

# California Drought Update

## by Patrick Ruckert

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<http://www.californiadroughtupdate.org>

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

[patruckert@hotmail.com](mailto:patruckert@hotmail.com)

## A Note to Readers

We begin this week's report by continuing the theme we began with last week: How to free the mind from the paralysis of the past. Again our theme is presented by Helga Zepp-LaRouche, from her presentation to the celebration of the birthday of Friedrich Schiller held in New York City on November 9.

With the Carlsbad desalination plant scheduled to begin pumping out 54 million gallons of fresh water daily, several items highlight both this upcoming event and provide some background on desalination.

The report this week also includes some weather reports, drought effects, the Delta and an analysis of our governor's determination to depopulate the state, and the world.

## Helga Zepp-LaRouche on the Birthday of Friedrich Schiller

[larouchepac.com/20151109/helga-zepp-larouche-birthday-friedrich-schiller](http://larouchepac.com/20151109/helga-zepp-larouche-birthday-friedrich-schiller)

(Excerpts)

*Hello! Let me send greetings to your conference, on the very beautiful occasion of Schiller's birthday, a birthday which we celebrate since the foundation of the Schiller Institute, every year in many countries around the globe.*

*Now, I want to speak to you about some of his works, which many of you probably know, but which I think is of really the highest relevance right now, namely about what Schiller develops in the Aesthetical Letters. As you know, he wrote these letters dealing with the aesthetical education of man in the context of the failed French Revolution, because he was asking, "Why is it that a great moment found such a little people?" And, he came to the conclusion: the objective possibility for change was there, but the subjective, the moral condition, was lacking....*

*How can we change this nightmare? And I think that what Schiller has developed in the Aesthetical Letters, is today as much the method for getting people out of it, as it was in his time. He said, where do you find the venue; where should the change come from? It cannot come from the state, because it is the state itself, which is the cause of evil in its present form; and the state would have to be re-established first, on more noble principles, if the state was supposed to change this....*

*He says, "All improvement in the political realm, therefore, can only come through the ennoblement of the character of the individual. But, how can this occur, when the state is in such a barbaric*

condition?" And Schiller gives, for some, the surprising answer, "It can only happen through beautiful art. Because, Classical art and science are the only two areas which have an immunity against the arbitrariness of the despot...."

*If the United States is to be saved from its present condition of barbarism, then only through a Renaissance movement inspiring the population through the beauty of great art, only that can accomplish it. And, as Schiller says, "Truth and Beauty will be received by the more noble souls in society, and then from there, spread in milder rays throughout the whole population."*

*So therefore: "Dare to be wise," and join us.*

## **Desalination: The Carlsbad Plant and More**

A four minute video released by *Bloomberg* on November 10, while not without its flaws, is well worth watching: "Can Seawater Desalination Solve California's Drought?"

<http://www.bloomberg.com/news/videos/2015-11-10/can-seawater-desalination-solve-california-s-drought->

With a typical financial press negative tone, an article in *Investor's Business Daily* on November 5, "Desalination Costs, Even In Major Drought, Still High," does provide some useful background (excerpts):

*There are two principal ways to desalinate water: filter it or distill it.*

*Filtering involves two methods: With reverse osmosis, salt water is forced through a membrane fine enough to strip the salt from the water. Electrodialysis is similar, but it involves a membrane and an electrical charge to pluck salt from the stream.*

### **Collecting Steam**

*Distillation involves heating water and collecting the salt-free steam. Distilling plants heat the water in a partial vacuum, making water boil at a lower temperature, which saves energy. And if a distillation plant is located near an electricity-generation station, waste heat from the generator can be used to steam the salt water in the vacuum chamber.*

*Both processes require a lot of energy, which of course is costly but also increases a desalination plant's carbon footprint.*

*Still, the gap between the cost of importing water from outside a region and the cost of desalination is narrowing.*

*Right now, desalting an acre-foot of water per year (a volume equal to a foot of water covering an acre) costs about \$2,000, says Heather Cooley, water program director of the Pacific Institute, a global water think tank.*

*It costs half that to import water via pipes to drought-weary San Diego County in Southern California, for example, but those costs are rising.*

Joining those promoting desalination is Ernesto Medrano, a Council Representative at the Los Angeles/Orange Counties Building and Construction Trades Council, in a guest commentary published in the *Daily News* on October 31, under the title, "California's drought won't be solved by El Niño."

