

California Drought Update



For August 25, 2016
by Patrick Ruckert

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A Note To Readers

As the drought drones on and on, likewise there appears to be no end to the Governor's and the Water Board's criminal incompetence. If their commitment to the anti-human environmentalist ideology was not enough, again and again even the management of what they will concede to humans is fraught with downright stupid policies and actions.

From the sending of millions of acre-feet of water out to the ocean to unsuccessfully save fish, to almost emptying the San Luis Reservoir last month, to the Governor's WaterFix of building two tunnels under the Delta, none of it works.

This week the tunnels may have received a death blow with a report from the University of the Pacific. Already threatened by the potential pull-out of funding from the potential two largest beneficiaries of the project, the Metropolitan Water District of Southern California and the Westlands Water District, a just released report from the University of the Pacific claims that the project cannot be justified economically.

Briefly, the report states, *"The \$16 billion WaterFix plan would deliver just 23 cents in benefits, such as increased water supply, for every dollar in costs. The most optimistic scenario increases the return to just 39 cents per dollar, according to the study."* In other words, the project will cost four times its potential benefits. Following the coverage of the study is a refutation of it.

Desalination, a water producing technology which is not dependent on climatic processes which mankind cannot control yet, is reported in a couple of items below.

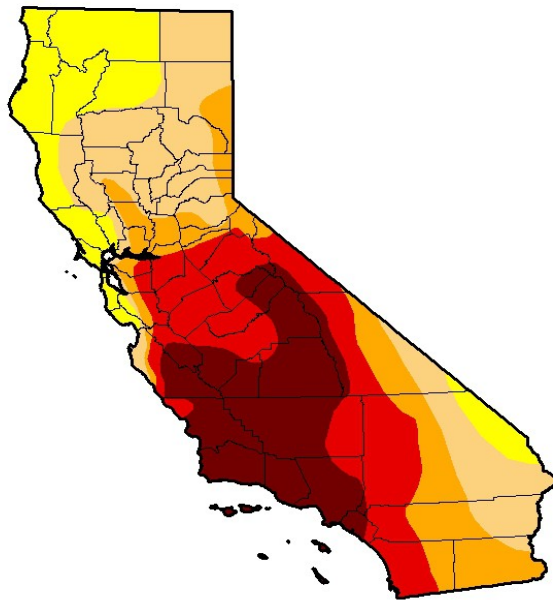
Then to real economics, keying off the bill in the state legislature to give farmworkers overtime pay.

This week's report concludes with a couple of items illustrating why we have a Presidential campaign from Hell.

The U.S. Drought Monitor and the Reservoir Graph

U.S. Drought Monitor California

August 23, 2016
(Released Thursday, Aug. 25, 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 9/16/2016	0.00	100.00	83.59	59.02	42.80	21.04
3 Months Ago 5/24/2016	5.50	94.50	86.39	61.00	42.99	21.04
Start of Calendar Year 1/22/2015	0.00	100.00	97.33	87.55	69.07	44.84
Start of Water Year 9/25/2015	0.14	99.86	97.33	92.36	71.08	46.00
One Year Ago 8/25/2015	0.14	99.86	97.35	92.36	71.08	46.00

Intensity:

