

CONNECTING YOU TO



# QUALITY DRINKING WATER



2024 WATER QUALITY REPORT  
PUBLIC WATER SYSTEM ID NUMBER: MO 5010754  
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.



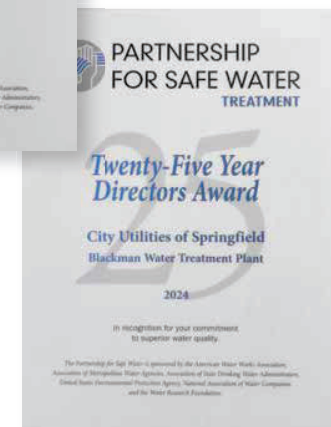
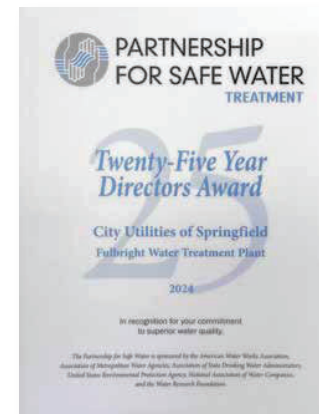
This report contains important information about Springfield's drinking water. For more information regarding this assessment or for additional water quality data, call the City Utilities Manager-Water Quality Lab at 417-831-8822.





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.



For the 25th 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.



**"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 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, 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 project at McDaniel Lake comprised of the installation of five floating wetlands alongside shoreline plantings. Unlike traditional wetlands, these innovative floating platforms utilize pontoon floaters and metal framing. Each floating island



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 algae 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

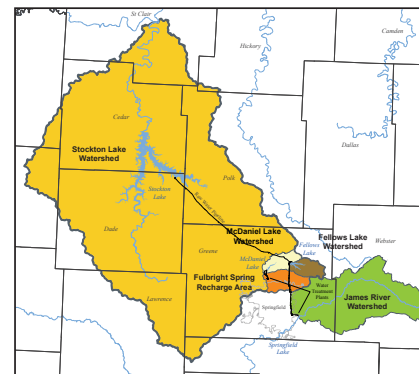
City Utilities' drinking water comes from a variety of lakes, rivers, wells, and a spring. Approximately 74 percent of Springfield's drinking water comes from surface waters, such as lakes and rivers. The remaining comes from groundwater sources.

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 using a certified third-party laboratory. Since testing began, a range of 3.1 to 16.0 ppt PFOS, which is a chemical in the PFAS family, has been detected in the James River. CU has implemented an operational policy to blend water from the James River with Fellows Lake to stay below the Maximum Contaminant Level (MCL) Running Annual Average (RAA) of 4 ppt PFOS in the finished water, which becomes enforceable in 2029. In 2024, a range of 3.7 to 5.3 ppt PFOS was detected in the James River. Additionally, tap samples were analyzed for PFAS quarterly by CU’s contract laboratory and as part of the EPA’s fifth Unregulated Contaminant Monitoring Rule (UCMR5). This finished water data is shown on the table on page 14.

PFAS: per- and polyfluoroalkyl substances  
PFOS: perfluorooctanesulfonic acid

LEAD AND COPPER RULE

The Lead and Copper Rule Revision (LCRR) proposed by the EPA went into effect October 2024. The rule requires water utilities like City Utilities to provide a water service line inventory available to the public showing both the utility-owned and customer-owned portions of the service line. City Utilities has identified all service lines on the utility-owned side to be non-lead. Thanks to the help of our customers, City Utilities has identified over 34,000 customer-owned service lines as non-lead. There are still 52,000 customer-owned service lines that need to be identified. The public map of service line materials can be found at <https://cityutilities.net/lcr>.

The EPA is requiring public water systems to replace all lead lines within 10 years, with limited exceptions. In some cases, galvanized service lines will also need to be replaced. If you have any questions about your service line material, contact

City Utilities by calling 417-831-8787 or going to our website at <https://cityutilities.net/lcr>.

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.



Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. City Utilities of Springfield is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family’s risk. Using a filter, certified by an American National Standards Institute accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line or galvanized requiring replacement service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have your water tested, contact City Utilities of Springfield at 417-831-8787. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <https://www.epa.gov/safewater/lead>.

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

Parts per Trillion (ppt):  
or nanograms per Liter (ng/L)

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 2024

| Detected Contaminants | Units | MCLG      | MCL                                  | Average Level                         | Range Detected    | Compliance | Major Sources   |
|-----------------------|-------|-----------|--------------------------------------|---------------------------------------|-------------------|------------|---|
| Treatment Plants      |       |           |                                      |                                       |                   |            |   |
| Fluoride              | ppm   | 4         | 4                                    | 0.66                                  | 0.04-0.91         | YES        | Added during treatment for dental health or dissolved from natural deposits                 |
| Total Chlorine        | ppm   | 4 (MRDLG) | 4 (MRDL)                             | 1.48                                  | 0.93 - 1.98       | YES        | Water additive used for disinfection  |
| Barium                | ppm   | 2         | 2                                    | 0.065                                 | 0.042 - 0.089     | YES        | Discharge of drilling wastes or from metal refineries; erosion of natural deposits          |
| Nitrate               | ppm   | 10        | 10                                   | 0.54                                  | ND (<0.01) - 1.68 | YES        | Runoff from fertilizer; leaching from septic tanks or sewage; erosion of natural deposits   |
| Nitrite               | ppm   | 1         | 1                                    | ND (<0.01)                            | ND (<0.01) - 0.18 | YES        | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Total Organic Carbon  | mg/L  | N/A       | TT: 0                                | 1.52                                  | 0.62 - 2.75       | YES        | Naturally occurring   |
| Turbidity             | NTU   | N/A       | TT: at least 95% of samples <0.3 NTU | Highest Single Measurement = 0.1      |                   | YES        | Soil runoff   |
|                       |       |           |                                      | Percentage of samples <0.3 NTU = 100% |                   |            |   |
|                       |       |           |                                      | Fully Compliant - all 12 months       |                   |            |   |



| Detected Contaminants   | Units              | MCLG    | MCL   | Highest LRAA  | Range Detected             | Compliance                  | Major Sources  |
|---|--------------------|---------|---|---|----------------------------|-----------------------------|--|
| Distribution System   |                    |         |   |   |                            |                             |  |
| Total Trihalomethanes   | ppb                | N/A     | 80 (LRAA)                                       | 52  | 20.3 - 75.8                | YES                         | By-product of drinking water disinfection  |
| Haloacetic Acids  | ppb                | N/A     | 60 (LRAA)                                       | 34  | 5.64 - 54.1                | 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 | 2024 testing - highest monthly % positive   |                            | YES                         | Naturally present in the environment - No fecal coliform or <i>E. coli</i> in 1472 tests in 2024 |
|   |                    |         |   | 0.00%   |                            |                             |  |
| Detected Contaminants   | Units              | MCLG    | MCL   | Highest Value   | Range of Sampled Result(s) | Compliance                  | Major Sources  |
| Additional Monitoring Data (General Water Quality Parameters) |                    |         |   |   |                            |                             |  |
| Analyte   | Units              | Average | Range   | Comments  |                            | Major Sources               |  |
| Hardness  | GPG                | 9.1     | 5.7 - 13.3                                      | Hardness refers to the mineral content of water. Calcium and magnesium are the main contributors to water hardness. |                            | Erosion of natural deposits |  |
|   | ppm                | 154.9   | 98.0 - 226.8                                    |   |                            |                             |  |

