

California Drought (and Flood) Update



For August 3, 2017

by Patrick Ruckert

Published weekly since July, 2014

<http://www.californiadroughtupdate.org>

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

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The United States government's responsibilities for defense and for building new economic infrastructure are equally explicitly stated in the Constitution. The American people formed a government to "provide for the common defense"; also to "promote the general welfare" and "to establish post offices and post roads"; and the first Congress in 1789 affirmed the responsibility for ports, by the Lighthouse Act.

Yet the Federal government is planning to fund production of a single class of Navy ships and a single new fighter-bomber fleet with \$400 billion — or more — over the next decade, as much as it is currently investing in building, operating and repairing all forms of economic infrastructure.

The United States is as far behind in its economic infrastructure, as it is seeking to get ahead militarily. With Wall Street running U.S. economic policy, this can't work.

As Far Behind in Infrastructure as Ahead in Military Power

A Note To Readers

The quote above is from a *LaRouche PAC* statement of July 24, 2017. The full statement can be found toward the end of this report. The simpletons usually discuss this idea as “will it be guns or butter?” But, as another item found also in the last section of this report, “Capital Budgeting and Infrastructure: Zero Net Infrastructure Spending Since 2013” demonstrates, not only has there been a net negative investment in U.S. infrastructure by the federal government since 2013, but since the nation's infrastructure is depreciating at a rate of \$100 billion per year, not even President Trump's proposed \$1 trillion of such investment over ten years would result in any net gain or improvement.

The driving idea of these weekly reports has been for more than three years now, that California's water management system that provides the water to 39 million people and makes possible the most productive agricultural producing machine in the world, cannot and will not continue to function into

the future without it being a part of a nation-wide financial and economic reorganization reorganization that concentrates on investments in the real physical economy of science, infrastructure, space exploration, fusion power and rebuilding the broken-down industrial capacity of the nation. That reorganization begins by restoring the American System of public credit, as established by the first U.S. Treasury Secretary Alexander Hamilton. Today, that means the first step must be the shutting down of the Wall Street gambling casino by re-enacting President Franklin D. Roosevelt's Glass-Steagall banking law. And then the rest of *LaRouche's Four Laws* <https://www.youtube.com/watch?v=vKD20EjUYi4>.

And it had better be done soon, for we are day by day arriving at the break point for a new, even bigger than 2008, financial collapse.

With that said, once again I refer you to the last section of this week's report for a discussion on how President Franklin Roosevelt saw his task as he entered the Presidency in 1933, facing a crisis in the nation much like the one we face today.

In This Week's Report

Seattle and Portland may hit 100 degrees today, while here in the Bay Area we are suffering a balmy 77 degrees and it will be down in the sixties on Sunday. And while the drought has left California for now, 11 percent of the country is suffering it.

The Oroville Dam update begins with some videos showing progress of the construction of the spillway, the construction schedule and the “wet spot” on the face of the dam. It is that spot that continues to generate articles and questions that answers seem to be unavailable as yet.

California WaterFix, or better known as the Delta tunnels, a \$17 billion dollar and 17-year project that has received a couple of passes recently and the proponents, led by Governor Brown are acting like they won the lottery. Two opinion pieces, one for and one against the project are presented this week.

Wildfires remain a hot news item (pun intended). One article forecasts that the fire danger will be extreme all the way into November. That is interesting since over the past several years fire officials have said that California's fire season is now twelve months a year.

The proposed Sites Reservoir now has enough water agencies ready to pay for it, that all it needs now is the state to approve it. If approved, it could be completed in maybe less than ten years, maybe not.

San Luis Reservoir will have some work done on it and raise the dam a bit, but it will not begin construction for three years. But, that being in the news gives us opportunity to watch President Kennedy speak as he inaugurated the project.

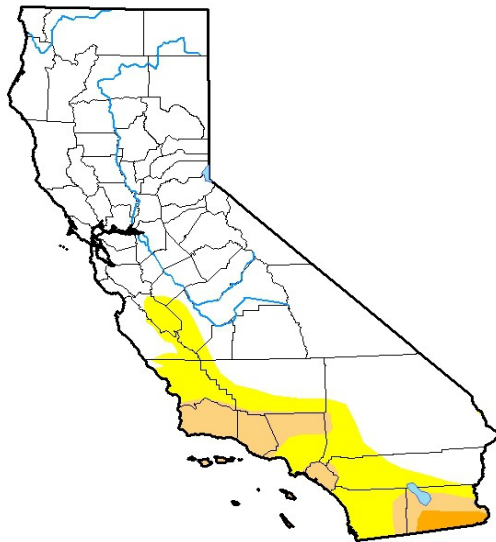
And the State Continues to Go to Pot as it prepares for legalization in January.

