

# California Drought (and Flood) Update



**For April 20, 2017**

**by Patrick Ruckert**

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<http://www.californiadroughtupdate.org>

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## **A Note To Readers**

Five years of drought and a winter of floods, and what shall the future be? Drought and deluge are “acts of nature,” and, at least not yet, there is little mankind can do to alter that. What mankind can do, though, is prevent or alleviate the consequences of droughts and, shall we say, excess precipitation. We have done so as a species forever. The first farmers used a stick to dig a channel to his crops. Later we used water wheels to move larger amounts of water to where it was needed. Next came dams, reservoirs, canals, aqueducts and greater and greater water projects. We tamed a river, and then an entire watershed, then created a water management system encompassing multiple watersheds, and now, as China is doing with its Move South Water North Project, we are creating a continental water management system. And if there is not enough fresh water available, we human beings then create it by desalination.

As Kraaft Ehrlicke said in the first of his three principles of space exploration: “Nobody and nothing under the natural laws of this universe can impose any limitations on man, except man himself.”

One week ago a two-day conference in New York City sponsored by the Schiller Institute presented exactly how the United States can and must join China's One Belt One Road (OBOR) infrastructure building project-- the largest such undertaking in human history. This conference occurred just one week following the two day summit between President Trump and President Xi of China, in which the President, I am sure, received an in-depth report on how really to build infrastructure. While the Trump administration has at least a sense of what the nation requires, the Schiller Institute conference, should the President watch it, will give him the blueprint for doing so. With the keynote given by Helga Zepp-LaRouche, followed by representatives of the Chinese and Russian governments, attendees were

presented with both a picture of the fight for the soul of the Trump administration, and the technical details of how the OBOR project is the center of China's contribution of more than one-third of world economic growth today. Here are a couple of links to videos of the conference:

<https://www.youtube.com/watch?v=2yUt-SNGUoE>

<https://www.youtube.com/watch?v=J92CqLJE0vg&feature=youtu.be>

And should the President clean out his administration of the British connected traitors within it who led him to the stupid and criminal act of bombing Syria, then, as Helga Zepp-LaRouche has stated more than once, Donald Trump can become one of the nation's great Presidents.

The bulk of this week's report has the usual drought, precipitation, snowpack and forecasts, followed by just a couple of other items.

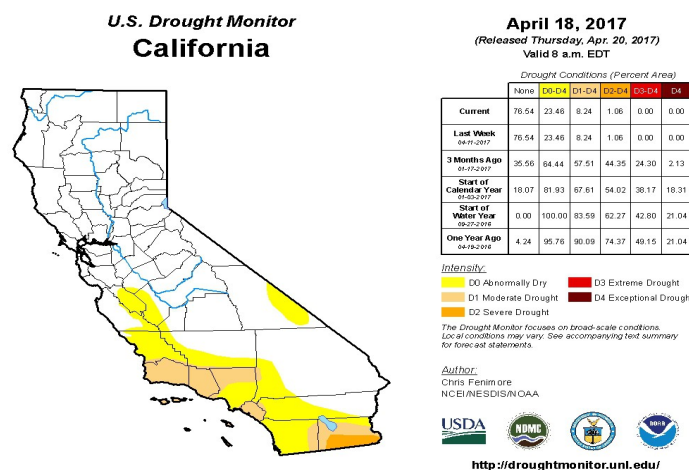
The ongoing coverage provided here of the Oroville Dam disaster does highlight one development that demonstrates what we can do if we so desire to do it. The huge repair job is being done the way all the required infrastructure building the nation requires should be done. The bureaucratic procedures are being eliminated, the usual multiple environmental impact reports are being bypassed, everything is being streamlined and work shall begin tomorrow. The Department of Water Resources received the bids from the contractors one day, picked the winner a few days later, then awarded the contract the next day. The call for contract bids went out, came in, and were awarded all in one week. Wow!!

As the final item in this report makes clear, that without the U.S. dramatically acting to change its economic policy now, the continuing collapse of all productive economic categories will suddenly go over the edge. The continued debate and the political movement toward restoring the Glass-Steagall banking law shows that such a development is now possible.

