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QUALITY DRINKING WATER



Public Water System ID Number: MO5010754

2023 WATER QUALITY REPORT
CITY UTILITIES OF SPRINGFIELD, MO.

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ATTENTION
Landlords and
Apartment Owners:

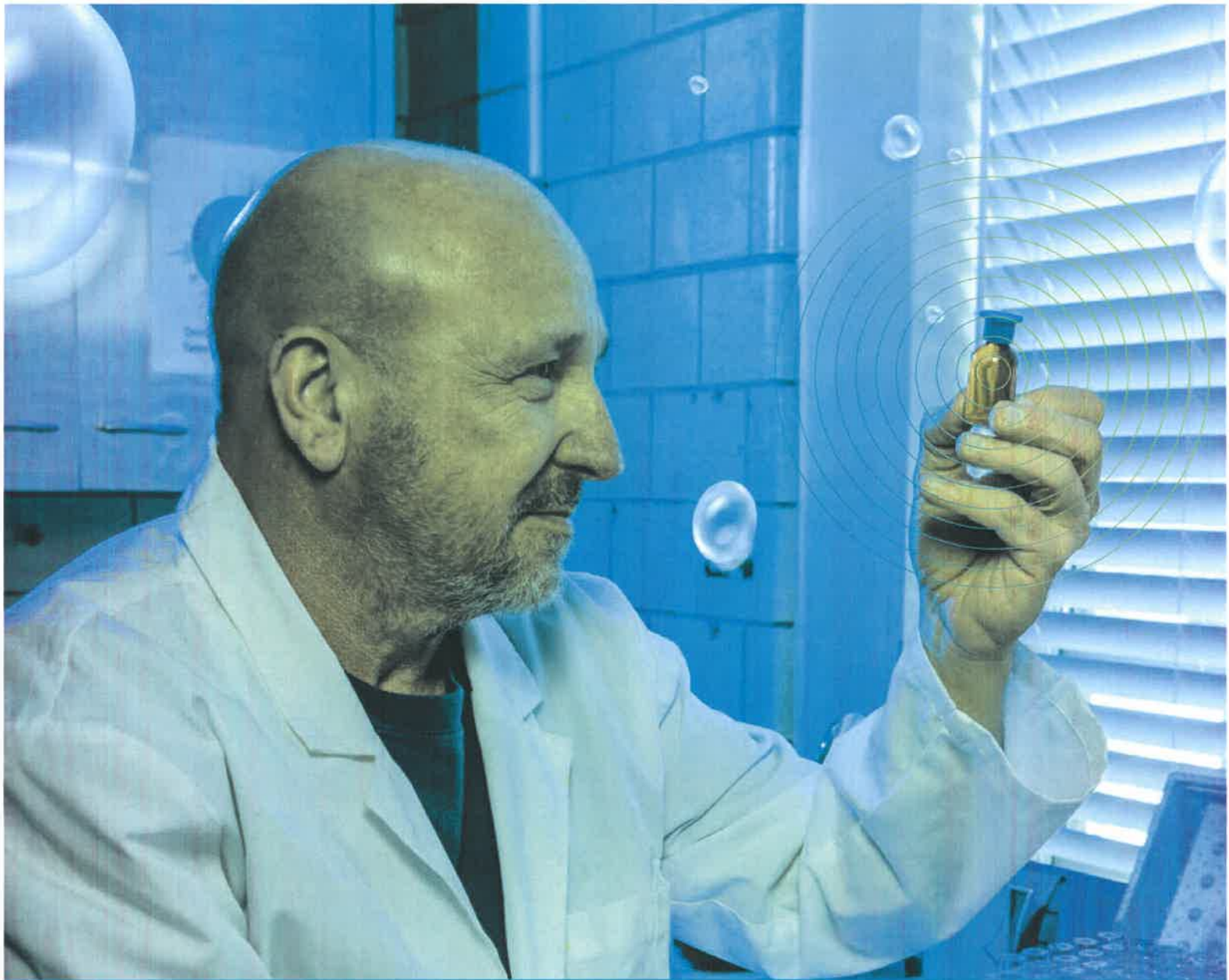
Please share a copy
of this report with
your tenants about
the quality of their
drinking water.



Springfield



This report contains important information about Springfield's drinking water. For more information regarding this assessment or for additional water quality data, call the City Utilities Manager-Water Quality Lab at 417-831-8822.



