There were no violations. Levels surpassed fe

	Unit	Maximum Allowed	Goal	Highest Lev Detected
Arsenic	ppb	10	N/A	6.7
Atrazine *(b)*	ppb	3	3	0.9
Barium	ppm	2	2	0.25
Chromium	ppb	100	100	13.5
Fluoride *(c)*	ppm	4	4	1.1
Gross Alpha	pCi/L	15	0	5.8
Nitrate and Nitrite total *(as Nitrogen)*	ppm	10	10	4.4
Selenium	ppb	50	50	5.4
Sodium *(d)*	ppm	500	N/A	167
Trihaloacetic acids *(HAA5s)*	ppb	60 *(a)*	N/A	18 *(a)*
Trihalomethanes, total *(TTHMs)*	ppb	80 *(a)*	N/A	44 *(a)*
Turbidity	NTU	1	N/A	0.21
Total Coliform bacteria	%	5% positive	0	0.4
E. Coli bacteria			0	1

	Unit	Action Level†	Goal
Copper *(f)*	ppm	1.3†	1.3
Lead *(f)*	ppb	15†	0

Unregulated contaminants

Unregulated contaminant monitoring helps EPA determine where certain contamin taminants. We tested for and detected the following unregulated contaminants in 20

	Maximum Unit	Highest Level Allowed	Goal	Detected	Flo
Bromochloroacetic acid	ppb	N/A	N/A	7.5	
Bromodichloromethane	ppb	N/A	0	20	
Bromoform	ppb	N/A	0	0.7	
Chloroform	ppb	N/A	N/A	44	
Dibromoacetic acid	ppb	N/A	N/A	2.4	
Dibromochloromethane	ppb	N/A	60	9.3	
Dichloroacetic acid	ppb	N/A	0	24	
Metolachlor	ppb	N/A	N/A	0.1	
Monochloroacetic acid	ppb	N/A	N/A	3.2	
Nickel	ppb	N/A	N/A	4.6	
Total Organic Carbon	ppm	N/A	N/A	3.0	
Trichloroacetic acid	ppb	N/A	300	7.7	
Sulfate	ppm	N/A	N/A	170	

the regulated contaminants detected in your drinking water between January 1 and December 31, 2006. The maximum and minimum
deral and state requirements.

el	Florence Plant	Platte South Plant	Peaking Wells	Likely source(s)
	<2.0	5.7	6.7 - <2.0	Runoff from orchards; natural deposits; runoff from glass and electronic production wastes.
	0.1 - <0.08	0.9 - <0.08	0.7 - <0.08	Runoff from herbicide used on row crops.
	0.03	0.10	0.25 - 0.12	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
	<1.0	4.9	13.5 - 5.9	Discharge from chemical and agricultural chemical factories.
	1.1 - 0.8	1.1 - 0.8	0.3 - <0.2	Water additive to promote strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
	<1.0	4.8	5.8 - 1.0	Erosion of natural deposits.
	1.8	1.4	4.4 - 0.3	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
	<5.0	5.4	<5.0	Discharge from petroleum and metal refineries; erosion natural of deposits; discharge from mines.
	79 - 42	167 - 36	21 - 18	An element of the alkali metal group found in nature, soil, rocks and other deposits.
	33 - 6	33 - 6	33 - 6	By-product of drinking water chlorination.
	72 - 19	72 - 19	72 - 19	By-product of drinking water chlorination.
	0.21 - <0.08	N/A	N/A	Soil runoff.
	Minimum monthly distribution samples = 210			Bacteria naturally present in the environment; used as an indicator that other potentially harmful bacteria may be present.
	Violation = No *(e)*			Naturally present in the environment.

	90th Percentile	50 samples taken in June 2004 Number of sites over Action Level	
	0.03	0	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives.
	4.6 *(g)*	0	Corrosion of household plumbing; erosion of natural deposits.

ants occur and whether it needs to regulate those con-
006.

rence Plant	Platte South Plant	Peaking Wells
7.5 - 2.3	7.5 - 2.3	7.5 - 2.3
20 - 5.5	20 - 5.5	3.7 - <0.5
0.7 - <0.5	0.7 - <0.5	<0.5
44 - 9.5	44 - 9.5	10 - <0.5
2.4 - <0.5	2.4 - <0.5	2.4 - <0.5
9.3 - 1.8	9.3 - 1.8	1.2 - <0.5
24 - 3.4	24 - 3.4	24 - 3.4
0.1 - <0.1	0.1 - <0.1	<0.1
3.2-<3.0	3.2-<3.0	3.2-<3.0
<1.0	2.3	4.6 - <2.0
3.0 - 2.2	—	—
7.7 - 1.1	7.7 - 1.1	7.7 - 1.1
170	64	41 - 11

