

California Water and Infrastructure Report

Formerly, the “California Drought (and Flood) Update”



For May 24, 2018

by Patrick Ruckert

Published weekly since July, 2014

An archive of all these weekly reports can be found at both links below:

<http://www.californiadroughtupdate.org>

<https://www.facebook.com/CaliforniaDroughtUpdate>

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California's new solar roof mandate will make housing more expensive, increase electricity prices, and transfer wealth upwards.

What it won't do is significantly reduce carbon emissions.

Since he took office in 2011, Governor Jerry Brown and the regulatory bodies he controls have worked to close the state's two nuclear plants.

Between 1976 and 1979, Brown and his allies killed so many nuclear power plants that, had they been built, California would today be generating almost all of its electricity from zero-pollution power plants.

“California's Solar Roof Law Will Raise Housing And Energy Prices But Do Little To Reduce Emissions”

Michael Shellenberger, Democratic Candidate for California Governor

A Note To Readers

California's State Primary Election is June 5, so this issue of the report will highlight some of the election's candidates and ballot issues. The quote above from, surprising to most I am sure, one of the Democratic candidates for Governor, thus making him the only candidate, Democrat or Republican, in the race who is even remotely qualified. He is the only candidate that ridicules solar power and promotes nuclear power. I am sure you will also find it surprising that Michael Shellenberger is a

national leader of what we call the “environmentalists.” He is the President of “Environmental Progress,” based in Oakland, and was named Time Magazine “Hero of the Environment” in 2008. His article, “California's Solar Roof Law Will Raise Housing And Energy Prices But Do Little To Reduce Emissions,” is excerpted later in this report.

In This Week's Report

The seriousness of the drought in the greater southwest region of the country stays near the top of my report again this week. Meanwhile, California's descent into a new drought slowly proceeds. The state's reservoirs remain above the average level for this time of the year and the Department of Water Resources has increased its allocation to 35% of what water contractors have requested. That fact demonstrates that, as I have long maintained, the California water management system is broken and has been so for more than two decades. The state has only been able to provide full allocations to the water contractors-- and thus the farmers-- only a couple of times in the past 20 years.

We have a longer report and update from the Oroville Dam this week, including a construction report, three videos and some nice photos.

The Delta Tunnels seem to be rolling along, or over all opposition. As one editorial puts it: The “California WaterFix” name of the project is perfectly appropriate, for the fix is in.

There are two water bonds on the ballot this year, or rather one water bond and one park bond disguised as a water bond. There are a couple articles analyzing the bonds under the title “The California June 5 Primary Election, and More.”

Next you will find extensive excerpts from Michael Shellenberger's article, “*California's Solar Roof Law Will Raise Housing And Energy Prices But Do Little To Reduce Emissions.*” Not only does he break solar power into shards of glass, but he makes the case for nuclear power. Pretty good for a Democratic candidate for Governor.

Fracking is back in the news with a new report on wastewater pollution of the state's water supply. I accompany that report with an item that gets at the more fundamental question of lifting ourselves to a new platform of productivity by nuclear and fusion.

The last section of this week's report is fun: If China, Bolivia, Russia, and Syria can optimistically drive their economies with science, nuclear energy, and a sane farm policy, thus providing for a growing population, well, so can we, if we decide to do so. “Pessimist,” as one person from China attending a meeting in the Bay Area said last week, “is stupid.”

Drought, Reservoirs and Water Allocations

Drought on tap to intensify over US Southwest

By Susan Montoya Bryan, Associated Press

ALBUQUERQUE, N.M. — May 23, 2018

<https://abcnews.go.com/Technology/wireStory/drought-tap-intensify-us-southwest-55372737>

Rivers are drying up, popular mountain recreation spots are closing and water restrictions are in full swing as a persistent drought intensifies its grip on pockets of the American Southwest.

Climatologists and other experts are scheduled Wednesday to provide an update on the situation in the Four Corners region — where Arizona, [New Mexico](#), Colorado and Utah meet.

The area is dealing with exceptional drought — the worst category. That has left farmers, ranchers and water planners bracing for a much different situation than just a year ago when only a fraction of the region was experiencing low levels of dryness.

With the region's water resources strained, a top federal official has resumed pressure on states in the Southwest to wrap up long-delayed emergency plans for potential shortages on the Colorado River, which serves 40 million people in the U.S. and Mexico.

