

California Drought Update



For August 11, 2016 by Patrick Ruckert

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A Note To Readers

With little news or outrages to report, this week's drought update will focus on what we should be doing.

Under the title, "We Must Return to the Past to Go Forward" the 1962 inauguration of the construction of the San Luis Reservoir is recalled, and the spirit and policy of President John F. Kennedy is presented. As Kennedy said in his remarks there that day:

Progress represents the combined will of the American people, and only when they are joined together for action, instead of standing still and thinking that everything that had to be done has been done. It's only when they join together in a forward movement that this country moves ahead and that we prepare the way for those who come after us, as Mr. O'Neill and others who made this project possible 20 years ago prepared the way for us.

Following that report on what we used to be and to do, we recall the Kennedy era project that was not built-- The North American Water and Power Alliance and the Oregon-California Extension of that continental water management system.



Next is a report that drought now affects more than 20 percent of the nation. That is followed by a short item on the Israeli desalination system and its more efficient reverse-osmosis technology.

“Atmospheric Rivers and Artificial Ionization” is the title of the following section, which highlights the potential to manage the powerful storms called atmospheric rivers with the experimental technology of artificial ionization.

Finally, we report on a study that claims that the recovery of groundwater levels during the past 15 years, does not begin until after a year or more after the end of a drought, whereas in the past recovery began immediately when the drought ended.

This introduction cannot end without calling to your attention a new article from *LaRouche PAC*, “The New Presidency: It Begins with LaRouche’s ‘Four Laws.’” While two candidates, nominally the candidates of their respective and disintegrating political parties, are disliked or distrusted by a majority of the American people, there is no discussion of what must be the policy of the nation. Here is just a short excerpt that does present such a policy:

“In principle, without a Presidency suited to remove and dump the worst effects felt presently, those created presently by the Bush-Cheney and Obama Presidencies, the United States were soon finished, beginning with the mass-death of the U.S. population under the Obama Administration’s recent and now accelerated policies of practice.”

And then later:

“A chain-reaction collapse, to this effect, is already accelerating with an effect on the money-systems of the nations of that region. The present acceleration of a ‘Bail-in’ policy throughout the trans-Atlantic region, as underway now, means mass-death suddenly hitting the populations of all nations within that trans-Atlantic region: whether directly, or by ‘overflow.’ ”

This systemic crisis requires not just a set of policies, but a New Presidency, one based on a citizenry with a higher devotion, one beyond mere electoral politics, one similar to that of Benjamin Franklin, George Washington, and Alexander Hamilton. It requires a commitment to the creation of a new nation, of a new United States, and of a world that has never existed before—a world now more possible than

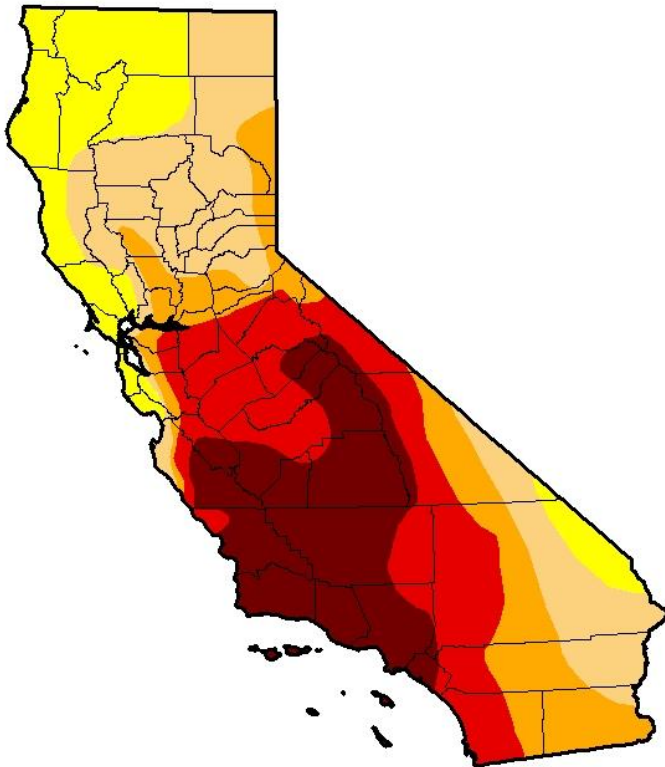
ever, and a world that now lies in our hands. Will it come to be, or will we fall short?

