

# California Drought Update

**For March 10, 2016**  
**by Patrick Ruckert**

<http://www.californiadroughtupdate.org>  
<https://www.facebook.com/CaliforniaDroughtUpdate>  
[patruckert@hotmail.com](mailto:patruckert@hotmail.com)

## A Note To Readers

Following our Part III on Physical Economy, which focuses on the Central Valley Project of California, is our report on El Nino, the rains and where the drought stands today. The last item in this week's issue continues our ongoing reports on how the Federal Fish and Wildlife agency and the Bureau of Reclamation continue to send hundreds of thousands of acre-feet of water directly into the Bay, not to storage. As promised last week, this week's report includes a thorough evaluation of the initiative now seeking signatures for the November ballot, "The Water Priorities Public Interest and Public Trust Constitutional Amendment and the New Surface Water and Groundwater Storage Facilities Bond Act of 2016."

Without a return of the nation to a focus on the frontiers of science and the space program, we may or may not solve this or that problem, but we will definitely not create a future we can be proud of. The last time we actually had that kind of focus was in the administration of John Kennedy, especially his Apollo Project to put a man on the Moon. China has just issued a "National Strategy" as part of its five-year plan that does focus on the frontiers of science and technology. This article from LaRouche PAC reports on it: "'The Sky Is the Limit for China's National Strategy' in Five-Year Plan."

[larouchepac.com/20160307/sky-limit-chinas-national-strategy-five-year-plan](http://larouchepac.com/20160307/sky-limit-chinas-national-strategy-five-year-plan)

## Real Economics-- Part III

### The Central Valley Project: Hamilton Economics and Physical Economy

The Central Valley Project (CVP) is the largest federal water project in the country, and until recently the largest and most complex water management system in the world. China's "Move South Water North" project now holds that distinction. Construction of the project began in 1936, and now includes within the system 20 dams and reservoirs, 1,437 miles of canals, 192 miles of drains, and an array of pumping and power generating facilities.

The CVP provides, in non-drought years, 7 to 8 million acre-feet of water, irrigating about 3 million acres of cropland. Because of the CVP, and the entire California water management system, the state has been called the most geologically altered landscape in the world. Mankind, using his creative and

productive powers has reshaped the physical structure of the Earth itself, and has produced a dramatic increase in both the “energy-flux density” and the “relative potential population density” of the state and the nation. (See Parts I and II of this series for the discussion of these terms).

The following is largely from my report, “The History of the California Water Management System,” of July, 2013. <http://amatterofmind.org/ca-drought-pdf/History-of-the-California-Water-Crisis.pdf>

During the last half of the 19<sup>th</sup> Century, as California's population rapidly grew, and agriculture began replacing mining as the foundation of the economy. In the San Joaquin Valley dry-land wheat farming predominated through the 1880s. Then irrigation began slowly to expand, and then much more rapidly beginning in the 1930s.

From beginning to end, what the Valley and the State are today was shaped, financed and directed by both the Federal and State governments. The directing of the economy to new platforms of productivity by the government demonstrates the American System of economics. The financing of great projects, like the Transcontinental Railroad and the CVP by the government is premised on the principle that all the funds invested are paid back by the increased productive output of the economy that the projects create. Such projects create the foundation of the expansion of the private sector while upgrading the entire economy to a new, more productive platform.

In 1873, Congress and President U. S. Grant authorized the Army Corps of Engineers to carry out a survey of the Central Valley and report on the feasibility of irrigation. The authorization stated: “It was the duty of the government to teach the value of irrigation, and to lay out a comprehensive system, and enforce proper laws on the subject.” An explicit statement of the American System.

The conclusion of this survey was that the valley was suitable for agriculture and would need irrigation projects whose source would be outside the valley itself, and it would have to be of such a large scale it would be beyond the resources of the farmers themselves, and must be undertaken by the government. The report specified that a large dam would be required at the northern end of the Sacramento Valley, which could feed water into a lengthy canal extending down the western side of the valley. This was an important step toward what would finally begin to be done in the 1930s.

The beginning of what would become the Central Valley Project and the State Water Project was in 1919, when Robert Marshall, formerly of the U.S. Geological Survey, proposed the construction of a large storage dam across the upper Sacramento River that would: 1) allow the diversion of water into large irrigation canals running along the west and east sides of the the Sacramento Valley and southward into the San Joaquin Valley; 2) ensure a minimum flow in the Sacramento River for navigation and preventing the influx of sea water into the delta region; and 3) generate large quantities of hydroelectric power that would pay for the overall development. Marshall's proposal, in a general sense, is the essence of what would become the Central Valley Project of the 1930s.