For the 24th year in a row, City Utilities of Springfield's Blackman and Fulbright Water Treatment Plants have received the Directors Award from the Partnership for Safe Water, a program of the American Water Works Association (AWWA). This award is given in recognition of the efforts to achieve excellence in water quality far beyond what is required by federal regulations. Less than one percent of the treatment plants in the United States have received this recognition.



Water is important for all life. While City Utilities provides water, natural gas, electricity, transit, and broadband services to the City of Springfield—water is the only commodity that our customers ingest. Providing safe drinking water is not an option, but is a necessity to keep our community healthy.

City Utilities' commitment to you, our neighbor, is that our team will continue to work hard every day to ensure you not only have safe drinking water, but great tasting water too.





**"IN THE END WE WILL
CONSERVE ONLY
WHAT WE LOVE;
WE WILL LOVE ONLY
WHAT WE UNDERSTAND;
AND WE WILL
UNDERSTAND ONLY WHAT
WE ARE TAUGHT."
- BABA DIOUM**



WATERSHED STEWARDSHIP

ENSURING GREAT TASTE AND ODOR-FREE DRINKING WATER

City Utilities (CU) understands the importance of delivering safe drinking water to its customers. While water quality is a top priority, ensuring that the water maintains a pleasant taste and smell is equally crucial.

Algae, a natural component of lake ecosystems, plays a significant role in the occurrence of taste and odor compounds such as Geosmin and 2-Methylisoborneol (MIB). McDaniel Lake, a vital water source for CU, experiences natural stratification during the summer, forming distinct layers of water. As cooler weather arrives in the fall, these layers mix, bringing accumulated taste and odor compounds from the sediment to the surface.

Although Geosmin and MIB are harmless to public health, they can adversely affect the aesthetic quality of the water. Recognizing this, CU diligently monitors these compounds in our certified laboratory. Highly trained operators at the water treatment plants use various strategies to remove these compounds. By employing advanced testing and treatment methods, CU ensures that the drinking water not only meets regulatory standards but also exceeds customer expectations in terms of taste and odor.

INNOVATIVE ALGAE CONTROL PROJECTS UNDERWAY AT MCDANIEL LAKE

City Utilities has joined forces with various local entities to implement floating wetlands as a sustainable method to control algae in our area lakes. Led by the Missouri Department of Conservation, this collaborative effort includes CU, Ozarks Technical Community College, Missouri State University, the Watershed Committee of the Ozarks, the Missouri Department of Natural

Resources, the City of Springfield, and the James River Basin Partnership.

The pilot project at McDaniel Lake comprises of the installation of four floating wetlands alongside shoreline plantings. Unlike traditional wetlands, these innovative floating platforms utilize pontoon floaters and metal framing. Each floating island



Graphic courtesy of FloraFloat*

utilizes perennial, native plants carefully selected for their ability to thrive in aquatic environments and reemerge year after year. Beyond their aesthetic appeal, these plants serve a crucial purpose: to uptake excess nutrients present in the lake to prevent harmful algal blooms.

The overarching goal of the project is to enhance water quality in McDaniel Lake and to serve as a model for sustainable lake management practices across the region. By harnessing the natural filtration capabilities of wetland vegetation, CU and its partners aim to create a healthier, more resilient ecosystem that benefits both aquatic life and the surrounding community.



WHERE YOUR WATER COMES FROM

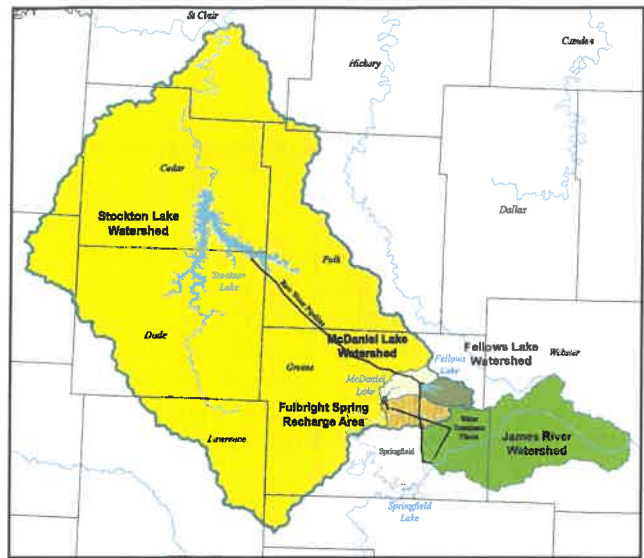
City Utilities' drinking water comes from a variety of lakes, rivers, wells, and a spring. Approximately 74 percent of Springfield's drinking water comes from surface waters, such as lakes and rivers. The remaining comes from groundwater sources.

