California Drought Update
by Patrick Ruckert
August 20, 2015

Note to Readers

Our first item below should be read along with the report in last week's *California Drought Update*: "Special Report on the California Economy: A Reflection of the U.S. Economy and the Role of Agriculture." http://www.californiadroughtupdate.org/2015/08/15/california-drought-update-for-august-13-20015/

While providing some useful material, the report discussed below makes the same mistake virtually all economists in the state make by claiming that agriculture represents only 2 percent of the state's economy.

A New Report on Drought Damage to Agriculture

Released on August 18 is a new report by the *UC Davis Center for Watershed Science* that claims the drought has damaged agriculture but not seriously, maybe. The report, "Drought bites harder, but agriculture remains robust, claims that "The direct costs of drought to agriculture will be $1.84 billion for 2015. The total impact to all economic sectors is an estimated $2.74 billion, compared with $2.2 billion in 2014."

Here are a few more details from the report:

"The loss of about 10,100 seasonal jobs directly related to farm production, compared with the researchers' 2014 drought estimate of 7,500 jobs. When considering the spillover effects of the farm losses on all other economic sectors, the employment impact of the 2015 drought more than doubles to 21,000 lost jobs."

"Surface water shortages will reach nearly 8.7 million acre-feet, which will be offset mostly by increased groundwater pumping of 6 million acre-feet."

"Net water shortages of 2.7 million acre-feet will cause roughly 542,000 acres to be idled — 114,000 more acres than the researchers' 2014 drought estimate. Most idled land is in the Tulare Basin."

"The effects of continued drought through 2017 (assuming continued 2014 water supplies) will likely be 6 percent worse than in 2015, with the net water shortage increasing to 2.9 million acre-feet a year. Gradual decline in groundwater pumping capacity and water elevations will add to the incremental costs of a prolonged drought."

Yet, despite the lack of surface water for irrigation, *"The agricultural economy continues to grow in this fourth year of severe drought, thanks mostly to the state's vast but declining reserves of groundwater, which will offset about 70 percent of the surface water shortage this year, the researchers said."*

Buried in the report, but should be highlighted is that the biggest chunk of agricultural losses will come from fallowing of 542,000 acres, about one-fifth more land than was forced out of production by the drought last year.

Buying water is more expensive than last year's $500 an acre-foot, rising to $650 an acre-foot this year. In addition, all the extra pumping of water has dramatically increased the energy cost for irrigators. And it will cost farmers about $590 million extra just to pump groundwater this year, states the report.

As pointed out in an article in the *Visalia Times Delta* on August 18, the south Valley area is the hardest hit:

"'Feed, grain and field crops have the largest proportional cuts in irrigated acreage under drought conditions, because they hold a lower value per unit of water,' states the report.

"Those crops are particularly important in Tulare County, the top dairy-producing county in the U.S., where dairies often grow their own feed for their cows.

"As some are unable to grow feed because of the drought, many have taken on the added expense of buying feed produced from other areas — a major financial burden considering low milk prices paid to producers this year — or they've culled their herds or they've done both."

A critique of the methodology of the report was posted by Mark Borba on "My Job Depends on Ag" face book page on August 19:

"These statewide ag 'losses' are WAY UNDERSTATED! The total direct economic loss is the 'gross farm-gate sales value.'

"The multiplier effect of those dollars circulating thru the economy is 3.5X.....or about $4,000/acre for typical crop mixes (considering everything from almonds to barley)…so that lose would be: ($4,000 X 3.5) X 542,000 acres = $7,588,000,000……in 'LOST ECONOMIC ACTIVITY!'

"That's more than 4X the loss per the UC numbers!?"

Water Board Plans to Seize Farms in Delta

The shocker this week, especially for farmers in the Delta, is the release of documents through Public Records Actions on the Department of Water Resources plans to "acquire" family farms and right of way in the Delta for the twin tunnels of Governor Brown. The following are excerpts from the release by *"Restore the Delta,"* as reported on August 17 by Maven:

"From Restore the Delta:

> *"Newly released documents gained through Public Records Actions show that water exporters and the Delta Design Construction Enterprise housed within the California Department of Water Resources have already developed plans to 'acquire' family farms and right of way in the Sacramento-San Joaquin Delta through eminent domain.*
>
> *"The 'Acquisition Management Plan,' obtained from the Metropolitan Water District of Southern California, shows that agencies have identified 300 parcels in the Delta they intend to "acquire" or gain right of way through.*

"The documents can be viewed here:
http://restorethedelta.org/wp-content/uploads/2015/08/DCE-Cm1-Property-Acquisition-Plan-2-Fr-MWD-PRA-2015.pdf

http://restorethedelta.org/wp-content/uploads/2015/08/DCE-Cm1-Property-Acquisition-Plan-1-Fr-MWD-PRA-2015.pdf

"The documents also include maps of targeted farm parcels in the Delta.

