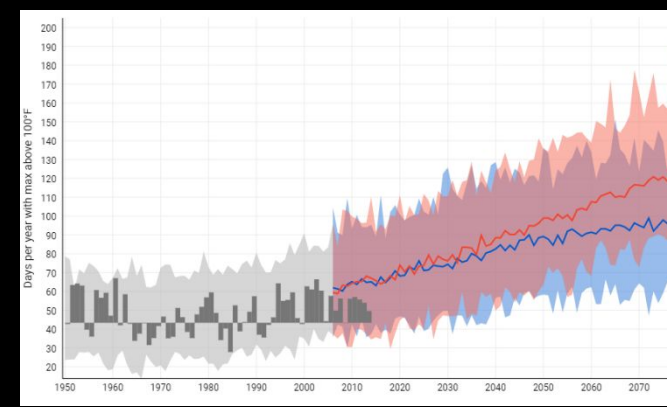


# CLIMATE AND SOCIETY CHALLENGES FOR THE SOUTHWEST

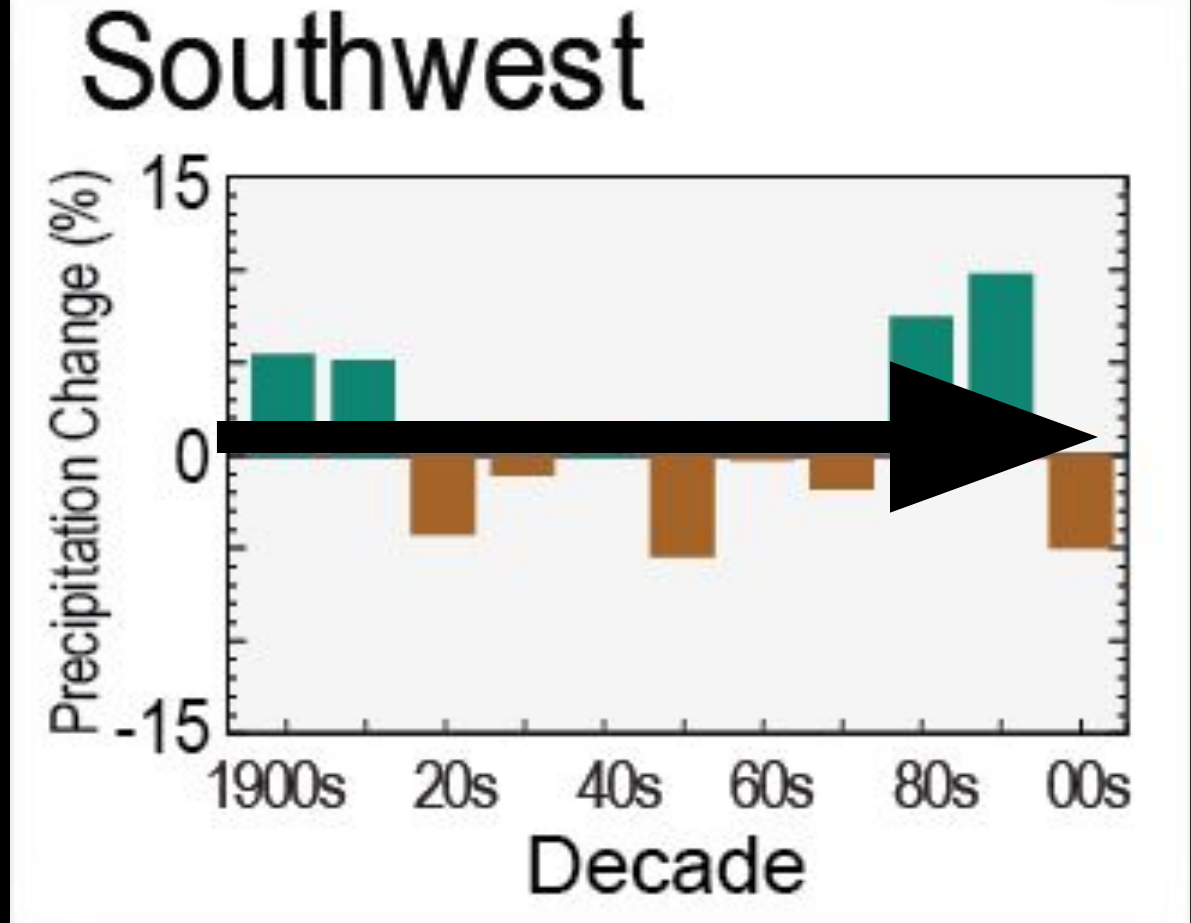
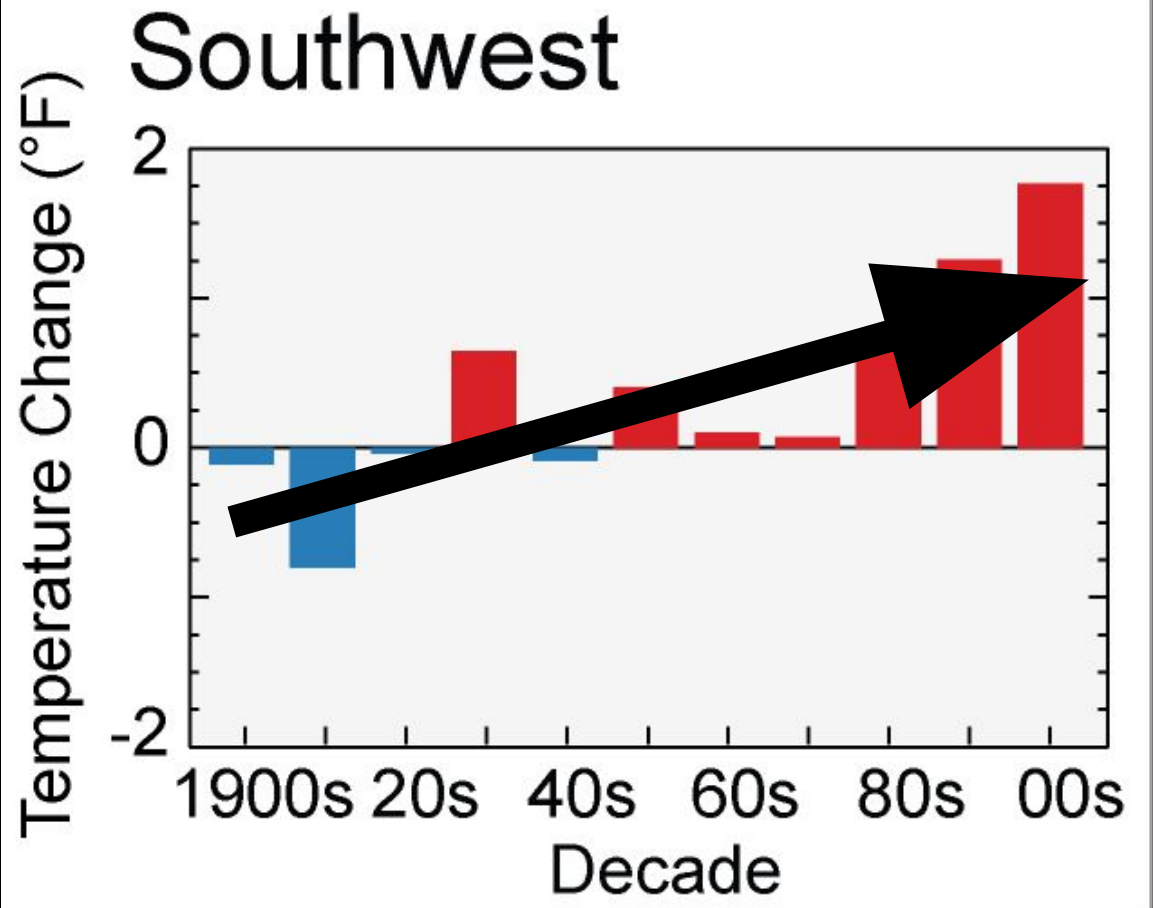