Medrano's commentary covers various aspects of the drought and the necessity of a new water supply source-- desalination. The link is here: <http://www.dailynews.com/opinion/20151031/californias-drought-wont-be-solved-by-el-nixflo-guest-commentary>

And here is an excerpt:

*What does all of this mean? It means that Californians need clean, reliable and renewable sources of local drought-proof water. Luckily, we are already sitting on one of the planet's largest such sources of water: the Pacific Ocean. We cannot depend on once-in-a-decade events, such as El Niño, to replenish groundwater basins, refill reservoirs and bolster snowpack. Alternative sources such as the proposed Huntington Beach Poseidon desalination plant and the Carlsbad plant which will start delivering water to San Diego this fall — that can produce 50 million gallons of drinking water a day — should be approved and embraced. Local water agencies, including the San Diego County Water Authority and Orange County Water District, have already voted in support of such efforts.*

## Going, Going.....

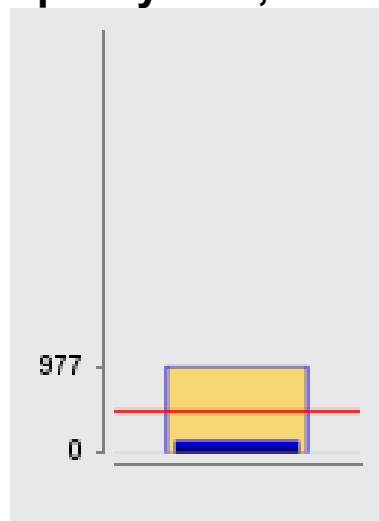
The headline from *KCRA* on November 9 was, “Folsom Lake near historic-low depth despite rainfall-- Recent rains barely make a dent.” Here are a few excerpts:

*It will take dozens of rain storms to alter the effects of California's four-year drought. Folsom Lake is now approaching a historical low in terms of acre feet, something that hasn't been seen in decades.*

*"The lowest the Lake has been since it filled when we constructed it was in November 1977," said Shane Hunt, a spokesman with the Bureau of Reclamation. "It got to about 140 thousand (acre feet)."*

*Today lake levels are down to 143,000-acre feet, Hunt told KCRA 3.*

### Folsom Lake Total Capacity: 977,000 acre feet



15% | 29%  
of Capacity | % of Historical Average

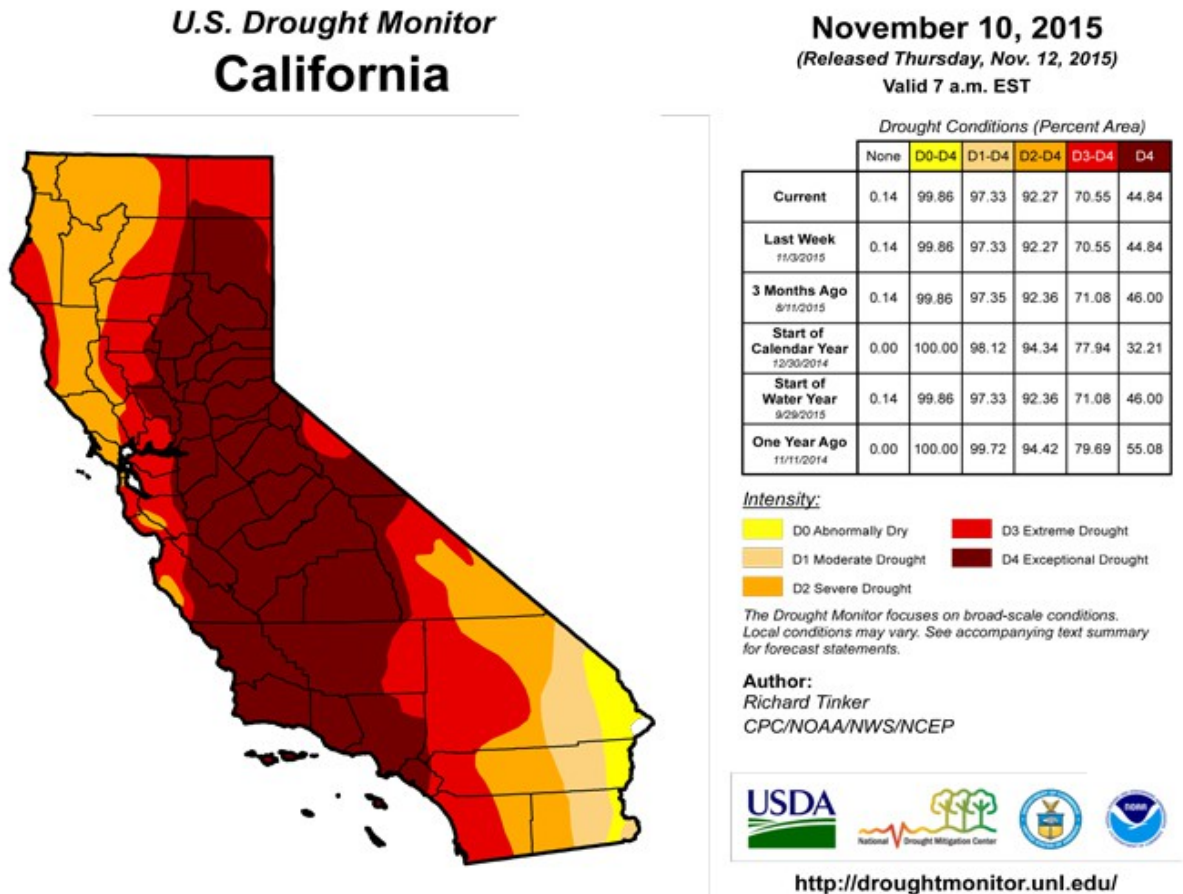
Source: California Department of Water Resources

