2023 Water Quality Report ***Irvine Municipal Utilities*** **KY0330205**

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Meetings: 238 Broadway St. Third Thursday of every month 9:00 AM

We at IMU use the Kentucky River as our source for water. We only take about 1.3 million gallons a day on average to supply 15,000 people with safe drinking water. Although we have an ample supply of water, there is always room for conservation. There are two types of water sources, ground water and surface water. The Kentucky River is a surface water source. Like all water sources, it is susceptible to pollutants, not only directly dumped in to it, but also those contaminates that can enter from creeks, karsts and caverns hundreds of yards away. We have developed a source water assessment which identifies all the areas with in the large radius of the rivers edge to help us determine what could be a potential hazard to our source of water. The Kentucky River is at moderate risk for hazards due to the pesticides, fertilizers and straight pipes in the area. We monitor closely for these types of hazards to maintain our high quality of safe drinking water. This Source Water Assessment is updated and check on a regular basis and is available for review upon request at our office.

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 may be obtained by calling the Environmental Protection Agency'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 may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or mining activities). 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. FDA regulations establish limits for contaminants in bottled water to 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).

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 local water system is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.

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) - or milligrams per liter, (mg/l). 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 has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Variances & 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 that a water system shall follow.

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

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

To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. **Copies of this report are available upon request by contacting our office during business hours.**

Regulated Contaminant Test Results — Irvine Municipal Utilities

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Radioactive Contaminants							
Alpha emitters [4000] (pCi/L)	15	0	3.12	3.12 to 3.12	Feb-23	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	0.507	0.507 to 0.507	Feb-23	No	Erosion of natural deposits
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.0532	0.0532 to 0.0532	Nov-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.96	0.961 to 0.961	Nov-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.401	0.401 to 0.401	Nov-23	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.06 (lowest average)	0.34 to 1.70 (monthly ratios)	2023	No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.39 (highest average)	0.5 to 2.09	2023	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	40 (high site average)	9.5 to 49.5 (range of individual sites)	2023	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	57 (high site average)	16.1 to 82 (range of individual sites)	2023	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper [1022] (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.0995 (90^{th} percentile)	0.00343 to 0.131	Sep-22	No	Corrosion of household plumbing systems

Turbidity (NTU) TT * Representative samples	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.16	100	No	Soil runoff

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that EPA has not established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our office during normal business hours.

	Average	Range of Detection
Fluoride (added for dental health)	0.8	0.0603 to 0.967
Sodium (EPA guidance level = 20 mg/L)	32.6	32.6 to 32.6

Secondary contaminants do not have a direct impact on the health of consumers. They are being included to provide additional information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Chloride	250 mg/l	18.6	18.6 to 18.6	Nov-23
Color	15 color units	1	1 to 1	Nov-23
Corrosivity	Noncorrosive	-0.855	-0.855 to -0.855	Nov-23
Fluoride	2.0 mg/l	0.818	0.818 to 0.818	Nov-23
pH	6.5 to 8.5	7.02	7.02 to 7.02	Nov-23
Sulfate	250 mg/l	227	227 to 227	Nov-23
Total Dissolved Solids	500 mg/l	440	440 to 440	Nov-23

Level 1 Assessment: A Level 1 Assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Coliforms are bacteria that are naturally present in the environment and are used an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment distribution. When this occurs, we are required to conduct assessment(s) to identify problems and correct any problems that we found during the assessment.

During the past year we were required to conduct one Level 1 Assessment. One Level 1 Assessment was completed. In addition, we were required to take two corrective actions and we completed those two actions