Gregg Garfin, Southwest Climate Adaptation Science



**3rd Southwest Adaptation Forum  
October 11, 2022**



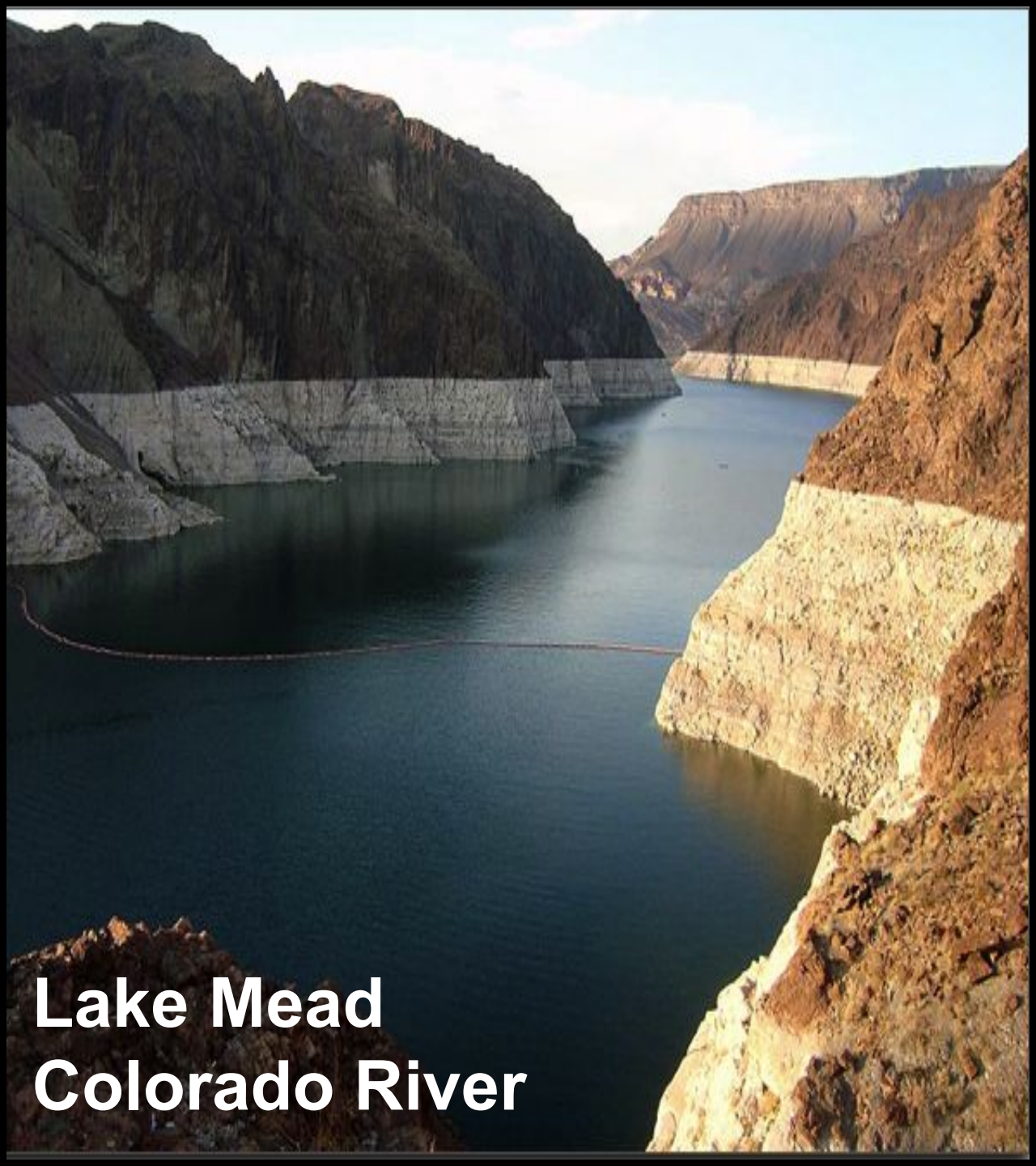
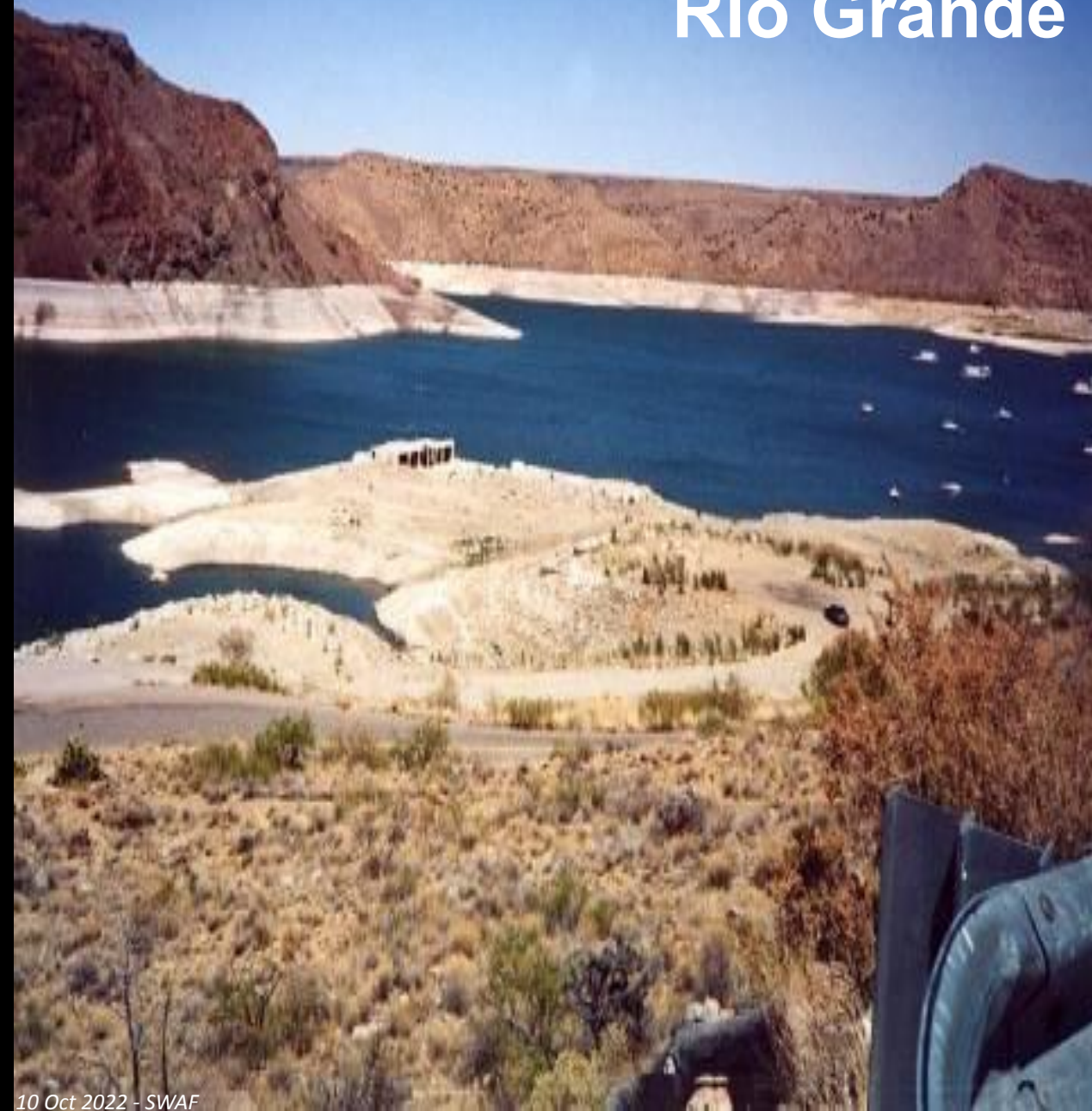