The entire article is here: <https://larouhepac.com/20160809/new-presidency-it-begins-larouche-s-four-laws>

The U.S. Drought Monitor

I really do think they have fallen asleep.

U.S. Drought Monitor California



August 9, 2016

(Released Thursday, Aug. 11, 2016)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	83.59	59.02	42.80	21.04
Last Week <i>8/2/2016</i>	0.00	100.00	83.59	59.02	42.80	21.04
3 Months Ago <i>5/10/2016</i>	4.27	95.73	89.68	72.72	47.92	21.04
Start of Calendar Year <i>12/29/2015</i>	0.00	100.00	97.33	87.55	69.07	44.84
Start of Water Year <i>9/29/2015</i>	0.14	99.86	97.33	92.36	71.08	46.00
One Year Ago <i>8/11/2015</i>	0.14	99.86	97.35	92.36	71.08	46.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Richard Tinker

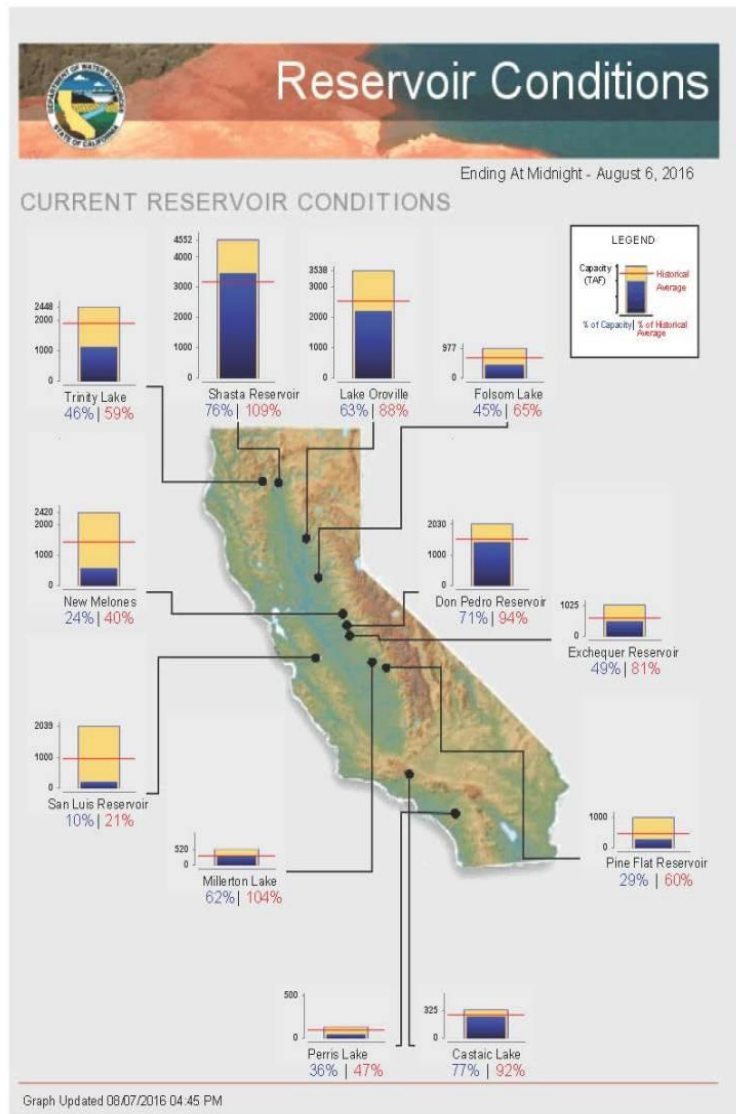
CPC/NOAA/NWS/NCEP



<http://droughtmonitor.unl.edu/>

The Reservoirs

There is not much new here. San Luis remains at a critical level of 10 percent of capacity, making the likelihood of another emergency almost guaranteed.