"The released documents also reveal that DWR and the tunnel promoters will cease all outreach to the Delta as a cost saving measure while issuing multi-million dollar no-bid contracts to oversee the construction of a project that will dewater the estuary."

The *Associated Press* reported on August 17, the following further details:

"State contractors have readied plans to acquire as many as 300 farms in the California delta by eminent domain to make room for a pair of massive, still-unapproved water tunnels proposed by Gov. Jerry Brown, according to documents obtained by opponents of the tunnels.

"Under the plan, landowners would have 30 days to consider and negotiate a one-time state offer, while officials simultaneously prepare to take the land by forced sale if owners declined to sell. 'Negotiations to continue in parallel with eminent domain proceedings,' the plan notes."

State Assembly Member Makes Sense

State Assembly member Kristin Olsen from Modesto, in a guest column in the *Stockton Record* on August 13, reported on her tour of the Carlsbad desalination plant and contrasted that with the unworkable plans of Gov. Brown and the State Water Board. Excerpts follow:

"After a recent tour of the Carlsbad Desalination Project, I was encouraged.

"San Diego has been working to diversify and localize its water supply for nearly two decades. Through water conservation, recycling and canal improvement projects, among others, the region has successfully reduced its reliance on Northern California by nearly 50 percent since 1991.

"The Carlsbad Desalination Project will provide a drought-proof and reliable local water supply that will further reduce the area's reliance on imported water. Once the project goes online later this year, it will bring between 48,000 and 56,000 acre-feet per year to the region at a cost of just $5 and $10 per month per household.

"Compare all that to the goals set forth in Gov. Jerry Brown's California Water Fix (a fancy new name for the same old Delta tunnels project), which will do nothing to increase water supply by even one drop but will spend 17 times as much as one desalination plant to move water out of the Delta and into Southern California.

"It has taken nearly 20 years to bring the Carlsbad Desalination Project online. To meet our state's current and urgent water supply needs, future desalination projects, including those

under review in Huntington Beach, Monterey and Santa Barbara need to have a much shorter time frame.

"The state also needs to move the Water Bond storage projects forward as quickly as possible so that we can begin capturing more of the water that California's economy and quality of life depends on."

Update on Folsom Lake

In an earlier report I discussed the juggling act the State Water Board is attempting as it attempts to prevent a disaster that it has helped to create. One of the balls they have in the air is Folsom Lake, being drawn down to replace water from Shasta which is being saved for fish later in the year. Here is an update on Folsom from the Sacramento Bee on August 14:

Headline: *"Crews begin work on drought fix at Folsom Lake--$3.5 million project ensures water for Folsom if reservoir drops below intakes; Federal officials hope they won't need to switch on pumps; Outflows from reservoir are being cut back*

"As water regulators continue to rapidly drain Folsom Lake to bolster supplies downstream, crews have begun construction of a floating barge that could keep water flowing to the city of Folsom this fall.

"The U.S. Bureau of Reclamation, which operates the reservoir, has allowed roughly 42 billion gallons to flow from Folsom Lake in the last 30 days. The lake now stands at its third-lowest point for this time of year in at least 40 years. At current outflows, Folsom Lake would reach record-low depths within weeks.

"Local water agencies take water from Folsom Lake through huge intake valves well below the surface. The fear is that the reservoir level would drop to the point where the intakes would not function properly.

"Several Sacramento suburbs, including Folsom, rely primarily on Folsom Lake for their water supply. In recent months, the Bureau of Reclamation has sharply decreased flows out of Lake Shasta and increased flows out of Folsom Lake to protect fish and maintain the right amount of salinity in the Sacramento-San Joaquin Delta.

"The $3.5 million barge under construction would pump drinking water to more than 60,000 people in the city of Folsom and the nearby state prison complex should the lake's water line drop below 330 feet above sea level.

