



City of Nicholasville Water Quality Report

January 1 through December 31, 2005

PWSID # 0570315



We are pleased to provide this report that will inform you of the quality water and services we deliver to you every day. Our constant goal is to provide a safe and dependable supply of drinking water. The main source of water for Nicholasville is surface water from the Kentucky River (Pool #8). We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources.

The following is a summary of the system's susceptibility to contamination, which is part of the completed Source Water Plan (SWAP), and is available for inspection at the Water Treatment Plant.

An analysis of the susceptibility of the Nicholasville Utilities water supply to contamination indicates that this susceptibility is generally moderate. There are, however, a few areas of high concern. Several highway bridges pose an immediate threat to the intake in the event of an accidental release of contaminants at any of these sites. Also, a segment of the Kentucky River is impaired. The presence of an impaired water body may indicate that environmental conditions that are potentially detrimental to source water quality may already exist within the watershed. Areas of row crops, a Tier II hazardous chemical user, and a Superfund site all pose immediate threats to the intake should contaminants escape from these. Finally, there are numerous permitted operations, activities and large capacity septic systems to sewer systems to underground storage tanks of moderate concern within the watershed that cumulatively increase the potential for the release of contaminants within the area.

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 Environmental Protection Agency's (EPA) 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 human activity. Contaminants that may be present in source water include microbial contaminants, inorganic contaminants, pesticides and herbicides, organic chemical contaminants, and radioactive contaminants. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems.

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/Centers for Disease Control (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).

Some or all of these definitions may be found in this report:

Maximum Contaminant Level (MCL) - the highest level of a contaminant that is 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) - 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 Residual Disinfectant Level (MRDL) - the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) - the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Below Detection Levels (BDL) - laboratory analysis indicates that the contaminant is not present.

Not Applicable (N/A) - does not apply.

Parts per million (ppm) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) - or micrograms per liter, (µg/L). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per trillion (ppt) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

Parts per quadrillion (ppq) - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

Picocuries per liter (pCi/L) - a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Variations & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system shall follow.

Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.

Questions?	System Manager	CCR Contact
	Thomas Calkins	Gregory Hobson
	859-885-1121	859-885-6974
	595 Water Works Rd Nicholasville, KY 40356	

Wish to attend our meetings? Regular meetings are held:
Second and Fourth Thursday nights
5:30 PM
450 North Main Street, Nicholasville

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less o

	Allowable Levels		Highest Single Measurement	Lowest Monthly %	Violation	Likely Source	
Turbidity (NTU) TT	No more than 1 NTU Less than 0.3 NTU in 95% of monthly samples		0.28	100	No	Soil runoff	
Regulated Contaminant Test Results							
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria # or % positive samples	5%	0	2	N/A	Oct	No	Naturally present in the environment
Radioactive Contaminants							
Combined radium (pCi/L)	5	0	1	0.3 to 1	Nov-02	No	Erosion of natural deposits
Inorganic Contaminants							
Antimony [1074] (ppb)	6	6	1	1 to 1	Feb-05	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic [1005] (ppb)	50	N/A	1	1 to 1	Feb-05	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium [1010] (ppm)	2	2	0.033	0.033 to 0.033	Feb-05	No	Drilling wastes; metal refineries; erosion of natural deposits
Beryllium [1075] (ppb)	4	4	1	1 to 1	Feb-05	No	Metal refineries and coal-burning factories; electrical, aerospace, and defense industries
Cadmium [1015] (ppb)	5	5	5	5 to 5	Feb-05	No	Corrosion of galvanized pipes; erosion of natural deposits; metal refineries; waste batteries and paints
Chromium [1020] (ppb)	100	100	1	1 to 1	Feb-05	No	Discharge from steel and pulp mills; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.123 (90 th percentile)	0.001 to 0.289	Sep-04	No	Corrosion of household plumbing systems
Cyanide [1024] (ppb)	200	200	10	10 to 10	Feb-05	No	Discharge from steel/metal factories; plastic and fertilizer factories
Fluoride [1025] (ppm)	4	4	1.2	1.01 to 1.2	Sep	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	1 (90 th percentile)	0 to 3	Sep-04	No	Corrosion of household plumbing systems
Mercury [1035] (ppb)	2	2	1	1 to 1	Feb-05	No	Erosion of natural deposits; refineries and factories; landfills; runoff from cropland
Nitrate [1040] (ppm)	10	10	0.05	0.05 to 0.05	Aug-05	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits



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Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Nitrite [1041] (ppm)	1	1	0.05	0.05 to 0.05	Aug-05	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium [1045] (ppb)	50	50	3	3 to 3	Feb-05	No	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium [1085] (ppb)	2	0.5	1	1 to 1	Feb-05	No	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) measured as ppm, but reported as a ratio*	TT	N/A	1.28 (lowest average)	1 to 2.13 (monthly ratios)	N/A	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.							
Chlorine (ppm)	MRDL 4	MRDLG 4	1.18 (highest average)	0.20 to 2.19	N/A	No	Water additive used to control microbes.
HAA [Haloacetic acids] (ppb)	60	N/A	39 (highest average)	16 to 71	N/A	No	Byproduct of drinking water disinfection
TTHM [total trihalomethanes] (ppb)	80	0	49 (highest average)	23 to 100	N/A	No	Byproduct of drinking water disinfection.