

California Drought Update

For June 16, 2016
by Patrick Ruckert

<http://www.californiadroughtupdate.org>
<https://www.facebook.com/CaliforniaDroughtUpdate>
patruckert@hotmail.com

A Note To Readers

Late in this report is the section on the escalation of the California water wars-- of words and not much action. I have relegated it to that place because the present developments are really just a continuation of the conflict that has dominated water policy over the past few years, if not decades. There is really not much new to report. Though, the excerpts from statements and articles presented do provide some perspective, if just from the standpoint of the combatants.

More important is that the drought is going to rapidly intensify in the coming months, and, I forecast, that it will become more destructive than ever as we move more deeply into it. While, as reported below, alarmist articles have begun to appear, including articles that warn that the state is in "permanent drought," much of this discussion insists on blaming it on man-caused global warming. I include a short refutation of that narrative also.

The drought is real, no matter what is said by one Presidential candidate, as demonstrated below in the reports about the collapse of the cattle industry of the Central Coast in San Luis Obispo County, the millions of dead and dying trees, and the dead wells in areas like East Porterville.

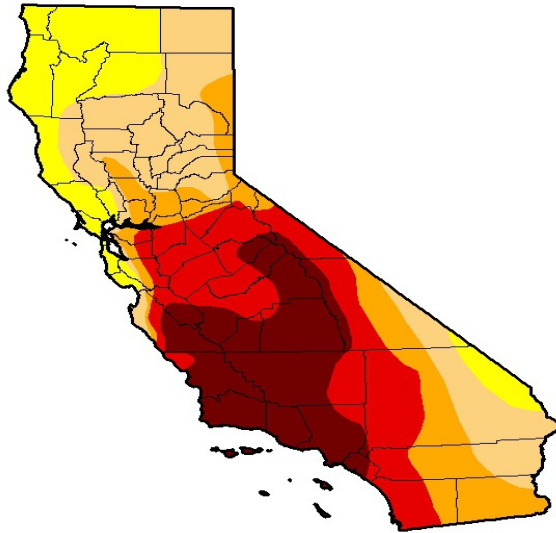
Our feature this week is an article by Marsha Freeman on the great, creative, pioneering space scientist Krafft Ehrlicke; a man who had the quality of mind required today if we are to solve any problems, not just the California water crisis.

The U.S. Drought Monitor

The Drought Monitor below demonstrates the point I made last week, that the tide has turned-- drought intensity has begun to increase. The future is foretold in, not the numbers, but the process now underway. Just like last week, the U.S. Drought Monitor does not report any shocking leap in the intensity of the drought. The change, in fact, is almost imperceptible, but it is indicative of the future to come. Last week about 96 percent of the state was in one category of drought or another. This week that number is 100 percent. In the coming weeks watch the top line of the graph, and I think we will see, at first, a slow increase in each category, which, by the end of August, shall become a more rapid increase.

U.S. Drought Monitor California

June 14, 2016
(Released Thursday, Jun. 16, 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 6/7/2016	4.27	95.73	83.91	59.02	42.99	21.04
3 Months Ago 3/15/2016	0.43	99.57	93.28	73.64	55.31	34.74
Start of Calendar Year 12/29/2015	0.00	100.00	97.33	87.55	69.07	44.84
Start of Water Year 9/29/2015	0.14	99.86	97.33	92.36	71.08	46.00
One Year Ago 6/16/2015	0.14	99.86	98.71	94.59	71.08	46.73