## “So wet, yet so far from drought recovery”

That is the headline in a piece November 11 from *Capital Press*, by Don Jenkins, which provides an overview of the affect of both recent storms and drought conditions in the West.

[http://www.capitalpress.com/Nation\\_World/Nation/20151111/so-wet-yet-so-far-from-drought-recovery](http://www.capitalpress.com/Nation_World/Nation/20151111/so-wet-yet-so-far-from-drought-recovery)

“So far from drought recovery” can be seen in the U.S. Drought Monitor posting for November 10. Despite two storms hitting the state over the last two weeks, the portion of the state in “Exceptional Drought” has declined a measly less than two percent.



On the other hand, the NASA climatologist Bill Patzert, who is usually a contrarian (he forecast that last year's expected El Nino would be an “El Floppo”), is warning that this year's El Nino could be very destructive in a piece by *NBC News* on November 10. The article, “Extreme El Niño: Drought-Stricken California in the Crosshairs of Wild Weather,” includes the following excerpts. The link is here: <http://www.nbcnews.com/news/weather/extreme-el-nino-drought-stricken-california-crosshairs-wild-weather-n460796>

*After four years of a historic drought that has ravaged virtually every corner of California, this winter could usher in a new challenge: A series of storms with rains so heavy and so punishing that mudslides and flooding would be the norm, forecasters warn.*

*That's because of an El Niño weather phenomenon that will target California — perhaps in ways that*

*haven't been documented for decades, said Bill Patzert, a climatologist with NASA's Jet Propulsion Laboratory.*

*"This is larger, it's more intense, and it's still growing," Patzert told NBC News' Al Roker.*

*"It's going to be a mess ... when these great rains come. There's nothing to hold the water and we are expecting debris, mud, water to come pouring out of the mountains," Patzert warned.*

So, expect everything, nothing or somewhere in between, which is what the experts have been saying for months.

## **Jerry Brown: "How can I kill people? Let me count the ways"**

### **Water cut-offs in California on the horizon; millions at risk**

Nov. 7 (EIRNS)-- Governor Jerry Brown, who flies around the world promoting depopulation, acts on that policy by denying water to the residents of California. That policy takes many forms. First and foremost is the virtual prohibition of developing new sources of water by, for example, desalination. Brown probably regrets that he allowed one horse to get out of the barn on this one, since the largest desalination plant in the U.S., at Carlsbad, will begin producing 50 million gallons of fresh water per day before the end of this year. But Brown's new regulations make building more such plants almost impossible.

Next Brown and his environmentalist Brownshirts ensure that millions of acre feet of water from California's rivers is diverted from agriculture and allowed to run out to San Francisco Bay to ensure the survival of a few fish. This policy has resulted in more than one million acres of the best agricultural land in the world being fallowed this year.

But, denying water to people and agriculture does not stop there. With more than 2,500 families in the state with no running water in their homes due to wells going dry, Brown's policy of merely providing some bottled water to them, while refusing to hook up those homes to an existing municipal system, has created extreme hardship and health problems throughout the Central Valley of the state.

In addition, since the mandatory cut-back of 25 percent in water use by urban areas has been enforced this year, water districts have been slammed by falling revenue as they sell less water. This is forcing these utilities to dramatically raise the rates charged to their customers. Some increases are near 60 percent. Low income households are, in turn, hit with water bills they can no longer afford.

Since state law forbids water agencies from subsidizing water bills as is done for heating and electric bills, there is no solution in sight to ensure that thousands, or even millions, of families are not cut off from water. Twenty percent of the state's population already lives below the poverty level-- that is more than six million people-- and who are at risk, like the thousands already in the Central Valley, of living in a house with no running water.

