

[Nukes and AI require 1.4 million gallons of water a day at New Mexico lab](#)

In a state that's already short on the resource, Los Alamos National Laboratory expects to double water use.

[Alicia Inez Guzmán](#) April 30, 2026, **High Country News**



Crews install supercomputer components at Los Alamos National Laboratory in 2023. Plans are in place to build a new facility dedicated to artificial intelligence supercomputers. Los Alamos National Laboratory

HIGH ATOP A PLATEAU IN NORTHERN NEW MEXICO, Los Alamos National Laboratory is facing its biggest expansion since the World War II-era Manhattan Project, the top-secret government effort to produce the world's first atomic weapons. The current expansion will require a colossal use of resources, including one that New Mexico has in short supply these days — water.

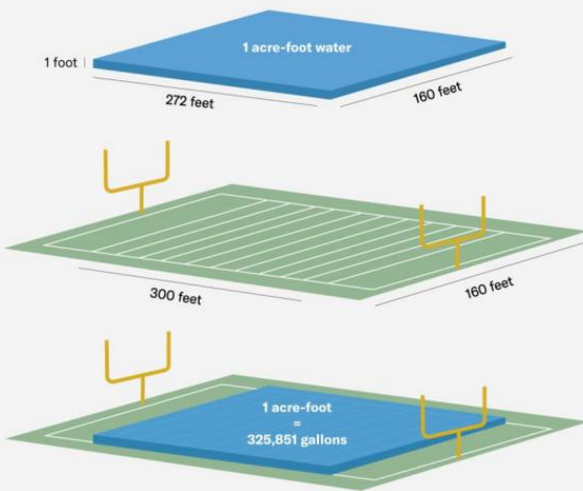
Last month, the U.S. Department of Energy [projected](#) that the Los Alamos expansion would require around 504 million gallons of water annually — about 1.4 million gallons of water per day — for at least another decade. By comparison, a single New Mexico resident [uses](#) about 81 gallons per day.

The lab started making plutonium bomb cores, or “pits” for a new generation of warheads well before an [environmental impact statement](#) was published in March. In its latest move, however, the Department of Energy has set its sights on an even larger — and thirstier — expansion.

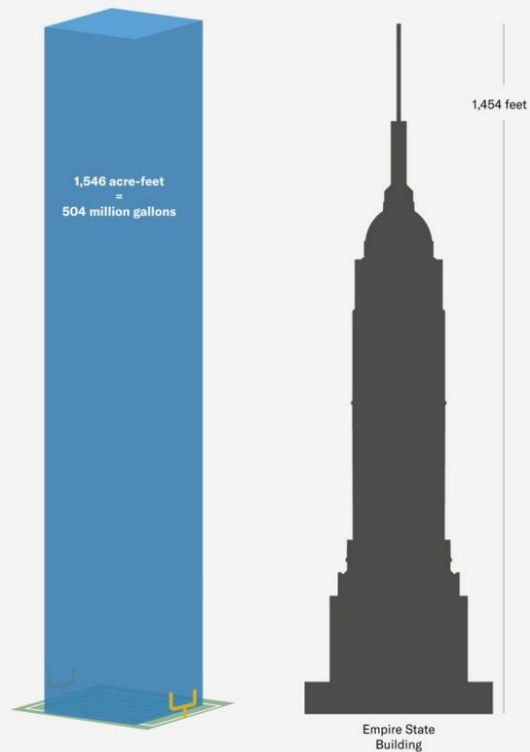
Plans include building a new 100,000-square-foot facility dedicated solely to artificial intelligence supercomputers, along with one or more microreactors, a compact nuclear reactor designed to generate small-scale power and facilities for staging nuclear waste.

The expanded lab would use more water in one day than the average farmer uses in a single year, said Joni Arends, executive director of Concerned Citizens for Nuclear Safety. “But farmers are growing food, whereas the lab is building nuclear weapons,” she said.

The Los Alamos National Laboratory expansion would use more water in one day to cool supercomputers than the average New Mexico farmer uses to water crops in a year. Here's how to visualize an acre-foot of water.



The expansion would require around 504 million gallons of water annually — about 1.4 million gallons per day — for at least another decade.