Add to that the President's commitment to restoring the industrial power of the U.S., as he outlined once again this week in a speech to the workers at the Snap On Tools factory in Wisconsin, tells us that that battle for the soul of the administration is alive and well. Here is the video of that speech:

[https://www.youtube.com/watch?v=EVsj\\_uN1t3s](https://www.youtube.com/watch?v=EVsj_uN1t3s)

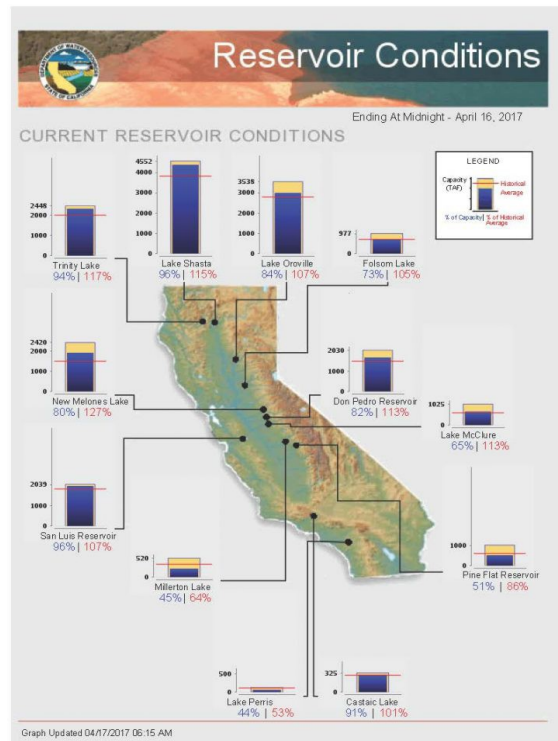
## U.S. Drought Monitor



The drought monitor this week, as for the past several weeks, does tell us a couple of things of interest. While the state as a whole is almost drought free, there are areas in southern California that remain in the mildest category of drought, and larger areas in that region that remain abnormally dry. As we have seen over the past few years, it does not take very long for the intensity of drought to dramatically get worse.

## The Reservoirs

They are full.



## Don't Get Used To It Because It Will Change

While we are still receiving some storms, the dry season in the state has begun. Normally, there will be little or no precipitation for the next six months, but even the forecasters are ready to give up any projection more than a week or so ahead. Our first article below warns that if you liked our rain-forest weather this past winter, you may just get another next winter. Following that is one that puts the record drought we just exited in perspective. It also cautions that recovery from the drought is not to be found by just seeing a bunch of water coming down.

### *El Niño's Odds to Return By Late Summer or Fall Increasing*

*By Jonathan Belles and Brian Donegan*

Mar 23 2017

weather.com

<https://weather.com/news/climate/news/el-nino-la-nina-2017-atlantic-hurricane-season>

*Chances for El Niño's development later this year are on the rise.*

*El Niño forecasts this time of year can be particularly uncertain, however, given it's a transitional time of year.*

*El Niño typically impacts weather patterns around the globe, including hurricane season.*

*The odds of El Niño's development by the late summer or early fall have increased, according to the latest output from forecast model guidance.*

*NOAA's Climate Prediction Center (CPC) officially declared La Niña's end in early February as sea temperatures have steadily warmed in the equatorial region of the central and eastern Pacific, and we're now in the neutral phase of the oscillation. Neutral means that neither La Niña or El Niño conditions exist.*

## ***California's Five-Year Drought Was Worst in Nearly 450 Years for Some Areas, Records Show***

*By Jonathan Belles*

*Apr 12 2017*

<https://weather.com/news/climate/news/california-drought-worst-450-years>

*Over the past five years, California's Central Valley and Southern Coast endured the worst period of dry conditions in nearly 450 years, [according to a recent NOAA report](#).*

*Locations hit hardest by the drought will likely need decades to recover from the long-term lack of moisture, the scientists said.*

*The last four-year stretch as dry as the 2012-2015 drought dates back to at least 1571 in the Central Valley, including Sacramento and Fresno southward into Southern California's most populated stretch of real estate, including Santa Barbara and Los Angeles.*

*This is based on data in the instrumental era, which dates back to 1896, and paleo-reconstruction data going back to 1571.*

## **Slowly the DWR Moves, Ever So Slowly**

What could have been announced a month or two ago has finally been announced by the DWR. Too late for some farmers, though. For the first time in 11 years farmers in the Valley will get a full allocation. The 85% figure is what will be received by Southern California. Remember, as the State's Constitution makes clear, all the water in the state belongs to all the people in the state; there is no such thing as northern or southern water.