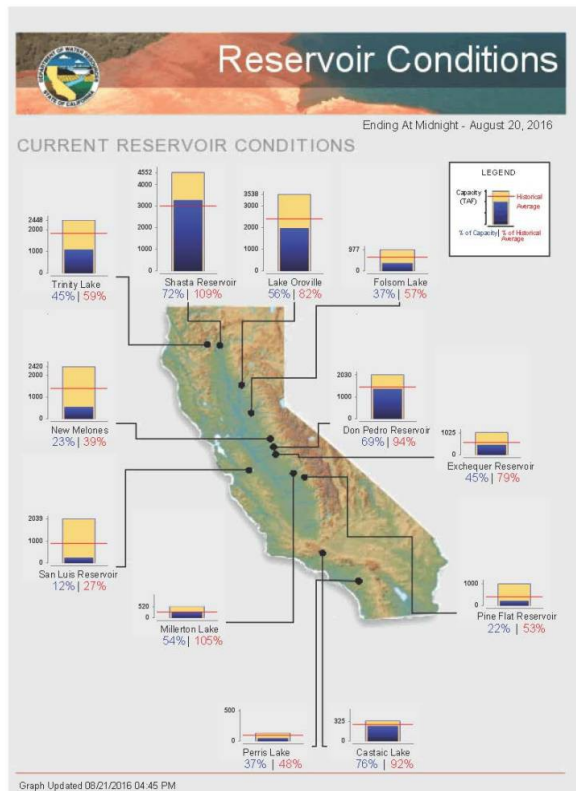


The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brad Rippey
U.S. Department of Agriculture



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



Another Jerry Brown “Dream” Down the Drain?

The “WaterFix” project, one of the Governor's “legacy” projects, already on the ropes, may have just received the death knell this week. Already threatened by the potential pull-out of funding from the potential two largest beneficiaries of the project, the Metropolitan Water District of Southern California and the Westlands Water District, a just released report from the University of the Pacific claims that the project cannot be justified economically.

Briefly, the report states, “*The \$16 billion WaterFix plan would deliver just 23 cents in benefits, such as increased water supply, for every dollar in costs. The most optimistic scenario increases the return to just 39 cents per dollar, according to the study.*” In other words, the project will cost four times its potential benefits.

But, it should be noted that the study was at least partially funded by the *Delta Counties Coalition*, which I believe opposes the project. See a refutation of this study from *Californians for Water Security*, below.

Here is the release from the University, followed by the summary provided by the authors:

WaterFix tunnel project not economically justified, study finds

University of the Pacific report: Just 23 cents in benefit for every dollar spent

From the University of the Pacific:

Like the Bay-Delta Conversation Plan before it, California WaterFix would cost more to build than it would deliver in return, according to new research by University of the Pacific’s Center for Business and Policy Research.

California WaterFix is the newest iteration of the California Department of Water Resources and U.S. Bureau of Reclamations’ effort to build twin 35-mile water conveyance tunnels under the Sacramento-San Joaquin River Delta.

The \$16 billion WaterFix plan would deliver just 23 cents in benefits, such as increased water supply, for every dollar in costs. The most optimistic scenario increases the return to just 39 cents per dollar, according to the study.

“This is the first comprehensive [benefit-cost analysis](#) of WaterFix and it is clear that it costs four times more than its benefits. This project simply is not economically justified,” said economist Jeffrey Michael, a professor of policy at University of the Pacific and director of the Center for Business and Policy Research. The center produces independent, objective analyses of business, economic, and public policy issues in California.

The study received funding support from the Delta Counties Coalition, which represents the governments of Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties.

Low water yield is the primary economic drawback of the project, according to the report, in that WaterFix would deliver too little additional water for the cost. The report concluded that WaterFix would be economically justified only if its construction and mitigation costs were below \$2 billion.

In carrying out the study, the Center for Business and Policy Research used the project

description and operating assumptions developed by the state for the WaterFix environmental analysis. The study also includes many additional assumptions that are favorable to the project. The study did not consider the possibility of cost overruns, risk of harm to endangered species, or financing costs of a bond debt that is expected to be used to pay for construction.

“We did not include a pessimistic scenario that deviates from the state’s environmental analysis,” said Michael. “That means the economic return to WaterFix could be even smaller than we estimate.”