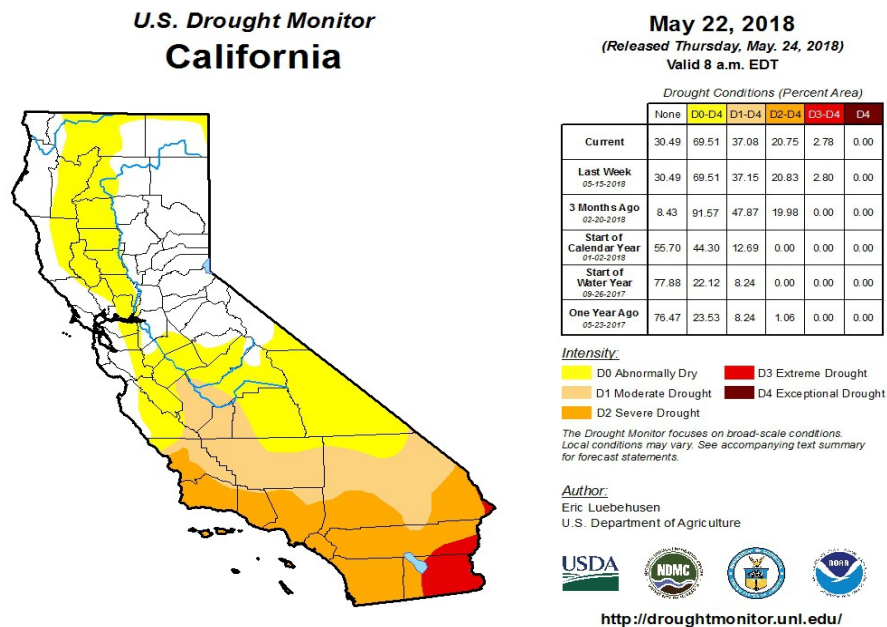
"We face an overwhelming risk on the system, and the time for action is now," Bureau of Reclamation Commissioner Brenda Burman said Tuesday. She spoke before the Imperial Irrigation District in Southern California, one of the biggest single users of the Colorado River.

The drought has hit the Colorado River hard. Forecasters say the river will carry only about 43 percent of its average amount of water this year into Lake Powell, one of two big reservoirs on the system.

There's a 52 percent chance that Mexico and the states of Arizona and Nevada will take a mandatory cut in their share of water in 2020 under the agreements governing the river, forecasters have said.

U.S. Drought Monitor

Drought intensity in the state has been holding steady for the past few weeks.



Folsom Lake nearly full as several California reservoirs top historical averages

Brian Hickey, KCRA

May 23, 2018

<https://www.sfgate.com/weather/article/Folsom-Lake-nearly-full-several-California-12938354.php>

Folsom Lake is about two feet away from being full heading into Memorial Day weekend, the unofficial start to summer, as other lakes across NorCal are also inching their way up.

As of Wednesday morning, the lake's surface elevation was 463.84 feet above sea level, 2.16 feet below the reservoir's maximum elevation of 466 feet, according to the California Department of Water Resources.

At that level, Folsom Lake stands at 97 percent of capacity, and 120 percent of historical average. During the height of California's recent drought, the lake held roughly 18 percent of capacity. Despite a slow start to the rainy season, several other [key state reservoirs](#) sit at or above historical average as summer approaches.

Other Northern California reservoirs also posted impressive numbers ahead of the Memorial Day weekend.

Lake Shasta, the region's largest reservoir, was at 89 percent of capacity, putting it at just above average for this time of year.

New Melones Lake stands at 83 percent of capacity and 132 percent of normal.

While reservoir totals are impressive heading into summer, water managers are urging conservation because the state's largest reservoir -- the Sierra snowpack -- is way below normal.

The snowpack in the southern Sierra is just at 11 percent of average, while the central Sierra is at 18 percent of normal and the northern Sierra is at 13 percent.

State Water Project allocation now 35%, up from 30%

May 21, 2018

From the Department of Water Resources:

The California Department of Water Resources (DWR) today increased the State Water Project (SWP) allocation for 2018 to 35 percent – up slightly from the 30 percent allocation announced in April.

In December, SWP contractors were notified of an initial 15 percent allocation that was later raised to 20 percent in January.

“Late season rain and snow in March and April salvaged what would have been a severely dry year, which allows us to make this slight increase in allocation,” said DWR Director Karla Nemeth. “Our water storage is currently in fair condition, but the state’s snowpack is still low, so Californians need to continue to embrace water conservation as a crucial part of our lifestyle.”

The statewide snow water content dropped from 44 percent of average on April 21 to 15 percent of average today. Snowpack accumulation for the year is well below average because warm temperatures brought more rain than snow in the Northern Sierra.

Snow water content and reservoir storage are among several factors used in determining allocations. Most of the state’s major reservoir levels continue to be above their historical averages, but lower in percentage of capacity today than last month. San Luis Reservoir, the largest off-stream reservoir in the United States where water is stored for the SWP and Central Valley Project (CVP), is at 79 percent of capacity. Shasta Lake, the CVP’s largest

reservoir, is at 89 percent of capacity. Lake Oroville and New Melones Lake are at 69 percent and 83 percent of capacity, respectively.