City Utilities' Fulbright and Blackman Water Treatment Plants use a combination of sources for water treatment, including both surface and groundwater. Fulbright is located on the northern edge of Springfield and is served by Fulbright Spring (the original source for the city), a deep well, and McDaniel Lake. The Blackman Plant is in the southeastern corner of the city and receives water from Fellows Lake and James River. Both Fellows and McDaniel Lakes can be supplemented with water from Stockton Lake. Another deep well can be found in the distribution system and is used as an additional source when needed.

ABOUT OUR WATERSHED

Springfield is fortunate to have a variety of natural resources available to supply our community's drinking water. Springfield's water sources are unique compared to other communities in southwest Missouri. While other towns and rural residents rely on groundwater wells, water customers of City Utilities have an abundance of surface water sources.

- The wells in Springfield come from underground aquifers which are replenished by precipitation soaking into the ground. Healthy soils increase the quality and quantity of water that recharges the aquifers.
- The "riparian area" is the land along streams and rivers. Forested riparian areas are one of the best ways to prevent flood damage, erosion, and nutrient pollution to our drinking water.
- Prescribed or rotational grazing practices help improve soil health and water quality, while over-grazed pastures do the opposite.
- Nutrients from fertilizer, animal or human waste, and sediment from erosion can cause algae blooms in our drinking water reservoirs which can negatively impact our water supply.
- The cleaner our sources of drinking water, the better it will taste and smell, less it will cost, and more affordable it will be for the consumers.



SOURCE WATER ASSESSMENT

The Department of Natural Resources completed a source water assessment for City Utilities' drinking water sources. The assessment showed that, as expected for surface waters, the sources are susceptible to viruses and microbiological contaminants, which are inactivated by conventional treatment. In addition, all surface waters are moderately susceptible to land-use activities within the watershed. City Utilities, in support of the Watershed Committee of the Ozarks, will continue to encourage low-impact land use to reduce detrimental effects to our drinking water sources. The source water assessment for our system can be found online at <http://drinkingwater.missouri.edu>. City Utilities' Public Water System number is 5010754.



CITY UTILITIES TAKES STEPS TO PROTECT DRINKING WATER FOR FUTURE GENERATIONS

As part of our ongoing commitment to water quality and environmental responsibility, City Utilities is actively addressing potential health concerns associated with per- and polyfluoroalkyl substances (PFAS), also known as “Forever Chemicals,” and responding to regulations by the Environmental Protection Agency (EPA). At the same time, we’re taking steps to ensure the safety of our drinking water in light of upcoming changes to the Lead and Copper Rule regulation.

PFAS “FOREVER CHEMICALS”

PFAS is a group of man-made compounds found in everyday items like fire-fighting foams, popcorn bags, cleaning products, non-stick cookware, stain repellent carpeting and many more. While the full impact of health effects to humans is still unknown, concerns have prompted the EPA to pass rules limiting some PFAS levels in drinking water to no more than 4 parts per trillion (ppt). To put this in perspective, 1 ppt is equivalent to one drop of water in 20 Olympic-size swimming pools.

In an effort to be proactive, CU began testing its water supply for PFAS in November 2022. Over the last year, CU detected a range of 3.1 to 16.0 ppt PFOS, which is a chemical in the PFAS family, in the James River. In response, CU has implemented an operational policy to blend water from the James River with Fellows Lake to stay below the proposed Maximum Contaminant Level (MCL) of 4 ppt PFOS. Tap samples tested on March 5, 2024, showed all PFAS levels below the new EPA required limits.

LEAD AND COPPER RULE

Simultaneously, the EPA is proposing new rules with the goal of removing all lead-service lines under the control of the utility within 10-years.

The Lead and Copper Rule Revision (LCRR) focuses on creating a public inventory of all water service lines and initiates more lead service line replacements. While not yet final, EPA is proposing a requirement that water utilities like City Utilities must oversee replacement of all lead service lines within 10 years, with limited exceptions. In some cases, galvanized service lines will also need to be replaced.