[Read the Benefit-Cost Analysis of the California WaterFix, August 2016, here.](#)

Benefit-Cost Analysis of The California WaterFix

*Dr. Jeffrey Michael
Executive Director, Center for Business and Policy Research
Professor of Public Policy
Eberhardt School of Business and McGeorge School of Law
University of the Pacific*

<http://www.pacific.edu/Documents/school-business/BFC/WaterFix%20benefit%20cost.pdf>

Results and Conclusion

Although the study includes assumptions favorable to the WaterFix, the results clearly show that the WaterFix is not economically justified under both the base and optimistic scenarios. The base scenario finds a net present value of -\$10.2 billion, and a benefit -cost ratio of 0.23. That means the WaterFix is estimated to provide only 23 cents of benefits for each dollar of cost. In the optimistic scenario, the net present value is -\$7.8 billion and the benefit-cost ratio is 0.39.3

Thus, even under optimistic assumptions, costs are still more than 2.5 times larger than benefits. The primary economic problem for the WaterFix is its low water yield, that is the difference in water supply with and without the WaterFix, relative to its \$16 billion construction cost. The results of the base scenario analysis show that it could only be economically justified if its construction and mitigation costs were below \$2 billion or if its water yield could be increased from an annual average of 225,000 acre feet per year to about 2 million acre feet per year without negatively impacting the environment or causing any additional harm to other water users.

The WaterFix has the physical capacity to increase water exports more than the constrained operations assumed in the current proposal, and many project opponents fear that the economic demands created by project financing could result in much higher exports that harm the environment and other water users. This report shows the concern of project opponents is well justified, and raises questions as to why state and federal water agencies are seeking environmental approval for the WaterFix without a benefit-cost and financial feasibility analysis consistent with the operating assumptions it is using to obtain regulatory approval.

Here is a statement refuting this study from the *Californians for Water Security*:

<https://mavensnotebook.com/2016/08/25/news-worth-noting-coalition-supporting-california-water-fix-debunks-biased-study-manufactured-by-project-opponents-reclamation-to-release-additional-water-from-trinity-reservoir-to-supplement-flows/>

Today, Californians for Water Security blasted a report released by California WaterFix opponent Jeffrey Michael, who works as a vocal and active surrogate for the opposition.

“The author and funders of this study are longtime opponents of WaterFix. There is nothing independent or objective about this report,” said Michael Quigley, executive director of the California Alliance for Jobs. “Failing to implement the California WaterFix because of short-sighted opponents will hurt the 25 million Californians who rely on our state water supplies.”

“The promoters of this report fail to address the fundamental economic benefit of this project: To protect our state’s families, farms and businesses from continued water supply cutbacks that are all but certain if we don’t move forward with WaterFix,” said Charley Wilson, executive director of Southern California Water Committee. “There’s nothing objective about a report created by an individual who has worked in opposition to this project for years.”

The California WaterFix will protect the water supply for two-thirds of our state’s homes, farms and businesses. The current system is vulnerable in the case of an earthquake or a natural disaster; and fails to capture water during rainy seasons for the historic droughts California has endured in recent years.

Desalination

While the desalination plant in Carlsbad has demonstrated that large-scale desalination provides an important addition to both pumping and surface water, those who run the water policy of the state, or should I say mismanage the water policy of the state, continue to pretend that desalination does not exist.

The *Press-Enterprise* editorial of August 17, while weak, does help to keep the discussion alive. “California needs drought proof water.”

[Http://www.pe.com/articles/water-810904-desalination-california.html](http://www.pe.com/articles/water-810904-desalination-california.html)

Excerpts:

Although it’s not exactly news that California could use some more water, new research has revealed just how extensive the need has become – and at what cost for the state economy. The good news is, new research of a much different kind has revealed the answer: affordable, large-scale ocean desalination.

That’s where bold new advances in desalination technology come in. In Israel, researchers have developed new filtering membrane technologies that now ensure over half of the country’s domestic water comes from desalination – engineering a radical turnaround from one of the worst droughts in history to a fresh water surplus.

And a candidate for the California Assembly, Jordan Cunningham, wrote a guest commentary for the *Santa Maria Times* on August 22, entitled, “Fight the drought with desalination.” Some excerpts are below.

http://santamariatimes.com/news/opinion/editorial/commentary/guest_commentary/fight-the-drought-with-desalination/article_8f5c0c88-05f4-535d-b58d-b466925d3f2e.html

But given our climate, there always will be the potential for drought. For the good of our residents and local agricultural economy, we must actively pursue new water sources to expand our water supply locally.