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

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

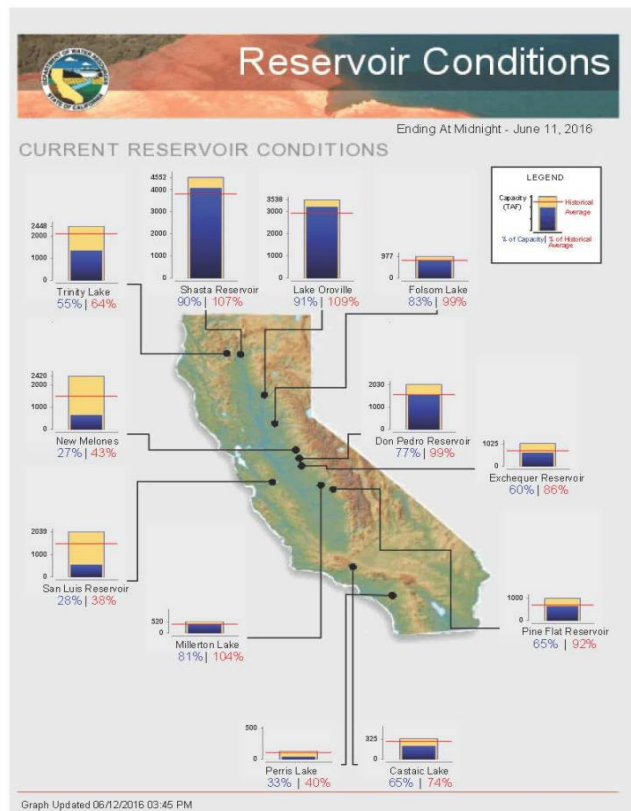
Author:
Chris Fenimore
NOAA/NESDIS/NCEI



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

And the Reservoirs

Again, like the last few weeks, there is not much of a change in reservoir levels. We should continue to note, though, that the San Luis Reservoir level is declining at about one percent per week.



“EL NINO: 'The Great Wet Hope' is dead”

So reads the headline from *sfgate.com* by David Downey on June 10. It is only one of many like it this week, but this one has some content that is notable. <http://www.sfgate.com/bayarea/article/Scientists-bid-farewell-to-a-slightly-7997097.php>

The Godzilla of all El Niños is dead. And the big guy went out with a whimper, at least in Southern California.

On Thursday, the National Oceanic and Atmospheric Administration's Climate Prediction Center declared the much-anticipated – and miserably disappointing – El Niño of 2015-16 history.

“There's nothing left,” said Climate Prediction Center Deputy Director Mike Halpert. “Stick a fork in it, it's done.”

It is the end of a dramatic weather show, said Bill Patzert, a climate scientist at NASA's Jet Propulsion Laboratory in Pasadena,

“This long-running El Niño had a fairly spectacular run on the world stage. It lasted for almost 15 months,” Patzert said. “And so the consensus now is, it's time for the curtain call.”

The label “Godzilla” was coined early on by the colorful and quotable Patzert. And it stuck. Pretty soon, it seemed, everyone was using the term – to the growing frustration of some in the forecasting business as storm after storm veered north.

“We actually asked NASA not to do that again,” said Alex Tardy, a warning coordination meteorologist for the National Weather Service in San Diego. “We've asked them nicely not to do it.”

Patzert said he would “take the heat” for ridicule generated by the term.

“It was billed as the Great Wet Hope. And it wasn't,” he said. “And I have to assume a little responsibility for that.”

This one from the *Los Angeles Times* on June 9, begins with a little humor:

Still waiting for a monster El Niño storm? Forget it

<http://www.latimes.com/local/lanow/la-me-ln-bye-bye-el-nino-20160609-snap-story.html>

by Hector Becerra

Remember those monstrous storms that bore down on Southern California this year courtesy of El Niño, and how they caused mudslides, mass flooding and general pandemonium on the freeways?

Neither do we.

The National Oceanic and Atmospheric Administration has declared El Niño, the climate pattern that can bring powerful rains to the region, over – and after a rather anemic showing.

Which leads us to the *Climate Central* article by John Upton on June 14, “The Weird Weather That Entrenched California's Drought.”

<http://www.climatecentral.org/news/weird-weather-entrenched-californias-drought-20438>

This one develops a theme that we are sure to see more of, unfortunately. But, it has the redeeming feature of presenting some real climatology and reports on the snowpack-- its just about completely

gone. The theme is that climate change, caused by mankind, will result in warmer weather, less or more rain, and the need to reduce greenhouse emissions. Of course, not a word about an actual policy of building the water infrastructure required if all the forecasts become real events. (See the box on the next page for a discussion of climate change.)

As summer begins, California's snowpack is "pretty much getting close to bare," said Frank Gehrke, California's chief snow surveyor. "This is coming off of last year being the worst year on record in terms of snowpack."

Most of California is unusually dry for this time of year and large swaths of southern California remain in "exceptional drought," the federal government's [Drought Monitor shows](#). The projected arrival of El Niño's counterpart, La Niña, is triggering fresh drought concerns throughout the region.

[Figures from Gehrke's department](#) show the Sierra Nevada snowpack contains about 6 percent as much water as is normal for this time of year. [That's down from 90 percent](#) in March following storms that eased drought in northern California but did little for the southern part of the state.