City Utilities has already begun the identification process of utility-owned service lines and there are no known lead service lines in our system. However, there are more than 86,000 customer-owned service lines in City Utilities’ service territory that still must be identified. The customer-owned service lines reach from the property line to the residence. City Utilities is actively developing a plan to work with customers to comply with this regulation.

WATER AT A GLANCE ABOUT LEAD AND COPPER

City Utilities fully complies with the lead and copper provisions of the Safe Drinking Water Act. In 2022, City Utilities gathered samples from a number of residences in accordance with state and federal regulations. EPA regulations require that at least 90 percent of the samples are below the action level for both lead (15 ppb) and copper (1.3 ppm). Two rounds of lead and copper sampling were completed in 2022. Both sampling rounds had 90th percentile values below the action levels for lead and copper.

Special Lead and Copper Notice: 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. CU is responsible for providing high quality drinking water but 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 (800-426-4791) or <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>.

IMPORTANT DRINKING WATER DEFINITIONS

90TH PERCENTILE: For lead and copper testing. 10% of test results are above this level and 90% are below this level.

ACTION LEVEL (AL): The concentration of a contaminant which, if exceeded, triggers requirements which a water system must follow.

HAA5: Haloacetic acids (mono-, di-, and tri-chloroacetic acid, and mono- and di-bromoacetic acid) as a group.

LOCATIONAL RUNNING ANNUAL AVERAGE (LRAA): The average of samples collected at a particular location, calculated from the most recent 4 quarters.

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 health risk. 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 disinfectant use to control microbial contamination.

NEPHELOMETRIC TURBIDITY UNITS (NTU): A measure of cloudiness of the water.

PICOCURIES PER LITER (PCI/L): Erosion of natural deposits

POPULATION: 172,025. This is the equivalent residential population served including non-bill paying customers.

RANGE OF RESULTS: Shows the lowest and highest levels found during a testing period. If only one sample was taken, then this number equals the highest test result or highest value.

RUNNING ANNUAL AVERAGE (RAA): The average of sample analytical results for samples taken during the previous four calendar quarters.

TOTAL TRIHALOMETHANES (TTHM): Total trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.

TREATMENT TECHNIQUE (TT): A required process intended to reduce the level of a contaminant in drinking water.

TURBIDITY: A measure of the cloudiness or clarity of water. It is monitored because it is a good indicator of both water quality and the effectiveness of our filtration system.

UNIT DESCRIPTIONS & DEFINITIONS

Grains Per Gallon (GPG):
measure of hardness 1 GPG = 17.1 ppm

Parts Per Million (ppm):
or milligrams per liter (mg/L)

Parts Per Billion (ppb):
or micrograms per liter (ug/L)

Not Detected (ND):
not detectable at testing limits

N/A:
not applicable

MEASUREMENTS



Parts Per Million
1 drop in a 10-gallon
fish tank



Parts Per Billion
1 drop in a 10,000-gallon
swimming pool

CITY UTILITIES OF SPRINGFIELD - WATER QUALITY SUMMARY 2023

Detected Contaminants	Units	MCLG	MCL	Average Level	Range Detected	Compliance	Major Sources
Treatment Plants							
Fluoride	ppm	4	4	0.67	0.44-0.91	YES	Added during treatment for dental health or dissolved from natural deposits
Total Chlorine	ppm	4 (MRDLG)	4 (MRDL)	1.46	1.24 - 1.89	YES	Water additive used for disinfection
Barium	ppm	2	2	0.079	0.043 - 0.143	YES	Discharge of drilling wastes or from metal refineries; erosion of natural deposits
Nitrate	ppm	10	10	0.66	ND (<0.07) - 2.41	YES	Runoff from fertilizer; leaching from septic tanks or sewage; erosion of natural deposits
Nitrite	ppm	1	1	ND (<0.02)	ND (<0.02)-0.47	YES	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon	mg/L	N/A	TT: 0	1.39	0.66 - 2.19	YES	Naturally occurring
Turbidity	NTU	N/A	TT: at least 95% of samples <0.3 NTU	Highest Single Measurement = 0.08 Percentage of samples <0.3 NTU = 100% Fully Compliant - all 12 months	YES	Soil runoff	