The feature this week begins with a discussion of the thinking of President Franklin D. Roosevelt as he entered office in 1933. That is followed by several related articles.

U.S. Drought Monitor and Reservoir Graph

U.S. Drought Monitor California

August 1, 2017
(Released Thursday, Aug. 3, 2017)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	77.86	22.14	8.24	1.06	0.00	0.00
Last Week 07-25-2017	75.73	24.27	8.24	1.06	0.00	0.00
3 Months Ago 05-02-2017	76.47	23.53	8.24	1.06	0.00	0.00
Start of Calendar Year 01-03-2017	18.07	81.93	67.61	54.02	38.17	18.31
Start of Water Year 09-27-2016	0.00	100.00	83.59	62.27	42.80	21.04
One Year Ago 08-02-2016	0.00	100.00	83.59	59.02	42.80	21.04

Intensity:

■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

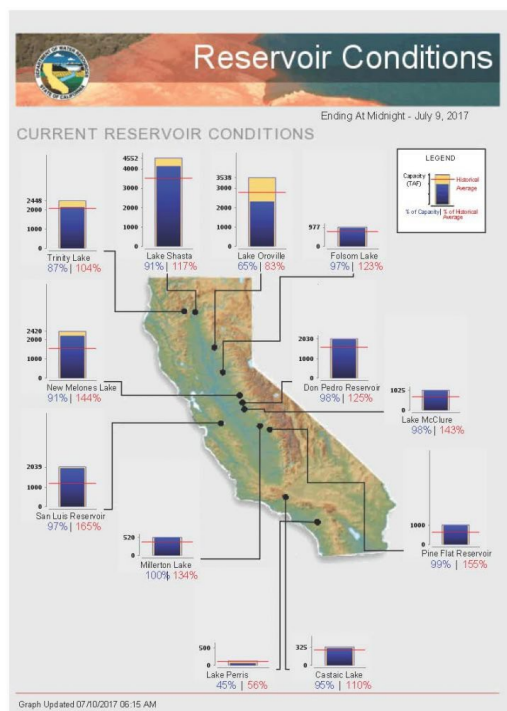
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Deborah Bathke
National Drought Mitigation Center



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



Drought: Its Not Just In California Anymore

Other than record breaking temperatures in the Northwest, neither neither rain, nor snow, nor the heat

of day shall halt at least one report for this section.

Worsening drought conditions in parts of US stressing crops

By DAVID PITT
Associated Press

July 27, 2017

[http://hosted.ap.org/dynamic/stories/U/US_MIDWEST_DROUGHT_CROPS?
SITE=AP&SECTION=HOME&TEMPLATE=DEFAULT](http://hosted.ap.org/dynamic/stories/U/US_MIDWEST_DROUGHT_CROPS?SITE=AP&SECTION=HOME&TEMPLATE=DEFAULT)

DES MOINES, Iowa (AP) -- Drought conditions worsened in several states over the past week from extreme heat and weeks with little rain, raising the prospect that grocery staples such as bread and beans could cost more as the region that produces those commodities is hardest hit.

Drought conditions have begun to stress corn, soybeans, wheat and livestock in some areas, according to the weekly U.S. Drought Monitor released Thursday by the University of Nebraska-Lincoln.

Nearly 11 percent of the continental United States is in moderate drought or worse, said Richard Heim, a meteorologist with the National Oceanic and Atmospheric Administration, in this week's drought summary. The report is compiled weekly using data from the U.S. Department of Agriculture and NOAA.

Oroville Dam Update

Several videos showing the progress of construction on the damaged spillway and the “wet spot” on the face of the dam follow. While the concern about the “wet spot” and what is causing it was extensively covered in last week's report, I include in this section excerpts from an interview with the man who has called attention to it, Robert Bea, the UC Berkeley Engineering professor emeritus and the founder of Berkeley's Center for Catastrophic Risk Management (CCRM).

Then we have some excerpts from a lengthy article from *KQED* which features documents the station obtained under the California Public Records Act, which show the Department of Water Resources has puzzled for years over the source of the seepage feeding the “green spot” and has been slow to act on a 2014 recommendation. The documents are extensively reported on in the article.

As Bea has stated, what is at issue here is the integrity of the dam itself. And thus far, the Department of Water Resources has not responded to the concern in a forthright manner.