We Must Return to the Past to Go Forward

An opinion column in the *Modesto Bee* on August 5, provides a good introduction to both what we used to do, but also what we planned to do that was not done. First the column by John Michelena, described as “a West Side grower and community columnist.” Michelena recalls the day when President John Kennedy, on August 18, 1962, inaugurated the building of the San Luis Reservoir, pointing out that the ideas of creating the future represented by President Kennedy, has been lost, along with the purpose of the reservoir itself. Just some excerpts.

<http://www.modbee.com/opinion/opn-columns-blogs/community-columns/article93940392.html>

Why have we forsaken Kennedy’s vision for feeding the world?

San Luis Reservoir is 9 miles long and, when it’s full, can hold 660 billion gallons of water – or roughly enough to cover every inch of Stanislaus County 2 1/2 feet deep.

The problem is, San Luis Reservoir isn’t full. Not even close.

When ground was broken on Aug. 18, 1962, for the B.F. Sisk Dam that would create the reservoir, President John F. Kennedy came to make a speech. Gov. Edmund G. “Pat” Brown, Jerry’s father and

the father of the California State Water Project, was there, too.

President Kennedy, speaking confidently as he so often did, talked about a conservation project that “looks to the future and not to the past.” He told those listening under a hot August sun that it would help the nation “continue to move forward.”

It was a “joint use” facility, meaning it stored water for both the California State Water Project and federal Central Valley Project. Kennedy noted that such an arrangement was the “first of its kind” – which is why Gov. Brown was there to represent the state in this partnership. It was “water leadership” because large portions of this big valley with its “brown, dusty and useless” land could become the “greenest and richest” on Earth, helping to feed the nation and world, in Kennedy’s words.

California’s farmers made that happen. The reservoir provided water for irrigation districts up and down the San Joaquin Valley, from Stanislaus to Kern counties, and the Valley has been feeding the world for generations.

That mission is in danger. According to the California Department of Water Resources, San Luis Reservoir is only 10 percent full at 200,028 acre-feet. According to Zerohedge.com, water deliveries are likely to be curtailed.

That is not the end of the story, for President Kennedy was committed to human progress and, for example, as demonstrated in the following quotation, demanded that progress must be the commitment of every member of his administration, and more:

“Every Member of Congress, everyone in the executive branch from the President on, in the field of national resources, has to plan during their period of administration or office for the next generation, because no project that we plan today will be beneficial to us. Anything we begin today, is for those who come after us. And just as those who began something years ago make it possible for us to be here, I hope we’ll fulfill our responsibility to the next generation that’s going to follow us.”

John F. Kennedy, Pueblo, CO August 17th, 1962

Here is more of his speech at Los Banos on August 18, 1962:

Progress represents the combined will of the American people, and only when they are joined together for action, instead of standing still and thinking that everything that had to be done has been done. It’s only when they join together in a forward movement that this country moves ahead and that we prepare the way for those who come after us, as Mr. O’Neill and others who made this project possible 20 years ago prepared the way for us.

We must step up our program to convert cheap fresh water from salt water. There is no scientific breakthrough, including the trip to the moon, that will mean more to the country which first is able to bring fresh water from salt water at a competitive rate. And all those people who live in deserts around the oceans of the world will look to the nation which first makes this significant breakthrough, and I’d like to have it the United States of America.

