



QUANTITY WATER REPORT

2004
McPherson
Board of
Public Utilities

2004 Water Quality Report

The McPherson Board of Public Utilities serves nearly 8,300 water customers in our service area, including four rural water districts. This Water Quality Report is provided to you as part of the Safe Drinking Water Act Amendment of 1996 and describes the quality of your drinking water and how the BPU complies with water regulations that protect your health.

The Board of Public Utilities continues to exceed all drinking water standards to maintain a safe drinking water supply. We are proud to report that during the year 2004 our system has not exceeded a maximum contaminant level or any other water quality standard. The water we provide to our customers is safe to drink.

In October, 2004 Water Supply Well #2 met the maximum contaminant level for nitrates of 10.0 ppm, at which time the Utility chose to remove the well from the water distribution system. Presently, the BPU is evaluating what course of action will be taken regarding the well.

Water Treatment

To prevent disease, McPherson complies with regulations to disinfect its water with chlorine. Added at the well, chlorine kills microbes that the water may naturally be exposed to. There are no other treatment processes applied to the water before it is delivered to our consumers. The BPU has also implemented a backflow/cross-connection prevention program to protect against contamination of the water system.

Keeping Our Water Safe

Federal and Kansas State regulations include procedures and schedules for monitoring water at the source, in the distribution system and at the tap. The Kansas Department of Health and Environment (KDHE) ensures that public water supply systems comply with all regulations, follow monitoring schedules, and report monitoring results. Our employees, who are state certified, work each day to provide the highest quality water to the citizens of McPherson. Water samples are collected and analyzed by Kansas certified independent labs and the Kansas Department of Health & Environment. The Board of Public Utilities continues to exceed all drinking water standards to maintain a safe drinking water supply for our customers.

Is There Lead and Copper in My Water?

Copper naturally occurs in source water at very low levels. Therefore, tap water has very low levels of lead and copper. Because lead may leach from faucets or plumbing components containing lead, some homes and buildings may have elevated lead levels at the tap if water "stands" in pipes for several hours. Leaching may also occur if copper pipes are joined with lead-based solder. To minimize exposure to lead and copper in your water, run the water about 30 to 60 seconds if it has been standing in the pipes for more than 6 hours. Because our system has a low level of lead and copper, the Kansas Department of Health & Environment has placed us on a reduced monitoring frequency of once every three years. Infants and young children are typically more vulnerable to lead in the 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. Additional information regarding lead and copper is available from the Safe Drinking Water Hotline at (800) 426-4791.

Additional Health Information

Nitrates in drinking water at levels above 10 ppm is a health risk for infants of less than 6 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 at (800) 426-4791.

The tables represented below list all of the drinking water contaminants that were detected during the reporting period. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk.

The EPA or the State of Kansas requires the utility to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Consequently, some of the data represented here is more than one year old.

The following are explanations of the abbreviations and terms used in the water quality Substance Tables that are printed below:

AL-Action Level - The concentration of a contaminant that triggers treatment or other requirements that a water system must follow.

LI-Langelier Index - A measure of the corrosiveness of water.

MCL-Maximum Contaminant Level - Highest level of a contaminant allowed in drinking water.

MCLG-Maximum Contaminant Level Goal -

The level of a contaminant in drinking water below which there is no known or expected risk to health.

nd-Non Detected

pCi/L-Picocuries per liter - A measure of the radioactivity in water.

PPM-One part per million

PPB-One part per billion

Unregulated Substance	Date Tested	Unit	Range Detected	Ideal Limit for Taste & Odor	Source
Alkalinity as CaCO ₃	2002	ppm	247.5-295.0	60-300	naturally occurring
Aluminum	2002	ppb	nd-10.0	50-200	naturally occurring
Calcium	2002	ppm	85.7-131.4	75-200	naturally occurring
Chloride	2002	ppm	27.3-95.0	250	naturally occurring
Corrosivity	2002	LI	0.31-1.22	0.0-1.0	naturally occurring
Iron	2002	ppb	ND-22.0	300	naturally occurring
Magnesium	2002	ppm	8.1-12.5	50-150	naturally occurring
Nickel	2002	ppb	2.4-5.5	100	naturally occurring
Potassium	2002	ppm	1.96-2.61	100	naturally occurring
Silica	2002	ppm	29.44-40.18	50	naturally occurring
Sodium	2002	ppm	14.94-28.07	100	naturally occurring
Specific conductivity	2002	umho/cm	58.71-901.7	less than 1500	naturally occurring
Sulfate	2002	ppm	13.20-50.74	250	naturally occurring
Total dissolved solids	2002	ppm	338.7-536.5	500	naturally occurring
Total hardness	2002	ppm	247-380	400	naturally occurring
Total Phosphorus	2002	ppm	0.03-0.37	5	naturally occurring
Zinc	2002	ppm	nd-0.029	5	naturally occurring
pH	2002	ph units	7.39-8.23	6.5-8.5	naturally occurring
DCPA (total)	2002	ppb	ND-0.582	na	chlorinated acid herbicides

