

# California Drought Update

## by Patrick Ruckert

### September 10, 2015

#### Note to Readers

Our major report this week is from the convention held in San Diego from August 30- September 4 of the International Desalination Association. My associates report notes the important difference in the way of thinking between the U.S. representatives and those from other nations in which the environmentalist disease has not become an epidemic.

In addition, a report last week on how Governor Jerry Brown fired the regulators of the oil industry in order to cover-up and continue his service to the oil industry follows.

The concluding element of the report is an excellent graphic, **“What Happens to California Water?”**

#### Just a Reminder

This drought is a disaster, as the following excerpts from an article by John Lindt in *The Business Journal*, on September 2 about Tulare citrus growers demonstrates: “In Terra Bella, half of citrus trees meet bulldozers:”

*“We find groves in Terra Bella enjoy a unique micro-climate and survive frost well,” said Sean Geivet, general manager of the district.*

*It is the home to about 400 small citrus farmers who — at least until two years ago — had about 10,000 acres of citrus trees. That’s no longer the case.*

*“We figure we have lost 50 to 60 percent of those groves due to lack of water in the past two years,” he said. “It’s pretty depressing.”*

*Unlike other districts in the region, Terra Bella has virtually no groundwater. It depends on surface water delivered since the 1950s from the Friant Kern Canal.*

*Geivet said the district in a normal year would deliver around 20,000 acre-feet of irrigation water to farmers. But last year, due the drought, they got only 11,000 acre-feet with some creative trades and cash deals.*

*This year the district got only half that — about 5,500 acre-feet. That was made possible through a water exchange where “there was enough money to make the water move,” he said.*

#### Report on the International Desalination Association Convention

The conference of the International Desalination Association Convention, held in San Diego between August 30 and September 4, should be of great interest to people in California, since the desalination of seawater and brackish water will be one of the main sources for new water supplies in the decades to come.

The opening press conference began with a bang, demonstrating that experts around the world, as opposed to most of those from the U.S. and Europe, are little infected with environmentalist insanity. A representative of Lyndon LaRouche's Political Action Committee (LPAC) asked the panelists about nuclear-powered desalination, referencing the depopulation agenda. Ironically, the British Publisher of Global Water Intelligence, responded with a forceful attack on the environmentalists, claiming that \$1 billion was being wasted to protect fish (I assume he was referring to the soon to be operating Carlsbad plant), and that pelicans eat more fish, and more fish die naturally, than from the impact of desalination plants. He added, that the \$1 billion dollar subsea infiltration gallery required by the State Water Resources Board for the proposed Huntington Beach plant would save as many fish as the local branch of Whole Foods Market sells on a slack day.

But, he did not stop there. He then rhetorically asked if California does not want to be a state any longer; and "should people just go out and die in the desert somewhere?" He added, that the impact of not doing desalination is more damaging than any environmental impact a desalination plant could produce.

He concluded that California needs at least ten times it's current desalination capacity by 2050, and that the new State Water Resources Board regulations will add another \$1 billion to the cost of the proposed Huntington Beach plant. (*Actually the responsible agency subsurface intake pipes for the Huntington Beach plant is the California Coastal Commission*).

The one presentation on nuclear desalination, given by a South Korean official reported on the nuclear desalination plant that they're building. It was reported, that at the convention in 1999, the International Atomic Energy Agency presented a session which concluded that nuclear desalination could be "a great source," and that this was now being reviewed, but would not be ready for a few years.

(Since most of these experts appear to be unfamiliar with the history of the nuclear-powered desalination plans of President John Kennedy, here is that history:

<http://www.californiadroughtupdate.org/2015/05/29/nuclear-powered-desalination-in-california-parts-i-iv/> )

A presentation by the Australian panel moderator underlined what California farmers have long known: That extreme water conservation militates against adequate reuse availability and prevents aquifers from being recharged.

The enthusiasm and optimism of the representatives of underdeveloped sector nations and those especially from the Middle-East, contrasted sharply with the U.S. and Germans attending, who were not only clueless about the urgency of the world fresh water shortage, but have adapted almost completely and openly to the Greenie agenda. Pathetically, one said, "that's just the world we live in; we can't change it"

In contrast, an Israeli government panelist, a consultant to the Red-Dead Sea Project, in a discussion with an LPAC representative, found Governor Brown's claim that California can only naturally support 400,000 people, "a curious statement to make, since we used to drive horses because that is what was provided to us by nature, but now we drive cars, because Man created something better." Similarly, an Israeli Greek woman took on a silly German panelist on nuclear energy, the latter smugly resorting to blaming Greeks' problems on "corruption."

The most moving of the panelists was a government official from Jordan, who began his presentation on the Red-Dead Sea Project with documentation of the refugee crisis and its impact since the 1967 war on his nation. He said that Jordan has a population of 11 million, but only 4.5 million are natives, with the rest being refugees from Syria, Iraq, Palestine, Libya and Yemen-- nations that have been destroyed by Bush's and Obama's wars. Thus, he said, "This project is a matter of life and death. Jordan has no resources except human,...no oil like our neighbors; it is our own life ...we cannot wait. We must go for sea water desalination...our government believes this is the future for the region and the world."