Detected Contaminants	Units	MCLG	MCL	Highest LRAA	Range Detected	Compliance	Major Sources
Distribution System							
Total Trihalomethanes	ppb	N/A	80 (LRAA)	50	13.74 - 71.44	YES	By-product of drinking water disinfection
Haloacetic Acids	ppb	N/A	60 (LRAA)	25	8.96 - 34.2	YES	By-product of drinking water disinfection
Lead	ppb	0	AL = 15	2022* Testing Results		YES	Corrosion of household plumbing; erosion of natural deposits
				90th Percentile Values	Range Detected		
				3.9 - 4.9	ND (<0.01) - 22.7		
Copper	ppm	1.3	AL = 1.3	0.101 - 0.11	ND(<0.12) - 0.586	YES	
Total Coliform Bacteria	% positive samples	0	Coliform bacteria in no more than 5% of samples	2023 testing - highest monthly % positive 0.83% January		YES	Naturally present in the environment - No fecal coliform or E. coli in 1489 tests in 2023

Detected Contaminants	Units	MCLG	MCL	Highest Value	Range of Sampled Result(s)	Compliance	Major Sources
Kansas Street Well							
Combined Radium (-226 & -228)	pCi/l	0	5	1.1	1.1	YES	Erosion of natural deposits
Radium-226	pCi/l	0	5	1.1	1.1	YES	Erosion of natural deposits
Additional Monitoring Data (General Water Quality Parameters)							
Analyte	Units	Average	Range	Comments		Major Sources	
Hardness	GPG	8.9	5.7 - 12.1	Hardness refers to the mineral content of water. Calcium and magnesium are the main contributors to water hardness.		Erosion of natural deposits	
	ppm	152.2	97.8 - 207.6				

Violations and Health Effects Information

Compliance Period	Analyte	Type
No Violations Occurred in the Calendar Year of 2023		

* System-wide testing of representative homes for lead and copper (which may be imparted to the water from plumbing and fixtures) was conducted in two rounds of standard monitoring during 2022.

UNREGULATED CONTAMINANT MONITORING RULE RESULTS - 2019

UCMR4				
Detected Contaminants	Collection Date of HV	High Value (HV)	Range Detected	Unit
Bromide	08/20/19	39.5	27.7 - 39.5	ppb
HAA5	05/13/19	42.28	5 - 42.28	ppb
HAA6Br	08/20/19	19.88	6.1 - 19.88	ppb
HAA9	05/13/19	54.51	9.9 - 54.51	ppb
Manganese	02/04/19	0.53	0 - 0.53	ppb
Total Organic Carbon	05/13/19	3880	1070 - 3880	ppb

Unregulated contaminants do not have a maximum contaminant level (MCL) associated with their occurrence. Utilities are periodically required to sample for unregulated contaminants to assist the EPA in determining if an MCL is needed for those contaminants. During the latest round of monitoring, our utility tested for 30 contaminants. The 6 contaminants measured at detectable levels are listed in the table (ABOVE).

WHAT ARE THE SOURCES OF CONTAMINANTS?

As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can be polluted by animals or human activity. Contaminants that might be expected in untreated water include microbial contaminants, such as viruses and bacteria; inorganic contaminants, such as salts and metals; organic chemicals from

pesticides, herbicides, and industrial or petroleum use; and radioactive materials. 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 SAFE DRINKING WATER HOTLINE: 800-426-4791.





SECURING SPRINGFIELD'S WATER SUPPLY

City Utilities maintains and operates Springfield's water system for more than 84,000 homes and businesses. To help secure water for the future, the Board of Public Utilities approved an agreement expressing City Utilities' intent to join several other utilities and buy future water reallocations from Stockton Lake through the Southwest Missouri Joint Water Utility Commission (SWMO).

SWMO is requesting a total of 94,750 acre-feet of water storage space in Stockton Lake to be reallocated for drinking water supply. One-acre-foot is equal to 325,851 gallons. If approved by the U.S. Army Corps of Engineers (Corps), City Utilities could purchase 29,154 acre-feet of water storage space in Stockton Lake as part of SWMO's request. If SWMO is successful in obtaining a contract with the Corps, this would be CU's third allocation of water from Stockton Lake. This commitment to diverse water sources helps ensure a continuous supply of high-quality water for our customers for generations to come.

SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to certain types of contamination in drinking water than the general population. Immuno-compromised individuals, people with cancer who are undergoing chemotherapy, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk for infections. These people should seek advice from their healthcare provider. Environmental Protection Agency and Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA hotline listed below:

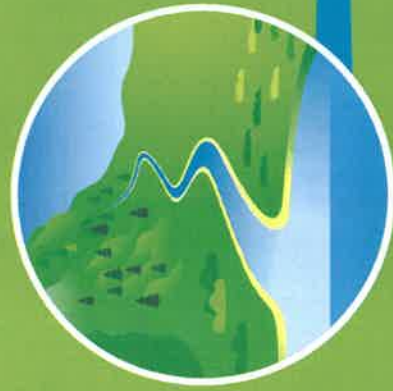


Environmental Protection
Agency's Safe Drinking Water
Hotline: 800-426-4791



HOW YOUR WATER IS TREATED

City Utilities takes great measures to keep your water clean and safe for you and your family to drink. This process takes place in four steps:



COAGULANTS

COAGULANTS/FLOCCULATION
Raw water is drawn into mixing basins at the Blackman and Fulbright Water Treatment Plants. During this step, coagulant is mixed with the raw water. This process causes small particles to stick to each other, forming larger particles called floc.



SEDIMENTATION
Next, the particles slowly become heavier and settle to the bottom of a basin. This is how most of the dirt and contaminants are removed from the water.

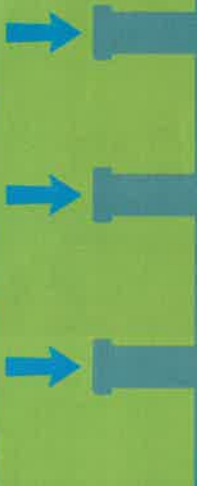


CORROSION CONTROL

FLUORIDE

DISINFECTION

DISINFECTION
Chlorine is then added and given plenty of time to inactivate any bacteria, viruses, or other harmful microbes that might remain.
In addition, carbon is used to help the water taste great. While fluoride occurs naturally in water, a small amount is added to help protect oral health. Finally, the pH of the water is adjusted to protect pipes from corrosion. All these steps take place before the water goes into the distribution system, your home, or any business. City Utilities carefully monitors the quality of water during the treatment process and throughout the water system.

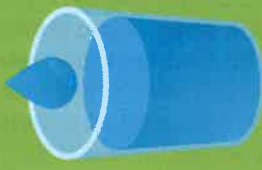


TREATED WATER STORAGE

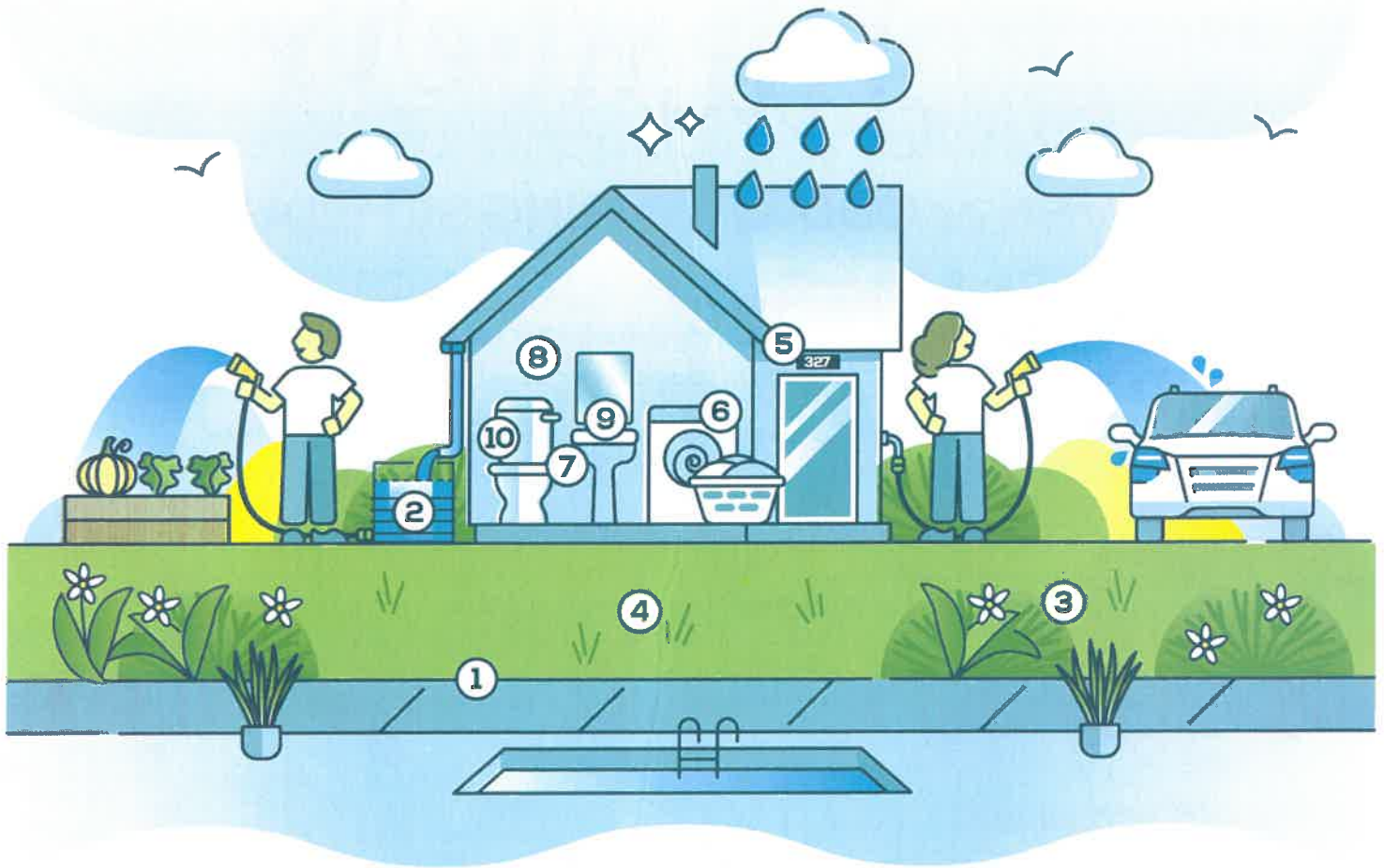
FILTRATION
To finish the clarifying of the water, it is then filtered through layers of fine, granulated materials consisting of carbon, sand, and rocks. As smaller particles are removed, cloudiness diminishes, and clear water emerges.