Regulated Substance	Unit	Date Tested	Range Detected	MCL	MCLG	Source
Gross-Alpha	Pci/L	2000	2	15	0	Erosion of natural deposits
Arsenic	ppb	2002	3.1-5.0	50	na	Erosion of natural deposits
Barium	ppm	2002	0.123-0.366	2.0	2.0	Erosion of natural deposits
Chromium	ppb	2002	3.5-5.9	100	100	Erosion of natural deposits
Fluoride	ppm	2002	nd-0.22	4	4	Erosion of natural deposits
Nitrate (N)	ppm	2003	0.82-10.0	10	10	Fertilizer, sewage, septic tanks
Selenium	ppb	2002	4.4-10.3	50	50	Erosion of natural deposits
Tetrachloroethylene	ppb	2004	nd-0.53	5	0	Leaching from PVC pipe; discharge from dry cleaners & factories
Atrazine	ppb	2002	nd-0.22	3	3	Runoff from herbicide used on row crops
Total Coliform Bacteria		2004	0	0		Bacterial regrowth. A minimum of 180 samples are collected each year. During 2004 no samples were found to contain coliform.
Lead	ppb	2004	nd-27	AL=15		Corrosion of household plumbing. 90% of homes tested had lead levels less than 4.9 ppb. 90% of homes tested must have lead levels less than 15 ppb. The BPU had 1 site above 15 ppb.
Copper	ppm	2004	0.21-4	AL=1.3		Corrosion of household plumbing. 90% of homes tested had copper levels less than 0.95 ppm. 90% of homes tested must have copper levels less than 1.3 ppm. Our tests found 1 site in excess of 1.3 ppm.
1,1-Dichloroethylene	ppb	2003	nd-0.55	7	7	Discharge from industrial chemical factories
1,1,1-Trichloroethane	ppb	2002	nd-0.5	200	200	Discharge from metal degreasing sites and other factories
Total Trihalomethanes		2004	1.0-6.4	80	0	Byproduct of drinking water chlorination

Be Involved

We encourage our customers to stay abreast of information concerning the quality of the water they drink. If you have questions concerning this report, or your water utility, please contact the general manager's office at 400 E. Kansas Avenue in McPherson or phone us at 245-2525. Board meetings occur bi-monthly at the McPherson Municipal Center and are open for public attendance.

Providing Safe Water

The Board of Public Utilities has been providing safe water to the citizens of McPherson since 1969. In 2004, the BPU pumped approximately 1.4 billion gallons of water. This annual Water Quality Report illustrates the Utility's commitment to providing high quality water, that meets or surpasses all state and federal standards.

If you have questions regarding water quality, call

ENVIRONMENTAL PROTECTION AGENCY

Safe Drinking Water Hotline

(800) 426-4791

KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT

(785) 296-5500

BOARD OF PUBLIC UTILITIES

General Manager's Office

(620) 245-2525

Customer Service Office

(620) 245-2515

24 hour emergency number

(620) 245-2555

BOARD OF PUBLIC UTILITIES

400 E. Kansas Avenue

PO Box 1008

McPherson, Kansas 67460

Did You Know

- One gallon of spilled gasoline can contaminate 750,000 gallons of water.
- Nearly 97% of the earth's water is salty or otherwise undrinkable. Another 2% is locked in ice caps and glaciers. That leaves 1% for human consumption.
- Americans use 450 billion gallons of water every day.
- Bottled water may cost up to 1000 times more than municipal water and may not be as safe.
- Groundwater is renewed once every 1,400 years.

Our Water Source

An underground aquifer called the Equus Beds is the only source of McPherson's water supply. The aquifer underlies portions of a four county area, which is about 900,000 acres in size and generally flows from the northwest to the southeast of McPherson. Water is drawn from 12 underground wells located in and around the City of McPherson. Two overhead water towers with a combined capacity of 2,000,000 gallons serve as storage for the system. Because the Equus Beds is the only source of water supplied to our customers, we encourage conservation and good stewardship practices of this valuable resource.

As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and radioactive materials, and can be polluted by animals or human activity. 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

Be Water Wise

Even though we have enjoyed a clean, fresh supply of water for many years, we encourage the customers of the Board of Public Utilities to be water wise. Protecting the aquifer that provides the potable water to our community today, will help to ensure a safe, plentiful supply for years to come.

