# California Drought (and Flood) Update



# For August 10, 2017 by Patrick Ruckert

Published weekly since July, 2014

http://www.californiadroughtupdate.org

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President Trump and Secretary Tillerson have made it abundantly clear that the world's two nuclear superpowers must be friends, not enemies. The President also directly named the Congress as the responsible party for the dangerous state of affairs between these two nations, following the despicable, near-unanimous Congressional votes to impose sanctions on Russia, and even on the businesses of our allies who do business with Russia. The Congress must be forced to end the McCarthyite witchhunt, and to launch, instead, a full investigation into the lies of the war party, using the evidence in the VIPS report.

VIPS Exposure of the Fraud Behind Russiagate Breaks Out in The Nation

### A Note To Readers

I offer no apology for the quote above having little apparent connection to the subject of this report. Simply this: The California water management system will be the least of our worries in a nuclear war, or, for that matter, should the destruction of the President's intent to rebuild the nation's infrastructure continue to be blocked by the insanity and criminality of the U.S. media, the intelligence agencies and members of Congress. The quote is from this statement by LaRouche PAC:

https://larouchepac.com/20170810/vips-exposure-fraud-behind-russiagate-breaks-out-nation

### This Week's Report

Yes, it can rain in Southern California in the Summer.

What is a "flash drought?"

The California drought continues to wreak damage as the Friant-Kern Canal slows by 60 percent due to subsidence.

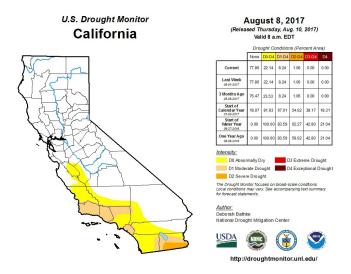
The Oroville Dam update features the shocking report on a 2014 study that considered and dismissed the possibility of a spillway failure.

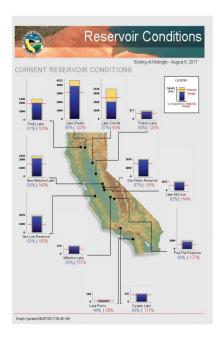
When wildfires cannot be fought.

Its the environmentalists versus the pot growers in California. May they both loose.

And our feature this week on infrastructure and the credit system demonstrates once again that only \$1-2 trillion per year invested in infrastructure can repair the damage. Also covered is why water districts should not gamble on Wall Street.

# U.S. Drought Monitor and Reservoir Graph





# A Weather Report

### What's behind Southern California's summer rain and thunderstorms?

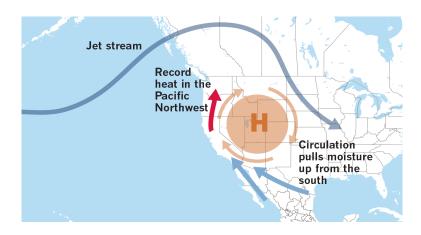
By Paul Duginski

http://www.latimes.com/local/california/la-me-monsoon-20170803-htmlstory.html

Anyone who was around last winter knows that the song got it wrong: It does indeed rain in Southern California. Not only that, it can rain in the summer in Southern California. That rain is courtesy of a North American monsoon that usually fuels showers and thunderstorms in the inland mountains and deserts. At the very least, the monsoonal flow gives Los Angeles a sticky, tropical feel, making what can be a hot semi-desert uncharacteristically muggy. But the showers and thunderstorms occasionally spill over into the Los Angeles Basin, sometimes reaching all the way to the coast. Here's a look at the dynamics of the monsoon.

#### Monsoonal moisture

Circulation around the high pressure pulls subtropical or monsoonal moisture up from the Gulf of California and the Gulf of Mexico, increasing humidity in the Southwest. Currently, it is also sending unusual heat into the Pacific Northwest as the jet stream is well to the north in Canada.



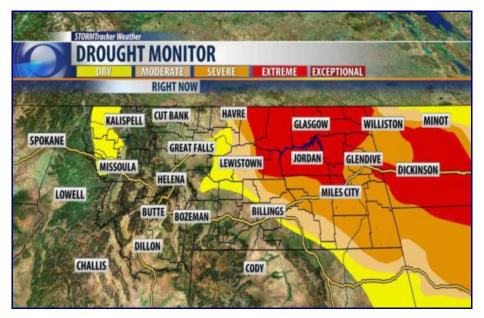
# Flash Drought In US High Plains May Have Already Destroyed Half Of This Year's Wheat Crop

August 5th, 2017

by James Ayre

https://cleantechnica.com/2017/08/05/flash-drought-us-high-plains-may-already-destroyed-half-years-wheat-crop/

The "flash drought" that came out of nowhere this summer in the US High Plains, afflicting Montana and the Dakotas the worst, has already destroyed more than half of this year's wheat crop, going by some recent field surveys. Considering that the region is now one of the top wheat-growing regions in the world, the damage is very notable.