## **The Delta Plan/Controversy/War: A New Player Joins the Game**

With the announcement this week that the Metropolitan Water District of Southern California moved to purchase four large Delta islands: Bouldin, Bacon, Webb and Holland, and one smaller island, the Delta saga just got more complex. The islands total about 20,000 acres, or three percent of the entire Delta.

Farmers, environmentalists and fishermen are up in arms, fearing that Metropolitan will help facilitate the Jerry Brown tunnel project and take more water south to Los Angeles.

The *Stockton Record* in an article titled, “L.A. water provider moves forward on Delta land purchase” on November 10, by Alex Breitler, included the following excerpts:

*For 25 years, the current owners of the private islands — a company called Delta Wetlands, owned by Swiss investors — have been working on a plan to convert two of the bowl-like islands into reservoirs, and two more into wildlife habitat. During wet times, water from the new reservoirs could be pumped south and stored underground for dry times.*

*Metropolitan is interested in a similar plan, though the details have yet to be worked out.*

*“We’re more interested, frankly, by the environmental pieces of it than we are the water supply pieces,” Kightlinger said.*

*That’s because Metropolitan believes simply allowing more water to flow through the Delta to San Francisco Bay will not reverse the estuary’s collapse, he said.*

*“Our belief is you have to restore habitat,” Kightlinger said. “Ninety-eight percent of the Delta marsh has disappeared.”*

*How does that tie in with Metropolitan’s interests? The crashing Delta ecosystem has forced officials to cut back on the amount of Delta water that can be pumped south. Fixing the ecosystem could help Metropolitan obtain a more reliable supply of water.*

*The land acquisition could also facilitate construction of Gov. Jerry Brown’s twin tunnels, a project that Metropolitan supports. The tunnels would pass below two of the islands, Bouldin and Bacon.*

*“That would be valuable,” Kightlinger said.*

*Bruce Blodgett, director of the San Joaquin Farm Bureau Federation, said the islands haven’t been well-managed by their current out-of-area owners and suggested control by Metropolitan isn’t likely to help matters.*

*“The bottom line is what is best for this region?” Blodgett said. “We’re concerned that Metropolitan may not have in mind what’s best for our region.”*

## **Will Central Valley Farmers Get Water If It Is A Wet Winter?**

Expressing doubt that water deliveries will resume even if this winter's precipitation is abundant, farmers in the Central Valley discussed this as reported by the *Visalia Times Delta* on October 28. Titled “Farmers talk politics and drought,” the full article can be found here:

<http://www.visaliatimesdelta.com/story/news/local/2015/10/28/farmers-talk-politics-drought/74781132/?from=global&sessionKey=&autologin=>

Here are some excerpts:

### *TERRA BELLA*

*Terra Bella farms are among the hardest hit by the drought, as the majority of water they need for irrigation comes from water in Millerton Lake in Fresno County and is delivered here through the 152-mile Friant-Kern Canal, which extends through eastern Tulare County and south into Kern County.*

*But for the past two years, the lake's levels have been so low due to lack of rain that most farmers contracted to get water from the canal have gotten zero allocations for the past two years.*

*To make matters worse for farmers in Terra Bella and other parts of the east county, many have no wells or, like Martin, some have wells but with limited groundwater supplies.*

*Terra Bella Irrigation District officials estimate that 3,500 to 4,000 acres of the 10,000 acres in production within the district prior to the drought and the lack of water allocations have been taken out of production.*

*And it's not just the weather farmers in this group are blaming, as they say the zero allocation is tied to the San Joaquin Delta, which delivers water from Northern California to the central part of the state, though not Tulare County.*

### *Odds of zero water allocations*

*Some farmers who depend on water from the Friant-Kern Canal have barely hung on after two years of zero water allocations to them.*

*And rumors are spreading that even if the Valley has good rainfall over the winter, the a third year of zero water is on the horizon.*

*While there is no way to accurately predict whether that will happen, Bill Luce, interim general manager of Lindsay-based Friant Water Authority, said odds are favoring at least some surface water being distributed to contracted farmers and communities next year.*

*"If we get a really significant amount of rain and a good snowpack on the San Joaquin River, I don't think there will be a problem getting a water supply," he said, but added, "It will have to be a very big year."*

# What Happens To Agriculture's Water?

**1** Agriculture water delivered to California farms totals: 34.1 million acre-feet

41.4% of the entire state's water use

Agriculture uses water to grow half of the nation's food supply



**2** 73.9% of farm water is converted into food and fiber

The food we eat and clothes we wear

**3** The remaining 26.1% of the farm water returns to rivers, lakes or refills groundwater aquifers.

Recycled and reused



Source: California Department of Water Resources: 1998-2010 average