10 Oct 2022 - SWAF



# Elephant Butte Reservoir Rio Grande



# Lake Mead Colorado River



**CO 2020**



**AZ 2011**



**NM 2022**

**CA 2020**



10 Oct 2022 - SWAF



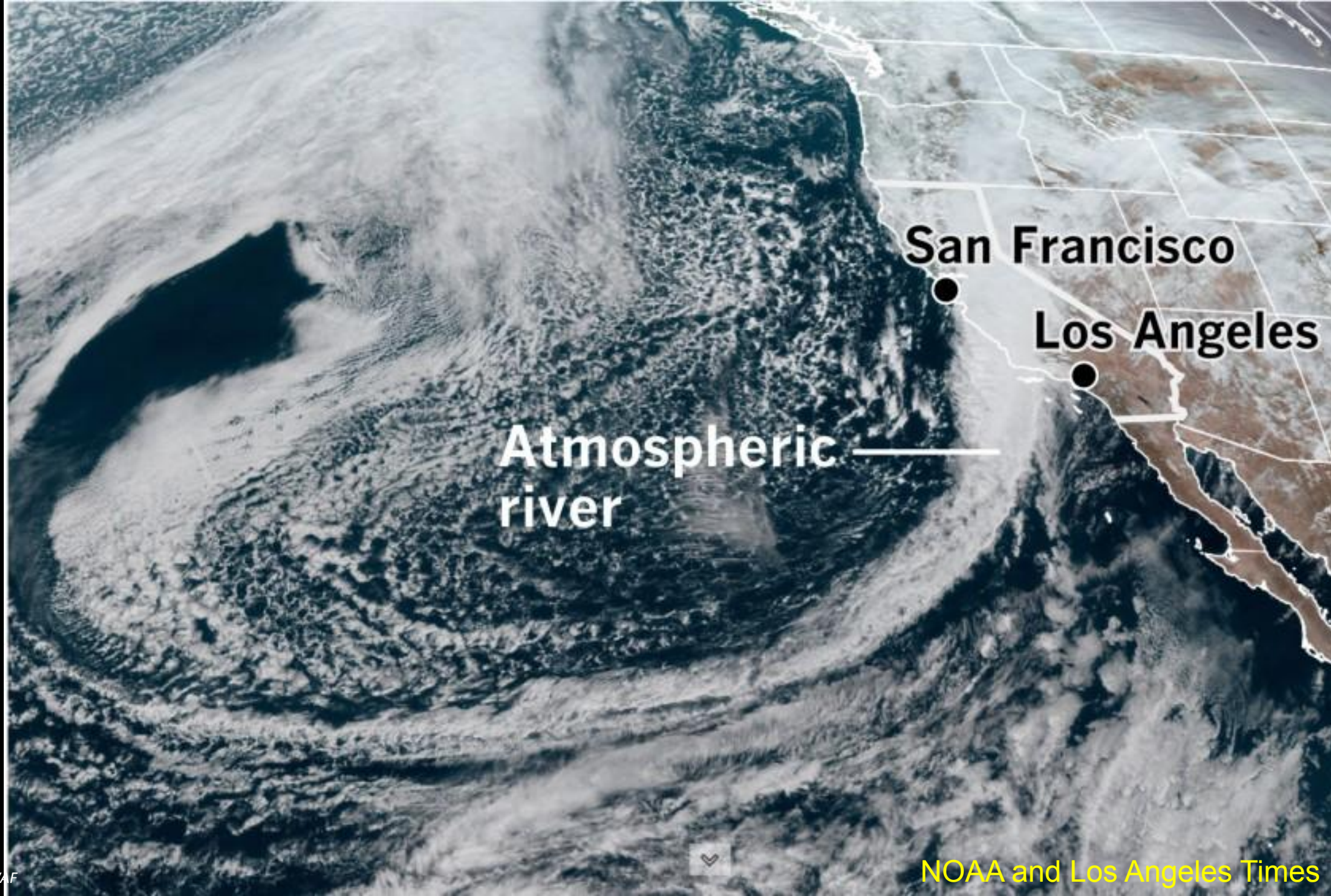
**UT 2007**

**NV 2018**









# A New Round of Colorado River Cuts Is Announced

Give this article



The water levels of Lake Powell, behind the Glen Canyon Dam near the Arizona-Utah border, could drop so low next year that the dam could no longer generate hydropower. Caitlin Ochs/Reuters

With water levels in the Colorado River near their lowest point ever, Arizona and Nevada on Tuesday faced new restrictions on the amount of water they can pump out of the river, the most important in the Southwest.

# California pushed to the limit by a relentless heat wave that broke the mold

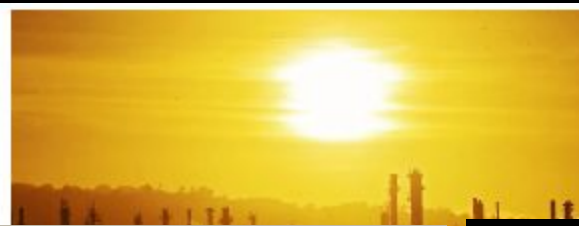
A heat wave that has shattered temperature records nearly broke California's overtaxed electric grid Tuesday evening, pushing it to the brink of rolling blackouts but narrowly averting widespread power loss.