He then went on to joyfully describe the cooperation between Jordan, Israel and the Palestinian Authority on the Red-Dead Sea project,, and he and the Israeli warmly recounted their meeting with his family at a restaurant in Jerusalem.

During the course of the conference several foreign panelists remarked that they are learning from California's mistakes about how not to do things, highlighting that the Carlsbad plant has taken 17 years to complete, due to 15 years of permit requirements and legal suits. In contrast, one of the Israeli's stated, a plant four times larger than Carlsbad, designed by the same Israeli company, will take only four years to complete from start to finish. Actual construction time for the Carlsbad plant is just a little less than two years.

The conference participants, naturally had a tour of the Carlsbad plant, which will soon be pumping 50 million gallons of fresh water per day into the San Diego Water Authority system. This will provide between 48,000 and 56,000 acre-feet annually, about seven percent of San Diego's water needs. That is about 112,000 homes.

## **We Said it in June: “Governor Jerry Brown is Organized Crime”**

Here is my background report to an AP article of September 4:

“Governor Jerry Brown is Organized Crime”

<http://www.californiadroughtupdate.org/2015/06/12/governor-jerry-brown-is-organized-crime/>

The Ellen Knickmeyer *Associated Press* article titled, “AP Exclusive: Ex-Calif. official says governor ordered regulators to bypass US water law,” can be found here:

<http://www.usnews.com/news/science/news/articles/2015/09/04/fired-regulator-brown-pushed-to-waive-oil-safeguards>

Excerpts:

*SAN FRANCISCO (AP) — California's top oil and gas regulators repeatedly warned Gov. Jerry Brown's senior aides in 2011 that the governor's orders to override key safeguards in granting oil industry permits would violate state and federal laws protecting the state's groundwater from contamination, one of the former officials has testified.*

*Brown fired the regulators on Nov. 3, 2011, one day after what the fired official says was a final order from the governor to bypass safety provisions of the federal Safe Drinking Water Act in granting permits to oil companies for oilfield injection wells. Brown later boasted publicly that the dismissals led to a speed-up of oilfield permitting.*

*Brown's spokesman, Evan Westrup, said Thursday that the allegations, contained in a newly filed court declaration by Derek Chernow, Brown's fired acting director of the state Department of Conservation, were "baseless."*

*This year, however, the state acknowledged that hundreds of the oilfield operations approved after the firings are now polluting the state's federally protected underground supplies of water for drinking and irrigation.*

*The U.S. Environmental Protection Agency has now given the state until 2017 to resolve what state officials conceded were more than 2,000 permits the state improperly gave oil companies to inject oilfield production fluid and waste into protected water aquifers.*

*Chernow testified he was in the office of John Laird, Brown's secretary of Natural Resources, in early October 2011 when Laird took a call from Brown. Hanging up, Laird said, Brown had relayed just receiving a call from former Gov. Gray Davis, then acting as legal counsel for Occidental Petroleum, the country's fourth-biggest oil Company.*

*Brown said Davis and Occidental had demanded Brown fire Chernow and Miller over what Occidental complained was then the slow pace of issuing drilling permits, according to Chernow.*

*A few weeks later, on Nov. 2, 2011, Chernow and Miller received a call from Brown's energy adviser, Cliff Rechtschaffen, who urged the two oil-and-gas regulators to "immediately fast-track" approval of new oilfield permits, according to Chernow's filing.*

*Miller replied that what Brown aides and the oil industry were pressing for "violated the Safe Drinking Water Act, and that the EPA agreed" with that conclusion, Chernow said. In response, according to Chernow, Rechtschaffen told them "this was an order from Governor Brown, and must be obeyed."*

*Chernow and Miller were fired the following day.*

## **Hydroelectric Power Production**

In a generally stupid article from the Los Angeles Newspaper Group on September 8, some useful statistics at least were reported. This includes the following:

*The 102-year-old central-California complex owned and operated by Southern California Edison lost 80 percent of its hydroelectric power this year, a direct result of a persistent drought that has wiped clean the Sierra Nevada snowpack and produced an eerie silence inside dams and powerhouses.*

*The four-year drought has cut hydroelectricity by 36 percent,*

*Hydroelectricity can account for 10 percent to 20 percent of the electricity consumed in the state,*

## **El Nino Once Again**

While the coming, or not coming, El Nino continues to generate a lot of uninformed or hysterical press coverage, a *Los Angeles Times* article on September 10, does provide a more balanced view. The article, "A monster El Niño is likely, but there are 'no guarantees,'" by Rong-Gong Lin II, is excerpted here:

*El Niño is on track to become one of the most powerful on record, strongly suggesting California could face heavy rainfall this winter, climate scientists say.*

*But El Niño still hasn't sealed the deal, and there still needs to be a dramatic change in the winds in the Pacific Ocean if it is to be as strong as it might be, said Bill Patzert, climatologist for NASA's Jet Propulsion Laboratory in La Cañada Flintridge.*

*At this point, El Niño is strong and could be even stronger than the 1997-98 event, which brought heavy rain and deadly flooding and mudslides across California, and gave the south of the state double its rainfall and the mountains double the snowpack.*