Videos

Oroville Spillway Update July 27, 2017

<https://www.youtube.com/watch?v=lgeNnp1WZ0I>

Published on Jul 28, 2017

Roller-compacted concrete begins to fill erosion areas in the middle of the main spillway.

Oroville Spillway Update August 1, 2017

<https://www.youtube.com/watch?v=bcvINGILtXM>

Published on Aug 2, 2017

Construction continues on the lower spillway, building forms and installing drains. The rotary drilling machine begins to expand the holes for the emergency spillway cutoff wall. Concrete goes in on the upper spillway and Kiewit works through the night laying roller-compacted concrete.

7-28-17 Oroville Dam Live Update - Oroville Dam Spillway Reconstruction Schedule - Lake Oroville Dam

<https://www.youtube.com/watch?v=Cz6ivVfnwz8>

Published on Jul 28, 2017

7-28-17 Oroville Dam Live Update - Oroville Dam Spillway Reconstruction Schedule - Lake Oroville Dam

News Alert - 7-28-17 Oroville Dam 'Green Spot' Causes Concern About Leak - Lake Oroville Dam - 2017

<https://www.youtube.com/watch?v=3b3APv-pdUI>

Published on Jul 28, 2017

News Alert - 7-28-17 Oroville Dam 'Green Spot' Causes Concern About Leak - Lake Oroville Dam – 2017

Oroville Dam Update 7-28-17 - DWR ► Final 2017 Construction Plans for Oroville Dam Spillway Approved

<https://www.youtube.com/watch?v=PoYYrg3-MF0>

Published on Jul 28, 2017

Oroville Dam Update 7-28-17 - DWR ► Final 2017 Construction Plans for Oroville Dam Spillway Approved

Bob Bea Takes Us on a Deep Dive Through His Dire Oroville Report

By Glen Martin

<http://alumni.berkeley.edu/california-magazine/just-in/2017-07-27/bob-bea-takes-us-deep-dive-through-his-dire-oroville-report>

CALIFORNIA: You investigated some of the nation's most spectacular disasters, including Hurricane Katrina, Deepwater Horizon, and the Challenger space shuttle. How would a major breach at Oroville compare to those incidents? And is such a failure even possible?

Bea: Yes, it is possible. And it would be worse than any of them. A breach at Oroville would send a wall of water down the Feather River, through the Sacramento Valley and ultimately into the Sacramento/San Joaquin Delta. It would destroy towns along the Feather and Sacramento Rivers, flood major portions of Sacramento, and blow out levees throughout the Delta, permanently flooding much of the region. The huge government pumps near Tracy that send water to Southern California

cities and farms would be incapacitated. There would be tremendous loss of life and property, and it would be years before a permanent water delivery system to the south state could be reestablished.

Furthermore, it wouldn't necessarily take a tremendous amount of rain and uncontrolled releases as we saw in February to trigger such a failure. It could happen on a bright, sunny summer's day. The situation is that serious.

You've often talked about a certain laissez faire attitude among engineers and bureaucrats regarding the risks of large infrastructure projects. How does that apply to Oroville?

First, rigorous state and federal guidelines exist for the risk-based management of dams. Some of them were issued by President Carter following the [Teton Dam failure](#) in Idaho in 1976 [which killed eleven people and caused massive property damage]. But they're simply being ignored. Dams should be viewed like nuclear power plants or jet airliners. With both nuclear plants and passenger jets, there is tremendous emphasis on managing and minimizing risks, and that's appropriate. But dams are treated like inert piles of dirt or concrete that have no potential for catastrophic failure, and that's simply not the case. Oroville isn't just a big dirt plug with a bunch of cows and corn downstream. If it failed, it would be the worst disaster in the history of the United States. The people at DWR are not bad human beings, but it's apparent to me that they're not up to the risk management challenges they're facing.

Governor Jerry Brown (B.A., Cal Classics) has just appointed Grant Davis (B.S., Cal Political Science) as the new director for DWR. He was formerly the director of the Bay Institute and the Sonoma County Water Agency. In both positions, he was a strong advocate for environmental protections and sustainable water use. What do you think of him?

He's certainly an improvement over recent past directors, but he's no [Admiral] Hiram Rickover [widely regarded as the father of the U.S. nuclear submarine fleet and a visionary engineer who promoted safety and risk aversion in both marine and terrestrial nuclear power plants]. Davis has good environmental credentials, but I don't think he knows much about managing risk, and I'm not sure he has the guts to say what needs to be said to the people above him. I just don't think he has the capabilities we need at this point.

Is 'Green Spot' a Sign of More Trouble for Oroville Dam?