WATER CONSUMPTION



THE INS AND OUTS OF WATER SAVINGS



Conserve Water Outside Your Home

- 1 Sweep your sidewalks and steps rather than spraying them down with the hose.
- 2 Install a rain barrel to collect water from your downspout for watering plants.
- 3 Plant native plants which are suited for our climate and require less care and fewer resources to maintain.
- 4 Set your mower blades 2-3 inches high. Longer grass improves moisture retention.
- 5 Follow CU's even/odd watering schedule

Save Water Inside Your Home

- 6 Run only full loads of dishes and laundry.
- 7 Inspect faucets and toilets for leaks.
- 8 Limit your showers to 5 minutes or less.
- 9 Turn off the faucet when you are brushing your teeth, shaving, and while washing your hands.
- 10 Upgrade old toilets to WaterSense® high efficiency toilets and save more than two gallons per flush.

Visit cityutilities.net to see rebates offered by CU to help you save even more!

Water by the Numbers

EVEN or ODD WATERING SCHEDULE

City Utilities is committed to helping our customers use their water and energy wisely. With your help, Springfield may be able to save 5 million gallons of water every day with the Even-Odd Watering Schedule.

Lawns in our area typically need 1 to 1.5 inches of water per week to remain green. You can achieve this goal and help our community save water. If your house number ends in an even number, water only Wednesday, Friday, and Sunday. If your house ends with an odd number, water on Tuesday, Thursday, and Saturday. On Mondays, we will all take a break.

2340

Finding out is as simple as
looking at your address.

