Tens of thousands of truck loads of earth will be moved to raise the B.F. Sisk Dam by ten feet. Chris Neklason contributed (article on page 6)

California Water and Infrastructure Report For September 19, 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

A Note to Readers

This week's report provides more coverage of the battles now ongoing in California's "Water Wars."

But that follows this week's *U.S. Drought Monitor* map and summary.

One court decision found that the California State Water Board had illegally put one water district under sanctions illegally, and granted the decision to the water district. The link and excerpts from the article, *"'Unlawful regulation': State suffers big setback in water lawsuit filed by growers,"* fills out the details.

Meanwhile three new water infrastructure projects are now moving forward in actual construction, though the Sites Reservoir project did have a setback in the permitting process.

Edward Ring has another contribution in presenting projects that break the idea that California has an unsolvable water shortage problem. As does "a new study finds that the state should replenish groundwater aquifers to sustain agriculture."

This week's coverage of developments on the Colorado River has only a two minute video on the subject of the *"What is Lake Powell and why does it matter?"* Lake Powell on the river is the second

largest reservoir in the United States.

In wildfire coverage this week, we report on the record breaking fire season in Oregon and Washington states.

Without a **Feature** this week. The report concludes with, *"*Physical Economy and Technology Report for September 16, 2024: What We Strive to Achieve" by my colleague Michael Carr *from Promethean Action.*

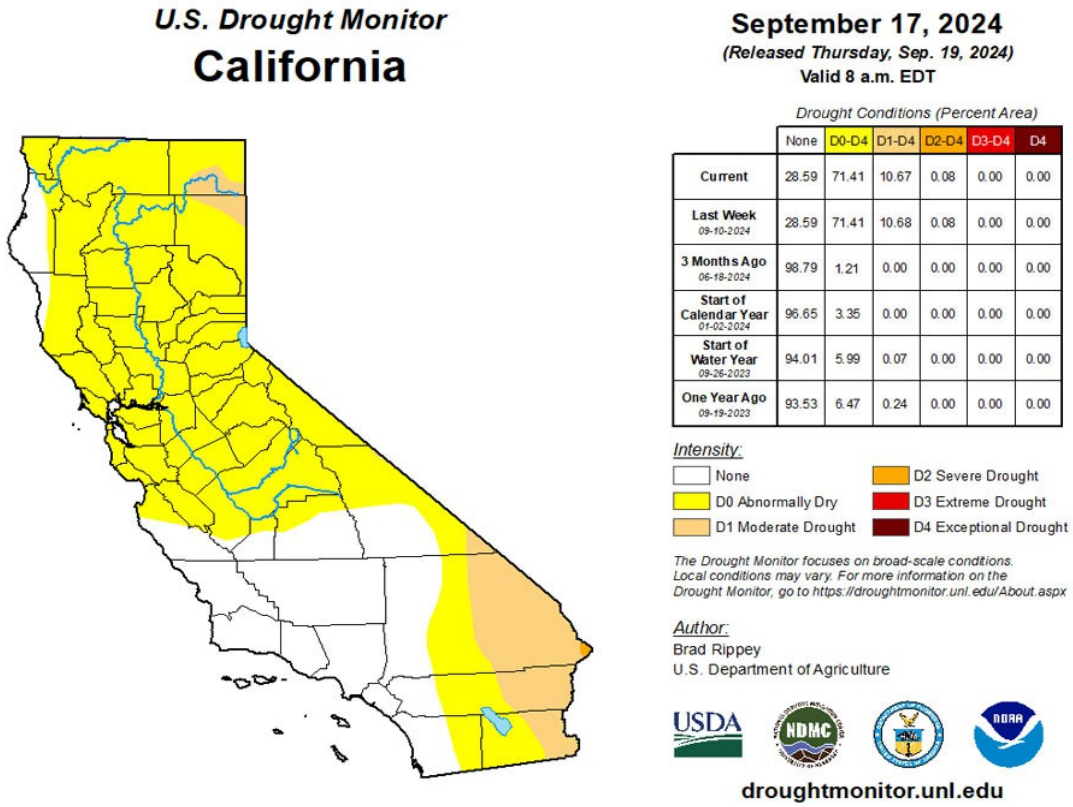
U. S. Drought Monitor

California

September 17, 2024

Despite a blistering Summer with virtually no precipitation in the state, still only about 11% of the state has some level of drought, and that being of the minimal level of "Moderate Drought."

The western states summary, below the map, provides some elaboration of the general conditions.