We tested for and did not detect the following contaminants in 2006: 1,1-dichloroethene; 1,1-dichloropropene; 1,1,1,2-tetrachloroethane; 1,1,1-trichloroethane; 1,1,2,2-tetrachloroethane; 1,1,2-trichloroethane; 1,1-dichloroethane; 1,2,3-trichlorobenzene; 1,2,3-trichloropropane; 1,2,4-trichlorobenzene; 1,2,4-trimethylbenzene; 1,2-dibromo-3-chloropropane; 1,2-dibromoethane; 1,2-dichlorobenzene; 1,2-dichloroethane; 1,2-dichloropropane; 1,2-diphenylhydrazine; 1,3,5-trimethylbenzene; 1,3-dichlorobenzene; 1,3-dichloropropane; 1,4-dichlorobenzene; 2,2-dichloropropane; 2,4,6-trichlorophenol; 2,4-D; 2,4-dichlorophenol; 2,4-dinitrophenol; 2,4-dinitrotoluene; 2,4,5-TP (silvex); 2,6-dinitrotoluene; 2-chlorotoluene; 2-methyl-1-phenol; 3-hydroxycarbofuran; 4,4'-DDE; 4-chlorotoluene; acetochlor; acrylamide; alachlor; Alachlor ESA; aldicarb; aldicarb sulfone; aldicarb sulfoxide; aldrin; antimony; asbestos; benzene; benzo[a]pyrene; beryllium; bromobenzene; bromochloromethane; bromomethane; butachlor; butylate; cadmium; carbaryl; carbofuran; carbon tetrachloride; chlordane; chlorobenzene; chloroethane; chloromethane; chloropyrifos; cis-1,2-dichloroethene; cis-1,3-dichloropropene; cyanazine; cyanide; DCPA di acid; DCPA mono acid; dalapon; di(2-ethylhexyl) adipate; di(2-ethylhexyl) pthalate; diazinon; dibromomethane; dicamba; dichlorodifluoromethane; dichloromethane; dieldrin; dinoseb; diquat; disulfoton; diuron; E. Coli; endothall; endrin; EPTC; ethylbenzene; fonofos; glyphosate; gross beta; heptachlor; heptachlor epoxide; hexachlorobenzene; hexachlorobutadiene; hexachlorocyclopentadiene; isopropylbenzene; lindane; linuron; m-xylene; mercury; methomyl; methoxychlor; methyl-t-butyl-ether; metribuzin; molinate; monobromoacetic acid; n-butylbenzene; n-propylbenzene; napthalene; nitrobenzene; o-xylene; oxamyl; p-isopropyltoluene; p-xylene; PCB-1016; PCB-1221; PCB-1232; PCB-1242; PCB-1248; PCB-1254; PCB-1260; paraquat; pentachlorophenol; perchlorate; picloram; prometon; propachlor; RDX; sec-butylbenzene; simazine; styrene; t-butylbenzene; terbacil; terbufos; tetrachloroethene; thallium; toluene; toxaphene; trans-1,2-dichloroethene; trans-1,3-dichloropropene; trichloroethene; trichlorofluoromethane; trifluralin; vinyl chloride.

(b) This number is based on a running average for one year. We had a high value of 0.9 ppb at the Platte South Plant in July, however with the plant's annual average of 0.3 ppb, we did not exceed the maximum.

(c) Fluoride is added in treatment to bring the natural level of about 0.5 ppm to the optimum of 1.0 ppm.

(d) State requirement only.

(e) A violation occurs when a routine sample and confirmation samples are total coliform positive and one also is E. coli positive.

(f) 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.

(g) 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.

† 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.

Crypto not in M.U.D. water

We tested raw and treated water for Cryptosporidium (Crypto) at our two water treatment plants every month during 2006. 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.

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.

The Safe Drinking Water standard (MCL) for arsenic is 10 ppb. We tested for arsenic in 2006. The result at the Florence Plant was <2.0 ppb. The result at the Platte South Plant was 5.7 ppb. The level at the peaking wells in ranged from <2.0 to 6.7 ppb.