A flurry of research will be published in the months ahead that could help explain any links between climate change and the latest chapter in California's enduring drought.

One thing is already clear, however: warmer weather in the West caused by global warming will mean less water for farms, homes and factories. Warmer weather accelerates the melting of snow and hastens the evaporation of water from rivers, lakes and soils.

Climate change has pushed up average temperatures by nearly 2°F worldwide. Most of California was warmer than that from March through May, with [federal data showing](#) some patches of the state were more than 4°F warmer than average during the three-month period.

"The last couple of years especially [have shown the role](#) that temperatures really play in some of these drought events," Cook said.

Meanwhile, unusually warm and sunny spring weather has already caused late winter snow that fell over montane northern California to melt nearly into oblivion. That [helped top up reservoirs](#) in northern California but left those further south unusually dry.

Early summer is not a time of year when California's snowpack is ordinarily bursting with aqueous bounty. But what has surprised scientists is how quickly the northern snowpack has virtually disappeared.

"The snowmelt was already underway by mid-March," said [Michael Dettinger](#), a U.S. Geological Survey hydrologist. "The snowmelt since has been pretty quick."

The *Christian Science Monitor* uses the forecasted heat wave for this weekend in the Southwest to run this article on June 15, "Southwest braces for record heat: Is it climate change?, with this kicker, "The National Weather Service has issued an 'excessive heat watch' predicting record-breaking temperatures this weekend in the Southwest, a region already beleaguered by wildfire and drought." You can read it, if you like: <http://www.csmonitor.com/Environment/2016/0615/Southwest-braces-for-record-heat-Is-it-climate-change>

Let's Have a Rational Discussion of Climate Change

The following is an excerpt of the presentation by Ben Deniston of the LaRouche PAC Science Team on September 22, 2015, as part of a press conference releasing the LaRouche PAC Special Report: 'Climate Change Scare is Population Reduction, Not Science.' Here is the link to the press conference: <https://larouchepac.com/20150922/larouchepac-live-eir-press-conference-climate-change-scare-population-reduction-not-science>

BENJAMIN DENISTON: My name is Benjamin Deniston. I wrote some sections of this report. I'm just going to give an overview of a few elements of the report. A lot of the details you can find in the report itself, but I want to just kind of give a flavor of what we're discussing here today with this claim of a man-made climate catastrophe coming. Now I think it's important just to start by clarifying the terms that are used, and the reality of the issue from some media publications right before this event. If you read the literal statements of these headlines, it's saying a certain specific thing. It's saying, "Obama Condemns Climate Change Deniers." "Bad News For Climate Change Deniers." "Climate Denier Group Likens Pope Climate Change Talk To Paganism."

Now this is a rather terrible misrepresentation of some of the scientific criticism that's being put forward, because many of the people opposing what's being pushed right now as a response to a supposed climate catastrophe, is not based on denying the existence of climate change. And it's not based on the idea of denying the existence of the climate itself, which some of these headlines seem to imply, by the way they phrase the wording here. What is being addressed here is something rather different. It's one thing to recognize climate change exists. We recognize that climate changes. We recognize human beings have been emitting large amounts of carbon dioxide. We recognize carbon dioxide is a greenhouse gas that can have an effect on the climate. Those are pretty well-established facts.

It is another issue to claim that the human release of greenhouse gases is the predominant cause of the increase in temperature of the past century. It is another statement to say the continued release of CO2 will cause catastrophic effects for the planet, and then there's another thing to say, it will be best for human society to take drastic action to dramatically reduce CO2 emissions. So this is what we're taking issue with. We're not saying, CO2 isn't potentially a small effect on the climate. What we're taking issue with is the claim that human CO2 emissions are having catastrophic effects that require dramatic action, to have major interventions to change our mode of existence to deal with. That's what's being addressed here.

If you think it ends here, you are mistaken. *Buzzfeed.com* warns us that, although "El Niño Is Dead And California Could Be 'In A Drought Forever.'" The story on, June 9 by Jim Dalrymple II, warns of the on-coming La Nina, and more. https://www.buzzfeed.com/jimdalymples/drought-is-never-going-to-end?utm_term=.xalgNg5G8#.twyORO8Gb

The question now is if sea surface temperatures will swing back in the other direction and become cooler than normal, leading to a La Niña. According to NOAA, there is now a 65% chance of a La Niña by July, and a 75% chance by the fall.

