

City of Highland

– Water Quality Report *(covers calendar year 2011)*

This pamphlet lists water quality information for the City of Highland. It includes limited details on the source and quality parameters and how our water compares to Environmental Protection Agency (EPA) and state standards. It's important that customers be aware of the efforts that are made continually to improve their water system. To learn more, please attend any of the regularly scheduled meetings that are held on the second Wednesday of the month at 7:00 p.m. at City Hall. For more information, please contact Bill Butrick at 785/442-3765.

The water source for Highland is from wells. The water is treated to remove contaminants. A disinfectant is also added to protect the water supply against microbial contaminants. An assessment of our source water has been completed. For the results of the assessment, please contact us or download the results at www.kdheks.gov/nps/swap/SWreports.html.

A message from EPA

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. The city treats water according to EPA's regulations. Food and Drug Administration 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).

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 (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and 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.

Contaminants that may be present in source water before treatment may 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

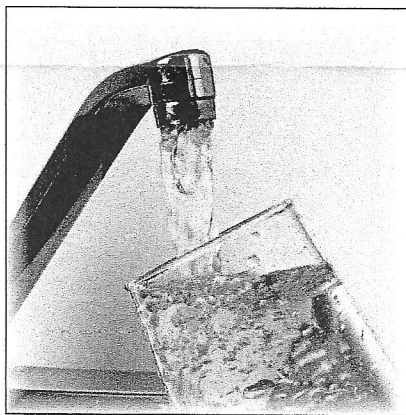
■ **Pesticides and herbicides**, which may come from a variety of sources such as agriculture and residential uses.

■ **Radioactive contaminants**, which are naturally occurring.

■ **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 stormwater runoff, and septic systems.

■ **Lead**: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Your water system is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Total Coliform Rule (TCR): Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. During 2011, the utility collected two samples per month and all were in compliance.



Water Quality Data

The table on the reverse side lists all the drinking water contaminants that we detected during the 2011 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless noted, the data presented in this table is from testing done January 1 - December 31, 2011. The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. The bottom line is that the water that is provided to you is safe.

Terms & Abbreviations

Maximum Contaminant Level Goal (MCLG): the 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.

Maximum Contaminant Level (MCL): the highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs allow for a margin of safety.

Action Level (AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT): a required process intended to reduce the level of contaminants in water

MRDL: Maximum Residual Disinfectant Level

N/A: not applicable; **ND**: non detect at testing limit

pCi/l: picocuries per liter (a measure of radiation)

ppb: parts per billion or micrograms per liter ($\mu\text{g/l}$)

ppm: parts per million or milligrams per liter (mg/l)

NTU: Nephelometric Turbidity Unit: measure of turbidity

Testing Results for the City of Highland

The City of Highland had no violations of drinking water regulations in 2011; there were no detections of microbiological contamination in the drinking water.

Regulated Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
BARIUM	3/7/2011	0.15	0.15	ppm	2	2	Discharge from metal refineries
CHROMIUM	3/7/2011	3	3	ppb	100	100	Discharge from steel and pulp mills
FLUORIDE	3/7/2011	0.29	0.29	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth
NITRATE	3/7/2011	5.7	5.6 - 5.7	ppm	10	10	Runoff from fertilizer use
SELENIUM	3/7/2011	2.6	2.6	ppb	50	50	Erosion of natural deposits

Nitrate in drinking water at levels above 10 ppm is 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 for advice from your health care provider.

Disinfection Byproducts	Monitoring Period	Highest RAA	Range	Unit	MCL	MCLG	Typical Source
TOTAL TRIHALOMETHANES (TTHMs)	2011 - 2013	13	13	ppb	80	0	By-product of drinking water chlorination

Lead and Copper	Monitoring Period	90 th Percentile	Range	Unit	AL	Sites Over AL	Typical Source
COPPER, FREE	2011	0.5	0.036 - 0.81	ppm	1.3	0	Corrosion of household plumbing
LEAD	2011	3.8	1.5 - 8.9	ppb	15	0	Corrosion of household plumbing

Radiological Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
GROSS ALPHA, INCL. RADON & U	8/20/2008	3	3	PCI/L	15	0	Erosion of natural deposits

Secondary Contaminants	Collection Date	Highest Value	Range	Unit	SMCL
ALKALINITY, TOTAL	3/7/2011	175	175	MG/L	300
CALCIUM	3/7/2011	51	51	MG/L	200
CHLORIDE	3/7/2011	3.7	3.7	MG/L	250
CONDUCTIVITY @ 25 C UMHO/CM	3/7/2011	410	410	UMHO/CM	1500
HARDNESS, TOTAL (AS CaCO3)	3/7/2011	190	190	MG/L	400
IRON	3/7/2011	0.027	0.027	MG/L	0.3
MAGNESIUM	3/7/2011	15	15	MG/L	150
MANGANESE	3/7/2011	0.0036	0.0036	MG/L	0.05
PH	3/7/2011	7.2	7.2	PH	8.5
PHOSPHORUS, TOTAL	3/7/2011	0.084	0.084	MG/L	5
POTASSIUM	3/7/2011	1.5	1.5	MG/L	100
SILICA	3/7/2011	31	31	MG/L	50
SODIUM	3/7/2011	14	14	MG/L	100
SULFATE	3/7/2011	17	17	MG/L	250
TDS	3/7/2011	260	260	MG/L	500
ZINC	3/7/2011	0.0064	0.0064	MG/L	5