Fortunately, we have the technology and opportunity to solve many of our water supply problems through

expansion of desalination technology for a stable and drought proof water supply.

It is ironic that we live next to the largest body of water on Earth, but we find ourselves like the ancient mariner, who complained, “Water, water, everywhere, nor any drop to drink.”

Desalination technology has evolved to where we are now able to remove the salt and other contaminants from ocean water in an environmentally-sensitive, cost-effective manner. One such desalination facility has been in operation for years at the Diablo Canyon Power Plant, mainly serving the plant’s operational needs.

In March the San Luis Obispo County Board of Supervisors authorized \$900,000 to research providing Diablo’s desalinated water to South County residents. A study concluded that the project “could be both technically and economically feasible.”

Jordan Cunningham is a businessman and former prosecutor who lives in Templeton, and is a candidate to represent the 35th Assembly District, which includes San Luis Obispo County and western Santa Barbara County.

Farmworker Overtime Pay

Now here is an “issue” in which both sides demonstrate, and I must say it, their ignorance of the fundamental principles of physical economy. On the one hand, better working conditions and pay for farmworkers should be a legitimate goal, and on the other, the sometimes precarious financial condition of farm owners has set them against the bill in the California Legislature. Unless there is an end to the control of the economy by speculators and criminals, this conflict cannot be resolved.

I link below a 15 minute video that puts the minimum wage issue in its proper context of physical economy; a presentation by Jason Ross of the *LaRouche PAC Science Team*.

Here are some excerpts from a *Los Angeles Times* article of August 22, “Legislation to expand farmworker overtime pay clears the Senate.”

<http://www.latimes.com/politics/essential/la-pol-sac-essential-politics-updates-legislation-to-expand-farmworker-1471910219-htmistory.html>

After an hour of debate, including emotional words from Senate leader Kevin de León, the California Senate on Monday passed a bill that would expand overtime pay for farmworkers.

AB 1066, introduced by Assemblywoman Lorena Gonzalez (D-San Diego), squeezed out of the Senate floor with a 21-14 vote. It is now headed back to the Assembly, [where it faces its most passionate opposition](#), for a final vote.

The proposal would roll out new rules for overtime in 2019, lowering the current 10-hour-day threshold for overtime by half an hour each year until it reaches the standard eight-hour day by 2022. It also would phase in a 40-hour standard workweek for the first time.

Introduction to LaRouche’s Economics <https://larouchepac.com/20160717/introduction-larouche-s-economics>

Would raising the minimum wage to \$15/hr fix the economy? How about making it \$100/hr? Don't start with money — the economy starts from the human ability to make and implement discoveries, as measured through energy flux density and potential population density. Jason Ross gives a short introduction to these two concepts of physical economic value, as seen in the works of Lyndon LaRouche.

Maybe We Deserve A Presidential Campaign From Hell

The following two items, reflecting the cultural, moral and political degeneration of the nation, I hope, leaves you both shaking your head and committing yourself to righting the sinking ship.

First, imagine a lot of cows walking around with a fart catcher. *California Ag Today* ran this item on August 17. Excerpts follow. <http://californiaagtoday.com/air-resources-board-to-rein-in-cow-flatulence/>