An inspection team views seepage at Oroville Dam's green spot in February 2011. Unexplained moisture has appeared in the area for years, raising concerns the dam's stability may be affected. (California Department of Water Resources)

By [Dan Brekke](#) July 28, 2017

[Share](#)

Updated 5:35 p.m. Friday

<https://www.kqed.org/news/2017/07/28/oroville-dam-green-spot-department-of-water-resources/>

From Day 1 of the Oroville spillway crisis in February, the California Department of Water Resources has never wavered in its declarations that, despite the disintegration of the massive concrete flood control outlet and a near-disaster caused by uncontrolled emergency reservoir flows down a rapidly eroding hillside, the stability of the massive dam itself was not and has never been threatened.

Despite those oft-repeated assurances, public questions about the dam's integrity have persisted — in internet forums, in community meetings and, most recently, in [a report](#) released last week under the auspices of UC Berkeley's Center for Catastrophic Risk Management.

That's in part a reflection of [public distrust of DWR](#) after the spillway incident and in part a recognition that anything that seriously compromises the 770-foot-tall dam could endanger tens of thousands of lives, cripple a key element of California's water-supply network and put the state's entire economy at risk.

Specifically, the questions have focused on an extensive area of moisture on the left side of the dam's downstream face that's known, even to the Department of Water Resources, as "the green spot."

The spot, characterized by what state inspectors have termed "lush" vegetation during wet seasons that turns into dense thickets of dry weeds by late summer, is clearly visible on satellite images and measures about 700 feet long by 130 feet wide. That's roughly the size of two football fields.



A satellite image shows Oroville Dam's green spot on April 14, 2015. (Google Earth)

Last week's [study](#), led by internationally known civil engineer and risk management analyst [Robert Bea](#), included several subreports asking whether the moisture at the green spot is a sign that water is leaking through the dam and weakening its inner structure.

Publicly, DWR officials have tended to dismiss those concerns. In response to questions at community meetings in [Oroville](#) and [Yuba City](#) in May, for instance, the agency said the green area is due to rainfall, that it first appeared while the dam was under construction, and that it poses no risk to the dam.

But outside public view, documents KQED obtained under the California Public Records Act show the Department of Water Resources has puzzled for years over the source of the seepage feeding the "green spot" and has been slow to act on a 2014 recommendation from independent experts to

investigate the issue.

California orders closer look at dams after Oroville crisis – including 7 in our region

By Dale Kasler

and Ryan Sabalow

dkasler@sacbee.com

July 27, 2017 5:18 PM

<http://www.fresnobee.com/news/local/article164090137.html>

California officials have [ordered owners of 93 dams to reinspect their flood-control spillways](#) following the [Oroville Dam crisis](#), including seven in eastern Fresno County.

The dams at Shaver, Huntington, Edison and Florence lakes, owned by Southern California Edison, are on the list released Thursday by the Department of Water Resources. So are Crane Valley Dam (which creates Bass Lake), Courtright Dam and Wishon Dam, which are owned by Pacific Gas & Electric Co.

Large dams on the list include New Exchequer, which creates Lake McClure on the Merced River, and Don Pedro Dam on the Tuolumne River, which contains the sixth-largest reservoir in California.

The 93 dams represent less than 10 percent of the 1,250 dams overseen by the Department of Water Resources' dam safety division.

DWR said the probes were ordered in recognition of the emergency at Oroville, which prompted a mass evacuation, and the fact that California's dams are 70 years old on average.

Preliminary assessments showed each of the spillways on the list "may have potential geologic, structural or performance issues that could jeopardize its ability to safely pass a flood event," according to letters the dam-safety division sent to the dam owners. "Therefore, we are requesting that you perform a comprehensive condition assessment of the spillway as soon as possible."

Two Views on the Tunnels

One issue that will not go away, and perhaps will play out over the next 17 years, is the California WaterFix, or the twin tunnels to run water under the Delta to aqueducts going south. It has been argued about for years and will be argued about for years to come. But, in the end, whatever the decision on building or not building, one thing is certain: The project does not add one new drop of water to the overall supply the state has now. That will not work, for in 20 years the state's population will be 50 million people, more than 10 million more than today. Next week's report will present what we must do instead of just redistributing a fixed supply of water, an amount which, by the way, can dramatically vary year to year, as we experienced during the five year drought.

What follows are just the introductory paragraphs of two articles published by the State Treasurer's office which present the ye and nay views on the project.