Dimensions are for visualization using estimates for sizing versus exact scale. Luna Anna Archey/High Country News

MOST OF THE WATER GOING TO THE LAB comes from the Española Basin, a sole-source aquifer that stretches across almost 3,000 miles of north-central New Mexico. It currently [supplies](#) eight tribes and towns, including Santa Fe, the state capital, as well as the town of Los Alamos, where wells have been declining 1 to 2 feet per year since the 1970s.

“Increasing temperatures and decreasing precipitation totals will strain existing water resources,” a recent [water conservation plan](#) authored by Los Alamos County warned. One of “the biggest factors” out of its control, and the control of the Department of Energy, it added, is a “changing climate.” Efforts are currently underway to [map](#) the Española Basin to better manage its water resources.

Anxiety has been on the rise in recent years concerning the growing water shortages linked to climate change. Snowpack has continually been at record lows, and growing seasons have begun to shift and shorten in recent years from lack of precipitation.

More broadly, New Mexico faces a “looming groundwater crisis,” as aquifers statewide are depleted with little chance of recharging, a report from the New Mexico Groundwater Alliance [said](#) last year. The report cited irrigation for large-scale agricultural operations as the state’s biggest guzzler.

By 2050, [estimates](#) show the state’s water shortage will amount to 750,000 acre-feet of water, or some 2.5 trillion gallons. The Pojoaque Basin Aquifer, which is adjacent to the Española Basin, is now closed to any new water development to protect the high-priority water rights of four local tribes following a multi-decade lawsuit.

The lab’s expansion — which will grow its [footprint](#) by about 30% — could almost double its water use compared to previous years. Yet the federal government [insists](#) that the impacts of the expansion would be negligible.

“Barring potential water quality issues, continued pumping of the regional aquifer at current rates is likely to be sustainable for hundreds of years,” its environmental impact statement said, even considering “increasingly erratic and damaging weather patterns.” Federal environmental law only mandates further analysis if the lab exceeds 542 million gallons annually, it went on, a number that corresponds to the [amount of water rights](#) the lab holds. The Department of Energy did not respond to inquiries regarding when the lab would realize its increased water use.

“Barring potential water quality issues, continued pumping of the regional aquifer at current rates is likely to be sustainable for hundreds of years.”

Still, staying below its maximum adds up to about 30% of all water consumption in Los Alamos County, which supplies water to the lab.

“They’re going to need to use reclaimed water and their water rights availability to meet their expanded growth,” said Philo Shelton, manager of the county Public Utilities Department. But discussions about how the lab plans to meet those water demands — and how much reclaimed water it will use — are still in the early stages, he added.

“Our other challenge is the chromium plume,” Shelton added, referring to underground contamination from hexavalent chromium, a highly toxic carcinogen that seeped into the aquifer decades ago from lab operations. When the contamination was found within a quarter of a mile of a drinking water well, the county ultimately shut it off, out of an abundance of caution.

“That limits our ability to supply water with a high-producing well,” he said, adding that the county is in talks with the Department of Energy about drilling a new one.



Before its approval last year, organizers protest Project Jupiter, a new \$165 billion data center campus in Santa Teresa, New Mexico. [Diego Mendoza-Moyers/El Paso Matters](#)

THE INCREASED WATER USE AT the Los Alamos National Laboratory comes at a time when communities in New Mexico and across the West are pushing back against the growing water demands of technological facilities, including AI data centers. In fact, according to the impact statement, much of Los Alamos’ increased water use will be for a “future supercomputer” that is expected to be installed in 2027. Two supercomputers have already come online in recent years and will “explore the tremendous opportunities of artificial intelligence,” Tom Mason, the lab’s director, [said](#) at a town hall earlier this year.

Public sentiment has been strongly against similar nearby projects, including Project Jupiter, the controversial AI data center campus slated for southern New Mexico that is projected to use about [1 million gallons per day](#). Meanwhile, Meta’s data center in central New Mexico is permitted to use [163 million gallons a year](#).

The Department of Energy allowed public comment on a draft of the impact statement last year. But a [day after](#) that period ended, an executive order passed by President Donald Trump rescinding the National Environmental Protection Act went into effect, essentially curbing local residents’ ability to weigh in on the federal government’s final decision to expand the lab and increase its water use. “What’s lost is people’s right to self-determination,” Arends said.

Climate change and its impacts, including drought, were [once recognized](#) as threats to national security. Now, as water helps power the next chapter of national security, that recognition has all but evaporated.