

Gleick: Is the drought over? Wrong question!

We should be asking: Are we managing our water in a sustainable way? That answer is ‘No’

By [Peter H. Gleick](#) |



Jeremy Burton of San Jose, takes a picture of the high waters on the Los Gatos Creek Trail in Los Gatos Tuesday. (Nhat V. Meyer/Bay Area News Group)

Given the massive series of storms bringing rain and snow to California over the past month, people are asking, “Is the California drought finally over?” The term “drought” means different things to different people, but let me suggest that “Is the drought over?” is the wrong question.

The end of the drought does not mean the end to California’s water problems. Here are some more appropriate questions and answers.

Is California having a wet year? So far, yes. Precipitation, especially in northern California, is far above average – indeed, California is swinging from the extreme of little rain to the risk of severe flood. But the wet season

doesn't end until April, and we don't know if more storms will blow in from the Pacific.

How does the snowpack look? After a weak start, recent storms have brought large amounts of snow to the Sierra Nevada for the first time in five years. This is great news for skiers and water managers, but again, the year is young. A prolonged stretch of warm dry weather could quickly melt mountain snow, as it has in recent years because of rising temperatures from climate change. The key measure is how good the snow will be in the spring. If it is bad, our "snow drought" may continue.

Are the reservoirs filling up? Yes, California's big reservoirs are filling rapidly to the point that we must balance the need to store water for dry periods with maintaining space to hold back flood waters. As with the snowpack, the real measure will be how full they are at the end of the wet season.

Will this year's rains reverse the massive overdraft of groundwater aquifers in the Central Valley? No. This may be the biggest water problem California faces: our use of groundwater often exceeds natural recharge. During the past five years, that imbalance has been enormous. It's like a bank account in perpetual overdraft and the balance continues to go down. This year should see a drop in groundwater withdrawals, but even a wet year won't prevent some continued overdraft, and it won't help thousands of people in disadvantaged communities whose wells have run dry in the Central Valley.

Will this year's rains reverse the damage to forests in the Sierra? No, more than 100 million trees have died from drought, temperature stress and insect infestation. It will take decades for forests to regenerate, and the dead trees and damaged soils will pose forest fire and landslide risks for years.

Will farmers finally get all the water they want? Not all of them. Deliveries to the agricultural sector this year will be the highest in several years – great news for farmers who have had to fallow land or cut back on irrigation because of drought. But some urban or agricultural water users will never get

all the water they want because [formal water rights claims filed with the state](#) are many times larger than California's natural water availability. In this sense, some farmers are suffering permanent drought.

Will a really wet year help endangered salmon? Lots of water will help endangered salmon, but the real problem for the past few years hasn't been too little water, it's been [water that is too warm](#). If we get a good snowpack and cold river runoff in the spring and summer, it should help, but if it remains too warm, pressures on salmon survival will continue.

Will the official state drought declaration be canceled? Gov. Brown's executive order remains in place for the moment, but the conservation measures established during the drought are, in most places, voluntary. The Governor's Office and State Water Board will decide what to do later in the spring.

Can I stop conserving water at home and go back to watering my lawn, washing my car and taking long showers? You can, but you shouldn't. The efficient use of water should be a way of life, not a temporary reaction to crisis. Every gallon of water you don't use saves money, leaves water in reservoirs and underground for the future, reduces energy use and protects ecosystems. [Californians did a great job conserving](#) water during the drought without serious hardship. We should keep up those efforts, even when it's wet.

Ultimately, "Is the drought over?" is the wrong question. We should ask, "Are we managing water in a sustainable manner for the long haul"? The answer to that is still "no."

Let's take the lessons learned during the drought and prove, for once, that John Steinbeck was wrong when he wrote in *East of Eden*:

"And it never failed that during the dry years the people forgot about the rich years, and during the wet years they lost all memory of the dry years. It was

always that way.”

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