[California State Treasurer's Office](#)

John Chiang serves as California's 33rd State Treasurer

Jul 21, 2017

<https://medium.com/@catreasurer/modernizing-the-delta-time-for-a-decision-671459018042>

Modernizing the Delta: Time for a Decision

By Jeffrey Kightlinger

****Editor's Note: The following article is one viewpoint on the proposed California WaterFix project, the topic of our Head to Head feature in July. On July 25, an opposing viewpoint was published in the article "[The Real Costs of the CA WaterFix](#)."*

The decades-old water system in the Sacramento-San Joaquin Delta that supplies water to two-thirds of all Californians is a classic case of aging infrastructure. The problem is compounded by a declining ecosystem and 1,100-mile levee system that are increasingly vulnerable. As a state, we now have the opportunity to modernize this system so it can continue to deliver water to 25 million Californians and millions of acres of farmland.

State and federal agencies have been working toward a solution for more than 10 years, a process that has included the most comprehensive environmental analysis ever undertaken for an infrastructure project.

The result is California WaterFix. The plan would construct new water intakes in the northern Delta, allowing many of the current problems to be avoided. There, water quality is healthier. It is outside of the area where many threatened native fish species like Delta smelt migrate. And it is north of the fragile levees in the Delta.

The Real Costs of the CA WaterFix

By Barbara Barrigan-Parrilla

****Editor's Note: The following article is one viewpoint on the proposed California WaterFix project, the topic of our Head to Head feature in July. On July 21, an opposing viewpoint was published in the article "[Modernizing the Delta: Time for a Decision](#)."*

Californians will face huge costs and unreliable deliveries from the climate change-sensitive California WaterFix, a two-tunnels water diversion project that would continue to over-extract water from the San Francisco Bay-Delta.

CA WaterFix's construction cost alone starts at \$17 billion in 2017 dollars, according to Metropolitan Water District of Southern California, excluding annualized operating costs and debt service. It will take 17 years to complete the project, causing major economic, environmental, and community disruptions throughout the Delta. After 11 years, the project still has no clear finance plan and is only 10% designed.

Though water contractors insist that beneficiaries will pay, Goldman Sachs recently presented to Westlands Water District board members an array of finance options, including federal loans, that are most often used for public private partnerships.

Wildfires

Fire season could stay dangerous into November, experts predict

<http://www.pe.com/2017/08/01/fire-season-could-stay-dangerous-into-november-experts-predict/>

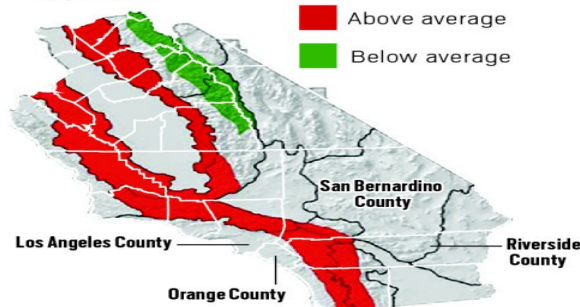
*By [Brian Rokos](#) | brokos@scng.com | The Press-Enterprise
August 1, 2017*

In a report that makes last spring's end to the drought seem like a distant memory, fire officials say anything that could fuel a devastating brush fire in Southern California is quickly drying out and that residents should have their evacuation plans in place.

LARGE FIRE POTENTIAL

Above-normal temperatures, a high amount of grasses and "critically dry" brush are expected to combine to trigger a busy fire season in August through November.

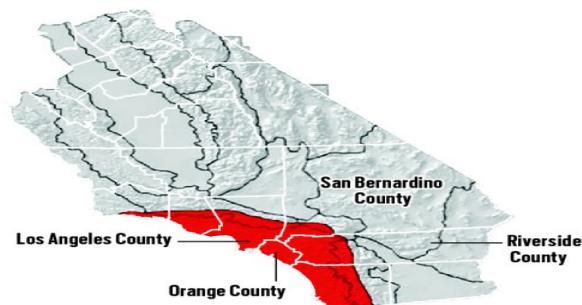
August 2017



September-October 2017



November 2017



Source: National Interagency Coordination Center

SCNG

"This has already been a busy fire season, and it has the potential to continue to be a busy fire season into November," said Tom Rolinski, a meteorologist with the U.S. Forest Service. "The big wild card is, how much Santa Ana winds are we going to get before we get any meaningful rainfall?"

Those winds, which blow west from the desert, can sap any remaining moisture from vegetation and push flames faster than firefighters can move. They typically start to show up in September and are most active from October through February.

Forecasters including Rolinski in the multi-agency [Geographic Area Coordination Center](#) issued their latest [three-month seasonal outlook](#) on Tuesday, Aug. 1.