During a La Niña year, the southern tier of the U.S. tends to be cooler and drier, while the north is

wetter and stormier. That's in contrast to El Niño years, when the Southwest and California tend to receive more precipitation than usual.

A drier year would be bad news for much of the West, which Patzert said has been grappling with a drought that effectively began after the last big El Niño in the late 1990s.

"The real story is the Godzilla drought, not the Godzilla El Niño," Patzert said, pointing to [record low levels in Nevada's Lake Mead](#) as an example.

"We are in a drought forever," Patzert said. "I can't think of any scenario where we would have six wet El Niño years in a row, which would top out all the reservoirs and the ground water supply."

Waterdeeply.com on June 13, presents a potential apocalypse to come for San Diego in an article titled: "What Climate Change Means for San Diego's Water."

<https://www.newsdeeply.com/water/articles/2016/06/13/what-climate-change-means-for-san-diegos-water>

Climate change will lead to hotter, drier weather in San Diego, but also more frequent floods caused by larger storms. Water supply will be diminished but demand is expected to increase.

SAN DIEGO – San Diego imports 80 percent of its water, with the Colorado River supplying about 63 percent, and 20 percent coming from Sierra Nevada runoff funneled from northern California via the State Water Project. The remaining 17 percent comes from local sources – a mix of rainwater, groundwater, desalination and recycled water.

While these numbers vary from year to year, what hasn't changed is the fact that San Diego has relied heavily on imported water for many decades. With climate change heralding warmer weather and prolonged droughts, this impacts the level of snowpack and river flow, which in turn threatens the region's water security.

Yes, It Is a Drought, Despite What a Presidential Candidate Says

As you can read in the next section below, the water war of words is going into overdrive, with an intensification of the battle of water for farmers vs water for fish, much like last year.

Drought is not "man-caused," nor is it "regulation caused," though some sectors of the states can legitimately claim that their shortages are directly due to such political decisions.

California is a large state, and the drought's impact varies from region to region. Here are a few of the real impacts from the real drought we are enduring.

Canmua.net reports on June 11, that, "In Central Coast cattle region, drought continues to shrink the herds." A few excerpts follow. <http://canmua.net/california/in-central-coast-cattle-region-drought-continues-to-shrink-the-herds-915746.html>

Grassland is turning into bare ground. Pine trees, some four stories tall, are dead or being eaten alive by fungal pathogens. And Sinton's cattle herd has shrunk to one-fifth its usual size.

Canyon Ranch, started near San Luis Obispo by Sinton's great-grandfather 150 years ago, is withering from lack of rain, as are most other ranches in this once-thriving cattle region. Roughly 75% of the cattle in San Luis Obispo County have been sold or taken out of state over the last four years to escape

conditions in the most drought-stricken region in California.

Since the late 1700s, grazing has been the best use for the region's rolling hills and valleys. Vast tracts of chaparral and oak forests made farming difficult; the soil is generally too shallow for crops, and surface water is limited.

And do not forget the 2,000 plus people who have been without water for two years because their wells have gone dry in East Porterville. Here is an excerpt from a report by the state:

Connection to City of Porterville Water System

<http://water.ca.gov/waterconditions/porterville.cfm>

June 11, 2016

California's five-year drought has created hardship and deprivation across the State, but nowhere have impacts been more severe than in Tulare County, often called "ground zero" of the drought. From the beginning of Water Year 2012 through April 2016, the Tulare Basin received just 56 percent of its average annual rainfall over the past 50 years. Private wells that were the only source of water for hundreds of East Porterville homes are dry due to the drought, and wells that can still draw water are likely below drinking water standards due to groundwater nitrates contamination.

Too often ignored is the following, as reported by *weather.com* on June 11, under the title, "29 Million Trees Have Died in California From Bark Beetles, Drought," by Ada Carr. Some excerpts follow.

<https://weather.com/science/environment/news/california-sudden-oak-death-epidemic-killing-trees-bark-beetles-drought>

Ongoing drought conditions have contributed to the 29 million tree deaths in California, a number that is still on the rise. In addition to millions of oak trees in the state being killed off by sudden oak death disease, bark beetles have also played a large role in taking out the timbers.

"The tree mortality that we're experiencing, it's really unprecedented," California Department of Forestry and Fire Protection Director Ken Pimlott said in a video for the California State Association of Counties (CASC). "Unless you get into the Sierra Nevada, and particularly the central and southern Sierras, you don't necessarily understand the gravity of it."



