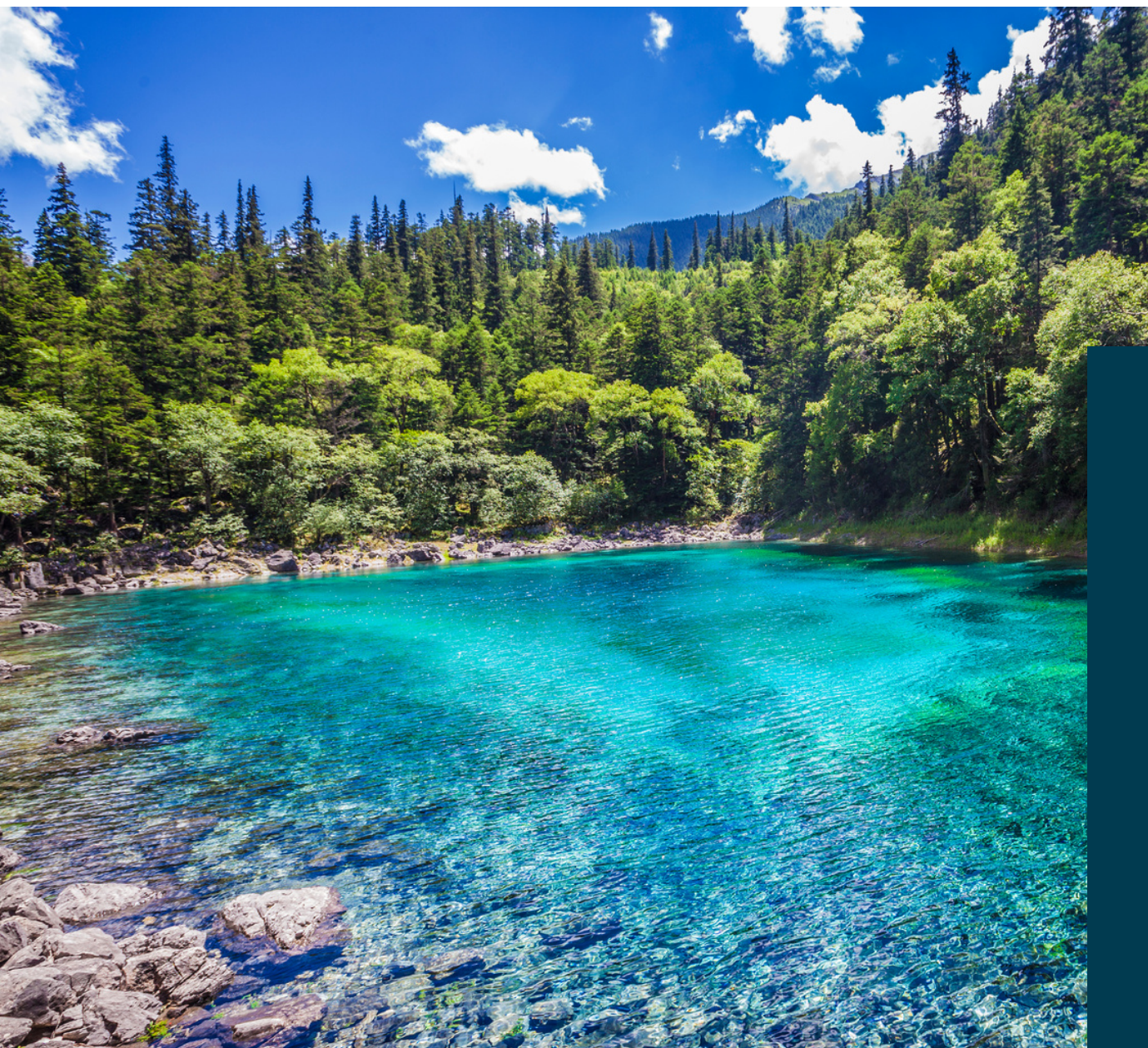


GOOGLE'S TAKE ON WATER STEWARDSHIP

“We aim to replenish more water than we consume and help improve water quality and ecosystem health in the communities where we operate.”

Google



The global sustainable freshwater supply is estimated to be 4,200 billion m³ annually. In 2000, global water use stood at 3,950 billion m³. For 2030, global water demand is projected to be 6,900 billion m³, exceeding the sustainable supply by 40 percent. Under a business-as-usual scenario, the Organization for Economic Co-operation and Development (OECD) forecasts that global freshwater demand for manufacturing industries will increase 400 percent from 2000 to 2050.

According to the United Nations Industrial Development Organization (UNIDO), water stewardship is described as the responsibility for planning and managing resources. Water stewardship is further defined as using water in a socially equitable, environmentally sustainable, and economically beneficial way. This is achieved through a stakeholder-inclusive process that involves site and catchment-based actions. Good water stewards understand their water use, catchment context, and shared risk regarding water governance, water balance, water quality, and important water-related areas. With this understanding, water stewards engage in meaningful individual and collective actions that benefit people and nature (UNIDO, 2024).

With the adoption of a "water stewardship" policy, Google has taken steps in terms of reducing its water footprint. By 2030, Google aims to replenish 120% of the freshwater consumed by their offices and data centers and help to improve the water quality and health of the ecosystems in the communities where they operate. They focus on three areas, namely enhancing water stewardship across Google offices and data centers, replenishing their water use and improving watershed health and ecosystems in water-stressed communities, and sharing technology and tools that help everyone predict, prevent, and recover from water stress.