Ceaser Trejo wipes his forehead as he works through the heat wave loading large trash bins into a sanitation truck. (Al Seib / Los Angeles Times)

# Heat waves, wildfires — and a hurricane? One of California’s weirdest weather weeks ever

As Swain writes in his blog, this was “perhaps the singularly most unusual and extreme weather week in quite some time in California — and that is saying something.”



A firefighter battles the Fairview fire along Batista Road near Hemet on Tuesday. (Luis Sinco / Los Angeles Times)

# Reno-Sparks air quality: Wildfire smoke prompts Stage 2 emergency declaration



**Brett McGinness**

Reno Gazette Journal

Published 8:33 a.m. PT Sept. 10, 2022 | Updated 10:47 a.m. PT Sept. 10, 2022

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The Washoe County Health District's Air Quality Management Division (AQMD) declared the emergency on Friday afternoon. The index for fine particulate matter is expected to surpass 100 on Saturday, indicating unhealthy conditions for sensitive groups. The AQMD predicted an index of 150 on Sunday, indicating unhealthy conditions for all.

# Nevada's long-term dry spell: Megadrought or new normal?



But the biggest difference between the current drought and historic droughts is the heat. Dan McEvoy, associate research professor of climatology at the Desert Research Institute, explains that precipitation trends haven't significantly changed in the state over the past 128 years — but temperatures have certainly increased.

# Utah's youth climate activists held a funeral for the Great Salt Lake

*'Even though we're the ones speaking up, the only landscape we know is something dead.'*



In July, its surface elevation fell below 4,190.2 feet, the record low set in October 2021. Since then, it has dropped over a foot further. The decline threatens the estimated 10 million migratory birds that stop annually at the lake, as well as the flies, brine shrimp and finely adapted microorganisms lower on the food chain, which are already beginning to die off due to increased salinity.





# *How New Mexico's Largest Wildfire Set Off a Drinking Water Crisis*

In a community ravaged by fire, floods and contaminated drinking water, residents wonder, 'What's next?' And who will pick up the bill?



Instead of replenishing reservoirs, the downpours are flooding a burn scar left by the blaze known as the Calf Canyon/Hermits Peak fire, releasing contaminants into private wells and overwhelming Las Vegas's main water supply with ashy sludge.

# Climate-fueled wildfires worsen dangers for struggling fish

BY JOHN FLESHER AND BRITTANY PETERSON / ASSOCIATED PRESS

PUBLISHED: SATURDAY, SEPTEMBER 24TH, 2022 AT 11:05PM

UPDATED: SUNDAY, SEPTEMBER 25TH, 2022 AT 12:05AM



“With every fire, more of their populations are being affected,” said Jill Wick, native fish program manager for the New Mexico Department of Game and Fish. “Their habitat is often gone, washed out of the creek. There’s no place they can hide and cool off. Their food is decimated as well.”

# Pipelines? Desalination? Turf removal? Arizona commits \$1B to augment, conserve water supplies



**Brandon Loomis**  
Arizona Republic

Published 7:00 a.m. MT June 27, 2022

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“The stakes are high,” Buschatzke said, adding that even a lower-flowing river out of Hoover Dam could slash farming along the river, where growers have traditionally enjoyed the most senior water rights.

# Climate change, drought may be impacting aquatic species, wildlife

“We’re starting to affect the environment even down to the species that are in our lake,” Tso said. “This is the reason why we really need to fix it. My concerns are not just for farmers, the livestock, it’s also other species.”

# California's algae bloom is like a 'wildfire in the water'

*Some scientists are equating the recent phenomenon to a mega blaze, spurred by human mismanagement.*



*In an aerial view, hundreds of dead fish are seen floating in the waters of Lake Merritt, a tidal lagoon of the San Francisco Bay, on August 30, 2022 in Oakland, California.*

*Justin Sullivan/Getty Images*

Keith Bouma-Gregson, a biologist with the U.S.G.S.'s California Water Science Center, was taking water samples around the bay when he saw dead sturgeon floating in the water. "That's like going out to the forest and seeing your old-growth long-lived species (like redwoods) getting hit pretty hard," he said. "That was a real sobering moment of recognizing that this this bloom truly was harmful."





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Climate Adaptation  
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