"This fall may be one of the more active and dangerous seasons in years due to the high amount of fuel loading from last winter's rains and the remnant stands of dead vegetation," the report concludes.

There's a bumper crop of grasses this year because of the rains that ended the drought, and the grass is expected to reach "critical dryness" by the end of August, the report said.

The hot weather that cooked Southern California in June continued through most of July, with temperatures 4-6 degrees above normal. And there was less monsoonal moisture than usual in July. That hot, dry weather has caused both "fine" and "heavy" fuels to dry to near-record low levels.

"The heavier fuels are at the point where they are going to support heavier fire," Rolinski said. "That's why we are getting more fire activity."

Through July 30 this year, Cal Fire has responded to about 30 percent more fires that have burned about 50 percent more acres than at this time last year. But that heightened activity does not necessarily mean there will be more fires through the rest of the year, Rolinski said

Fires burning in both California and Nevada near Tahoe

Michael Shepard via Mountain Democrat

July 27, 2017

<http://www.tahoedailytribune.com/news/fires-burning-in-both-california-and-nevada-near-tahoe/>

Firefighters in the region and throughout the West have had a busy summer so far, and there are few signs pointing toward an easing in the fire season.

Over 5,000 firefighters are on the lines of 11 large wildfires burning in California, according to a Thursday morning update from Cal Fire.

A New Reservoir-- In About Ten Years

Enough water agencies have bought in to get Sites Reservoir built even without Prop. 1 funding

By [Steve Schoonover](#), Chico Enterprise-Record

07/27/17

<http://www.chicoer.com/general-news/20170727/enough-water-agencies-have-bought-in-to-get-sites-reservoir-built-even-without-prop-1-funding>

Maxwell >> The deadline is Aug. 14 to apply for water storage funding from the Proposition 1 bond measure voters approved in 2014, and while the folks working to build Sites Reservoir will be applying, they don't need the money.

Enough water agencies have agreed to invest in the reservoir near Maxwell that it can be built without taxpayer funds, according to Sites Project Authority General Manager Jim Watson.

Twenty-eight agencies have signed on to support the construction in exchange for a share of the water that would be delivered from the lake, according to the authority's website. Watson said the funds committed would pay the \$4.7 billion cost of building the reservoir.

So the Sites authority's application to the California Water Commission will be a little different than most: Rather than a plea for funding needed to make a storage project possible, the authority will be

offering the state a chance to invest in a project that's likely to be built one way or another.

With funding identified, the biggest hurdle left is governmental approval.

Sites would be a 1.8 million acre-foot reservoir located in a valley about eight miles west of Maxwell. That's roughly half the size of Lake Oroville and twice the size of Folsom Lake.

There would also be a couple of small forebays. Three recreation areas are part of the plan as well.

The main reservoir would be off-stream, meaning the water to fill it wouldn't come by damming a river. Instead water would pumped in from the Sacramento River during times of high flows and saved for use in the dry times.

An Excuse To Watch President John F. Kennedy

Some work will begin on the San Luis Reservoir, in about three years. The article excerpted below tells the story. But, really I include this to put before you once again the very nice speech by President John Kennedy as he inaugurated the project more than 50 years ago.

JFK the dedication of San Luis reservoir, in Los Banos CA

<https://www.youtube.com/watch?v=ZGH282zD5ZM>

Retrofit project planned for San Luis Dam

July 27, 2017

http://www.westsideconnect.com/news/local_news/retrofit-project-planned-for-san-luis-dam/article_9220a774-72f3-11e7-a09e-6f2e9eadac74.html



San Luis Dam

SANTA NELLA - A long-term retrofit project to raise and strengthen B.F. Sisk Dam, commonly referred to as the San Luis Dam, is moving through the planning process and could break ground in three years.

Project leaders, while stressing that the chances of a dam failure are remote, said the planned retrofit

is necessary to bring the structure up to current seismic safety standards.

The 300-foot high earthen dam was constructed 50 years ago as a joint project providing irrigation water storage for the federal Central Valley Project and municipal and industrial water for the State Water Project. Behind the dam is San Luis Reservoir, with a capacity of more than two million acre-feet of water.

And the State Continues to Go to Pot

Last week I included the article on how the state was going to act to ensure there will be plenty of dope for the dopes when legalization begins January 1, 2018. Here is that article:

<https://merryjane.com/news/california-working-to-avoid-recreational-marijuana-shortage>.

This week, all the problems and damage the growing of marijuana will cause is the topic.