Water stewardship Google facilities

Over the years, Google has taken steps to address and improve its operational water sustainability by cooling its data centers using different water sources, such as treated/reclaimed wastewater or treated seawater.

Google's water stewardship journey will continuously enhance its water use and consumption. At its data centers, it includes identifying opportunities to use freshwater alternatives where possible—whether that's seawater or reclaimed wastewater. When it comes to its office campuses, it's looking to use more on-site water sources—such as collected stormwater and treated wastewater—to meet its non-potable water needs like landscape irrigation, cooling, and toilet flushing.

Google offices worldwide use water for many purposes, from preparing food for their employees to irrigating campus landscapes to keeping their workspaces cool. To achieve responsible water management, they increase efficiency and source water from non-potable sources in their real estate operations.



According to Google, their main strategy for conserving water is to adopt design standards that align with leading third-party certifications, such as LEED and the Living Building Challenge. As part of their new construction requirements, they require water-efficient fixtures such as faucets, toilets, and irrigation systems. As part of these standards, they will also replace old fixtures with highly efficient ones and install leak-detection water meters in any new space.

At their San Francisco Bay Area office, they worked with ecologists and landscape architects to develop an ecological design strategy and habitat guidelines to improve the resiliency of landscapes and nearby watershed health. This included implementing drip irrigation, using watering systems that adjust to local weather conditions, and fostering diverse landscapes on their campuses that can withstand the stresses of climate change. Their San Francisco Bay campus, which opened in 2022, is on track to be the largest development project in the world to achieve Water Petal certification from the LBC, aiming to produce more non-potable water than there is demand for at the site.

By 2030, Google plans to operate on carbon-free energy 24/7 and champion responsible water use as part of their climate-conscious data center cooling strategy.

When feasible, they claim to use alternative water sources, such as:

- reclaimed wastewater and seawater at their data centers.
- reclaimed or non-potable water in 25% of its data centers.
- reclaimed wastewater and non-potable water for 23% of their total data center water (excluding seawater).

Among the reduced water footprint examples is a data center in Douglas County, Georgia, that was able to use local sewer water to cool its facility instead of dumping it into the Chattahoochee River. They also brought in industrial canal water from the community to cool their data center in Eemshaven, the Netherlands, leaving potable water for other purposes.



Data tools to predict and prevent water stress

Google works together with communities, policymakers, and planners to develop tools to measure and predict water availability and water needs. Some examples are:

- Partnered with the United Nations Environment Programme and the European Commission's Joint Research Centre (JRC) to create the Freshwater Ecosystems Explorer. This tool tracks surface water changes over time on a national and local scale.
- Co-developed the web application OpenET with academic and government researchers to make satellite-based data that shows how and where water moves when it evaporates available to farmers, landowners and water managers.
- Provided Google.org funding for Global Water Watch and Windward Fund's BlueConduit. Global Water Watch provides real-time indicators for current and future water management needs and was built in partnership with Google.org, WRI, WWF, and Deltares. BlueConduit quantifies and maps hazardous lead service lines, making it easier to replace water infrastructure in vulnerable communities.

Accurate Water Use in Supply Chain

To address water challenges, companies need accurate water use data throughout their supply chains. Google's water stewardship efforts are focused on supplier facilities that have the greatest opportunity for improvement by monitoring their data. Through the Carbon Disclosure Project (CDP) supply chain platform, they asked suppliers to disclose water usage data and complete and disclose water risk assessments for their direct operations and value chains.

The CDP Supply Chain survey invited 186 suppliers to participate in the Water Security section. Of these, 177 (95%) responded. This report includes water withdrawal, consumption, and discharge data, including all water withdrawn from all sources, the portion permanently lost in the withdrawal, and all water effluent discharged.

The full report can be found here: <https://www.cdp.net/en/research/global-reports/global-water-report-2020>.



As a result of this outreach, they were able to gain essential insights into their supply chain's water footprint, which will help inform their supply chain risk-management strategies.

In conclusion, Google's commitment to water stewardship exemplifies a proactive approach toward addressing the global water crisis. By adopting a "water stewardship" policy, Google not only aims to reduce its water impact but also strives to replenish more water than it consumes while simultaneously improving water quality and ecosystem health in the communities where it operates. Through innovative strategies such as exploring alternative water sources for cooling data centers and sourcing water from non-potable supplies in offices, Google sets a commendable example for responsible corporate water management.

Moreover, by leveraging technology to monitor water usage throughout its supply chain, Google demonstrates a comprehensive approach to understanding and mitigating water-related risks.

As we navigate the challenges of water scarcity and climate change, Google's efforts underscore the importance of corporate leadership in promoting sustainable water practices for the well-being of both people and the planet.

At the IDRA, our purpose has always been to promote water scarcity solutions, and we have been doing so by connecting people and ideas to water solutions for over 50 years. We therefore commend Google for its proactive initiatives in water stewardship amidst the escalating global water crisis, which exemplifies commendable corporate citizenship. By committing to replenish more water than it consumes by 2030, Google demonstrates a steadfast dedication to sustainability. Their multifaceted approach, including the utilization of alternative water sources like reclaimed wastewater and seawater, reflects innovative solutions to mitigate water-related challenges.

Moreover, Google's comprehensive strategy extends beyond its own operations to engage with suppliers and stakeholders in assessing and addressing water risks throughout its supply chain. Through technological advancements and collaborative efforts, Google not only reduces its environmental impact but also fosters ecosystem health and resilience in water-stressed communities worldwide. In navigating the complexities of water scarcity and climate change, Google sets a compelling example of corporate leadership in promoting sustainable practices for the benefit of both present and future generations.

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