"Three cities and water districts serving more than 200,000 people rely on Folsom Lake for drinking water. Along with Folsom, they include the city of Roseville and the San Juan Water District, which serves Granite Bay and sells water to Fair Oaks, Citrus Heights and Orangevale.

*"As of Thursday, there were about 242,000 acre-feet of water in Folsom Lake. Officials hope to keep the reservoir from dropping below 120,000 acre-feet at its lowest later this year. The lake has never fallen below 140,000 acre-feet, according to state records starting in 1976."*News | August 19, 2015

Reports Are Heavy This Week

Three new studies are reported on here. I will briefly describe them. For those who wish to pursue them the links are provided.

NASA Report on Subsidence in the Central Valley

First, the NASA report on how the drought is causing valley land to sink. In summary, land in the San Joaquin Valley is sinking faster than ever-- up to nearly 2 inches per month in some areas.

The report, "Progress Report: Subsidence in the Central Valley, California, prepared for DWR by researchers at the National Aeronautics and Space Administration's (NASA's) Jet Propulsion Laboratory," is available here: http://portal-dev.water.ca.gov/waterconditions/index.cfm

The report states that land near Corcoran in the Tulare basin sank 13 inches in just eight months, and areas near the California Aqueduct sank up to 12.5 inches, with 8 inches of that occurring in just four months of 2014.

The increased subsidence rates have the potential to damage local, state and federal infrastructure, including aqueducts, bridges, roads and flood control structures. Long-term subsidence has already destroyed thousands of public and private groundwater well casings in the San Joaquin Valley. Over time, subsidence can permanently reduce the underground aquifer's water storage capacity.

Climate Change Intensifies Drought

The New York Times, on August 20, reports on a paper published by the journal *Geophysical Research Letters*. The article states:

"Global warming caused by human emissions has most likely intensified the drought in California by roughly 15 to 20 percent, scientists said Thursday, warning that future dry spells in the state are almost certain to be worse than this one as the world continues to heat up."

"Even though the findings suggest that the drought is primarily a consequence of natural climate variability, the scientists added that the likelihood of any drought becoming acute is rising because of climate change. The odds of California suffering droughts at the far end of the scale, like the current one that began in 2012, have roughly doubled over the past century, they said.

"'This would be a drought no matter what,' said A. Park Williams, a climate scientist at Columbia University and the lead author of the paper..."

If the Drought Continues....

A report by the Public Policy Institute of California, covered by Maven and others concludes that if the drought continues for another couple of years tremendous damage will hit poor rural communities and the environment. Here are some excerpts from the report, *What If the California Drought Continues?*

Click here to read the report

> *"If the California drought continues another two to three years, the state will face increasingly acute challenges in two areas: water supply in some low-income rural communities, where wells are running dry; and ecosystems, where the state's iconic biodiversity is under severe threat and wildfire risk is growing to new extremes. Farmers have been hit hard, but are adapting. The state's cities and suburbs are in the best shape to*

withstand more years of drought, thanks to investments in diversified water supplies and improved demand-management.

"As of July 2015, more than 2,000 dry wells were reported in communities that are home to some of California's most vulnerable residents.

"California's freshwater habitats and forested lands, which have already been severely affected, will continue to face huge challenges and force difficult trade-offs. These could include the extinction of as many as 18 species of native fish, including most salmon runs; and high mortality for waterbirds that use the Pacific Flyway. Continued drought also brings a high risk of one or more severe fires that would affect local communities, watersheds, wildlife, infrastructure, and air quality.

"In agriculture, roughly 550,000 acres will be fallowed for each year the drought continues."

LaRouche PAC's New Paradigm Show interviews Paul Driessen

An Interview with Paul Driessen, Author of "Eco-Imperialism: Green Power, Black Death"

https://www.youtube.com/watch?t=1968&v=X0GbS2sfZOw

This week's New Paradigm show features LPAC Science Research Team member Jason Ross' August 12, 2015 interview with Paul Driessen, author of *Eco-Imperialism: Green Power, Black Death*. Driessen discusses the evolution of the green movement and how what is called "environmentalism" today is responsible for millions of deaths world-wide, in the name of protecting the environment. Driessen and Ross also discuss the resource crisis myth and what is being done to cultivate the ultimate resource: the human mind. Responses? Questions? Post them: Our show next week will be live, and on this theme.