A 1923 report by the California State Engineer of the state's water resources and potential, provided an extensive hydrographic study of precipitation and stream-flow patterns, and presented data regarding more than 1,000 possible reservoir sites in the state.

A follow up report by the State Engineer in 1927 became the basis for the first state water plan in 1929, and included many elements of the soon to be Central Valley Project, which the state committed itself

to building in 1933. Unable to fund the project itself in the middle of the Depression, the state government then requested from the FDR administration federal funding for the Project, which was approved in 1935, and the project became a “Federal Reclamation Project,” under the Bureau of Reclamation. Under Reclamation law, the first function of the dams and reservoirs was flood control and improved navigation; the second for irrigation and domestic use; and the third for power generation. Construction began in 1938, and was largely completed by 1951, though some further additions were built into the early 1970s.



## And We Do Have A Dent in the Drought

Last weekend's storm dumped lots of rain on us, and the one that began today will bring lots more, but it only puts us back to where we were a month ago before the February big dry-out, which shrunk the snowpack back below normal for this time of the year. The best summary of where we presently stand is from *Capital Radio* in an article by Ed Joyce on March 10: “Reservoirs Filling, But Snowpack Worries In California.” <http://www.capradio.org/68717>

*The early March storms offset three dry weeks in February, in terms of precipitation, and helped fill some California reservoirs. But the U.S. Drought Monitor says warm temperatures did not build snowpack at lower elevations in the Sierra Nevada.*

*The first wave of 'Miracle March' storms in California offset three dry weeks in February and improved storage in some reservoirs. Now, the state is primed for drought improvement, according to the [U.S. Drought Monitor](#) released March 10.*

*"Therefore, considering that this storm basically negated the decline caused by the prior 3 weeks of*

*dryness and warmth, no changes were made this week," according to the weekly update. "However, with the state [California] now recharged with short-term moisture, any additional precipitation, especially from a colder system (e.g. lower elevation snows), should provide some improvement to the state, especially in northern and central areas."*

*The Drought Monitor drought intensity levels are Abnormally Dry, Moderate, Severe, Extreme and Exceptional Drought. In [California](#), 99 percent is abnormally dry, with 97 percent moderate, 83 percent severe, 61 percent extreme and 38 percent in exceptional drought.*

What more is needed is provided in an article from the *San Diego Union Tribune* of March 8 by Joshua Emerson Smith, "El Niño likely to bring rain this weekend and through March-- Winter storms likely to ease not end drought" Excerpts follow.

<http://www.sandiegouniontribune.com/news/2016/mar/08/el-nino-storms-california-drought-march/>

*Officials calculated that snowpack would need to accumulate to whopping 150 percent of normal by the end of the official rainy season on April 1 to fully recharge the state's system of reservoirs.*

*It would take three to five years in a row of average perception to start to alleviate some of the more entrenched drought impacts, said Michael Anderson, the Department of Water Resources' state climatologist.*

## **The Water Priorities Initiative**

Last week a section of my report was titled, "Let's Fight Over Water." The following report might be titled, "Let's Fight Over Other Things Too." In November, we may have on the ballot an initiative titled, "The Water Priorities Public Interest and Public Trust Constitutional Amendment and the New Surface Water and Groundwater Storage Facilities Bond Act of 2016," which is guaranteed to get everyone fighting everyone else. For what, and why? The simplest summary of the initiative is that it shuts down the Governor's high-speed rail project and shifts the funds to building water storage infrastructure. But, it is more complex than that.

Before discussing the initiative, I have something to say about the state of mind of the people of the state, and the nation, that has led us to such measures of desperation.

When you allowed the destruction of the powerful California productive economy over the past 40 years you should have expected the symptoms of that destruction to be all around you-- they are, and you complain about them, like having no water for agriculture. At best you respond by working your butt off for something that might alleviate one of the problems, but won't solve it.