*"The present El Niño is already one of the strongest on record and is expected to strengthen further through the late fall or early winter months," said Daniel Swain, climate scientist with Stanford University. "At this juncture, the likeliest outcome for California is a wetter-than-average winter."*

*"This El Niño is already happening and it's already having impacts," Patzert said, as warm ocean water from the western Pacific Ocean surges to the Americas.*

*But for this El Niño to rival the infamous "Godzilla El Niño" of 1997-98, as Patzert calls it, the east-to-west trade winds of the Pacific Ocean along the equator need to dramatically collapse, which would allow the sea near Peru to warm up even further. And that hasn't happened yet, Patzert said.*

*The bottom line? "There's still some drama here. The curtain has not fallen. We have not put this El Niño in the bank," Patzert said. "I'm still pretty optimistic, but this is not signed, sealed and delivered. But we're almost there."*

*"My eyeballs are glued to what the trade winds are doing," Patzert said. "We are still on track to have one of the strongest El Niños on record, but we could get derailed."*

*Experts are also warning that while more rainfall would certainly be welcome, there is virtually no hope that one rainy winter could reverse the severe effects of the four-year drought. It would take years of above-average rain and snow to end the drought and refill empty reservoirs and wells, experts say.*

## **To Conclude-- A Graphic**

**"What Happens to California Water?"** is derived from the California Department of Water Resources, California Water Plan, Update 2013-- Water Portfolios—Water Balance Data Summary, and demonstrates clearly where the water goes and how it is used. The graphic is below.



## What Happens To Agriculture's Water?

Based on available data, averaged over a thirteen-year period (1998-2010), developed water supplies and groundwater delivered to California farms totals 34.1 million acre-feet per year (41.4% of the entire state's water use).

73.9% of that farm water is converted into food and fiber while the remaining 26.1% is recycled as flows to rivers, lakes or recharging groundwater aquifers for use by others or the environment.

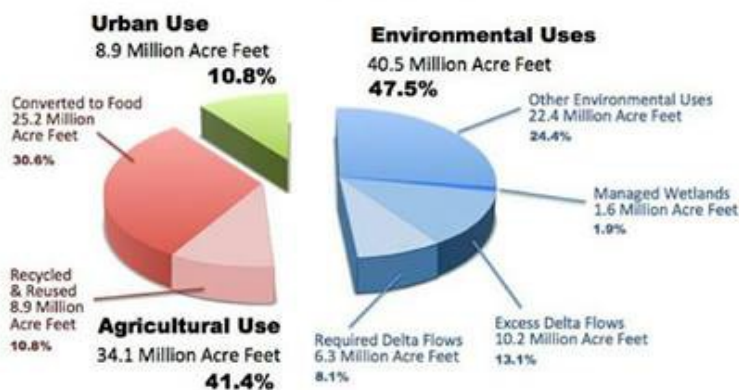
California farms provide 50% of the nation's fresh produce accessible year round. California farmers grow over 75% of the nation's lettuce; over 80% of the nation's spinach, strawberries, carrots, and avocados; over 90% of the nation's cauliflower, broccoli, lemons, and apricots; over 95% of the nation's celery, garlic, and plums; and over 98% of the nation's almonds, pistachios, tomatoes, olives & olive oil, grapes, walnuts, pomegranates, peaches, and artichokes. Due to California's farmers U.S. consumers' percentage of consumer expenditures for food averages 6.7% of household income, meaning we in the United States have broad and continuing access to the most affordable and healthful food supply in the world.

SOURCES: <http://www.marketwatch.com/story/why-the-california-drought-will-be-worse-than-everyone-thinks-2015-04-07?page=2>

[http://www.ers.usda.gov/datafiles/Food\\_Expenditures/Expenditures\\_on\\_food\\_and\\_alcoholic\\_beverages\\_that\\_were\\_consumed\\_at\\_home\\_by\\_selected\\_countries/table97\\_2013.xlsx](http://www.ers.usda.gov/datafiles/Food_Expenditures/Expenditures_on_food_and_alcoholic_beverages_that_were_consumed_at_home_by_selected_countries/table97_2013.xlsx)

The amount of water returned by California farmers for reuse by the environment, agriculture, and urban dwellers is virtually equal to the total of actual California urban water use, 8.9 million acre-feet.

### California's Average Water Use 1998-2010



Source: California Department of Water Resources

SOURCES (Chart): Data was derived from the California Department of Water Resources, **California Water Plan, Update 2013: Document 10 – Water Portfolios – Water Balance Data Summary**. This document estimates and presents actual water uses and water supplies for water years 1998-2010 using improved methods for representing consumptive (depleted) and non-consumptive water uses for environmental, agricultural and urban purposes, and for representing where reuse of water occurs.

Link for the required flows to the Delta, 1998-2010: <http://www.waterplan.water.ca.gov/technical/cwpu2013/index.cfm>, Item 10, DATA SUMMARY: 1998-2010, Water balances revised 02-12-15: [DATA SUMMARY: 1998-2010, Water balances](#).