State proposing new water regulations for legal pot farming

By Keith Carls

Aug 03, 2017

<http://www.keyt.com/news/california/state-proposing-new-water-regulations-for-legal-pot-farming/598875303>

SANTA MARIA, Calif. - The State Water Resources Control Board has begun the public review period for proposed regulations to protect surface and groundwater supplies from pollution generated by legal cannabis farming.

"We have anecdotal stories and evidence of just buckets of stuff just being dumped into streams killing fish, poisoning the water", says Felicia Marcus with the SWRCB, "the illegal cannabis issue has been a huge one that our enforcement efforts have grown on, and now as cannabis is legalized with more people coming into the fold the expectation is they are going to meet the same rules or even stricter rules."

The proposed regulations will also address the permitting process for marijuana farms and enforcement of waste discharged violations.

Feature: FDR and a National Credit System

President Trump does want to make the country great again, but to do so he must take a lesson from President Franklin D. Roosevelt. For, as FDR understood, in order to bring the nation out of the depths of the Great Depression the government of the United States must act, and act he did, unleashing the greatest infrastructure building process in our nation's history. That legacy we still live off of today, and one sees it in the Central Valley Project, the Grand Coulee Dam, the Tennessee Valley Authority, and thousands of smaller projects that are spread all over the country.

Following that discussion are a couple more articles on the topic.

The Discussion

Here is some discussion of how and what that great President thought about the job he had to do. The following includes material from a series of posts by Michael Kirsch in 2013.

Driving FDR's policies was his intent to create a new system in which the government would act like the government of the Preamble of the Constitution. As he wrote in 1938 in the "Papers of Franklin Roosevelt," "that the Government itself was going to use affirmative action to bring about its avowed objectives." That new system, he wrote, "would replace the old order of special privilege in a Nation which was completely and thoroughly disgusted with the existing dispensation."

And he was explicit in respect to the Preamble:

"The New Deal was fundamentally intended as a modern expression of ideals set forth one hundred and fifty years ago in the Preamble of the Constitution of the United States -a more perfect union, justice, domestic tranquility, the common defense, the general welfare and the blessings of liberty to ourselves and our posterity.

"But we were not to be content with merely hoping for these ideals. We were to use the instrumentalities and powers of Government actively to fight for them. There would be no effort to circumscribe the scope of private initiative so long as the rules of fair play were observed. There would be no obstacle to the incentive of reasonable and legitimate private profit.

"Because the American system from its inception presupposed and sought to maintain a society based on personal liberty, on private ownership of property and on reasonable private profit from each man's labor or capital, the New Deal would insist on all three factors. But because the American system visualized protection of the individual against the misuse of private economic power, the New Deal would insist on curbing such power."

And since FDR had a direct personal connection to the founder of that American System of national credit, Alexander Hamilton through his relative Issac Roosevelt who worked in Hamilton's Treasury Department, Hamilton's words on the meaning of the "general welfare" clause in the Preamble, as he wrote in his "Report on Manufactures" is conclusive:

"The terms 'general welfare' were doubtless intended to signify more than as expressed or imported in those which Preceded; otherwise numerous exigencies incident to the affairs of a nation would have been left without a provision. The phrase is as comprehensive as any that could have been used; because it was not fit that the constitutional authority of the Union, to appropriate its revenues shou'd have been restricted within narrower limits than the 'General Welfare' and because this necessarily embraces a vast variety of particulars, which are susceptible neither of specification nor of definition.

"It is therefore of necessity left to the discretion of the National Legislature, to pronounce, upon the objects, which concern the general Welfare, and for which under that description, an appropriation of money is requisite and proper. And there seems to be no room for a doubt that whatever concerns the general interests of *learning of Agriculture or Manufactures* and of *Commerce* are within the sphere of the national Council *as far as regards an application of Money.*"

As Far Behind in Infrastructure as Ahead in Military Power

July 24, 2017

The United States government's responsibilities for defense and for building new economic infrastructure are equally explicitly stated in the Constitution. The American people formed a government to "provide for the common defense"; also to "promote the general welfare" and "to establish post offices and post roads"; and the first Congress in 1789 affirmed the responsibility for ports, by the Lighthouse Act.

Yet the Federal government is planning to fund production of a single class of Navy ships and a single new

fighter-bomber fleet with \$400 billion — or more — over the next decade, as much as it is currently investing in *building, operating and repairing all forms* of economic infrastructure.

These are the Ford class aircraft carrier — the first, \$13 billion ship, out of 12 planned, having been commissioned by President Donald Trump July 22 — and the F-35 aircraft. Russia's and China's navies each operate one aircraft carrier.