Oroville Dam Update

Oroville Spillways Phase 2 Update May 11th, 2018

From the Department of Water Resources:

Today the Department of Water Resources (DWR) provided an update on construction-related activities for the Lake Oroville Spillways Emergency Recovery Project.

Construction on the Main Spillway

- *Crews continue to demolish the uppermost 730 feet of the original main spillway chute and have begun using controlled blasting in the center portion of the upper chute.*
- *In the middle chute, crews completed demolition of the temporary roller-compacted concrete walls, and are now preparing for construction of sub-drains, slab anchors, and structural concrete slabs and walls.*
- *Work continues on the energy dissipators, or dentates, at the bottom of the main spillway. The dentates are being hydro-blasted and rebuilt with reinforced structural concrete and epoxy-coated steel dowels.*
- *Crews have begun resurfacing one of the structural concrete slabs that did not meet DWR's quality control standards on the main spillway last year. The slab has a poor surface finish and the top layer is being removed and replaced with structural concrete.*

Construction on the Emergency Spillway

- *Placement of RCC on the northern half of the splashpad is 78 percent complete.*
- *Crews continue to clean and prepare the southern half of the splashpad for RCC placement.*
- *Placement of the cap or grade beam on the underground secant pile cutoff wall is complete. The cap will tie the secant piles together and will be secured to the RCC splashpad.*

To view photos and video of the Lake Oroville Spillways construction, visit DWR's [Oroville Spillway photo gallery](#) and [YouTube channel](#).

The latest videos from the Department of Water Resources ...

[California DWR](#)

Published on May 18, 2018

Crews continue to lay roller-compacted concrete (RCC) for the splashpad. Excavators continue removing the temporary RCC sidewalls on the main spillway middle chute in preparation for the placement of structural concrete.

https://www.youtube.com/watch?time_continue=21&v=tUqcs86vk4E

Oroville Spillways Phase 2 Update May 17, 2008

[California DWR](#)

Published on May 23, 2018

Excavators continue removing the temporary roller-compacted concrete (RCC) sidewalls on the main spillway middle chute. Crews begin controlled blasts of the original concrete on the main spillway upper chute in preparation for the placement of structural concrete.

https://www.youtube.com/watch?time_continue=66&v=EV8MVhFsSQE

Photos from the construction site ...



A controlled blast breaks up a section of the original upper chute of the Lake Oroville main spillway in Butte County, California. Photo taken May 16, 2018. Kelly M. Grow/ California Department of Water Resources, FOR EDITORIAL USE ONLY



Kelly M. Grow/ California Department of Water Resources, FOR EDITORIAL USE ONLY

Officials: Oroville Dam rebuild is 45 percent complete

[Tim Hearden](#) | May 24, 2018

<http://www.westernfarmpress.com/regulatory/officials-oroville-dam-rebuild-45-percent-complete>

Reconstruction of the Oroville Dam's main and emergency spillways is about 45 percent complete, but the project is still on track to be finished by the end of this year, state Department of Water Resources officials say.

While the earth-moving portion of the estimated \$870 million project is mostly behind them, crews will race this summer to put all the finishing touches on the new concrete structure.

Storm clouds

The project comes as both literal and political storm clouds have hovered overhead. There were isolated showers and thunderstorms in the mountains of Northern California in the past week as a weak system moved through, but weather didn't interfere with work on the dam, officials say.

Meanwhile, uncertainty remains about funding for the project as the Federal Emergency Management Agency told two California congressmen earlier this month that an independent panel's unfavorable review of the DWR's management of the dam may jeopardize some federal reimbursements.

DWR spokeswoman Erin Mellon has said the agency will continue to submit reimbursement requests to FEMA until it is told otherwise. The state wants FEMA to pick up 75 percent of the cost of the project, with the State Water Project contractors contributing the rest.

GoPro helicopter ride over Oroville Dam spillway

[Chico Enterprise-Record](#)

Published on May 18, 2018

https://www.youtube.com/watch?time_continue=2&v=8Jym1StVJEA

Fly over the massive construction at the Oroville Dam spillway. Butte County Sheriff Kory Honea offered us a ride in the BCSO helicopter during a break in training May 17, 2018. See photos from the flight at www.chicoer.com.

By Staff Reports

Posted: 05/21/18

<http://www.chicoer.com/general-news/20180521/birds-eye-look-of-work-underway-at-oroville-dam-spillways>

The Delta Tunnels: The Fix Is In?

Editorial: The 'fix' in WaterFix is certainly appropriate

Posted: 05/19/18

<http://www.orovillemr.com/opinion/20180519/editorial-the-fix-in-waterfix-is-certainly-appropriate>

A bit of irony has emerged over Jerry Brown's name for his twin tunnels idea — California WaterFix — because it sure looks like the fix is on.

The plan to put two huge tunnels under the Sacramento-San Joaquin Delta to carry north state water south has faltered on its own, and is unlikely to advance if it is put to the kinds of environmental and financial review that it warrants.

