



City of Topeka

2010 Water Quality Data

The City of Topeka Water Utility provides service for nearly 155,000 people in the Topeka, Shawnee County, and surrounding areas. The raw water source is supplied by the Kansas River and is processed at the Topeka Water Treatment Facility located at I-70 and MacVicar.

The Kansas River has its beginning near Junction City and its tributary rivers include the Republican, Smoky Hill, Blue, Solomon, and Saline Rivers. The reservoirs in the Kansas River Basin that provide additional reserves for Topeka include Kanopolis, Waconda, Milford, Tuttle Creek and Wilson.

The tables below list the results of the many analyses performed in 2010 on your water. The first column of numbers labeled "MCL" lists the maximum regulated level of contaminants that the United States Environmental Protection Agency and Kansas Department of Health and Environment have determined to be safe in your drinking water. The column labeled "Topeka Water" lists the 2010 summary of analyses results. Data for certain contaminants are more than one year old because regulations allow monitoring less than once per year because concentrations of these contaminants are not expected to vary significantly from year to year. As you will note from the following table, the water quality analyses results for the City of Topeka Water Utility fell below the Maximum Contaminant Level for every regulated chemical, microbial, and radionuclide contaminant.

Organic Contaminants

There are a number of organic contaminants that are of concern in drinking water. This group includes: volatile organic contaminants that vaporize easily and are called VOC's; pesticides and herbicides that run off soils and contaminate river and reservoir water supplies; synthetic organic contaminants used in personal and manufacturing pursuits, and contaminants that occur as a by-product of water disinfection.

Contaminant	MCL (mg/L)	Topeka Water (mg/L)
Alachlor	0.002	N.D.
Atrazine*	0.003	0.00066
Carbofuran	0.04	N.D.
Chlordane	0.002	N.D.
Endrin	0.002	N.D.
Heptachlor	0.0004	N.D.
Heptachlor Epoxide	0.0002	N.D.
Hexachlorobenzene	0.001	N.D.
Lindane	0.0002	N.D.
Methoxychlor	0.04	N.D.
Simazine	0.004	N.D.
Toxaphene	0.003	N.D.
Benzene	0.005	N.D.
Carbon Tetrachloride	0.005	N.D.

Chlorobenzene	0.1	N.D.
p-Dichlorobenzene	0.075	N.D.
o-Dichlorobenzene	0.6	N.D.
1,2-Dichloroethane	0.005	N.D.
1,1-Dichloroethylene	0.007	N.D.
cis-1,2-Dichloroethylene	0.07	N.D.
trans-1,2-Dichloroethylene	0.1	N.D.
Dichloromethane	0.005	N.D.
1,2-Dichloropropane	0.005	N.D.
Polychlorinated Biphenyls	0.0005	N.D.
Ethylbenzene	0.7	N.D.
Styrene	0.1	N.D.
Trihalomethanes**	0.080	0.0508
Tetrachloroethylene	0.005	N.D.
Toluene	1.0	N.D.
1,2,4-Trichlorobenzene	0.07	N.D.
1,1,1-Trichloroethane	0.2	N.D.
1,1,2-Trichloroethane	0.005	N.D.
Trichloroethylene	0.005	N.D.
Vinyl Chloride	0.002	N.D.
Xylene	10	N.D.
Ethylene Dibromide (EDB)	0.00005	N.D.
Hexachlorocyclopentadiene	0.05	N.D.
Haloacetic Acids (HAA5)**	0.06	0.0505
Chloramine***	4.0	3.55

N.D. = Not Detected.

*** = Annual Average.**

**** = Annual Average of Distribution System Quarterly Averages.**

***** = Monthly Distribution System Average.**

Inorganic Contaminants

The Environmental Protection Agency sets standards for a number of inorganic contaminants that can affect health. Most regulated inorganic contaminants are metals, but some are chemical compounds and one is made of fibrous minerals.

Contaminant	MCL (mg/L)	Topeka Water (mg/L)
Antimony	0.006	N.D.
Asbestos	7 MFL*	N.D.
Arsenic	0.010	N.D.
Barium	2.0	N.D.
Beryllium	0.004	N.D.
Cadmium	0.005	N.D.
Chromium	0.1	0.0013
Fluoride	4	0.52
Mercury	0.002	N.D.
Nickel	0.1	0.0026
Nitrate	10	1.3
Selenium	0.05	0.0023
Thallium	0.002	N.D.
Copper	1.3 AL**	0.030
Lead	0.015 AL**	0.0023

N.D. = Not Detected.