<http://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-039-039.aspx><https://www.youtube.com/watch?v=kMSbh01YQvg>

NAWAPA

Now for one of the Kennedy projects that did not get built. That project was the North American Water and Power Alliance (NAWAP), described as the greatest water project ever conceived. Look at it this way. First, we built dams and other facilities to control a single river. Then we built to control an entire watershed. And then, as we have done in California, we created a water management system

encompassing multiple rivers and their watersheds.

NAWAPA, designed by the Parsons Engineering Company of Pasadena, CA, became a real fight in the Congress during the 1960s into the early 1970s. The project design would have created a single water management system for the entire North American Continent.

The LaRouche political organization picked up on this project in the early 1980s, and updated the “blueprint” for the project just a few years ago, under the title, “NAWAPA XXI.” For further details on the complete NAWAPA XXI project go to: <http://larouchepac.com/infrastructure> . This report was elaborated further as part of a general economic development policy in the “Special Report: Nuclear NAWAPA XXI: Gateway to the Fusion Economy.”

[http://archive.larouchepac.com/files/NuclearNAWAPA-shrunk%20\(1\)_0.pdf](http://archive.larouchepac.com/files/NuclearNAWAPA-shrunk%20(1)_0.pdf)

NAWAPA XXI - Oregon-California Extension

One section of the updated NAWAPA program is titled the “NAWAPA XXI: The Oregon-California Extension.” Here is a video, described as, “A detailed overview of a western extension of NAWAPA XXI, which will manage and replenish water supplies from the Columbia river in Washington state, down through to southern California.” <https://www.youtube.com/watch?v=2ZTft0pJUUM>

Its Not Just In California Anymore

The article, “Drought is building in places other than California,” from *climate.gov* by Rebecca Lindsey on August 9, makes the point. Some excerpts follow.

<https://www.climate.gov/news-features/featured-images/drought-building-places-other-california>

A checkerboard of drought conditions has developed across the United States east of the Rockies between spring and summer 2016. Since March, the total drought-affected area of the country nearly doubled from 12.41%—as low as it’s been in five and half years—to 21.12% as of August 2, according to the National Drought Mitigation Center’s August 4 report.

According to the Drought Impacts Reporter, agricultural impacts are piling up. Pastures have deteriorated, hay production has fallen, and stock ponds and creeks have dried up in the High Plains, and fire danger is high.

Desalination

This article from *LaRouche PAC* on August 8, reporting on an article in *Ensia* of July 19, points out that the Israelis have an improved reverse-osmosis technology that significantly lowers the cost of desalinated water. Some excerpts:

For Use in Water-Stressed California: Israeli Desalination Success with New Technology <https://larouchepac.com/20160808/use-water-stressed-california-israeli-desalination-success-new-technology>

August 8, 2016

An article in Ensia of July 19, reprinted in the Scientific American on July 29, provides a shining example how the almost-arid Israel, using a technologically improved reverse-osmosis desalination of

seawater, has become a water-surplus nation, at least as of now.

Also contributing to this surplus is the fact that Israel monopolizes the Jordan River water source, including brackish water for desalination, and does not allocate water to other nations bounding the Jordan Valley. But the technology, already in use in one California plant as well, is a significant advance in the efficiency of desalination.

Atmospheric Rivers and Artificial Ionization

An article from *wunderground.com* on August 9 by Bob Henson, “Researching the Wet, Wild World of Atmospheric Rivers,” provides a fairly detailed background on the critical element providing in most winters the bulk of precipitation that falls in California. This past winter, with forecasts of drenching El Nino storms determining at what level to leave the reservoirs to avert potential flooding, the complaints were many that the Army Corps of Engineers were leaving the reservoirs unnecessarily too low. The cited article discusses the search for better forecasting of incoming atmospheric rivers. <https://www.wunderground.com/blog/JeffMasters/researching-the-wet-wild-world-of-atmospheric-rivers>

Here is an excerpt:

How AR forecasts might help save water ahead of drought

One of the perversities of California's water storage system is the requirement that some large reservoirs release water in midwinter to help protect against the potential for late-season flooding. The system works beautifully as a flood prevention tool, but it's based mainly on decades-old, by-the-book rules that take into account only the water that's fallen, the amount being stored, and the time of year, not the long-range weather forecast or the seasonal climate outlook. California's Lake Mendocino, built in 1958 on the Russian River north of San Francisco, has never gone over its spillway, thanks to careful management by the U.S. Army Corps of Engineers (USACE). As an AR-type series of storms dumped more than 20 inches of rain on the region in December 2013, some 25,000 acre-feet of water--more than half a typical winter's storage--was released from the lake, even though it was far from full at that point. The rest of the winter produced less than 10 inches of rain, and the region's drought intensified over the next year. A more flexible storage system based on weather and climate guidance might have allowed more of that much-needed water to be kept in the lake.

Though not discussed in the above article, nor almost anywhere else, experiments in the artificial ionization of the atmosphere over the past two decades has demonstrated that producing rain by this method is effective and deserves much more serious investigation and research.

The following excerpt is from “The United States Joins the New Silk Road: A Hamiltonian Vision for an Economic Renaissance,” published by the *LaRouche PAC* in December, 2015. <https://larouchepac.com/20151229/us-joins-new-silk-road>

Artificial ionization is discussed in the context of the water cycle generally, and from the standpoint that the creative power of mankind, not “nature” must and shall be the criteria for any approach to solving the problems of today and tomorrow.

While California is the face of the water crisis, other regions are not far behind. In the Northwest, Oregon and Washington have suffered drought in recent years. The entire Southwest—from California to Texas, Utah to Arizona—has long struggled with water shortages. The main water supply of the High Plains states—the Ogallala Aquifer—is being diminished each year.

Water, however, is not a finite resource on this planet (relative to any conceivable level of human use).

We simply have to use existing freshwater cycles more productively, when possible, and create entirely new freshwater cycles as needed. All of this is within our grasp.

Weather Control from a Galactic Perspective

Start with a 21st Century understanding of the water cycle. While our star—the Sun—powers the entire cycle by pumping freshwater into the atmosphere via evaporation of ocean water, it is our Galaxy which closes this atmospheric component of the water cycle via the effects of high-energy galactic cosmic radiation.

In the past two decades new scientific studies have shown that the ionization effects of high-energy galactic cosmic radiation play a critical role in triggering the condensation of atmospheric water vapor—leading to cloud formation and precipitation. On the one side, this is connected with understanding why the Earth’s climate has changed in response to our Solar System’s travels throughout the Galaxy.

On the other side, this is a clue as to how mankind can manage the ionization conditions of the atmosphere to control the behavior of water vapor, weather, and precipitation. Can we control the rain?

It is already being done! As discussed in more detail in the 2015 EIR special report, “The New Silk Road Becomes the World Land-Bridge,” ground-based atmospheric ionization system pilot projects have increased precipitation in Mexico, Israel, Australia, the United Arab Emirates, Russia, and other locations. These technologies can be further refined and expanded, giving mankind the revolutionary control over the water cycle needed to permanently solve droughts, in California and other locations.

Man Improves What He Touches

Ionization-based control of precipitation, desalination of ocean water, and transfer of surface water, together, give mankind the capability to improve and expand the water cycle in ways never before seen. Perhaps most importantly, not only will this address existing water shortages, it will enable new growth and development

The Great American Desert, encompassing the Southwest, can finally be tamed, and a greener, more prosperous future can be created for that entire region.

Drought and Groundwater

An article from *climate.gov* on August 4, by S.Y. Simon Wang, discusses the affect the drought has been having on groundwater levels throughout the Central Valley. Wang makes the point that whereas in the past groundwater levels would recover rapidly once a drought ended, but for the past fifteen year, that is no longer true. Recovering is now delayed for a year or more. Excerpts follow.