*Thousands of dead trees line the water at Bass Lake in the Sierra National Forest in California.
(Flickr/US Forest Service Region 5)*

Recognizing that healthy forests are critical to water supplies, *agalert.com* ran this commentary of June 15: “Tree mortality demands swift, aggressive actions,” by Ken Pimlott, Cal Fire chief and California state forester. Excerpts follow. <http://www.agalert.com/story/?id=9750>

California is ramping up for what may be another challenging year for wildfires. Though welcome rain occurred during the winter, it was already too late for the millions of trees that have died due to the historic drought and epidemic bark beetle infestation.

Though natural disturbance agents such as wildfire, drought, insects and disease eventually restore a balance in natural ecosystems, the drastic and periodic disturbances of catastrophic wildfires and large-scale tree mortality from bark beetles are not compatible with a population of 38 million people, many of whom like to live in a forested environment. All depend on forest lands for water and other ecosystem services.

The strong connection between healthy forests and a clean, reliable water source only underscores the need for swift and aggressive actions to mitigate the threat this epidemic poses to our forests.

With lots of dead trees, higher temperatures and dried out vegetation, guess what? The fire danger increases.

Here are some excerpts from the article, “‘Critical’ wildfire season expected for Southern California,” by Gregory J. Wilcox of the *Los Angeles Daily News* on June 13.

Southern California residents should prepare for what could be the worst wildfire season on record due to a persistent drought and much less rain from an El Niño that was weaker than expected, officials from a variety of agencies warned Monday.

“From our perspective, each and every day is fire season for us,” Los Angeles County Fire Department Chief Daryl Osby said. “El Niño? Bad news. El Niño did not occur in Southern California.”

Typically the region gets between 16 to 18 inches of rain by this time of year. But so far it has gotten only 9 inches, Osby said.

The Water War-- Version 2016

The California water war-- of words-- is underway once again. Setting the stage for this round is the article in the *Sacramento Bee* on June 11, “How plans to save fish species could cut summer water supply” by Ryan Sabalow, Dale Kasler and Phillip Reese. Some excerpts follow. <http://www.sacbee.com/news/state/california/water-and-drought/article83145097.html>

This year was supposed to be different. With Northern California’s reservoirs finally brimming and cities liberated from stringent conservation rules, farmers were expecting more water for their crops. The worst of the drought seemed over.

Or maybe not.

Despite a winter of fairly abundant rain and snow in the north state, federal fisheries regulators are considering a set of plans that would put Sacramento Valley reservoirs on a tight leash again this summer. Their aim is to prevent two endangered California fish species from going extinct.

Critics say two federal plans under discussion could cause another year of water shortages in farms and cities across the state. The Sacramento area's main reservoir, Folsom Lake, could get drawn down below average levels once more, although the situation wouldn't be as severe as last year's record low. On Thursday, 15 members of Congress from California sent a letter urging the Obama administration to reject the dam-management proposals, saying they would "significantly reduce the water supply available to Californians.

Then, to quote *agnewswest.com*, "on June Sixteen members of the California House delegation sent a letter to U.S. Department of Interior Secretary Sally Jewell and U.S. Department of Commerce Secretary Penny Pritzker regarding proposed actions by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that, if implemented, will significantly reduce the water supply available to Californians."

The *agnewswest.com* article of June 9, "Drought Alert: Call to Reexamine "Harmful Actions," <http://agnewwest.com/2016/06/09/drought-letter/>, further states,

As the state continues to struggle with drought, a group of California lawmakers are taking to task a move to even further reduce water to parts of the state.

The letter states the new actions will significantly limit releases from Shasta Reservoir through the summer and into fall, costing the Central Valley Project (CVP) approximately 400,000 acre-feet of water.