The plan would be disastrous to the delta ecosystem, and likely to the Sacramento River watershed, as it would give the tunnel operators the capability to pull more water out of the river than is there for much of the year.

And the \$17 billion price tag is absurdly underestimated, as is California's habit when coming up with a cost for a public works project. We should have learned that lesson with the Oroville Dam spillway

repair, the bullet train and the Bay Bridge replacement.

The obvious problems should prompt a statewide discussion on whether to proceed or not.

But the “or not” option doesn’t seem to be on the table. That means the next step, from the proponents’ view, has to be making sure the statewide discussion doesn’t happen.

That’s where we are now. The most blatant step is Riverside County Republican Rep. Ken Calvert’s proposal to prohibit environmental lawsuits over the twin tunnels. The provision was tucked on page 141 of a 142-page spending appropriations bill for the Department of Interior.

The California June 5 Primary Election, and More

As I wrote in the introduction above, I find only one candidate for any office, from dog catcher to governor to members of Congress, that has any thing worthwhile to say. If it is not narrow, ideological partisan bickering that the candidates spew out, then it is irrelevant blathering about identity politics, global warming or anti-government bullshit. So, I have nothing to say about any of them, beyond my above mentioned Democratic candidate for Governor Michael Shellenberger.

Otherwise, there are a couple of water bonds on the ballot, or least one real water bond and one parks bond disguised as a water bond. Here are a couple of articles on them.

Five Things to Know About Water Bonds on Upcoming California Ballots

By Matt Weiser

May 21, 2018

California voters will be confronted with two multibillion-dollar propositions this year dealing with water; one on the June 5 ballot and another on the November 6 ballot. While the bond measures overlap somewhat, they also have important differences.

<https://www.newsdeeply.com/water/articles/2018/05/21/five-things-to-know-about-water-bonds-on-upcoming-california-ballots>

Californians this year will vote on not one but two water bond measures totaling \$13 billion. Given that the state still hasn’t spent all of the \$7.5 billion from the Proposition 1 water bond passed in 2014, it raises a crucial question: Does California really need another \$13 billion in water bonds?

As of December 2017, the state had allocated only about \$1 billion from Proposition 1. About half of the total money available from the bond is dedicated to new water storage under a complicated new process that funds only the “public benefits” of such projects. The first dribble of money from that pot is expected to be awarded later this year.

With all that money still coming, why two more water bonds? Here are answers to some basic questions about the ballot measures that may help illuminate the situation.

[Proposition 68](#), a \$4.1 billion bond measure, wins the prize for most unwieldy title. Known as the California Drought, Water, Parks, Climate, Coastal Protection and Outdoor Access for All Act of 2018, it was placed on the June 5 primary ballot by the state legislature. Sponsored by former Senate President Pro Tem Kevin de León, D-Los Angeles, nearly two-thirds of the money appears destined for park and wildlife projects, not water projects. However, much of this money would indirectly benefit state water resources, such as projects along specific river corridors that would improve water quality.

The [Water Supply and Water Quality Bond](#) (proposition number not yet designated) has qualified for the November 6 general election ballot and would allocate \$8.9 billion for water projects. The main sponsor is Jerry Meral, former deputy secretary of the California Natural Resources Agency and now director of the California Water Program at the nonprofit Natural Heritage Institute. This bond is more strictly focused on water and wastewater projects. There is no money for parks, but there is money for watershed improvements all over the state.

The November bond measure targets a much broader array of water projects. For example, it includes \$100 million to change the way existing water storage reservoirs are operated so they can capture more runoff. The dams themselves would not be changed, only their operating rules. It also includes \$550 million for projects to capture and reuse stormwater, \$300 million for water conservation projects and \$60 million to improve data gathering on the state's water resources.

This bond also includes a particular focus on groundwater, with \$640 million designated to help implement the Sustainable Groundwater Management Act, the state's first effort to comprehensively regulate groundwater extraction. Most of this money will be offered as grants to help dozens of new groundwater management agencies acquire land and water from willing sellers to begin recharging depleted aquifers.

For example, the November bond measure includes \$200 million to help pay for repairs at Oroville Dam, which was heavily damaged by storms in February 2017. This money is being made available in case the Federal Emergency Management Agency doesn't cover all the repair costs. But Oroville Dam doesn't serve every Californian. It is part of the State Water Project, which provides some water for about two-thirds of the state's residents.

The same bond includes \$750 million to repair the Friant-Kern Canal. The canal is buckling because of heavy groundwater pumping in the San Joaquin Valley that caused the land to subside. This has compromised the canal's water-delivery capacity. In short, every California taxpayer is being asked to fix a canal that serves about 14 agricultural irrigation districts, which was damaged by a handful of groundwater users.

