



The Snowpack in the Sierra Mountains on January 2, 2024 (Photograph: Fred Greaves/California department of water resources)

California Water and Infrastructure Report

For January 11, 2024

(With expanded coverage of all the Western States)
by Patrick Ruckert

Published weekly since July, 2014

An archive of all these weekly reports can be found at both links below:

<http://www.californiadroughtupdate.org>

<https://www.facebook.com/CaliforniaDroughtUpdate>

For a free subscription to the weekly report: Send me an email-- patruckert@gmail.com

A Note to Readers

As the winter days follow each other one by one all of the water mangers, and others, wonder if the present snow-drought will throw the state back into another years long drought. Though there remains almost three more months of the “wet period” for most of the state, no one is counting on mother nature to come to the rescue. The water managers have already announced that the allocation of water to water districts, cities and agriculture will be only 20% of what they have requested. And only if the three months ahead are very different than what we have seen in November and December in terms of the rain and snowfall.

While the state's reservoirs are well above the average level for this time of the year, things are very different on the Colorado River, where the two largest reservoirs in the nation are barely at 35% full.

Fear of dramatic action to reduce what is taken from the river, meanwhile, has created a new situation in the negotiations on what must be done. The three lower basin states are stepping forward with a new plan to ensure that what is withdrawn from the river will not exceed new water coming into it.

I again include some excerpts from a new article by Edward Ring, whose polemic, as usual, is that attempting to solve the water crisis in the state by conservation is a sure path to disaster, and the \$7 billion, or \$8 billion the state wishes to spend on an impossible program would better be spent on infrastructure that would save much more water than the impossibility policy that will only save 400,000 acre feet a year.

This week's **Feature** presents some of the material I have published here previously, but I thought it was very appropriate to highlight it once again during this election year.

The material is on the role of President John Kennedy, who in 1962 and 1963, not only was driving the Apollo Project to put a man on the Moon “in this decade,” but initiated and dedicated many important water projects in the western states, while backing the *North American Water and Power project* to create a continental water management system. In addition, he initiated from the White House a policy to begin building large nuclear-powered desalination plants, with the first to be built at Huntington Beach, CA.

U.S. Drought Monitor and More

California and National Drought Summary for January 9, 2024

<https://goldrushcam.com/sierrasuntimes/index.php/news/local-news/53021-california-and-national-drought-summary-for-january-9-2024-10-day-weather-outlook-and-california-drought-statistics-97-of-california-not-currently-in-drought-conditions>

Summary

January 11, 2024 - It was a stormy week across much of the eastern lower 48 states leading to widespread drought improvements east of the Rockies.

A winter storm pummeled the Mid-Atlantic and Northeast over the weekend (January 6-7). Then a second system in its wake was ramping up across the Mississippi Valley toward the end of this week (Tuesday, January 9), bringing heavy rainfall to the Lower Mississippi and the Deep South.

More than 2 inches of rain fell in many areas, with localized amounts upwards of 5 inches. Heavy snow also fell across parts of the Central Plains and Midwest as it moved slowly eastward, with snowfall still ongoing across parts of the Midwest and Great Lakes by the end of this week.

Across the Intermountain West, it was a wet and snowy week mainly for parts of the Pacific Northwest and isolated locations in the Great Basin and Four Corners region, leading to some targeted improvements.

However, several areas experiencing antecedent dryness and drought missed out on the precipitation, leading to further degradations, particularly across the northern Rockies, Front Range, and across

parts of the western Colorado Plateau in Arizona.

In Alaska, no changes to the drought depiction are warranted this week.

In Hawaii, a Kona low spinning off to the north brought heavy bands of precipitation to western portions of the island chain, warranting some improvements to drought conditions.

Conversely, another week of warm temperatures and below normal rainfall in Puerto Rico resulted in widespread deterioration of the drought depiction.

The West

Targeted improvements are warranted across parts of the Pacific Northwest and New Mexico, where 7-day precipitation totals, in combination with storminess in recent weeks, have improved some of the long-term drought indicators, even improving seasonal snowpack to be closer to normal for several locations.

However, some degradation was also warranted in locations that missed out on heavier precipitation amounts this week, and who have experienced below normal precipitation and above normal temperatures over the past few months.

Seasonal snowpack is running below normal throughout much of the Intermountain West, although interior portions of the Great Basin are faring a little better. So much of the recent improvements can be attributed to rainfall and improving soil moisture and stream flows.

2024 Begins with Record Low Snow Conditions Across the West—But Help Is on the Way

<https://www.drought.gov/drought-status-updates/snow-drought-current-conditions-and-impacts-west-2024-01-10>

Key Points

- In early January, snow water equivalent (SWE) observations at some SNOTEL stations in Montana, Wyoming, Idaho, Colorado, Utah, Nevada, California, Oregon, and Washington were at record low values.
- The highest concentration of record low SWE is in the northern Rocky Mountains across Montana, Wyoming, and Idaho.
- Storms over the next week will improve conditions in the Pacific Northwest, Great Basin, and northern Rockies, but are unlikely to completely erase existing deficits.