The full letter is here: <http://costa.house.gov/sites/costa.house.gov/files/2016-06-09%20LTR.Members%20to%20Interior%20and%20Commerce%20re%20Operations%20issues.pdf>

Joining the fray is the *California Water Alliance*, with this statement (excerpts) of June 14. http://media.wix.com/ugd/252de5_13a9d19819de43cfb635a327c7447331.pdf

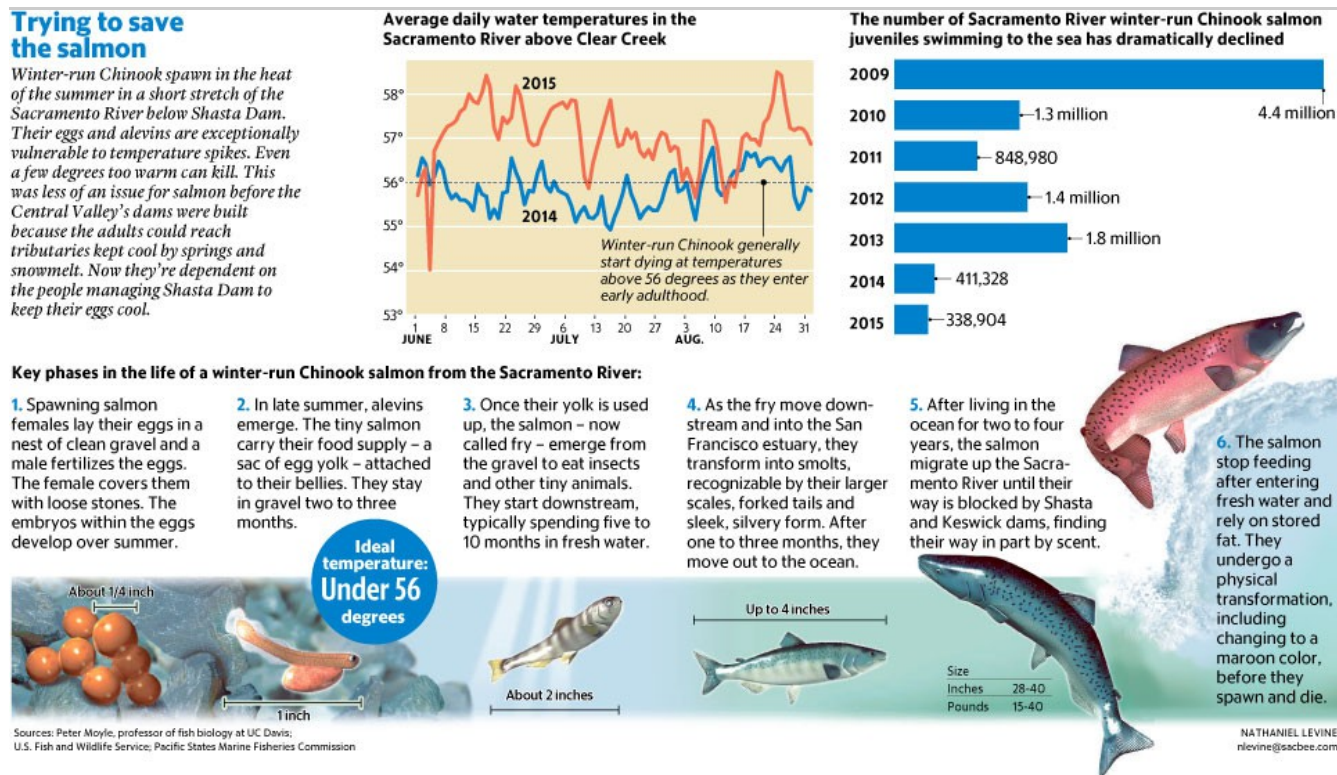
California Water Alliance Calls for Congressional Hearings on Federal Mismanagement of California's Water Resources

June 14, 2016 — *The California Water Alliance (CalWA), called on Congress Tuesday to exert its oversight responsibilities, conduct hearings into plans to divert California's drinking water supply to endangered species and water quality management and to investigate recent arbitrary and capricious regulatory plans announced by the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration's National Marine Fisheries Services.*

"USF&WS and NOAA/NMFS exhibit no understanding whatsoever of the consequences of their water mandates and have failed to consult in good faith with the state or even with each other," said Aubrey Bettencourt, CalWA's executive director.

For more background, back in April, I reported on the announced allocations by the federal and state projects, and cited this article from the *San Jose Mercury News*, "California water allocation has winners, losers," by Paul Rogers. Here it is again for those who wish read it: http://www.mercurynews.com/drought/ci_29714209/california-drought-water-deliveries-from-federal-central-valley

The *Sacramento Bee* article reference above included the following graphic, in case anyone is not clear about the life and death battle underway-- that is, at least, how some people look at it.