The West

Despite widespread precipitation in the northern Rockies and environs, only slight drought improvement was introduced, as concerns related to poor vegetation health and water-supply shortages were ongoing.

In one piece of good news, however, a summer-long Western heat wave effectively ended. On September 17, the maximum temperature of 93°F in Phoenix, Arizona, halted a record-setting, 113-day streak (May 27 – September 16) with afternoon readings of 100°F or greater.

Given the turn toward cooler weather and the gradual increase in cool-season precipitation, the wildfire threat has diminished in some areas.

In southern California, however, the Airport, Bridge, and Line Fires collectively burned more than 115,000 acres of vegetation earlier this month.

On September 15, topsoil moisture in agricultural regions ranged from 54 to 80% very short to short in eight of eleven Western States—all but California, Arizona, and Utah. Similarly, rangeland and pastures were rated 40 to 70% very poor to poor in eight Western States—all but California, Utah, and Colorado.

The Water Wars in California Has Victories and Setbacks

The Key to Fix California's Inadequate Water Storage? Put Water Underground, Scientists Say

A new study finds that the state should replenish groundwater aquifers to sustain agriculture.

By Caroline Marshall Reinhart
September 16, 2024
https://insideclimatenews.org/news/16092024/california-underground-water-storage/

- A new University of California Riverside study on California agriculture and climate proposes a plan for new water capture, storage and distribution systems throughout California that will sustain agriculture and keep up with climate trajectories.

The study, published last month in the Proceedings of the National Academy of Sciences, finds that groundwater aquifers have more storage potential than surface water reservoirs. So, instead of devoting decades to build more dams and reservoirs that are subject to evaporation and overflow, water should be diverted into these depleted aquifers below the Central Valley and the coastal plains.

But the big problem isn't simply a quantity issue: "When I moved to California over 20 years ago, someone told me, 'Don't let people tell you there isn't a lot of water in California because there is. The problem is that it's just managed really poorly," said Schwabe.

The study suggests more managed aquifer recharge (MAR) infrastructure is needed to adequately catch large amounts of water in short time periods and avoid similar water-loss situations.

Regardless, California has more monitoring practices than other states mainly because water availability is not as big of a concern elsewhere, said Berhanu. Monitoring standards vary by state and region. Regulations for urban areas differ from agricultural or industrial areas. Based on Berhanu's work assessing the country's volumetric potential for water use efficiency at the municipal level, he found that "there is no federal regulatory framework for monitoring or reporting. In a lot of cases, water supplies aren't even metered."

The study also mentions the value of reusing wastewater. Historically, wastewater has been treated to an environmental safety standard then released into the ocean or groundwater system.

Whether wastewater is for drinking or recharging aquifers, California plants are expanding their operations to include recycling methods so they can produce a sufficient supply.

What's Current?

California's Water & Energy Future with Edward Ring

Congress Comes to Santa Nella to Talk About Water

September 19, 2024

https://mailchi.mp/calpolicycenter/whats-current-issue-7859111?e=6b595f1938

The Great Valley of California, one of "the more notable structural depressions in the world," covers an area of 20,000 square miles. More than half of it, about 6.7 million acres, or over 10,000 square miles, is irrigated farmland. If you drive south on the main north-south artery, Interstate 5, orchards and cultivated fields appear as soon as you drop out of the foothills around Red Bluff. For the next 430 miles, until you begin ascending the Tehachapi Mountains far to the south, everywhere you look there is agriculture.

In response to the conventional wisdom that there isn't enough water in California for agriculture at its current scale, and in particular, to the current management practices of the federal and state regulators that control allocations of water to California's farmers, a congressional "field hearing" was held on September 6 in Santa Nella, a town situated along I-5 just east of the massive San Luis Reservoir.

Not present were any federal or state officials, despite being invited.

But as Jason Phillips, CEO of the Friant Water Authority, testified on September 6, "Without regulatory reform to stop the uncontrolled, unending taking of California's water supplies in pursuit of the proven failed approach to recover endangered species, there is no amount of new infrastructure, recycling, efficiency, or any other form of water supply development that can bring us to a place of abundance."

Phillips is absolutely right. We need more water supply infrastructure. But we also need environmentalists and the regulators they control to acknowledge that decades of mandating ever more "unimpaired flows" has not resulted in more salmon or more smelt. Farmers have completely transformed their industry to use water far more efficiently. California's Endangered Species

Industrial Complex needs to engage in reciprocal innovation, and accept tough choices and difficult compromises that are long past due.