Snow Telemetry (SNOTEL) snow water equivalent (SWE) values for watersheds in the western U.S. as a percentage of the 1991–2020 median recorded by the USDA Natural Resources Conservation Service (NRCS). Only stations with at least 20 years of data are included in the station averages.

The SWE percent of normal, in this figure and in the text, represents the current SWE at selected SNOTEL stations in or near the basin compared to the median value for those stations on the same date from 1991–2020. This map is valid through the end of the day January 7, 2024.

Unlike early 2023, when nonstop [atmospheric river](#) storms built a deep Sierra Nevada snowpack, replenished depleted reservoirs and flooded parts of California, snowfall and rain is sharply diminished so far this year. But state water officials say there is plenty of winter left to accumulate more snow and precipitation.

California Department of Water Resources State Climatologist Michael Anderson said accumulation of snowpack has just begun, pointing out that half the state's annual precipitation typically occurs during December, January and February.

"This period of really wet/really dry was definitely on display last year, but what we're seeing this year is not quite the strength of either wet or dry, so everything is a little bit subdued," Anderson said.

In the days since DWR's first Sierra Nevada snow survey of 2024 last week, storms added more snow, increasing the early January statewide snowpack figure of 25% of average to 36% of average as of Monday. At this time last year, the state's snowpack measured 117% of average, which is more than half of the average yearly total.

"It's really still too early to determine what kind of year we'll have in terms of wet or dry," said DWR Snow Surveys Manager Sean de Guzman. "There can be so many things that happen with our storm systems between now and April, when we should see our peak snowpack."

Recorded on April 1, the state's peak snowpack data is used in modeling by DWR to determine the amount of runoff the state can anticipate when snow melts in the spring and summer. The snowpack supplies about 30% of the state's water needs. "What we're interested in is how much water is in the snowpack," de Guzman said.

Ringside: Water Rationing is the Worst Way to Build Resiliency

Surplus water equals climate resiliency

By [Edward Ring](#), January 11, 2024 2:45 am

<https://californiaglobe.com/fr/ringside-water-rationing-is-the-worst-way-to-build-resiliency/>

When a public policy decision is flawed, and the reasons it is flawed are simple and obvious, and the consequences are huge and costly, the appropriate response for a concerned observer is to call attention to the looming debacle. Not just once, but over and over and over again. An example of an impending economic and environmental disaster is the special interest driven mad rush to deploy floating wind turbines off the California coast. It's insane, and we must return soon to the topic of offshore wind in the context of California's overall energy strategy. In the meantime, let's take yet another look at an equally distressing policy disaster, the flawed implementation of a flawed piece of legislation, [SB 1157](#) by Sen. Bob Hertzberg (D-Los Angeles), otherwise known as urban water rationing.

From the bowels of the SWRCB bureaucracy comes this steaming document, a "[Proposed Regulatory Framework](#)" for "Making Conservation a California Way of Life." This document is only 14 pages long, but nonetheless constitutes a "framework" guaranteed to create full employment for data gatherers, analysts and compliance personnel in perpetuity, employing thousands of people and costing billions of dollars while not producing one drop of new water.

Notwithstanding the mind-numbing complexity of these proposed regulations is their fastidious, panoptic scope. For water agencies to determine their outdoor landscaping water supply budgets, they must categorize every square foot of every residential piece of real estate into "Irrigable Irrigated," "Irrigable Not Irrigated," and "Not Irrigated" areas, then calculate water budgets for every unique

segment based on a formula that takes into account the targeted standard, the “effective precipitation,” the “evapotranspiration,” the landscape area, and the “unit conversion factor.” All of these variables, needless to say, will be in continuous flux, requiring continuous revisions.

[An independent study](#) found the estimated cost to implement SB 1157 is \$7 billion, to save an estimated 440,000 acre feet per year. You could desalinate 440,000 acre feet for that amount of money, and desalination is the *most* expensive option. You could also recycle urban wastewater, or invest in ways to harvest, store and treat urban storm runoff, and come up with 440,000 acre feet for far less than \$7 billion. According to the [Pacific Institute’s own 2022 study](#), wastewater recycling could yield up to an additional 3 million acre feet per year, and urban runoff harvesting could yield up to another 770,000 acre feet in dry years, and up to 3.9 million acre feet per year in wet years. Put the money there.

The Colorado River

Arizona and others may have a revolutionary plan to fix the Colorado River

Opinion: Arizona and other states have outlined an idea to use less Colorado River water, even when Lake Mead and Lake Powell are fuller.

[Joanna Allhands](#)

Arizona Republic

January 10, 2024

<https://www.azcentral.com/story/opinion/op-ed/joannaallhands/2024/01/10/colorado-river-water-plan-breaks-status-quo/72173486007/>

A new [proposal from the Lower Basin states](#) of Arizona, California and Nevada would base future Colorado River cuts on how much water is in the system, not just how low Lake Mead may be.