California Water Alliance Issues Statement Opposing Proposition 68 for June Primary Election

May 17, 2018 | [CalWA News](#), [Press Releases](#)

FOR IMMEDIATE RELEASE:

Media Contact: Robert Dolezal

(916) 408-5144

<https://californiawateralliance.org/california-water-alliance-issues-statement-opposing-proposition-68-for-june-primary-election/>

(Hanford, California) The California Water Alliance (CalWA) Board of Directors today voted to oppose Proposition 68, a statewide legislative initiative titled the Parks, Environment and Water Bond, appearing on the ballot in June's Primary Election.

"All too often, Californians are fooled when they cast their ballots by believing misleading language like that used by California's Attorney General to describe Proposition 68," said Erik Hansen, Chairman of CalWA and a San Joaquin Valley farmer.

"Proposition 68 is a highly deceptive measure written by special interests that cloaks what really is a local-parks-and-recreation bond measure billed as a vital state water bond; it utterly fails to give

Californians a single drop of new water or solve any of the state's long-term water problems," he said. "Voters reading the state Attorney General's initiative title and summary will learn little about how its four billion dollars will be spent," he continued. "To help it pass, they called it a water bond. Nothing could be further from the truth."

"Local projects like those in Proposition 68 should be paid for by those who use the local and regional parks, not by the entire state's taxpayers," Hansen continued. "Pork-barrel spending to benefit environmental and conservation groups will keep our grandchildren paying interest and principal on these bonds for decades into the future."

"When Californians vote in June, they should remember: Proposition 68 is not a water supply or reliability fix. It gives hundreds of millions of dollars to state conservancies, consultants and advisors without addressing real water problems facing real people," Hansen continued. "We've been fooled before. Don't let them fool us again."

"The California Water Alliance's mission is to promote legitimate water infrastructure policy not to lend credibility to yet another bond initiative that deceives fiscally responsible voters," Hansen concluded.

Governor Candidate Calls State's New Mandatory Solar Roof Law a Fraud; Promotes Nuclear Power

Really, you must read the full article provided by the link. It is not only good, it is fun and will provide you with much ammunition to fire at your environmentalist 'friends.'

(Michael Shellenberger is a Democratic candidate for Governor of California, President of Environmental Progress and Time Magazine 'Hero of the Environment' for 2008.)

California's Solar Roof Law Will Raise Housing And Energy Prices But Do Little To Reduce Emissions

[Michael Shellenberger](#) Contributor
May 10, 2018

<https://www.forbes.com/sites/michaelshellenberger/2018/05/10/californias-solar-roof-law-will-increase-housing-energy-prices-and-do-little-to-reduce-emissions/#4bfad3763199>

California's new solar roof mandate will make housing more expensive, increase electricity prices, and transfer wealth upwards.

What it won't do is significantly reduce carbon emissions.

The deployment of solar has been the main driver of high and rising electricity prices in California, which currently produces more solar energy than it can use.

"We already have some of the highest electricity rates in the country, and this will only be exacerbated by this mandate," UC-Berkeley economist [Lucas Davis](#) said. "As more and more rooftop solar gets installed, that pushes the cost onto all the non-solar customers."

From 2011 to 2017, California's electricity rates increased five times more than they did in the rest of the U.S.

California regulators say a solar roof will add \$9,500 in new costs but the average price of a solar roof in California is \$19,380.

California is in the midst of the worst housing and homelessness crisis since the Great Depression.

California has the second-most-expensive homes in the nation after Hawaii, and the third-worst state homeownership rate for millennials.

At the current rate California is adding homes, it would take over 100 years of solar roof-building to replace just the clean energy produced by the state's two nuclear plants.

And during that 100 years, all of the solar panels would need to be replaced at least three times, given the degradation of panels.

Against the hype about its solar policies, California underperformed the rest of the U.S. on reducing emissions.

Carbon emissions rose 3.2 percent in California between 2011 and 2015 even as they declined 3.7 percent in the remaining 49 states.

California's in-state emissions from electricity generation rose from 33 to 44 million metric tons of carbon emissions between 2011 and 2015.

Criminal Investigation of Nuclear Plant Closure

Since he took office in 2011, Governor Jerry Brown and the regulatory bodies he controls have worked to close the state's two nuclear plants.

Between 1976 and 1979, Brown and his allies killed so many nuclear power plants that, had they been built, California would today be generating almost all of its electricity from zero-pollution power plants.

In 2013, California's top energy regulator — a Brown appointee — made a secret deal to close down San Onofre nuclear plant.

The Brown appointee offered Southern California Edison an electricity rate increase worth \$3.3 billion even though San Onofre could have kept operating had the utility simply replaced the new steam generator, which would have cost well under \$1 billion.