### ***State Water Project allocation 100% for North-of-Delta contractors; 85% for other contractors***

*April 14, 2017*

*From the Department of Water Resources:*

*With record rainfall in the Northern Sierra and the snowpack still building, the Department of Water Resources (DWR) today increased its estimate of this year's State Water Project (SWP) supply to 100 percent for contractors north of the Sacramento-San Joaquin Delta and 85 percent of requests for other contractors.*

*"We're hopeful we'll be able to increase deliveries even more as we monitor conditions," said DWR Acting Director William Croyle.*

*Today's allocation is the highest since 100 percent in 2006.*

## **Oroville Dam Update**

First the autopsy, then the resuscitation. But, what is exciting about it, if we can use that word, is the speed of the repair process. As mentioned in the "Note to Readers," the call for contract bids to do the repair of the spillway went out, came in, and were awarded all in one week.

The following three items are the autopsy, each one having something a little different than the others. That is followed by articles on the repair process. Also, the "controversy" of the DWR using the Patriot Act to hide things continues, with some concession being made by those who would rather act behind a screen.

### ***Expert performed autopsy on Oroville spillway collapse. Here's what he found.***

*By Ryan Sabalow and Dale Kasler*

*Sacramento Bee*

*April 18, 2017*

<http://www.sacbee.com/news/state/california/water-and-drought/article145304464.html#storylink=cpy>

*As state officials clamp down on records at Oroville Dam, one of the country's foremost experts on catastrophic engineering failures has used state inspection reports, photographs and historical design specifications to piece together an autopsy detailing why the spillway at the country's tallest dam failed so spectacularly this winter.*

*The independent analysis by Robert Bea, of the [Center for Catastrophic Risk Management](#) at UC Berkeley, points to design and construction flaws dating back to the spillway's construction in the 1960s. Bea said the gaping crater that formed in the spillway on Feb. 7 was all but inevitable given that the design problems were compounded by inadequate upkeep and maintenance.*

*Bea's 78-page report, which he has shared with The Sacramento Bee and other media outlets, says the spillway was undermined by a variety of factors, including thin concrete, the presence of "soils and incompetent rock" below the concrete and evidence of water undermining that material. Bea's findings dovetailed with the conclusions made [last month by four consultants](#) advising the state on Oroville's repairs.*

*[Subsequent reports by those consultants have been sealed](#), along with several other documents connected to the Oroville recovery effort. Bea said he's troubled that federal and state officials are citing terrorism concerns to block access to these reports. Greater third-party scrutiny could help guide the \$275 million repair job at Oroville and point to flaws in other dams, he said.*



State officials say the Department of Water Resources is trying to balance the public's right to information while also preventing critical design elements from falling into the wrong hands. Federal regulators have mandated that independent consultants guide repairs and do a formal forensic analysis that will go into greater depth than Bea's, said Erin Mellon, a spokeswoman for the [California Natural Resources Agency](#).

"The forensics analysis team is reviewing thousands of documents and recent geotechnical information taken from the spillway," Mellon said in an email. "They will base their analysis not on original design drawings but on actual construction – there is a difference – and all of the facts, which are being collected and evaluated. ... We look forward to the team's final report, which will be made public."



Excavators dredge along the edge of the diversion pool below the spillway at Oroville Dam on April 6.  
Randy Pench [rpench@sacbee.com](mailto:rpench@sacbee.com)

## ***Serious design, construction and maintenance defects doomed Oroville Dam, report says***

By Ralph Vartabedian

Los Angeles Times

April 17, 2017

<http://www.sandiegouniontribune.com/news/california/la-me-oroville-failure-analysis-20170417-story.html>

Design flaws, construction shortcomings and maintenance errors caused the [Oroville Dam spillway to break apart](#) in February, according to an [independent analysis](#) by Robert Bea for the Center for Catastrophic Risk Management at UC Berkeley.

