

Nebraska City, Nebraska.
Nebraska City Utilities
Annual Water Quality Report
For the period of January 1 to December 31,
2009



This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water.

For more information regarding this report, contact Dean Hauptman or Cathy Meyer at (402) 873-3353.

If you would like to observe the decision-making processes that affect drinking water quality, please attend a regularly scheduled meeting of the Nebraska City Board of Public Works. If you would like to participate in the process, please contact Nebraska City Utilities to arrange to be placed on the agenda of the meeting of the Board of Public Works.

This report is available on the World Wide Web at www.nebraskacityutilities.com

Este informe contiene informacion muy importante sobre el agua que usted bebe. Traduzcalo o hable con alguien que lo entienda bien.

Source of Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

The source of drinking water used by the Nebraska City Utilities is groundwater under the direct influence of surface water. Drinking water is provided by nine wells located North of the Water Treatment Plant. Nebraska City is required to meet the State and Federal regulations as they relate to drinking water.

Permanent Use Well 561 A-010585A
Permanent Use Well 562 A-010585B
Permanent Use Well 563 A-010585C
Permanent Use Well 641 A-0010585D
Permanent Use Well 691 G-070422
Permanent Use Well 811-G-070423
Permanent Use Well 812-A-015753
Permanent Use Well 8 2000-1 G-121049
Permanent Use Well 9 2000-2 G-121048

Source Water Assessment Availability

The Nebraska Department of Environmental Quality (NDEQ) has completed the Source Water Assessment. Included in the assessment is a Wellhead Protection Area map, potential contaminant source inventory, vulnerability rating, and source water protection information. To view the Source Water Assessment or for more information please contact Nebraska City Utilities or NDEQ at (402) 471-6988.

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 at (800) 426-4791.

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, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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, people 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/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 (800-426-4791).

CROSS-CONNECTION QUESTION AND ANSWER:

Q: What is a cross connection?

A: A cross connection is a direct arrangement of a piping line which allows the potable water supply to be connected to a line which contains a contaminant. An example is the common garden hose attached to a sill cock with the end of the hose lying in a cesspool. Other examples are a garden hose attached to a service sink with the end of the hose submerged in a tub full of detergent, supply lines connected to bottom-fed tanks or supply lines to boilers.

Pregnant Women, infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at 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 water, you may wish to have your water tested. You can also flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791) or at <http://www.epa.gov/safewater/lead>.

TEST RESULTS (COLLECTED IN 2009 UNLESS NOTED)

				Maximum Contaminant Level			Likely Source of Contamination	
Microbiological Contaminants								
Total Coliform Bacteria	Violation	# Positive Sample	Total # Samples	MCLG	Fecal Coliform or E. Coli Maximum Contaminant Level	# of Positive E. Coli or Fecal Coliform Samples in all of 2005	Naturally present in the environment	
	No	1	97	0	0	0		
Lead and Copper								
Lead MCLG = 0	Lead Action Level	Lead 90th Percent	# Sites over Lead AL	Copper MCLG	Copper Action Level	Copper 90th Percent	# Sites Over Copper AL	Likely Source of Contamination - Lead, Corrosion of household plumbing systems; Erosion of natural deposits
Lead/Copper Test 06/11/2007	15 ppb	0.00001	0	1.3 ppm	1.3 ppm	0.0373 ppm	0	Copper - Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Inorganic Contaminants								
	Highest Level Detected	Range of Levels Detected	Unit Measure	MCLG	MCL	Violation	Likely Source of Contaminant	
Arsenic	2.42	2.42-2.42	ppb	n/a	10	No	Erosion of natural deposit; Runoff from orchards; Runoff from glass and electronics production wastes.	
Barium	0.0293	.0293-.0293	ppm	2	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
Fluoride	1.17	.864-1.17	ppm	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; fertilizer discharge	
Chromium	2.36	2.36-2.36	ppb	100	100	No	Discharge from steel and pulp mills; Erosion of natural deposits	
Nitrate (measured as nitrogen)	0.0615	.0615-.0615	ppm	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	
Regulated Contaminants Disinfection By-Products Total Haloacetic Acids (HAA5)	19	19 -20.9	ppb	n/a	60	No	By-product of drinking water chlorination	
TTHMs (Total Trihalomethanes)	61.99	53.28-61.99	ppb	n/a	80	No	By-product of drinking water chlorination	
Radioactive Contaminants Gross, Alpha, Radium & Uranium	0		pCi/L	0	15	No	Erosion of natural deposits	
Unregulated Contaminants								
Total Organic Carbon						The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set.		
Sulfate 08/25/2009	140	140-160	ppm					

The Nebraska City Utilities is required to test for the following contaminants: Coliform Bacteria, Antimony, Arsenic, Asbestos, Barium, Beryllium, Cadmium, Chromium, Copper, Cyanide, Fluoride, Lead, Mercury, Nickel, Nitrate, Nitrite, Selenium, Sodium, Thallium, Alachlor, Atrazine, Benzo(a)pyrene, Carbofuran, Chlordane, Dalapon, Di(2-ethylhexyl)adipate, Dibromochloropropane, Dinoseb, Di(2-ethylhexyl)phthalate, Diquat, 2,4-D, Endothall, Endrin, Ethylene dibromide, Glyphosate, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl (Vydate), Pentachlorophenol, Picloram, Polychlorinated biphenyls, Simazine, Toxaphene, Dioxin, Silvex, Benzene, Carbon Tetrachloride, o-Dichlorobenzene, Para-Dichlorobenzene, 1,2-Dichloroethane, 1,1-Dichloroethylene, Cis-1,2,-Dichloroethylene, Trans-1,2-Dichloroethylene, Dichloromethane, 1,2-Dichloropropane, Ethylbenzene, Monochlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Vinyl Chloride, Styrene, Tetrachloroethylene, Toluene, Xylenes (total), Gross Alpha (minus Uranium & Radium 226), Radium 226 plus Radium 228, Sulfate, Chloroform, Bromodichloromethane, Chlorodibromomethane, Bromoform, Chlorobenzene, m-Dichlorobenzene, 1,1-Dichloropropene, 1,1-Dichloroethane, 1,1,2,2-Tetrachloroethane, 1,2-Dichloropropane, Chloromethane, Bromomethane, 1,2,3-Trichloropropane, 1,1,1,2-Tetrachloroethane, Chloroethane, 2,2-Dichloropropane, o-Chlorotoluene, p-Chlorotoluene, Bromobenzene, 1,3-Dichloropropene, Aldrin, Butachlor, Carbarryl, Dicamba, Dieldrin, 3-Hydroxycarbofuran, Methonyl, Metolachlor, Metribuzin, Propachlor, Metribuzin, Propachlor, Uranium-if disinfecting test for DBP's. (ppm: parts per million, ppb: parts per billion, ppt parts per trillion, pCi/l: picoCuries per liter (measurement of radioactivity))

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Violation: Res Disinfect concentration (SWTR) Violation Began 06/01/2009 Violation Ended 06/30/2009 Violation Explanation: Measurements of disinfectant indicate that adequate disinfection did not occur for the period indicated. Adequate disinfection is required to ensure safe drinking water.

On June 10th, 2009 the free chlorine residual dropped to .17 mg/l. The minimum level required is .2 mg/l of free chlorine. Correction Action taken included raising the chlorine dose at the water treatment plant and flushing the water lines. The low chlorine level occurred from 4:15 a.m. to 11:15 a.m.. Special water tests were taken on that day and the following day and the tests passed.