Fracking: A New Report

The report below on the practice of dumping wastewater from the recovery of oil into unlined, open pits here in California is not an "environmentalist extremist" issue. It gets at the heart of why a full-blown nuclear and fusion development policy is necessary. First, though, a report from *Executive Intelligence Review* from four years ago:

Fracking: The Economics of Extinction

http://www.larouchepub.com/eiw/public/2014/eirv41n12-20140321/78-80_4112.pdf

Executive Intelligence Review

March 21, 2014

"At a time when half the United States is in drought, when 80% of the national food crop is threatened, and communities are faced with the prospect of turning on the faucet to see no water run, whatever

temporary economic relief hydraulic-fractured natural gas is bringing to communities, the net effect of this boom is criminal, and coheres with the colonial free-trade policies that have brought us the drought and gutted our infrastructure. This is why Lyndon LaRouche and LaRouchePAC have been so adamant that we shut down the fracking boom. In fact, as you will see, the industry would not even exist, or would exist in a very different form, if the progress of nuclear power had not been halted many decades ago....”

Toxic Wastewater From Oil Fields Endangers California’s Water Supply, Scientists Tell NBC Bay Area

By [Stephen Stock](#), [Robert Campos](#), [Michael Horn](#) and [Kaslin Ettema](#)

May 18, 2018

<https://www.nbcbayarea.com/investigations/Toxic-WasteWater-From-Oil-Fields-Endangers-Californias-Water-Supply-Scientists-Tell-NBC-Bay-Area-483089841.html>

The practice of dumping wastewater from the recovery of oil into unlined, open pits is one that has been banned in nearly every other state in the U.S. But here in California, oil companies can legally dump toxic waste onto the bare ground - into what are called “percolation ponds.” The waste comes from oil drilling, which requires an average of 12 gallons of water for every gallon of oil that is produced according to the Central Valley Regional Water Quality Control Board (CVRWQCB) which oversees this open dumping. When it comes up out of the well, scientific tests and a staff report from the Water Board show the wastewater can contain toxic chemicals in it like benzene, xylenes, ethylbenzene, boron, strontium and toluene.

According the CVRWQCB’s Incoming Executive Officer Patrick Pulupa, there are at least 1086 active wastewater ponds stretching from Monterey to Kern County. NBC Bay Area’s Investigative Unit found even more active ponds that are not on the Central Valley Regional Water Quality Control Board’s list.

“Astonishingly, California is the only oil producing state that allows this reckless practice,” said Hollin Kretzman, a lawyer with the Center for Biodiversity.

“It’s very concerning that the contamination is spreading underground to groundwater,” said Kretzman.

In just one series of ponds, near the small community of Buttonwillow, in Kern County, California, NBC Bay Area found that oil drilling operations are dumping as much as 4.8million gallons of wastewater per day during peak periods. Oil companies contend that the toxins are filtered out as the water seeps into the soil, but a report by the staff at the Central Valley Regional Water Quality Control Board concludes polluted water has migrated underground 2.2 miles from the wastewater ponds in one instance and more than a mile in another instance.

A Culture of Pessimism Is Stupid

As the U.S. continues to flounder as the President's intent to build infrastructure goes nowhere in this worthless, and largely criminal, Congress, here are a few contrasting items under my title: If China, Bolivia, Russia and Syria can do it, so can we:

One Quarter of U.S. Nuclear Plants Are Losing Money

May 18, 2018 (EIRNS)--A study just released by Bloomberg shows that one quarter of all operating U.S. nuclear power plants don't make enough money to cover their operating costs, and could shut down over the next three years. The 24 plants that are at risk have a generating capacity of 32.5 GW, which is more than a quarter of the entire fleet of U.S. reactors.

The report's authors estimate that it would cost \$1.3 billion per year to "close the revenue gap" to allow the plants to stay open. A similar report in March showed that half of U.S. coal-fired electric capacity is on "shaky ground."

Head of Bolivian Nuclear Agency: Developing Nuclear Energy Is Real Sovereignty

May 21 (EIRNS)--Speaking during the May 13-15 Atomexpo Forum in Sochi, Russia, Hortensia Jimenez, head of the Bolivian Nuclear Energy Agency (ABEN), discussed President Evo Morales' conception of nuclear energy as a means to achieve complete economic, scientific, and educational sovereignty.

This is not an issue of simply purchasing technology, Jimenez told {El Universal}, but "advancing in our own capabilities, educating our young people, and promoting our own specialists' research." She also emphasized that the development of science and technology "is not a matter of private investment but of sovereignty and public policy which conceives of the role of science and education as the primary promoters of our nation's development."

Jimenez detailed the construction that is underway for three nuclear research centers in Bolivia, one for nuclear medicine, one for food irradiation and agricultural research, and one containing a research reactor. Comparing Bolivia's progress to that of Russia, Turkey, Egypt and Belarus, Jimenez pointed to an international apparatus which she said is at work surreptitiously to sow fear and suspicion about the safety of nuclear energy. Morales' conception, she said, is that science is as important "as [national] territory or the economy to be able to discuss sovereignty. Without science and without knowledge, we can never be a truly free nation."