What was the state forty years ago? It was an industrial giant of aerospace, space science, auto, steel, great water projects and the most productive agriculture in the world. All that now remains of that today is the agriculture. Whoops, I forgot, by changing the spelling of one word, we can now at least claim we still have a *steal* industry-- with 35% of the economy of the state consists of finances, insurance and real estate. Don't blame those you allowed to take over the state, the blame is much closer to home. You want to look to the Republican and Democratic politicians who kiss the ass of Wall Street? You have been doing that for 30 years, and it has only got worse. It is time to both look within and without. First, determine you are going to learn what must be done, and I include a link

below for that. Then look abroad and ask, how, during the same 30 years that we have thrown 47% of America's children below the poverty level, China has brought 600 million out of poverty?

**The U.S. Joins the New Silk Road:** <https://larouchepac.com/.../US%20Joins%20Silk%20Road-web.pdf>

Now, the initiative:

The proposed initiative, sponsored by some Central Valley agriculture interest, to name it again, "The Water Priorities Public Interest and Public Trust Constitutional Amendment and the New Surface Water and Groundwater Storage Facilities Bond Act of 2016," is described by Aubrey Bettencourt, the executive director of the *California Water Alliance*, in a opinion column in the *Fresno Bee* on February 29, and does the following:

*Removing all unissued funding from high-speed rail, stopping it in its tracks.*

*Protecting water used for people in the Constitution while protecting all existing water rights.*

*Immediate approvals and funding for specific shovel-ready projects, including Sites and Temperance Flat reservoirs and expansions of Shasta and San Luis reservoirs.*

*Funding statewide construction of local stormwater capture, wastewater treatment and water recycling projects.*

*Cleansing and recharging groundwater with new groundwater storage and treatment facilities and creating sustainable management programs.*

*Modernizing existing surface and groundwater storage facilities.*

*Creating engineering, construction, scientific, recreation, farming, industrial, business jobs and more.*

*It also protects the environment – funded projects deliver at least 2.5 million acre-feet more water for critical environmental ecosystems.*

The full text of the initiative can be read here: [https://www.oag.ca.gov/system/files/initiatives/pdfs/15-0107%20%28Redirect%20HighSpeed%20Rail%20Funds%20to%20Water%20Projects%29\\_0.pdf](https://www.oag.ca.gov/system/files/initiatives/pdfs/15-0107%20%28Redirect%20HighSpeed%20Rail%20Funds%20to%20Water%20Projects%29_0.pdf)

The opening wording of the initiative state that, "Safeguarding supplies of clean, safe drinking water to California's homes and businesses and water for irrigation to California's farms is an essential responsibility of government, and critical to protecting the quality of life for Californians."

The problem in achieving that end, the initiative states, is that, "The State Legislature has failed to exercise its legislative powers over the state's water resources granted under Article X, California Constitution and as a result various agencies, boards, and commissions have asserted power and authority to regulate and enforce the laws of the state in the Legislature's name,...."

To fix this problem the initiative will amend Article X, section 2 of the California Constitution. That article and section defines the overriding law dealing with water in the state. In summary, it states that all the water of the state belongs to all the people of the state, and that "the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented...."

The new section to be added, reads, in part:

*the public interest in assuring the highest priorities of beneficial use and water conservation, as a public benefit and to satisfy the public trust, shall be first, domestic use, and second, irrigation use through the development and maintenance of surface water and groundwater storage facilities.*

What this new section eliminates is the priority, as practiced by state and federal agencies, given to the environment. For example, the allowing of hundreds of thousands of acre-feet of water to run into the Bay attempting to save the Delta Smelt. The initiative does not address whether or not such a policy will come in conflict with federal environmental laws, like the Species Protection Act.

Concretely, the initiative shuts down Governor Brown's High Speed Rail project by taking \$8 billion of uncontracted bonds and diverting that money to building water infrastructure projects. It also takes the \$2.7 billion in bonds allocated for water storage projects from Proposition 1, passed by the people in the 2014 election, and re-allocates it. This new total of \$10.7 billion will then be spent by a newly created commission on specified projects including the Sites and Temperance Flat reservoirs, the expansion of the San Luis and Shasta reservoirs, and other similar projects as discussed by Bettencourt above.

The committee must collect 585,000 valid signatures to place the initiative on the November ballot.

Critics raise the concern that the measure will set off years of litigation, stalling the building of any water infrastructure for many more years. Environmentalists, of course, oppose it as they oppose any water infrastructure. Those favoring the high speed rail project obviously oppose the initiative since it just shuts that project down.