## ***Disaster expert says spillway emergency 'developed and propagated by DWR'***

By Dan Reidel

*Chico Enterprise-Record*

04/19/17

<http://www.chicoer.com/general-news/20170419/disaster-expert-says-spillway-emergency-developed-and-propagated-by-dwr>

*Berkeley >> A disaster expert's review of the Oroville Dam spillway emergency says the Department of Water Resources could have prevented everything with better design, better construction and better maintenance.*

*Robert Bea prepared the report published Monday.*

*Bea is a former engineer with the U.S. Army Corps of Engineers and UC Berkeley professor who helped found the university's Center for Catastrophic Risk Management. He has worked on numerous disasters and was [recognized by the U.S. Senate](#) for his review of what went wrong during Hurricane Katrina and the Gulf Coast BP oil spill.*

### ***Oroville Dam update: More flow, more questions being asked***

*By Heather Hacking*

*Chico Enterprise-Record*

*April 13, 2017*

<http://www.chicoer.com/general-news/20170413/oroville-dam-update-more-flow-more-questions-being-asked>

*Jeanne Kuttel, Department of Water Resources chief engineer, and Bill Croyle, DWR acting director, brief reporters on the latest on the Oroville Dam spillway, Thursday in Oroville.*

*Oroville >> Many questions remain unanswered about the status and plans for the damaged Oroville Dam spillways. However a lot of work is underway, Department of Water Resources officials said during a press conference Thursday in Oroville.*

*Croyle said the quick pace is important. Normally a project of this size would take years just for the planning. "We need hours and days for approval vs. weeks, months and years," he said. Rather than have paperwork shuffle back and forth, staff from agencies will meet together, Croyle said.*

### ***Bids for Oroville Dam repairs top state estimates; \$275.4 million the lowest***

*By Dale Kasler*

*Sacramento Bee*

*April 15, 2017*

<http://www.sacbee.com/news/state/california/water-and-drought/article144848399.html#storylink=cpy>

*Blowing past state officials' financial projections, three construction contractors submitted bids for the Oroville Dam repairs that begin at \$275 million, the Department of Water Resources said Saturday.*

*DWR, in a brief announcement, said its engineers had estimated the repairs to the two damaged spillways would come in at \$220 million.*

*The low bid was \$275.4 million from a subsidiary of Kiewit Corp. of Omaha, Neb.; followed by an*

*affiliate of Barnard Construction Co. of Bozeman, Mont., at \$277 million. The high bid was made by Oroville Dam Constructors, a joint venture between Sacramento's Teichert Construction and Granite Construction of Watsonville, at \$344.1 million.*

## ***Company that made Folsom Dam safer lands job of fixing Oroville Dam***

*By Dale Kasler*

*Sacramento Bee*

*April 17, 2017*

<http://www.sacbee.com/news/local/article145144129.html#storylink=cpy>

*The company that built one of greater Sacramento's most important flood-control projects in years will fix the damaged spillways at Oroville Dam, site of a near catastrophe two months ago.*

*Kiewit Corp. of Omaha, Neb., beat two competitors for the right to repair the Oroville spillways, whose problems triggered the [evacuation of 188,000 residents](#) in February amid fears of massive flooding. The California Department of Water Resources announced late Monday that Kiewit will be paid \$275.4 million for the project, which is expected to take two years to complete.*

## **Desalination: The Huntington Beach Project Moves Forward**

While the article below is heavy with the statements from opponents, it does show that the project is on track for approval and construction. I admit that I could not finish reading it.

***Huntington Beach Desalination Project Touted By Boxer, Still Opposed By Many With Boxer and Nunez claiming benefits, opponents claim no amount of lobbying can change the facts: this is expensive water we don't need.***

*By Ashley Ludwig*

*April 19, 2017*

<https://patch.com/california/losalamitos/huntington-beach-desalination-project-touted-boxer>

*HUNTINGTON BEACH, CA — Poseidon Water's plan to provide Orange County with 50 million gallons of fresh drinking water was touted by former Sen. Barbara Boxer and former California Assembly Speaker Fabian Nunez on Wednesday. Both called upon state regulators Wednesday to approve the proposed Huntington Beach desalination project, where those many gallons would be extracted daily from the Pacific ocean.*

## **The American System: Abandoned by the U.S.; Adopted By China**

In his speeches last month, President Trump stated that he is committed to returning the United States to the American System, and named its author Alexander Hamilton, and its proponents like Henry Clay and Abraham Lincoln, as the models for his policies today. We can only hope that in his meetings two



weeks ago with China's President Xi, it dawned upon the President that that American System is exactly what has made China the global driver of real economic development that it is today. The President must begin by ensuring the passage by Congress of the bills to restore the Glass-Steagall banking law.