Some people, who drink water containing arsenic in excess of the MCL over many years, could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

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.

Mineral analysis (averages for 2006)

	Unit	Florence Plant	Platte South Plant	Peaking Wells
pH *(in pH units)*		8.78	8.89	7.20
Alkalinity *(total) as CaCO3*	ppm	83	140	264
Aluminum	ppm	0.26	<0.03	<0.03
Calcium	ppm	42	45	90
Chloride	ppm	21	62	8.6
Color *(in cobalt platinum units)*	ppm	2	4	1
Dissolved Solids *(total, calculated)*	ppm	445	433	574
Hardness *(total) as CaCO3*	grains per gallon	11	9	17
Iron	ppm	<0.02	<0.02	0.03
Magnesium	ppm	19	11	20
Manganese	ppm	<0.002	<0.002	<0.02
Phosphate	ppm	<0.05	0.6	0.56
Silica	ppm	8.6	26.4	32.1
Spec. Conductance *(@ 25 Deg.C.)*	umhos	629	584	560
Temperature	degrees Celsius	14.1	15.4	—
Zinc	ppm	0.03	0.03	<0.01

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 under-going 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.

Water Alerts

We will issue a Level 1 Water Alert when water use reaches 95 percent of capacity, reservoirs cannot be filled or low pressure jeopardizes fire fighting. The alert asks you 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 extraordinary water use or other emergency situations. We will notify you of water alerts 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 preventers 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.

What is potentially dangerous about an unprotected sill cock? A sill cock permits easy attachment of a hose for outside watering. However, a garden hose with an unprotected sill cock can be hazardous when left submerged in swimming pools, watering shrubs, and when chemical sprayers are attached to hoses.

Safe Drinking Water Hotline

800.426.4791
www.epa.gov/safewater

Protect the source

More than one million tons of hazardous waste from products used around the house enter the waters of our continent every year.

To protect water quality:

- Reduce your need for disposable batteries by using rechargeable batteries. Household batteries should be disposed of at a collection center.
- Recycle motor oil.
- Recycle plastic bottles.
- Donate unused paint to community groups or take to a recycling center.
- Do not dump waste into storm sewers.
- Plant trees, grasses and other natural buffers to reduce water pollution.
- Cut down on the use of fertilizers, pesticides and toxic cleaners. As rainwater passes through the ground, it takes pesticides and fertilizers with it which can contaminate water.
- Plant: Geraniums to repel Japanese beetles; garlic and mint to repel aphids, and marigolds to repel white flies.

For more information on source water protection, call Keep Omaha Beautiful, 444.7774—on the web: www.keepomahabeautiful.org.

For more information on wise water use landscape design, stop by the Douglas County Extension Office, 8015 W. Center Rd.

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 South Plant due to the natural filtration of the groundwater aquifer from which the water is pumped.

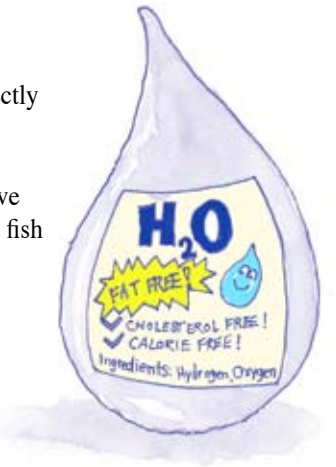
2. **Softening and Clarification:** Water flows into four primary treatment basins. In two basins, lime is added to remove dissolved minerals, softening the water. Alum is mixed with water in the other two basins. Alum causes fine suspended particles of silt to cling together, so they can be removed, 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.

   We also add chloramines (a combination of chlorine and ammonia) in the disinfection stage to reduce disinfection by-products. Dialysis centers and hospitals neutralize chloramines prior to their treatment processes.

   Chloraminated water is safe for warm-blooded animals, including humans, to drink because the digestive process neutralizes chloramine before it reaches the bloodstream.

   Chloraminated water is toxic to cold-blooded animals, such as fish, because these animals absorb or take water directly into their bloodstreams, bypassing the digestive process. People with aquariums need to pretreat the water to remove chloramine with products from pet and fish 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 chloramines 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 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.

Water treatment devices not needed

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.

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