### Violations and Health Effects Information

| Compliance Period   | Analyte | Type |
|---|---------|------|
| No Violations Occurred in the Calendar Year of 2024   |         |      |
| * 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. |         |      |

| Detected Compound   | Collection Date of Highest Value | Highest Value     | Range of Sample Results | RAA                     | Unit |      |
|---|----------------------------------|-------------------|-------------------------|-------------------------|------|------|
| EPA's Unregulated Contaminant Monitoring Rule (UCMR) Results  |                                  |                   |                         |                         |      |      |
| Lithium, Total  | 3/26/2024                        | 10.7              | 0 - 10.7                | N/A                     | ppb  |      |
| Perfluorobutane Sulfonic Acid (PFBS)                          | 3/26/2024                        | 3.03              | 0 - 3.03                | N/A                     | ppt  |      |
| Perfluorooctane Sulfonic Acid (PFOS)                          | 9/25/2024                        | 4.26              | 0 - 4.26                | 1.075                   | ppt  |      |
| Per- and Polyfluoroalkyl Substances (PFAS) Detected Compounds | Sample Point                     | Monitoring Period | Highest Value           | Range of Sample Results | RAA  | Unit |
| PFAS Routine Monitoring via Contracted Laboratory             |                                  |                   |                         |                         |      |      |
| Perfluorooctane Sulfonic Acid (PFOS)                          | Blackman Plant Tap               | 2024              | 2.4                     | ND - 2.4                | 0.6  | ppt  |
| Perfluorobutane Sulfonic Acid (PFBS)                          | Fulbright Plant Tap              | 2024              | 2.3                     | ND - 2.3                | N/A  | ppt  |
| Perfluorobutanoic Acid (PFBA)                                 | Blackman Plant Tap               | 2024              | 2.0                     | ND - 2.0                | N/A  | ppt  |

Some people who drink water containing PFOS in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including liver cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOS in excess of the MCL following repeated exposure during pregnancy and/or childhood.

### 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.



### 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.

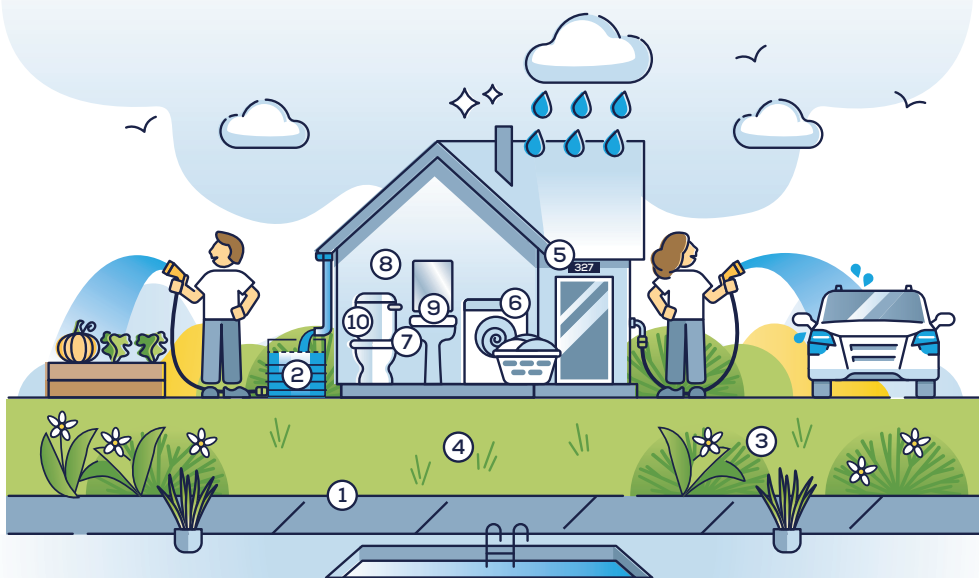
### FILTRATION

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.

## TREATED WATER STORAGE

## 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](http://cityutilities.net) to see rebates offered by CU to help you save even more!



City Utilities of Springfield is asking you to water your lawns on designated days of the week, based on your address.

It's simple to do—just check your address. Even or odd?

At City Utilities, we are committed to helping you use your water and energy wisely. Save more on your utility bills with CU Smart Solutions, backed by expert assistance from our Energy Specialists.

[cityutilities.net](http://cityutilities.net)

**Smart Solutions**  
Save More. Live Better.



For more information about this program and other ways you can save water and energy, call (417) 874-8200 or visit [cityutilities.net/save](http://cityutilities.net/save).





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