

Annual Drinking Water Quality Report DEVILS KITCHEN WATER DISTRICT IL1995160

Consumer Confidence Report

Annual Water Quality Report for the period of January 1 to December 31, 2018

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 DEVILS KITCHEN WATER DISTRICT is Purchased Surface Water

For more information regarding this report contact: Tim Yancey Phone 618-549-5141

Devils Kitchen Water District board meetings are the second Thursday of the month

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) 426-2791

In order 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. 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 (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 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 the office or call our water operator at 618-549-5141. 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: CARBONDALE and LAKE OF EGYPT WATER DISTRICT, Illinois EPA considers all surface water sources of public water supply to be 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 in Illinois lakes can include agricultural runoff, land disposal (septic systems) and shoreline erosion.

Source Water Information

Source Water Name	Type of Water	Report Status	Location
CC01 - DEVIL'S KITCHEN MASTER METERFF IL1995200 TP03 – LAKE of Egypt	SW	_____	9575 Day Road, Marion
CC02 - DEVIL'S KITCHEN MASTER METERFF0770150 TP05 – Carbondale WATER	SW	_____	2140 Dogwood

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 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 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.

Devils Kitchen Water								
Lead and Copper								
Definitions: Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. Action Level : The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.								
Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Lead	2018	0	15	0	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.
Regulated Contaminants								
Disinfectants and Disinfection By- Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination

Chloramines	12/31/2018	2.1	0.6-2.4	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2018	31	20.3-44.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	37	17.6-35.5	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Violations Table

Interim Enhanced SWTR

The Interim Enhanced Surface Water Treatment Rule improves control of microbial contaminants, particularly Cryptosporidium, in systems using surface water, or ground water under the direct influence of surface water. The rule builds upon the treatment technique requirements of the Surface Water Treatment Rule.

Violation Type	Violation Begin	Violation End	Violation Explained
SINGLE COMB FLTR EFFLUENT (IESWTR/LT1)	6/1/2018	6/30/2018	One turbidity measurement exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.

Violation Summary and Corrective Actions

The turbidity violation resulted from mineral reaction in which manganese was oxidized by chlorine. Chlorine had been used to disinfect newly rehabilitated filters at the water treatment plant. Some of this highly-chlorinated water mixed with drinking water and entered the City's water system. The violation was not caused by poor filtration. The turbidity levels returned to normal within 24 hours. Samples were collected throughout the City to ensure the safety of the drinking water, and a Drinking Water Alert containing all of the details of the event was issued directly to all residents. The IEPA determined that the water was safe to drink at all times and did not require the City to issue a boil order.

Carbondale

Lead and Copper

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

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	
Copper	7/18/2017	1.3	1.3	0.0365	0	ppm	N	Erosion of natural deposit; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	7/19/2017	0	15	1.22	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.
Disinfectants and Disinfection By- Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	12/31/2018	3	2.0 - 3.0	MCLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2018	34	20.9 - 36.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2018	25	18.9 - 31.7	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination

Barium	10/3/2018	0.022	0.022 - 0.022	2.0	2.0	ppm	N	Discharge of drilling wastes: Discharge from metal refineries; Erosion of natural deposits
Fluoride	10/3/2018	0.7	0.65 - 0.70	4.0	4.0	ppm	N	Erosion of natural deposits: Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Maganese	10/3/2018	2.4	2.4 - 2.4	150.0	150.0	ppb	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Nitrate (measured as Nitrogen)	4/19/2018	0.23	0.23 - 0.23	10.0	10.0	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of Natural deposits.
Sodium	10/3/2018	17.0	17.0 - 17.0			ppm	N	Erosion of natural deposit; Leaching from wood preservatives; Corrosion of household plumbing systems.
Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Simazine	2018	0.38	0 - 0.38	4.0	4.0	ppb	N	Herbicide runoff

Water Quality Test Results

Turbidity	Limit (Treatment)	Level Detected	Violation	Likely Source of Contamination
Highest Single measurement	1.0 NTU	2.47 NTU	Y	Soil runoff.
Lowest monthly % meeting limit	0.30 NTU	98%	N	Soil runoff.

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 filtrations system and disinfectants.

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 section.

Lake of Egypt

Lead and Copper

Definitions:
 Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
 Action Level : The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	9/19/2017	1.3	1.3	0.024	0	ppm	N	Erosion of natural deposit; Leaching from wood preservatives; Corrosion of household plumbing systems.

Regulated Contaminants

Disinfectants and Disinfection By- Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloramines	12/31/2018	2.8	3-Feb	MRDLG = 4	MRDL = 4	ppm	N	Water additive used to control microbes.
Chlorite	2018	0.83	0.45 - 0.83	0.8	1	ppm	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)	2018	36	8.6 - 48.9	No goal for the total	60	ppb	N	By-product of drinking water disinfection.

Total Trihalomethanes (TTHM)	2018	28	1.23 - 51.1	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2018	0.022	0.022 - 0.022	2	2	ppm	N	Discharge of drilling wastes: Discharge from metal refineries; Erosion of natural deposits
Fluoride	2018	0.6	0.553 - 0.553	4	4	ppm	N	Erosion of natural deposits: Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Iron	2018	0.013	0.013 - 0.013		1	ppm	N	This contaminant is not currently regulated by the USEPA. However, the state regulates. Erosion of natural deposits.
Nitrate (measured as Nitrogen)	2018	0.05	0.05 - 0.05	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of Natural deposits.
Sodium	2018	30	30 - 30			ppm	N	Erosion from naturally occurring deposits. Used in water softener regeneration.
Turbidity								
Turbidity	Limit (Treatment)	Level Detected	Violation	Likely Source of Contamination				
Highest Single measurement	1 NTU	0.168	N	Soil runoff.				
Lowest monthly % meeting limit	0.3 NTU	98%	N	Soil runoff.				

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 filtrations system and disinfectants.

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 section