The Pessimistic Current among Americans

May 17 (EIRNS)—According to a report by the National Center for Health Statistics (NCHS), part of the U.S. Centers for Disease Control and Prevention (CDC), births in the United States have plunged to record lows not seen in decades, marking a profound cultural shift that could have ramifications for the future economy.

Pointing out the "the lowest total fertility rate since 1978," NCHS reported that the U.S. birth rate plummeted to a 30-year low. "The 3.85 million U.S. births in 2017 were the fewest since 1987, as American women under 40 continued to delay childbearing. About 77,000 fewer babies were born last year than in 2016—about a 2% drop year-on-year."

What further threatens the United States' social and economic future is the increase of deaths due to the opioid epidemic, which is continuing to mushroom. In a March 6 press conference, the Centers for Disease Control reported that hospital emergency department visits due to opioid overdoses increased about 30% in the U.S. from the third quarter of 2016 to the third quarter of 2017.

China Ponders End of Limits on Births, in Search of Expanding Creativity

May 23 (EIRNS)—The Communist Party of China's Global Times published a fascinating "Observer" column on May 22 suggesting that "China is considering an end to all limits imposed on the number of

children a family can have.” The suggestion is sourced to Bloomberg rather than to a Chinese origin, but also states that Bloomberg credits a source “familiar with the matter.”

The reasoning of author Yu Ning is the most interesting aspect. He writes that there is no confirmation of the report, but, “one thing is certain: China’s understanding of population has been changing and a growing population is now being considered more of an asset than a burden.”

“The old view holds that population is a burden, and when resources are limited, controlling the population will help reduce the pressure on resources, employment and economic development. China’s family planning policy, introduced in the late 1970s, is estimated to have prevented some 400 million births, reducing pressure on resources and the environment.”

Now, however, China is seeing that people, “especially young people, are a source of creativity. It’s believed more people will create more opportunities and inspire more exuberant creativity. Nowadays talent is being highly sought after by Chinese cities with an eye for further development. This indicates the idea that population, especially talent, as a resource has been widely accepted by local governments and society. A huge population not only provides a bigger pool of human capital, but also creates demand and spurs greater consumption. The sheer size of China, a huge country with a population of over 1.3 billion, is one of China’s core advantages. Why did China’s high-speed rail develop faster than any other country in the world? Its large population and frequent migration of people propped up the huge demand for high-speed rail as a popular means of transportation.”

He writes that 7 billion people have traveled on the high-speed rail system since the first one opened in 2008, and says further that China overtook the U.S. as the largest consumer of IT products in 2013. But, he writes, “More importantly, with huge consumption demands brought about by its population, China has made a greater contribution to the global economy.”

He concludes: “The potential of China’s development lies in giving full play to the advantage of the population, improving the quality of the people and promoting mass production and mass consumption. Chinese policymakers have been fully aware of this.”

Putin, Xi Each Calls for Scientific and Technological Focus for Military Preparedness

May 18 (EIRNS)—Russian President Vladimir Putin made brief opening remarks at his May 17 meeting with the Russian Defense Ministry leadership and defense industry heads. He concluded those remarks as follows, according to his Kremlin site: “Our priorities include continued development of advanced weapons systems, which must surpass the best foreign counterparts. We are expecting the design bureaus and research institutes to come up with breakthrough, outside-the-box and effective technical and engineering solutions, which, among other things, should reduce the time and the cost of creating and introducing new weapons. Of course, quality must also improve.”

A day earlier, Chinese President Xi Jinping delivered what Xinhua called “an important speech” to the medical research institute of the Army Academy of Military Science, in which he “stressed accelerating the development of modern military science, and building high-level military research institutions to support the building of a strong military in the new era.” Xi stated that “more importance should be attached to innovations, calling for innovations in military research, defense technology and the organization model of military research.... Xi called for accelerating implementation of the strategy of strengthening the armed forces through science and technology,” Xinhua wrote, and reported that “he said independent innovation was a strategic base point, calling for breakthroughs in core technologies as early as possible.”

Syria Using Parity-Price and Credit Policy To Secure Nation's Wheat Production

STOCKHOLM, May 18, 2018 (EIRNS)--The Syrian government made a decision on May 15 to buy the entire upcoming wheat harvest from the nation's farmers and set up a credit facility to get them started. In addition, it will set up a complete technical and logistical support facility to support the farmers and collect the harvest. It will also provide the farmers with subsidized fuel to complete their operations. On top of that, the government will buy the crops from the farmers for almost twice the value of imported wheat.

This bold decision and the mass support which it will promote could become as important in reconquering the territory of the nation as the heroic Tiger forces of the Syrian army. It amounts to a mass mobilization of the population to resettle and develop what otherwise could become abandoned farmland or potential development areas.