Opposition to the measure also includes other farm interests. But, in at least one example, the opposition seems to be firing blanks. In a statement reported on March 9, spokesmen for the "*Stop the Special Interest Water Grab*," which includes the *California Rice Commission* and the *Northern California Water Association*, it was expressed that all the work on the Sites Reservoir done for the Proposition 1 money will have been for naught. A spokesman also claimed that it would undermine senior water rights, without specifying how it does that.

Other representatives of farmers, these in the San Joaquin Valley, expressed the same vague concern about the Proposition 1 work that has already done in planning both the Sites and Temperance Flat reservoirs going down the drain. A question that this group has not asked, though, is that since only \$2.7 billion from Proposition 1 funds will go to storage projects, and the two projects combined will cost close to \$10 billion, from where will the remaining funds come? Are we witnessing here some people attempting to grab at a mirage and then protect it? Are they saying, "we might get something if we are practical and play by the rules made by our enemies?"

Remember, the criteria for projects under Proposition 1 include, that the proposed projects must be environmentally friendly and help maintain the health of the Delta. In addition, hundreds of agencies and cities will be competing for that \$2.7 billion. And, whether projects meet the above stated criteria is a decision that will be made by the nine person commission appointed by Governor Brown, and you can guess what their decisions will be.

Another group that has not yet weighed in on either side as yet is the Building and Construction Trades Unions and the construction industry generally. But, building a railroad or a dam may make little difference to this group.

A question that does not seem to have been raised at all is, what impact would the passage of the initiative have on the governor's Twin Tunnel project for the Delta?

Another concern that has been raised is that if the rail project is cancelled the state will be liable to pay back the Federal government the \$2 billion it has invested in the project.

Finally, on the negative side, is the reality that if the initiative does become law, it will still be at least a decade before the water storage projects would be operational. So, while some among the supporters have pronounced fighting rhetoric like, "We need water now. We will enact the law ourselves," the reality is that not only will the law not deliver any water "now," but is really a diversion from what should be done. What should be done can be found in the next two paragraphs.

As for the high speed rail project, perhaps the best thing to do is to scrap the present structure, which not only will cost between \$65 billion and maybe \$100 billion, and will not carry any passengers for at least another 10 years. Instead, let's bring in the Chinese. China builds thousands of miles of high speed rail each year; it opens a new line at least once a month, and the Chinese companies are the best damn rail builders in the world. Better yet, restructure it and make it a part of a nation-wide high speed rail system as outlined in the link above, "The U.S. Joins the New Silk Road."

As for what we should really do about the water problem, I'll remind you of my policy: Bust the Wall Street system by reviving the Glass-Steagall banking law; issue a trillion or two in Federal government credits for massive infrastructure projects as the foundation of a real economic policy. It would work like my discussion above of the Central Valley Project. Part of that should be building a couple of dozen desalination plants in California, including a few in the Bay to pump directly into the aqueducts of the Central Valley Project and the State Water Project.

## **And the Water Just Flowed-- Right Into the Bay, Again**

As has been reported here several times, with the rivers flowing at near flood-stage levels, the pumps in the Delta should be working overtime sending thousands of acre-feet to storage. Not a chance. From Erik Wilson at the face book group My Job Depends On Ag, comes the following report on March 9:

*Holy Smokes! The out the delta has increased for the four day in a row! As much as 5 times the amount needed for environmental concerns continues to be lost out to sea! Not one extra gallon of water have been saved during the last week! Insane!*

Specifically, 8,000 cubic feet per second (cfs) must be allowed to flow into the Bay as is required for environmental requirements. The chart on the next page, dated March 9, shows that 59,000 cfs flowing through the Delta, but only 6,200 cfs has been sent to storage. (I had to shrink the chart a little to fit it on the page. You can enlarge it again to read all the numbers).

And why does the U.S. Fish and Wildlife and the Bureau of Reclamation do this? To protect the Delta Smelt, of course. How is that working out? Not too well, as this report from *Capital Public Radio* on March 7 demonstrates. "Delta Smelt Populations Plummet 2nd Year In A Row," is the headline of the article by Amy Quinton. Some excerpts follow, immediately after the chart.