*** = MFL - Millions of Fibers Per Liter > 10 Microns.**

**** = AL - Action Level. Copper and lead results are based on analyses of high risk homes. 90% of those homes are required to have copper and lead levels below Action Level.**

Microbiological Quality

Bacteria and other harmful organisms are removed by disinfection and particle removal processes. The efficiency of these treatment techniques is monitored continuously to ensure the absence of these organisms and the clarity of the water.

Contaminant	MCL	Topeka Water
Viruses: (Lowest Calc. CT Value)	TT > 1.0*	2.4
Giardia lamblia: (Lowest Calc. CT Value)	TT > 1.0*	1.4
Total Chlorine: (mg/L)	> 1.0**	3.42
Total Coliforms: (Highest Monthly %)	less than 5.0%	0.8%
Fecal Coliforms: (Highest Monthly %)	less than 0.0%	0.0%
Turbidity: (Lowest Monthly %)	less than 0.30 NTU***	100%
Total Organic Carbon: (TOC)	TT > 1.0****	1.69

* = **TT - Treatment Technique. Monitoring and treatment requirements are measured in CT values.**

** = **> 1.0 Treatment Plant Effluent.**

*** = **NTU - Turbidity Units. 95% of monthly samples must be below MCL.**

**** = **TT - Treatment Technique. Average Removal Ratio calculated between actual and removal requirements.**

Radiological Quality

Radiological quality standards are set for specific contaminants and for the total radioactive element content.

Contaminant	MCL*	Topeka Water*
Gross Alpha	15 pCi/L	Less than 3 pCi/L
Ra-226	5 pCi/L**	Less than 3 pCi/L
Ra-228	5 pCi/L**	Less than 3 pCi/L

* = **Values in picoCuries/Liter.**

** = **Combined MCL for Ra-226 and Ra-228 is 5 pCi/L.**

Unregulated Contaminant Monitoring Regulation 2 (UCMR2)

Unregulated Contaminant Monitoring Regulation 2 (UCMR2) contaminants are required to be tested but do not yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a standard.

- Unregulated Contaminant Monitoring Regulation 2: Assessment Monitoring -
<http://www.topeka.org/pdfs/AssessmentMonitoring.pdf>
- Unregulated Contaminant Monitoring Regulation 2: Screening Survey -
<http://www.topeka.org/pdfs/ScreeningSurvey.pdf>

Unregulated Organic Contaminant Monitoring

(Not Associated with UCMR2 Regulation)

Contaminant	Topeka Water (mg/L)
Metolachlor	0.00045
Aldrin	N.D.
Butachlor	N.D.
Dieldrin	N.D.
Metribuzin	N.D.
Propachlor	N.D.
Deethylatrazine	0.00048
Acetochlor	0.00010

N.D. = Not Detected.

General Water Quality Parameters

There are many general, unregulated water quality parameters such as water hardness, iron and temperature that affect households and industries. Below is a listing of 2010 averages and historical, multi-year approximate normal ranges of many of those general water quality parameters.

Parameter	Topeka Average	Normal Range
pH	9.4	9.0 - 9.8
Chlorides (mg/L)	42	25 - 200
Sulfates (mg/L)	86	40 - 180
Total Hardness (mg/L as CaCO ₃)	173	110 - 230
Total Hardness (grains per gallon)	10	5 - 14
Calcium Hardness (mg/L as CaCO ₃)	144	100 - 170
Magnesium (mg/L)	5.2	8 - 26
Partial Alkalinity (mg/L as CaCO ₃)	26	10 - 35
Total Alkalinity (mg/L as CaCO ₃)	89	60 - 120
Total Dissolved Solids (mg/L)	310	200 - 600
Aluminum (mg/L)	0.044	0.0 - 0.2
Iron (mg/L)	<0.010	0.0 - 0.2
Manganese (mg/L)	<0.0010	0.0 - 0.01
Total Phosphorus (mg/L as P)	0.40	0.10 - 0.90
Potassium (mg/L)	8.6	6 - 12
Sodium (mg/L)	36	20 - 160
Temperature (° F)	60	33 - 80
Silica (mg/L)	8.9	5 - 10
Specific Conductance (umhos/cm)	646	450 - 900