‘Unlawful regulation’: State suffers big setback in water lawsuit filed by growers

by Rachel Becker September 16, 2024

https://calmatters.org/environment/water/2024/09/california-water-kings-county-lawsuit/

In summary

A judge slaps the state with an injunction, saying the water board overstepped its authority in Kings County: “There has been no review, analysis, or ability to challenge their conduct.”

Welcome to CalMatters, the only nonprofit newsroom devoted solely to covering issues that affect all Californians. Sign up for WhatMatters to receive the latest news and commentary on the most important issues in the Golden State.

In a scathing ruling, a Superior Court judge has lambasted state water officials for going too far and invoking “underground regulations” when they penalized Kings County water managers for failing to protect overpumped groundwater in the San Joaquin Valley.

Kings County Superior Court Judge Kathy Ciuffini last week granted a preliminary injunction that bars the State Water Resources Control Board from requiring growers to pay fees and report how much water they pump from the county’s severely overdrawn aquifers. The injunction could last through a trial, which has not yet been scheduled.

“Clearly the actions of this state agency have not been transparent, are only known to the (water board), and there has been no review, analysis, or ability to challenge their conduct,” Ciuffini wrote in her decision. She added that the agency failed to show how an injunction from the court “would cause specific, identifiable harm to the public.”

The judge sided with growers’ claims that the board relied on “unlawful” and “underground” regulations when it placed the basin on probation. The state water board “had over 10 years to adopt regulations for state intervention but failed to do so. As to this unlawful regulation, the plaintiffs will prevail on the merits of their claim,” she wrote.

The groundwater basin, located in the San Joaquin Valley, serves a vast expanse of dairies, ranches and farms — including those controlled by agricultural giants J.G. Boswell Company and Bay Area developer John Vidovich — as well as disadvantaged communities.

Dusty Ference, executive director of the farm bureau, called the decision a “monumental win” that “highlights the validity of our claims.”

Legal experts noted that the 33-page decision sides heavily with the growers.

COURTHOUSE NEWS: California Sites Reservoir project hits troubled waters in permitting process

Courthouse News Service
News
September 16, 2024

https://mavensnotebook.com/2024/09/16/courthouse-news-california-sites-reservoir-project-hits-troubled-waters-in-permitting-process/

A key certification request was withdrawn because the U.S. Army Corps of Engineers lacked documentation.

By Alan Riquelmy, Courthouse News Service

The California state water board on Monday formally announced that the Sites Reservoir project failed to get federal approval, a situation they say isn't permanent and can be rectified.

The rejection by the U.S. Army Corps of Engineers is the latest setback for the estimated $4 billion project in Northern California that would capture water during the rainy season. Officials have said the reservoir would hold up to 1.5 million acre-feet of water, or enough for 3 million homes a year.

The denial stems from a back-and-forth over documents between governmental agencies, including the State Water Resources Control Board, Sites Project Authority and the U.S. Army Corps of Engineers.

The denial is effective Monday, the day the water board sent its letter to the Sites Authority.

According to the water board, the application for certification was denied without prejudice.

"State water board staff will continue to review plans and materials, and work with [the corps] and the authority towards the goal of expeditiously acting on the request for certification for this project once a subsequent certification application is received," the water board wrote in its letter.

The Ups and Downs of California Dams

We check in on efforts to raise some dams in the state to store more water, and to raze some dams to to let water run free.

BY CHRIS NEKLASON PUBLISHED SEP 15, 2024 6:48 P.M.
https://californialocal.com/localnews/nevada/ca/article/show/216365-the-ups-and-downs-of-california-dams/

Tens of thousands of truck loads of earth will be moved to raise the B.F. Sisk Dam by ten feet. Chris Neklason contributed

Three Go Up

Completed in 1967 by the federal Central Valley Project, the San Luis Reservoir has a storage capacity of 2,042,000 acre-feet of water and is the fifth largest reservoir in California. Located in Merced County, it is a vast landmark for motorists on the adjacent Highway 152 linking the Central Coast to

the Central Valley.

Since the beginning of the year, commuters and travelers might have noticed a caravan of heavy dump trucks hauling loads of earth to waiting bulldozers that are spreading the dirt out at the base of the dam, slowly raising the level of the ground imperceptibly with every load.

It's part of a $1 billion project to fortify the B.F Sisk Dam against earthquakes and raise it by 10 feet to store an additional 130,000 acre-feet of water, projected to be completed in 2032.