The long arm of the California drought

S.-Y. Simon Wang

August 4, 2016

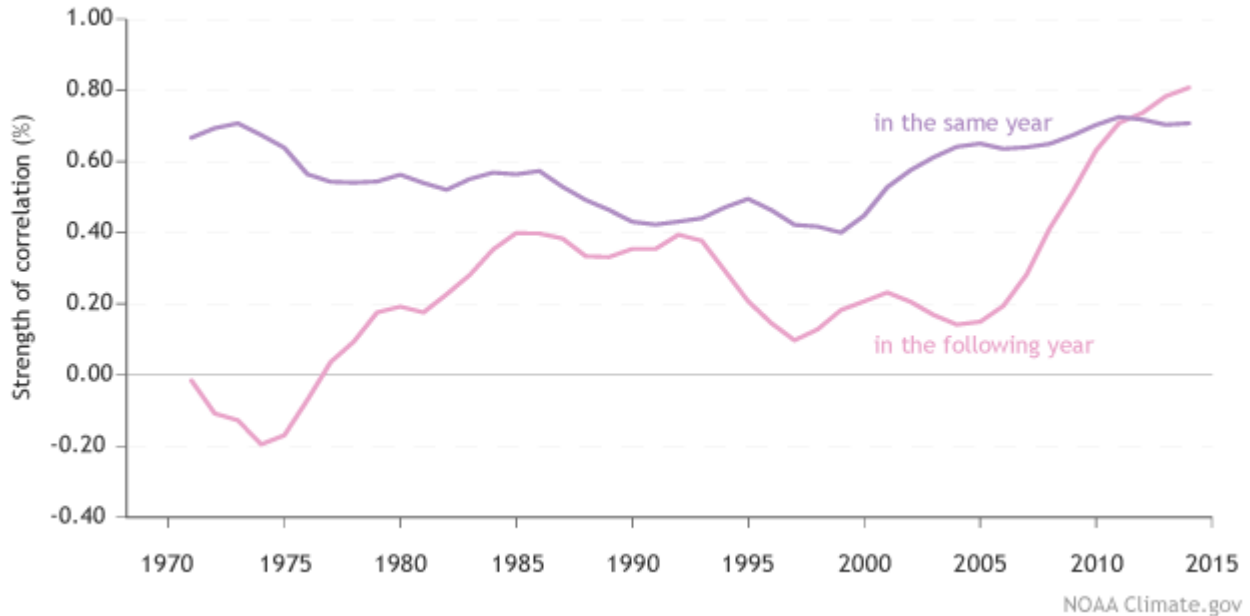
<https://www.climate.gov/news-features/blogs/enso/long-arm-california-drought>

This is a guest post from Simon Wang, Utah Climate Center/Dept. Plants, Soils & Climate, Utah State University. Simon specializes in climate dynamics, prediction, and their extremes.

Historically, drought and reduced groundwater storage occurred almost hand-in-hand in the Central Valley. When drought conditions ended, groundwater storage would normally rebound – this is the relationship we see in records from about 1960 – 2000. But our recent study found that this relationship has changed over the last decade and a half.

In the data from the past fifteen years or so, scientists found that groundwater storage continued to decline for a full year after drought has ended. So, whereas previously when drought ended, groundwater resources would begin to recover, now groundwater continues to decline, even through a wet period. It will take more research to understand exactly why this is happening, but it's possible that the recent tendency toward more intense, longer-lasting droughts in this region (footnote 2) has changed the way rainfall and snowmelt are taken up by the soil and recharge groundwater.

Relationship between Palmer Drought Severity Index and CA groundwater levels



Since the 1970s, drought severity in California in a given year has been closely correlated to groundwater levels in that same year (purple line), but not to groundwater levels the following year (pink line). Since the mid-2000s, however, the pink line has climbed steeply, which means groundwater levels have become sensitive to drought for an additional year. Graphic by Climate.gov, from data supplied by Simon Wang (see Wang et al. 2016).