At first glance, this might seem like it wouldn’t make much difference. Sort of like rearranging deck chairs on the Titanic.

But there’s more to it.

Rules don’t protect the Colorado River

Everyone knows the river, which feeds reservoirs that sustain some 40 million people, [isn’t producing the kind of water](#) that it used to.

And that’s a problem, because we’ve got a century of inflexible laws and court rulings that guarantee more water to users than the river now reliably produces.

Those laws and rulings are the basis for the [2007 guidelines](#) that spell out how we operate Lake Mead and Lake Powell, which are set to expire at the end of 2026.

Not surprisingly, neither the guidelines nor the slew of emergency measures we’ve enacted since have been nimble or aggressive enough to keep us from nearly draining the nation’s two largest water reservoirs.

Even with billions of dollars in federal money [now paying Lower Basin users](#) to temporarily conserve more water than they ever have before, that is simply holding the line on lake levels, not building back

storage.

Lower Basin cuts could be 'new normal'

How do we change direction in the new set of guidelines, which are [now taking shape](#) for approval in 2026?

We need to use markedly less water than we're guaranteed — and not just for a year or two, as is the protocol now.

The cuts will have to be more lasting. More of a “new normal” for users.

Which is essentially what the Lower Basin is proposing.

The three states would shoulder the burden of erasing the “structural deficit” — the imbalance between supply and demand that allows more water to flow out of Lake Mead than flows into it (and because the 2007 guidelines focus on equalizing contents between the two reservoirs, has also [drained Lake Powell](#) in the process).

Feature: A President, Unlike Any We Have Had Since

JFK Speeches Toward a Nation Wide TVA

<https://www.youtube.com/watch?v=TP8xpevILNE>

Sep 19, 2014

We begin this report with six projects that Kennedy supported and dedicated in 1962 and 1963. The video is about 1 hour and 20 minutes.

Here is the original introduction to the video:

December 6, 2012 - LaRouchePAC - To better understand the significance of NAWAPA 1964, LaRouchePAC presents to you the memory of JFK, by means of six speeches on the subject of national resources. In this period of national amnesia, and on the eve of general war to which our nation is being dragged by this same amnesia, remember our last expression of national pride, John F. Kennedy; remember through these films a legacy which is your own, even if you are unaware of that fact.

President Kennedy also commissioned studies of the potential for nuclear-powered desalination, which would go a long way to solving problems of water supply the United States now faces on all its coasts.

Plans were underway for the construction of at least a dozen such plants, stationed largely on the coastlines of states like Texas and California. Along with implementation of a major water transfer project such as the North American Water and Power Alliance

Kennedy saw great hope in desalinating sea water, and promoted it throughout his presidency. Then, he turned it into a nuclear desalination program, and he convened a special task group in the White House, in January 1963, to study the creation of large, dual-purpose nuclear reactors. This was discussed throughout the year, and even after his assassination, President Johnson and the US Congress passed legislation to push the project forward.

The final article is one from the *Orange County Register* in 2016:

What if JFK's dream had come to fruition?

By [Ian Lamont](#) | Orange County Register

January 17, 2016 at 12:00 a.m.

<https://www.ocregister.com/2016/01/17/what-if-jfks-dream-had-come-to-fruition/>

President John F. Kennedy was a staunch advocate for the development of the energy, water and other resources of this nation. At the forefront of his advocacy was the North American Water and Power Alliance. In 1962, JFK toured the West and gave three speeches on NAWAPA. In 1963, he once again toured the West and gave three more speeches on NAWAPA.

The six speeches are available online on YouTube. (<https://www.youtube.com/watch?v=TP8xpevILNE&feature=youtu.be>)

It is regrettable that much of this history has been forgotten because it was a special and different time in our country's history, a time of great national pride and a sense that almost anything was possible. Much of this was due to the charismatic and bold leadership of JFK. To say that NAWAPA was an immense project does not really do it justice. JFK's vision for the growth of the West was to create a "fission" (nuclear) economy. NAWAPA called for readying the ground for fission, through the development of nuclear desalination technology. It included agreements with Taiwan and South Korea and the utilization of much of the land from the Mississippi River to the West Coast, all the way north through Canada, to Alaska and the Bering Straits.

JFK's last speech on NAWAPA was made in October 1963, just one month before he was assassinated in Dallas. For a short while, others, including leaders in Congress, continued to push his vision for the future. His death, however, was the beginning of the end for NAWAPA.

In the fall of 1966, Congress passed legislation to build a massive nuclear powered desalination plant off the coast of Orange County. The cost of the project would be \$444.3 million. The plant would be built on a manmade island about half a mile from Bolsa Chica State Beach. The nuclear-powered desalination plant would be built in two phases. The first phase would produce 50 million gallons of fresh water a day. The plant's second phase would produce an additional 100 million gallons of fresh water a day. The completed plant would produce 150 million gallons of freshwater a day.