[http://www.cpradio.org/68410?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+CapitalPublicRadioLatestNewsRSS+%28Capital+Public+Radio%3A+Latest+News+RSS%29](http://www.cpradio.org/68410?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+CapitalPublicRadioLatestNewsRSS+%28Capital+Public+Radio%3A+Latest+News+RSS%29)

PRELIMINARY DATA  
SUBJECT TO REVISION WITHOUT NOTICE

EXECUTIVE OPERATIONS SUMMARY ON 3/9/2016

This summary can also be found at:  
<http://www.water.ca.gov/swp/operationscontrol/docs/delta/deltaops.pdf>

SCHEDULED EXPORTS FOR TODAY

Clifton Court Inflow	=	2,800 cfs
Jones Pumping Plant	=	3,400 cfs

State Water Project Informational Data can be found at:  
<http://www.water.ca.gov/swp/operationscontrol/projectwide.cfm>

ESTIMATED DELTA HYDROLOGY

Total Delta Inflow	=	58,596 cfs
Sacramento River	=	52,705 cfs
San Joaquin River	=	1,661 cfs

Data for previous 30-days is available at:  
<http://www.water.ca.gov/swp/operationscontrol/docs/delta/DeltaWQ.pdf>

DELTA OPERATIONS

Delta Conditions	=	Excess
Delta x-channel Gates (% of day is open)	=	0%
Outflow Index	=	62,200 cfs
% Inflow Diverted	=	24.5% (14-day avg)
X2 Position	=	73 km
Controlling Factor(s)	=	OMR(-5000)

RESERVOIR STORAGES (AS OF MIDNIGHT)

Shasta Reservoir	=	3,092 TAF
Folsom Reservoir	=	700 TAF
Oroville Reservoir	=	2,164 TAF
San Luis Res. Total	=	923 TAF
SWP Share	=	583 TAF

Reservoir data and reports are available at:  
<http://cdec.water.ca.gov/reservoir.html>

Reservoir Releases

Keswick	=	3,250 cfs
Nimbus	=	15,000 cfs
Oroville	=	800 cfs

Provisional Old River & Middle River Flows (as of 3/8/2016)  
Based on USGS stations 11312676 & 11313405 via CDEC available at:  
[http://www.usbr.gov/mp/cvo/vungvani/OMR\\_Mar2016.pdf](http://www.usbr.gov/mp/cvo/vungvani/OMR_Mar2016.pdf)

If you have any questions regarding the preliminary data  
in this report, please contact [OCO\\_Export\\_Management@water.ca.gov](mailto:OCO_Export_Management@water.ca.gov)

*Three Delta smelt caught in 2015 during the California Department of Fish and Wildlife's Spring Kodiak Trawl.*



*Populations of the threatened Delta smelt have plummeted to the lowest in history. The three-inch fish is often the focus of California's water wars.*

*Every fall and spring, the California Department of Fish and Wildlife conducts trawls to determine populations of the threatened Delta Smelt. This year the department hasn't netted more than seven fish in each trawl.*

*"These numbers are unprecedented in how low they are. It seems very unlikely the smelt can recover," says Peter Moyle, a fish biologist with UC Davis. "I would like to be optimistic about this, but these numbers are really low and the fish are very scattered. They're not even getting very many at the pumping plant."*

*Federal agencies can restrict water exports from the Delta to Southern California in order to protect the Delta smelt. The fish only has a one-year life span.*

It really is starting to piss people off. Even the *Fresno Bee* on March 9, ran this, "Editorial: Bureau of Reclamation should increase Delta water exports."

<http://www.fresnobee.com/opinion/editorials/article65069552.html>. Some excerpts:

*By The Editorial Board*

*There's no other way to say it. The federal Bureau of Reclamation's decision Wednesday to export less water south from the Delta than is legally allowed defies common sense.*

*Reservoirs need to be filled, and Valley farmers dependent on federal irrigation water deliveries need to know that they will get some much-needed relief after having to fallow hundreds of thousands of acres of cropland because of the drought.*

*But the Bureau of Reclamation, acting on a U.S. Fish and Wildlife determination of current Delta water temperatures, isn't operating the pumps at the maximum set by the biological opinion that seeks to improve conditions for the threatened Delta smelt.*

*Even as bone-dry California is receiving precious rain and snow from the heavens above and water is pouring into the Delta, vast amounts of water are being allowed to roll out to the Pacific Ocean.*

*It makes no sense. Especially when long-range scientific modeling suggests that this season's El Niño could transition into a La Niña and increase the threat of more drought for California.*

*The Bureau of Reclamation must do better. It needs to stop kicking farmers in the teeth.*