

Annual Drinking Water Quality Report

DIX-KELL WATER & SEWER COMMISSION – IL0815100

Annual Water Quality Report for the period of January 1 to December 31, 2022

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

The source of drinking water used by DIX-KELL WATER COMMISSION is Purchased Surface Water.

For more information regarding this report contact: Charles Burge, Water Superintendent/Certified Operator, at (618) 266-7701

Source of Drinking Water: 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 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 storm water 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, urban storm water runoff, and residential uses.
- * **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 storm water runoff, and septic systems.
- * **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 at **(800) 426-4791**.

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 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 at **(800) 426-4791**.

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. We 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 2 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>.

Source Water Information:

Source Water Name	Type of Water	Report Status	Location
CC01 – Dix Kell W.C. Master Meter FF IL0810300 - CC01	SW	ACTIVE	Just north of Mt. Vernon, 0.15 miles north of the intersection of intersection of Lakewood Drive and Route 37.

Source Water Assessment:

We want our valued customers to be informed about their water quality. If you would like to learn more, please feel welcome to attend any of our regularly scheduled meetings. The source water assessment for our supply has been completed by the Illinois EPA. If you would like a copy of this information, please stop by Dix-Kell Water & Sewer Commission office or call our water operator at **(618) 266-7701**. To view a summary version of the completed Source Water Assessments, including: Importance of Source Water; Susceptibility to Contamination Determination; and documentation/recommendation of Source Water Protection Efforts, you may access the Illinois EPA website at <http://www.epa.state.il.us/cgi-bin/wp/swap-fact-sheets.pl>.

Source of Water: REND LAKE INTER-CITY WATER SYSTEM Illinois EPA considers all surface water sources of public water supply to susceptible to potential pollution problems. Hence the reason for mandatory treatment of all public water supplies in Illinois. Mandatory treatment includes coagulation, sedimentation, filtration and disinfection. Primary sources of pollution in Illinois lakes can include agricultural runoff, land disposal (septic systems) and shoreline erosion.

2022 Regulated Contaminants Detected

Water Quality Test Results:

Definitions: The following tables contain scientific terms and measures, some of which may require explanation.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

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.

Level 2 Assessment: A Level 2 Assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level or 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 or 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 or MRDL: The highest level of 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 or 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.

na: not applicable.

mrem: millirems per year (a measure of radiation absorbed by the body)

ppb: micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

Treatment Technique or TT: A required process intended to reduce the level of a contaminant in drinking water.

Regulated Contaminants:

Disinfections and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	12/31/2022	3.5	3.5 - 3.5	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2022	18	10.2 - 28.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2022	37	21 – 49.3	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

2022 Regulated Contaminants Detected - REND LAKE INTERCITY WATER SYSTEM

Lead and Copper Date Sampled: 11/15/19

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

Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.

Lead MCLG	Lead Action Level (AL)	Lead 90th Percentile	# Sites Over Lead AL	Copper MCLG	Copper Action Level (AL)	Copper 90th Percentile	# Sites Over Copper AL	Likely Source of Contamination
0	15 ppb	0 ppb	0	1.3 ppm	1.3 ppm	0	0	Corrosion of household plumbing systems; Erosion of natural deposits

Water Quality Test Results

Definitions: The following tables contain scientific terms and measures, some of which may require explanation. **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the Maximum Contaminant Level Goal 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. MCLG's allow for a margin of safety. **ppm:** milligrams per liter or parts per million - or one ounce in 7,350 gallons of water. **ppb:** micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water. **N/A:** not applicable. **Avg.:** Regulatory compliance with some MCL's is based on running annual average of monthly samples. **Maximum Residual Disinfectant Level (MRDL):** The highest level of 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 disinfectant in drinking water below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants. **pCi/L:** Picocuries per Liter (a measure of radioactivity)

Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
<i>*Not all sample results may have been used for calculating the Highest level detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.</i>								
*Total Haloacetic Acids (HAA5)	2022	21	16.7 - 26.8	N/A	60	ppb	No	By-product of drinking water chlorination
*TTHMs [Total Trihalomethanes]	2022	35	24.9 - 49.3	N/A	80	ppb	No	By-product of drinking water chlorination
Chlorite	2022	0.5	0.024 - 0.5	0.8	1	ppm	No	By-product of drinking water chlorination
Chloramines	12/31/22	3.1	2.82 - 3.13	MRDLG=4	MRDL=4	ppm	No	Water additive used to control microbes
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source Of Contaminant
Barium	2022	0.0129	0.129 - 0.129	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Arsenic	2022	1	0.98 - 0.98	0	10	ppb	No	Erosion of natural deposits; Runoff from orchards; Runoff from electronics production wastes

<i>Inorganic Contaminants (continued)</i>	<i>Collection Date</i>	<i>Highest Level Detected</i>	<i>Range of Levels Detected</i>	<i>MCLG</i>	<i>MCL</i>	<i>Units</i>	<i>Violation</i>	<i>Likely Source Of Contaminant</i>
<i>Fluoride</i>	<i>2022</i>	<i>0.7</i>	<i>0.65 – 0.65</i>	<i>4</i>	<i>4</i>	<i>ppm</i>	<i>No</i>	<i>Erosion of natural deposits; Water additive which promotes strong teeth; Fertilizer or Aluminum Factory discharge</i>
<i>Nitrate (measured as Nitrogen)</i>	<i>2022</i>	<i>0.17</i>	<i>0.17 – 0.17</i>	<i>10</i>	<i>10</i>	<i>ppm</i>	<i>No</i>	<i>Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits</i>
<i>Sodium</i>	<i>2022</i>	<i>24</i>	<i>24 – 24</i>			<i>ppm</i>	<i>No</i>	<i>Erosion from naturally occurring deposits. Used in water softener regeneration</i>

The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

<i>Radioactive Contaminants</i>	<i>Collection Date</i>	<i>Highest Level Detected</i>	<i>Range of Levels Detected</i>	<i>MCLG</i>	<i>MCL</i>	<i>Units</i>	<i>Violation</i>	<i>Likely Source Of Contaminant</i>
<i>Combined Radium 226/228</i>	<i>1/22/2020</i>	<i>0.86</i>	<i>0.86 - 0.86</i>	<i>0</i>	<i>5</i>	<i>pCi/L</i>	<i>No</i>	<i>Erosion of naturally occurring deposits</i>
<i>Gross alpha excluding radon and uranium</i>	<i>1/22/2020</i>	<i>0.12</i>	<i>0.12 – 0.12</i>	<i>0</i>	<i>15</i>	<i>pCi/L</i>	<i>No</i>	<i>Erosion of naturally occurring deposits</i>

Turbidity Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Definitions: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
 NTU – Nephelometric Turbidity Units

<i>Lowest Monthly % meeting limit</i>	<i>Limit (Treatment Technique)</i>	<i>Violation</i>	<i>Source</i>
<i>100%</i>	<i>0.3 NTU</i>	<i>No</i>	<i>Soil Runoff</i>
<i>Highest Single Measurement</i>	<i>Limit (Treatment Technique)</i>	<i>Violation</i>	<i>Source</i>
<i>0.3</i>	<i>1 NTU</i>	<i>No</i>	<i>Soil Runoff</i>

Total Organic Carbon The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violation sections.

VIOLATIONS: There were no violations this reporting period.