Both systems are intended to replace older ones — Nimitz class carriers and F16 fighter-bombers — which are considered to be ending their planned lifetimes; 50 years in the case of the Nimitz carriers, for example. Most of the most important American transportation, navigation, water and water management, power, and even space exploration infrastructure is from 40 years to a century or more old, some of it crumbling and failing disastrously, with no action taken to replace it with new infrastructure platforms and modern technology.

Both new military systems employ not only very large funding, but also largely untested new technologies; neither the Ford class carrier nor the F-35 are as proven in operation as are magnetic levitation rail lines. Public funding equal to the funding for these two systems could build a 25,000 mile new high-speed rail network including maglev routes.

There is no public concern, and rightly so, about *this* public debt "destroying the credit of the United States" (nor about the two nuclear reactors which power the *USS Gerald R. Ford*). But in fact, the crumbling of the Wall Street-dominated U.S. economy and its infrastructure is making it take longer and longer, and more and more funds, to build such ships and planes. The looming second disastrous financial crash in a decade, if it isn't stopped by anti-Wall Street policies, will cripple such production entirely.

The United States is as far behind in its economic infrastructure, as it is seeking to get ahead militarily. With Wall Street running U.S. economic policy, this can't work.

Capital Budgeting and Infrastructure: Zero Net Infrastructure Spending Since 2013

July 31-- (EIRNS)-- According to the Bureau of Economic Analysis [of the Commercial Department], net [including depreciation] Federal spending on non-defense infrastructure fell to \$10 billion in 2013 — effectively, to zero -- and has been well below zero since. Even when defense infrastructure investment is included, the net investment has been below zero since 2014.

State and local net infrastructure investment still has a positive value of about \$60 billion/year across the country, but this has collapsed by more than half since 2000.

What is the depreciation amount? Federal publicly-supported infrastructure depreciation is about \$100 billion annually according to the BEA; so \$1 trillion in investment over 10 years would be net investment of zero, even in basic good repair and renovation.

Lyndon LaRouche in a 2006 paper on capital budgeting, wrote: "What we must do now, is increase the credit uttered by the Federal government, the only agency allowed to do so under our Constitutional system, such that the total amount allotted in each coming year immediately ahead, vastly exceeds the amount used up during the relevant, current fiscal year."

So the investment in "credit uttered by the Federal government" must "vastly exceed" \$1 trillion over 10 years. This is because simple replacement of depreciation is a zero investment in accounting terms only; in real physical terms it is below zero, because much important infrastructure has already been completely depreciated and must be replaced by new infrastructure with new technology.

Furthermore, \$100 billion/year is the upper limit of what the CBO should score as the "current cost" of any large-scale Hamiltonian credit institution's investment in new infrastructure. LaRouche: "The portion of an investment which may be regarded as consumed within a fiscal year, is the portion which

corresponds to the part of an investment which has been used up {physically}." Otherwise, the additional "current cost" of such an institution is merely the annual amount of the tax revenue required to support its capital.

The credit issued [LaRouche: "uttered"] by such an institution is not current cost; it consists of {assets} which have a future value of the economic use of the new infrastructure platform being created in each case. The capital budget, as a credit issuance, has nothing to do with "current cost."

Former NASA Chief Advises Trump: Return to the Moon, Work with China, and Get NASA Funding

July 19 (EIRNS)—Following a speech in Huntsville, Alabama, on July 14, former NASA Administrator Charles Bolden was interviewed by Lee Roop from the Alabama Media Group, which publishes the *Huntsville Times*. A most interesting point was made regarding the Moon, where Bolden proposed that a manned lunar mission should be carried out, and that in cooperation with China—tossing aside years of having to defend the Obama space program takedown, which had removed manned lunar missions. “We don’t need them to go to Mars right now,” he said. “We do need them to help get humans back on the surface of the Moon in this 10-year decade of time, the ’20s, when we really need to be making sure that the technology to take us to Mars is going to work.”

By the end of his years at NASA, which stretched through both of Obama’s terms in office, Bolden saw every other space-faring nation start planning manned lunar exploration missions. Over the years, he had become increasingly frustrated with the Congressional ban on space cooperation with China, which he expressed in public, with no way to do anything about it.

Bolden’s advice to the President was blunt. “Everybody likes space,” he said, but “put your money where your mouth is. If you want to know what’s important to you, look at the budget.” He also advised that former Huntsville Marshall Space Flight Center Director Robert Lightfoot, who has been NASA’s Acting Administrator, be appointed as administrator, so that NASA has the leadership it needs to accomplish the task.