Those projects include the construction of a new dam straddling Glenn and Colusa Counties in Northern California—the Sites Reservoir Project, which is the first new dam to be built in California in decades. This project, located 70 miles north of Sacramento, will deliver water to San Bernardino County.

Like the San Luis, the nation's largest off-stream reservoir, the Sites will not be stream-fed. Instead, it will store up to 1.5 million acre-feet of excess stormwater pumped from the Sacramento River for use during drought years.

Four Come Down

The end of the largest dam removal effort in US history was celebrated in September as the project to take down the last of four dams on the lower Klamath River wrapped up and the river ran free for the first time in more than 100 years.

The Iron Gate Dam, Copco Dams 1 and 2, and JC Boyle Dam were constructed by energy giant PacifiCorp to generate electricity in the early 1900's. This had a disastrous effect on the lives and livelihoods of the native Yurok people, who have inhabited the region for centuries, and on the migration and spawning cycles of coho and chinook salmon.

The Colorado River

What is Lake Powell and why does it matter?

The Salt Lake Tribune

Sep 13, 2024

Lake Powell is the second-largest reservoir in the United States. It was created when the Glen Canyon Dam was constructed along the Colorado River near Page, Arizona. The Colorado River provides water to seven states in the American Southwest. The reservoir faces increased challenges as climate change and increased water needs demand more from the crucial water source. Video by Bethany Baker of The Salt Lake Tribune.

2 minute video
https://www.youtube.com/watch?v=qVJ2mLJsEWc&t=4s

Northwest Wild Fires Set Records for the number and acreage burned

While the devastating wildfire news this Summer has concentrated on the California fires, the Pacific

Northwest has had record fire season.

Pacific Northwest wildfires set record for acres burned, largely fueled by Oregon infernos

Zach Urness
Salem Statesman Journal
September 13, 2024
https://www.statesmanjournal.com/story/news/local/oregon/2024/09/13/oregon-wildfires-pacific-northwest-record-acres-burned/75193565007/

It's been a rollercoaster ride of a wildfire season, but we should be swinging past the final loop before finally getting off.

The Pacific Northwest set a modern record for most acres burned in a season at 2.1 million as of Thursday, which beat out the historic 2020 wildfire season's 1.98 million acres in Oregon and Washington, according to the Northwest Interagency Coordination Center.

The record was fueled almost entirely by Oregon and its grassland megafires, which led to a state record of 1.8 million acres burned.

Reliable records for acres burned statewide, in the modern era, go back to 1992, NICC officials said.

"It's been an extremely stressful season for firefighters," Oregon Department of Forestry wildfire spokeswoman Jessica Neujahr said. "There just been so many fires and not enough people to attack them as aggressively as we normally would."

"The fatigue has been very real," Neujahr said. "We've had (fire crews) deployed consonantly on back-to-back in incidents with very little time to rest.

Why did Oregon wildfires get so big this year?

In many ways, this year brought the perfect setup for countless wildfires. The combination of extreme heat waves followed by thunderstorms hurling thousands of lightning strikes was a recipe for a situation no fire crew could get on top of, Neujahr said.

Fire season's wild ride in Pacific Northwest

The wildfire season started out with optimism — Oregon came into June without drought for the first

time since 2017. Wildfire experts said there was a decent change of a mild season.

That hope was flipped upside down in July, the hottest month on record in western Oregon and the second-hottest (after 2021) statewide. That heat rapidly dried out Oregon's grasslands and forest fuels, making them ripe for the multiple lightning storms that arrived during the month.

The fires were especially brutal east of the Cascades, where multiple megafires quickly roared to more than 100,000 acres.

Physical Economy and Technology Report for September 16, 2024: What We Strive to Achieve

In today's report: maglev hearts and rails, supersonic airliners, the Boeing strike, the Webb Telescope images the edge of our galaxy, and Trump's initiatives presented in New York.

By Michael James Carr
September 16 2024

https://www.prometheanaction.com/physical-economy-and-technology-report-for-september-16-2024-what-we-strive-to-achieve-2/

Posts in today's report:

- First Human Implant of Maglev Artificial Heart
- Chinese Demonstrate Superconducting Maglev Flight in Evacuated Tube
- Interview with Founder/CEO of Boom Supersonic
- Boeing Strike
- NASA's Webb Peers Into the Extreme Outer Galaxy, Sept. 12, 2024
- Augustine Warns That NASA Is Being Undermined by Inadequate Funding
- Trump at the Economic Club of New York