What's particularly "interesting" about the situation is how quickly the drought developed. It arose over just the last ~3 months — hence the phrase "flash drought" — and it quickly worsened. The US Drought Monitor recently upgraded the drought to "exceptional" — matching the intensity of the relatively recent drought in California, but developing over a shorter period of time.

Here's more from the <u>Grist</u> coverage: "The Associated Press says the dry conditions are 'laying waste to crops and searing pasture and hay land' in America's new wheat belt, with some longtime farmers and ranchers calling it the worst of their lifetimes. Unfortunately, this kind of came-out-of-nowhere drought could become a lot less rare in the future.

"Rainfall across the affected region has been less than half of normal since late April, when this year's growing season began. In parts of Montana's Missouri River basin, which is the drought's epicenter, rainfall has been less than a quarter of normal — which equals the driest growing season in recorded history for some communities."

A meteorologist at the National Weather Service's office in Glasgow, Montana, by the name of Tanja Fransen commented on this: "It's devastating...We're at the bottom of the barrel. For many areas, it's the worst we've seen in 100 years."

A more technical report on "flash droughts" can be found in this article:

### Data analytics show 'flash drought's' impact on U.S. wheat crops

By <u>Karen Graham</u> August 56, 2017

http://www.digitaljournal.com/tech-and-science/technology/data-analytics-show-flash-drought-s-impact-on-usa-wheat-crops/article/499371

# The California Drought That Really Did Not Go Away

Though the five year drought officially ended this year the damage, as we have reported previously,

will be with us for years, if not forever. Whether it is the 100 million dead trees that are now fuel for wildfires or the subsidence of the land from aquifers being over-pumped, that damage makes itself felt nearly everyday.

### Friant-Kern Canal Slows By 60 Percent, Subsidence To Blame

By Ezra David Romero
Aug 3, 2017
<u>Valley Public Radio News</u>
http://kvpr.org/post/friant-kern-canal-slows-60-percent-subsidence-blame

A section of the the Friant-Kern Canal in Tulare County is sinking so much that it's lost about 60 percent of its flow.

Doug DeFlitch with the <u>Friant Water Authority</u> says the canal that helps irrigate a million acres of farmland has sunk two to three feet in some places over about a 25 mile area. The original design capacity in the area is about 4,000 cubic feet per second and he says it's dropped to 1,600cfs. "Underneath the bridge at Avenue 96 the water was impounding on the side of the bridge where historically it would be able to go underneath the bridge." - Doug DeFlitch, Friant Water Authority

The 152-mile canal from Millerton Lake to Kern County was built in the 1940s. It also supplies water to places like Lindsey, Orange Cove and Terra Bella.

DeFlitch blames the subsidence on five years of drought, the over-pumping of groundwater and the geology of the region. As water is pumped out of the ground the clay the area is made up of collapses causing subsidence.

"One of the ways we discovered the subsidence was we were delivering some floods waters in January down the Friant-Kern Canal and underneath the bridge at Avenue 96 the water was impounding on the side of the bridge where historically it would be able to go underneath the bridge," DeFlitch says.

Subsidence along the waterway is affecting how gravity forces water down the canal — it was designed with a slope of six inches per mile to ensure flow. He says his team has reduced the amount of water in the canal to make up for the difference.

# **Oroville Dam Update**

While progress in rebuilding the destroyed spillway is on schedule, like peeling the layers of an onion, every week provides some new "revelation" that the attention of those responsible for the integrity of the dam were just not up to the job. This is not so much as to blame the individuals in the Department of Water Resources, but to call attention to the larger problem that created such a state of affairs. When the nation, for decades, has lived in the delusion of a "post-industrial society," in which science, industry and infrastructure are relegated to be something of insignificance, then not only are the resources not allocated for maintaining those fundamental elements of a healthy economy, but it significantly damages the identity of every section of the population. A structural engineer and those overseeing that dam become a little sloppy in their work. Why not, the society does not put serious value on that work; it worships the parasites of Wall Street.

So, below, following the videos on the repair work ongoing, the first item reports on the study done in 2014, which in which a safety review panel inspection of the dam and spillway required every five years actually hypothesized a spillway failure and dismissed its possibility. I include lengthy excerpts

from the article, but if one reads the entirety of it, the implications really sink in. The article is entitled, "Panel Weighed Oroville Spillway Failure in 2014 — and Called It Unlikely."