The farmers now have a guarantee to be able to sell their crops, and especially if the price is a parity price allowing for investment, they will rebuild their farms and equip them with machinery. This will bring orders to local industry and bring growth to all the territory of Syria. It is a decision by a nation which has fought hard for its freedom and sovereignty, defying any takeover of its land by foreign plantation owners or oligarchs.

Prime Minister Engineer Imad Khamis explained at a cabinet meeting that "the state will remain the main supporter of national food security, and will never back down from that responsibility." He further stressed that "the support which is given to the strategic crops must flow in the interest of the farmers, so that it becomes a motivation for them to continue their agricultural activities." He further stressed that "all necessary measures have to be taken to enhance agricultural development in the coming years and we have to think in terms of visions that enhance our food security."

<https://sana.sy/en/?p=137765>

Millions of U.S. Families Trapped in Poverty, New Study Shows

May 18 (EIRNS)—A study released May 17 by the United Way ALICE Project paints a devastating picture of the poverty afflicting millions of U.S. families, many of whose members are employed, but don't earn enough to cover the minimum amount needed to sustain a family.

The study by the United Way ALICE Project shows that nearly 51 million U.S. households don't earn enough to afford a monthly budget to cover housing, food, childcare, healthcare, transportation and cell phone. This is 43% of all U.S. households, and includes 16.1 million families living in poverty, plus 34.7 million families who fall within the category of ALICE—Asset Limited, Income-Constrained, Employed. That is, they make less than what's necessary to "survive in a modern economy."

According to project director Stephanie Hoopes, despite "seemingly positive economic signs, the ALICE data show that financial hardship is still a pervasive problem" in the United States. California, New Mexico and Hawaii have the largest percentage of struggling families, at 49% each; North Dakota has the lowest. The study points out that these "employed" in the ALICE category are low-wage earners such as childcare workers, home health aides, office assistants and store clerks, who have no savings. The study also states that 66% of U.S. jobs pay less than \$20/hour. Looking at counties, the study gives one example of King County in Seattle, in which an average family of four in 2016 needed a "survival" budget of \$85,000, requiring an hourly wage of \$42.46. Only 14% of the state's jobs pay more than \$40/hour.

According to the United Way ALICE website, an ALICE member is "a hardworking member of the community who is employed, yet does not earn enough to afford the basic necessities of life. ALICE

earns above the federal poverty level, but does not earn enough to afford a bare-bones household budget of housing, child care, food, transportation, and health care.” Explaining that United Way ALICE uses a new methodology to provide a more accurate picture of financial insecurity at the state, county, and municipal level, John Franklin, president and CEO of United Way of Northern New Jersey, warns that “for too long, the magnitude of financial instability in this country has been understated and obscured by misleading averages and outdated poverty calculations.... It is morally unacceptable and economically unsustainable for our country to have so many hardworking families living paycheck to paycheck. We are all paying a price when ALICE families can’t pay the bills.”

Financial Storm A Coming

If the damn British cannot wreck the Trump Presidency with their now failing attempted coup, or by starting wars, then they will pull the plug on the bankrupt, speculative, criminal financial system:

Fall of Corporate Debt Starts To Cause Severe Liquidity Danger

May 22 (EIRNS)—“Those of us with a little gray hair have seen this before, but I think the coming one is potentially Biblical in proportion.” The website Mauldin Economics carried an editorial May 17 which focused on two emerging rocks where the ship will be wrecked. First, “Corporate debt and especially high-yield debt issuance has exploded since 2009.” The author, John Mauldin, is talking about global corporate debt; but the explosion has been quite plain in the United States non-financial corporate sector, from \$10 trillion in 2010 to \$14 trillion in 2016, and in some estimates as high as \$18 trillion now. And second, “Tighter regulations discouraged banks from making markets in corporate and high-yield debt”; that is from maintaining readiness supposedly to buy or sell from or to any customer in any circumstance.

As Bloomberg showed in a May 19 article, the rise in dollar interest rates has already caused an average corporate bond to drop in value nearly 4% since the start of 2018. Bond values have not dropped this fast in 20 years, since, not the 2008 crash but the dotcom and sovereign bond blowouts of the late 1990s. In countries where companies borrowed heavily in dollars—Turkey, Argentina, Brazil, and numerous smaller developing countries—the loss is worse, and it is causing runs against their currencies, more serious the government’s own debt is also largely borrowed abroad, or not.

Mauldin is warning of the now fairly early point when investors in these devaluing corporate bonds want to sell large amounts of them, particularly of the “high-yield” or junk variety, and longer term. Then the problem of a crash will become acute, because much of the credit for the buying of all this debt, has come from non-banks or “shadow banks,” which are much less capitalized even than the highly-leveraged big banks.

That’s why his article was headlined, “A Liquidity Crisis of Biblical Proportions Is Upon Us.”