Air Resources Board to Rein In Cow Flatulence

Public Enemy #1: Cow Flatulence

By Patrick Cavanaugh, Farm News Director

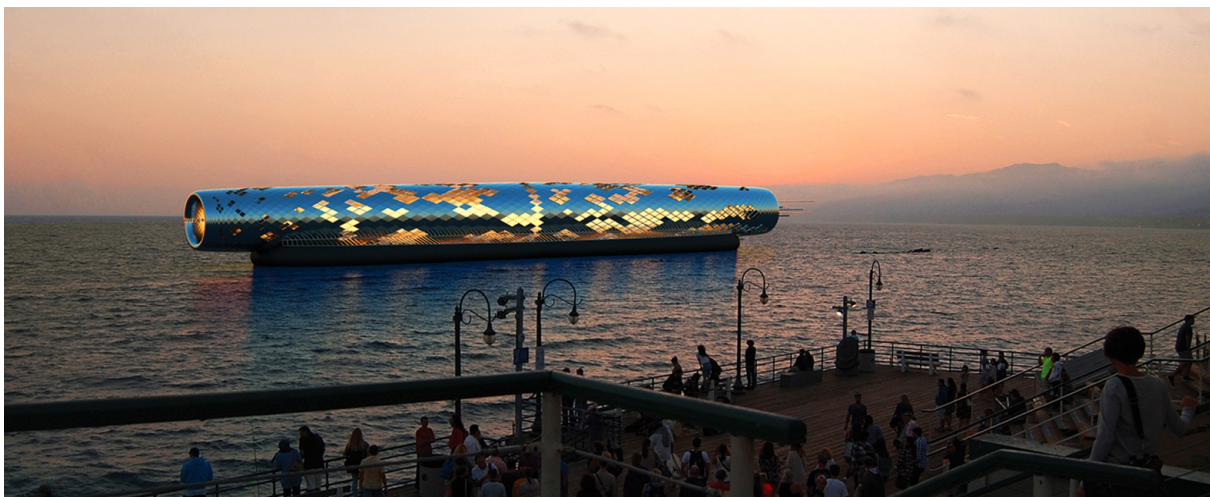
While not a popular or sexy topic of discussion, flatulence is a very natural activity. Who amongst us hasn't occasionally burped, belched, or otherwise passed a little gas? When guilty of passing waste gases such as hydrogen, carbon dioxide, methane and other trace gases due to the microbial breakdown of foods during digestion, we may say, "Excuse me."

But for dairy cows and other cattle, manners do not suffice; the California Air Resources Board (ARB) has a low tolerance for such naturally occurring and climate-altering gaseousness. The ARB is planning to mandate a 25% reduction in burps and other windy waftage from dairy cows and other cattle, as well as through improved manure management.

Here is the second example.

Let's Just Pretend This Will Work

We shall end this week's report with an item in which the author of the article either is an outrageous liar or an ignorant fool. But, given either type is not rare in California these days, we should not be surprised by the following. Reporting on a project submitted for a contest to design a system for producing energy and clean water, the author makes the most outrageous claims for this one pictured below, located off of the Santa Monica pier.



The article, “Solar-powered Pipe desalinizes 1.5 billion gallons of drinking water for California” by Taflin Laylin for *inhabitat.com* on August 24, can be found here:

<http://inhabitat.com/solar-powered-pipe-desalinizes-1-5-billion-gallons-of-clean-drinking-water-for-california/>

First some excerpts, then my comments:

A finalist of the [2016 Land Art Generator Initiative design competition](#) for Santa Monica Pier, the solar-powered plant deploys electromagnetic desalination to provide clean drinking water for the city and filters the resulting brine through on-board thermal baths before it is reintroduced to the Pacific Ocean.

According to Khalili Engineers, their design, a long gleaming thing visible from Santa Monica Pier, is capable of generating 10,000 MWh each year, which will in turn produce 4.5 billion liters (or 1.5 billion gallons) of drinking water. Given the current [drought throughout California](#), and the dearth of water in general, a variety of urban micro generators such as this can complement utility-scale energy generation.

My Comments:

To quote the article, “capable of generating 10,000 Mwh each year, which will in turn produce 4.5 billion liters (or 1.5 billion gallons) of drinking water.”

The largest nuclear power plant in the world generates about 7,000 megawatts; most generate between 1,000 and 3,000 megawatts. We, or anyone, is suppose to believe that this toy produces more electricity than the largest nuclear plant in the world?

While the 1.5 billion gallons the “plant” is suppose to produce may sound like a lot of water to the naive, that is only equal to 4,603 acre-feet, or enough fresh water to provide for 9,200 homes for one year. That does not quite “provide clean drinking water for the city” of 75,000 people, as the author claims.