Feature

Whether it is water projects or space travel, it is always those who live in the future; those whose minds are uncorrupted by the popular opinion of the day; those who know, as Krafft Ehrlicke said, "Nobody and nothing under the natural laws of this universe impose any limitations on man except man himself" -- it is those men and women who create that future.

Mankind is a species capable of unlimited progress, due to the potential for creative discovery in every human being. Why, then, does civilization stand closer than ever to collapse? To economic disintegration and the threat of terrorism? And to the outbreak of thermonuclear war, as seen in the escalating provocations by the transatlantic nations and NATO against Russia and China?

Krafft Ehrlicke, the great space pioneer and visionary, recognized that it's not enough to possess advanced technologies; mankind must make a moral choice to pursue progress, an open world, and to reject the closed world of limits to growth ideology which leads inevitably to collapse, shrinking resources, geopolitics, and, in the end, war.

Marsh Freeman presents, here, a brief sketch of one of those great men. The little minds that predominate in our nation today would do well to read this article. It is you, the citizens, who must demand leaders of the quality of men like Krafft Ehrlicke.

On June 8 in San Francisco Kesha Rogers, a member of the LaRouche PAC Policy Committee, discussed the campaign she is leading in Houston to revive the U.S. space program, in which she presented an indepth picture of the life and work of Krafft Ehrlicke. You can watch her presentation here: <https://www.youtube.com/watch?v=QGQGkU-U1fl>

The Mind of Krafft Ehrlicke **"Krafft Ehrlicke lives in a lonely place--the future."**

by Marsha Freeman

June 13, 2016

Krafft Ehrlicke (1917-1984) was preparing for the future his entire life.

While Hermann Oberth, Konstantin Tsiolkovsky, and Robert Goddard laid out the theoretical basis for the development of space flight, and talented scientists and engineers, such as Wernher von Braun, brought their concepts to practical realization, Krafft Ehrlicke uniquely created the philosophy of space exploration. Even before the launch of Sputnik, and the opening of the Space Age, Ehrlicke was confident the technology for space travel would be developed. What concerned him was the philosophical underpinnings of this Second Age of Exploration, following centuries later upon the first discovery of new worlds.

He credited his insight into the existential role that space exploration would play in the history of human civilization, to the European Renaissance. His 1957 "Anthropolgy of Astronautics" reflected that view, that it is the unlimited creativity of the human mind, and the moral law within himself, that would enable man to open the Age of Reason.

In 1971, Krafft completed a comprehensive work, prepared as a book, titled, "The Extraterrestrial Imperative: From Closed to Open World." He was engaged in a life-and-death battle of ideas with the anti-growth death cult that had been spawned a few years earlier. In a 1973 Foreword to the book, he writes: "A balanced attitude toward technology and industry, environment and ecology is essential to our mental and spiritual development, hence, to the preservation of our future. Otherwise, jungle and wilderness, inside the mind and outside, will regain their stranglehold on humanity, as starvation and disease depopulate the Earth, and the will to grow dies. Even with *stagnant* technology and industry, misery and poverty will engulf mankind."

"'Earth' and 'world' are no longer synonyms. We no longer live in a closed world of one planet, inside the womb of a biosphere.... Our world is no more closed than it is flat. Our world is open to space; and its resources therewith are potentially limitless..."

He continues: "...the primary source of human growth is the *mind*, not the terrestrial environment. The power of the mind is far from exhausted -- the world and its resources are without limit to a mind willing to grow."

The book has never been published, despite periodic promises from publishers. In the main, Krafft received letters rejecting the manuscript, as being too optimistic, pro-nuclear, and not in tune with what was popular.

That his refusal to bow to "popular opinion" was fundamental to his personality and moral and

intellectual integrity, he explained a decade earlier. In a discussion with space historian Shirely Thomas, in 1960, Ehricke was asked how he mentally survived Nazi rule in Germany. He replied that he "always had the tendency to reserve ardent judgment on important things. I would go along only so far, then I just wouldn't be told.... I wanted to think it out for myself. This was instinctive at first; later I was consciously afraid to surrender my capability of judgment. With the change in government, the advent of Hitler in 1933, this trait protected me.... This trait, of course, was something that helped me very greatly in holding a line of thought in the Nazi era.... To me, my mind is my castle. A part of it no one may enter.... I must have this ultimate, internal refuge, in which I am myself completely; only then am I really an individual." (emphasis in the original)