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## Does Your Chatbot Drink More Water Than You Do?



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It's hard to imagine an environmental impact from our online activities. After all, the virtual world is not a physical place. But computing uses much more electricity than just the battery in your laptop. Data centers use water to keep machines cool while they burn through all that electricity to process our data. And few online activities are as thirsty as the tech world's latest darling, ChatGPT.

Unless you've been living completely off-grid this year, you've probably heard the buzz about [ChatGPT](#) and generative artificial intelligence (AI) products from Google, Meta, and other tech giants. But understanding it might be a different matter. ChatGPT is an AI tool released in November 2022 by the Microsoft-backed company OpenAI. Although ChatGPT gets most of the press, it's not the only option for generative AI. All of them are designed to answer questions and follow instructions to complete tasks such as writing emails, articles, and code.

Since the release of ChatGPT, the ethical, economic, and data safety issues related to artificial intelligence have received a lot of attention. At the same time, potential environmental impacts have been largely overlooked. But that may be an enormous oversight. A forthcoming report from the [University of California estimates](#) that ChatGPT takes in almost 16 ounces of water for every series of 5 to 50 prompts or questions you ask it.

## How Thirsty?

Microsoft's most recent [environmental report](#) revealed a sharp increase in water usage in 2022 when ChatGPT was introduced. In addition to AI, the culprits included more streaming video and gameplay. Microsoft's global water consumption jumped 34% last year.

In 2022, [Google reported](#) its water consumption increased by 20%, which the UC researchers attributed to AI development. Google's data centers in Iowa (where Microsoft's AI supercomputers are also located) used the most water overall. Notably, Google's facilities outside of Las Vegas, Nevada, increased water use most dramatically, doubling in just one year.

Data centers in hot climates like Nevada and Arizona require more water for the same amount of computing to cool computers than in cooler regions. For example, technology companies in Las Vegas use [Colorado River water stored in Lake Mead](#). The water level of Lake Mead has [dropped 150 feet](#) since 2000, and the Colorado River dries up [miles from the Gulf of California](#), which it hasn't reached [since 1980](#).

By contrast, Iowa generally does not suffer from the water supply issues experienced in the western states, so it is a better choice for locating data centers. But even Iowa needs to be mindful of water consumption. The state [experienced drought](#) over the past two years.

## Conserving Water

Unfortunately, even if you don't have a ChatGPT account, conserving water by avoiding artificial intelligence is not practical. You can save some water by writing your essays and resumes without resorting to ChatGPT. But these days, search engines nearly all use some form of generative AI. Hardcore AI

avoiders can use [Marginalia](#), a user-supported alternative to mainstream search engines that can support only 70 questions a minute, so the independent DIY search engine cannot meet everyone's needs.

Tech companies have stated that they are working to reduce their water footprint. But [only some people trust big tech](#) to protect their data (and with [good cause](#)), let alone our planet. [Boycotting](#) the internet is not a practical option, either. But [social media activism](#) can sometimes have an effect, and investor opinions still matter. Take the time to vote if you own stock in tech companies, and ask management to reduce their impact. Unless you have a thick tech-stock portfolio, these efforts will likely make little difference.

Water use is one example of the wisdom of first putting your house in order. You will probably be more successful in saving water directly than trying to influence AI development.

In your home, repair leaks immediately and learn how to [fix bad habits](#) to save water in the bathroom and kitchen. When you replace your [toilet](#), [dishwasher](#), and [clothes washer](#), choose the most efficient option you can afford. Do the same with your [showerheads](#).

Outside your home, practice efficient [irrigation](#) in a [water-wise garden](#). Consider [eliminating your grass](#) lawn or even [xeriscaping](#). You can save water with your [food choices](#), too.

If you've already improved your water habits, spend some energy directly encouraging companies and [advocating for Congress](#) to create incentives and penalties nudging corporations to be more efficient.



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