2341

House
Numbers Water

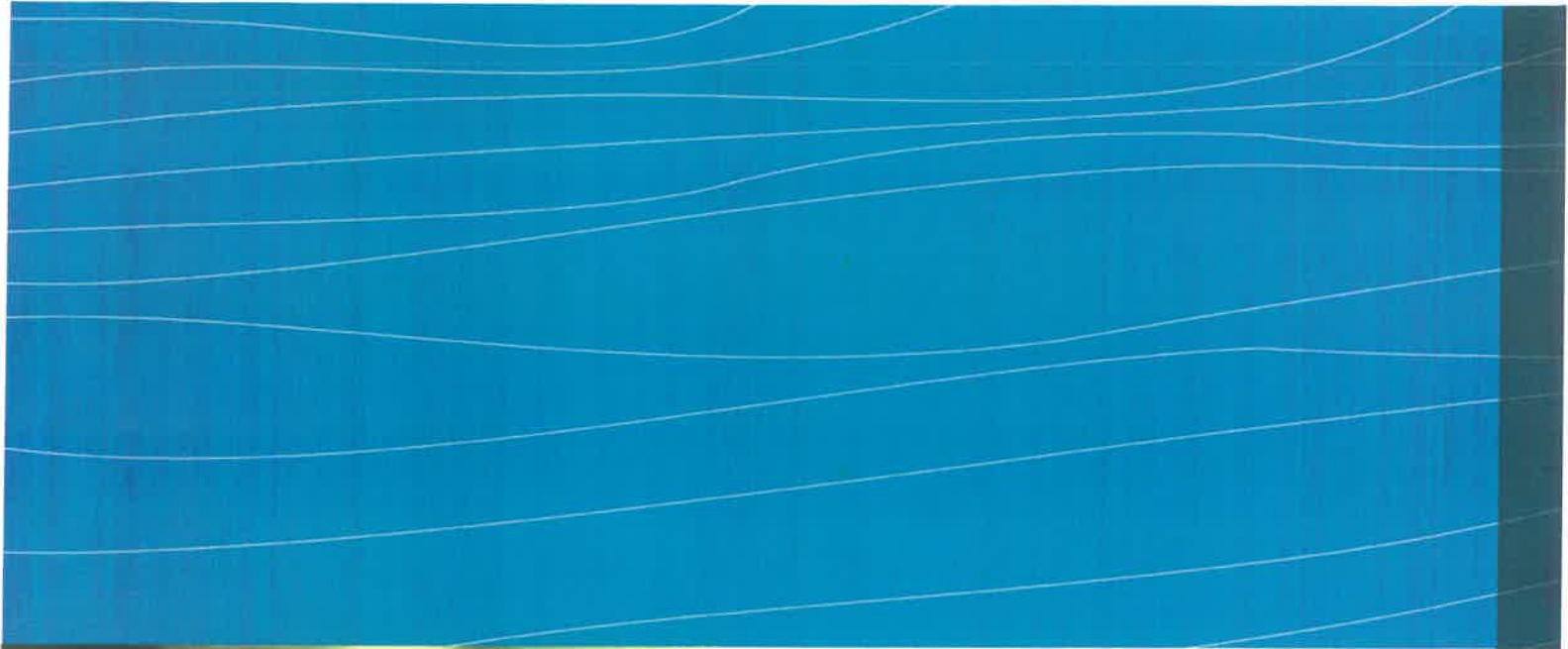
WED FRI SUN

 **City
Utilities**
Connecting Our Community

ODD House
Numbers Water

TUES THUR SAT

For more information about the Even-Odd watering program and how you can save water, call 417-874-8200 or visit cityutilities.net.



 **City
Utilities**
Connecting Our Community

301 East. Central, P.O. Box 551
Springfield, Missouri 65801
cityutilities.net

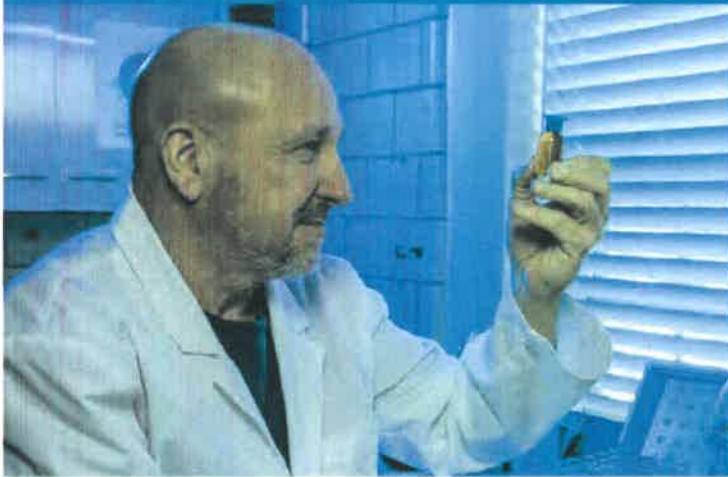
CONNECTING YOU TO     

QUALITY DRINKING WATER



 **City
Utilities**
Connecting Our Community

KNOW WHAT IS IN
EVERY DROP OF
YOUR DRINKING WATER



City Utilities works hard every day to make sure you have clean drinking water. From the source to the tap—we test and retest to make sure your water is not only great to taste, but more importantly—safe to drink.

A complete report of City Utilities' water quality can be found on the Missouri Department of Natural Resources' website at

dnr.mo.gov/ccr/MO5010754.pdf

For a paper copy, please call the City Utilities Water Quality Lab at (417) 831-8822.