To the point: China now produces as much steel in one month as the United States produces in a year.

## ***China and U.S. Economies: Why Trump Must Go to Beijing Belt and Road Forum in May***

*April 19 (EIRNS)—China's accelerating economic growth continues to drive the world economy—again accounting for one-third of expansion in the global economy—while the United States continues to drag it down.*

*Analyses of China's "unexpected" first-quarter 6.9% GDP growth, from PricewaterhouseCoopers (PwC) to Bloomberg to the U.S. National Bureau of Economic Research (NBER), agree on the primary driver of China's economic expansion acceleration. It is extraordinary investments in new infrastructure projects both domestically and in other nations—in other words, the Belt and Road Initiative or "New Silk Road."*

*But beyond GDP growth acceleration:*

- *China's factory output grew by 7.6% in the first quarter from the first quarter of 2016;*
- *Household disposable income of Chinese grew by 7.5%;*
- *Retail spending grew by 10.4%;*
- *Imports from other Asian countries grew by 22.7%, driving expansion of the manufacturing supply chain throughout Asia;*
- *Imports from the United States grew by 11%;*
- *China's steel production in the month of March reached 72.5 million metric tons, the amount the U.S. economy produces in an entire year.*

*The Belt and Road Initiative, projected as equal to 20 Marshall Plans, is truly proving to be a grand investment and trade plan which is to the mutual, "win-win" benefit of the 60 or more nations which are participating. The great projects of infrastructure involved are growing in value at nearly 50% a year, according to a February study by PwC. And a new study by the U.S. National Bureau of Economic Research today estimates, based on physical economic factors like illumination at night seen from space, that China's economy is actually growing faster than its government reports.*

*The "Belt and Road Forum for International Cooperation" in Beijing May 14-15 is intended as a path to productivity, productive employment and scientific and technological advancement for nations all over the world. Some 28 heads of state or government have announced plans to attend; even nations which have had security or strategic tensions with China, such as India, are sending high-level delegations and planning development corridors with the help of Chinese investment.*

*But the U.S. economy continues to stagnate and faces a potential new general crisis this year. U.S. industrial production fell further in March and is 3.5% lower than in November 2014, and actually only approximately 3% higher than in July 2000! Following that, the Federal Reserve on April 18 estimated an annual growth rate of just 0.5% in the first quarter, even lower than 2016's 1.8% growth. Labor productivity has not grown for six years. Bank credit has stopped expanding; commercial and*

*industrial lending is at zero growth. And corporate debt has grown so fast in the past ten years, against flat or declining profits, that an IMF report today said 20% of all non-financial companies will default if interest rates rise substantially.*

## ***U.S. Economic Crisis Ahead***

*April 7, 2017 (EIRNS)--The U.S. economy is turning down. President Donald Trump needs much more than individual corporate pledges to hire more American workers.*

*The March Labor Department employment report is chaotic-- but relying on the unadjusted year-to-year data, job creation over the 12 months through March 2017 is now down to just over 2.0 million, compared to a rate of 2.8 million during first half of 2016. Weekly average wage growth is down to 2.2% for the year to March – before inflation -- and the growth from February to March is just 0.17%.*

*It is clear that construction employment growth stopped in March, and that there was a large drop in retail employment associated with mall and department store bankruptcies. The latter are spreading, and hitting the large commercial mortgage-backed securities (CMBS) market which was already falling, with much higher interest rates on junk bonds and leveraged loans. With auto sales starting to fall, the subprime auto loan delinquency rate is now over 30% -- this is a securitized \$300 billion segment of auto loans.*

*Moreover, there has been since Feb. 15 a "sudden" drop in the growth of bank loans from about 5% to about 2% annual rate.*

*The Atlanta Federal Reserve's "GDPNow" tracking study is now estimating that U.S. economy grew at just an 0.6% annual rate in the 1st Quarter of 2017, after 1.7% growth for all of 2016. This is stall speed, and dropping.*

*Wolf Richter's "Wolf Street" blog recently reported that there has been no growth in U.S. corporate profits, after taxes, for five years, even before inflation; thus in real terms, they have fallen for five years. They are falling in absolute terms in 2016-17. The other side of this dangerous picture, not noted by Richter, is the spectacular rise in non-financial corporate indebtedness during the same five years, from \$8.5 trillion to \$13.5 trillion.*