Another surprise announced this week, but should not actually be a surprise, is that over \$1 billion in claims against the state have been filed for damage caused to farms, businesses and others by the February collapse of the spillway. The \$500 million price tag for fixing the damaged spillways, it appears, may just end up being about one-third of the cost of the disaster.

### **Video Updates from the** <u>California DWR</u>

### Oroville Spillway Update August 1, 2017

https://www.youtube.com/watch?v=bcvINGlLtXM

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.

### Oroville Spillways Update August 4, 2017

https://www.youtube.com/watch?
y=jhgvFpRE5kg&list=PLeod6x87Tu6eVFnSyEtQeOVbxvSWywPlx&index=1

Published on Aug 4, 2017

Kiewit continues to pour roller compacted concrete in the void near the lower spillway and conventional concrete to prepare the spillway's foundation, part of the Lake Oroville spillways recovery project.

### Oroville Spillway Update August 8, 2017

https://www.youtube.com/watch?v=JEC84KcBQdc

Published on Aug 9, 2017

Work continues on the Lake Oroville spillways. Concrete is poured into 30 to 80 foot holes to create the underground cut-off wall donwslope of the emergency spillway. Crews continue to assemble and erect electrical towers to reroute power lines away from the spillway. Rebar is installed for the upper spillway walls and structural concrete, concrete is poured and graded, and more stay-forms are installed for drainage.

### Panel Weighed Oroville Spillway Failure in 2014 — and Called It Unlikely

By Dan Brekke August 9, 2017

https://ww2.kqed.org/news/2017/08/09/oroville-dam-spillway-ferc-safety-review-2014-ruled-out-spillway-failure/

Consider a couple of scenarios for big trouble at Oroville Dam:

First: The facility's main concrete spillway suffers serious damage, resulting in erosion of the rock beneath it — and potentially threatening the safety of the dam itself.

Second: Water fills Lake Oroville, the gigantic reservoir behind the dam, and begins surging down a steep unpaved hillside that's meant to serve as an emergency spillway. The slope suffers serious erosion, again potentially threatening the dam's safety.

These scenes will sound familiar to anyone who followed the crisis at Oroville, which began to unfold six months ago this week. In fact, you may think you watched them happen.

But these aren't descriptions of actual events. They're worst-case scenarios that a federal-state safety review considered more than two years before Oroville became a synonym for "near catastrophe." The review — part of a process in which state, federal and independent experts study situations that could threaten a dam — agreed the scenarios were so unlikely that they didn't merit further consideration.

That finding, apparently based on inaccurate or incomplete information from the California Department of Water Resources about the condition of the dam's spillways and the strength of the rock they were built on, has led some dam safety experts and DWR critics to question both the evidence the safety board reviewed and whether the review process itself is effective.

The study — called a <u>potential failure mode analysis</u>, or PFMA — was performed in 2014 as part of what's called a Part 12D safety review, a title that refers to a Federal Energy Regulatory Commission regulation that requires independent safety inspections for most large dams every five years.

The PFMA declined further study of 31 "candidate" possible failure modes, including the two that outlined possible spillway failures.

'Spillway chute is in good condition, and the underlying rock is very competent.' 2014 Oroville Dam safety review

Although the details of the analysis for the spillway failure scenarios are not publicly available, Department of Water Resources documents KQED obtained under the California Public Records Act give a clear indication of why the experts decided to shelve them.

In dismissing the possibility that the main spillway might be lost, the PFMA summary said the 3,000-foot-long concrete chute "is in good condition, and the underlying rock is very competent."

The experts declined further study of the emergency spillway scenario — which contemplated an overflow about 25 times greater than the one that actually occurred in February — because of "competence of rock, with lack of erosional evidence" on the unpaved hillside.

The condition of the main spillway, too, is called into question by records that show DWR was well aware its concrete surface was prone to chronic cracking and that water flowed through numerous flaws in the chute floor and undermined parts of the structure.

California Department of Water Resources crews inspect and evaluate the erosion in the Oroville Dam's emergency spillway on Feb. 13, the day after state officials ordered the immediate evacuation of residents downstream. DWR had concluded in earlier studies that just 1 to 4 feet of erosion would occur if water flowed down the emergency spillway. (Kelly M. Grow/California Department of Water Resources)

After a large hole appeared in the spillway on Feb. 7, DWR temporarily stopped releasing water down the chute, then resumed limited flows as large sections of the rock beneath the concrete structure rapidly eroded — contrary to the confident assertions that the material was "very competent."

Meantime, the lake rose toward its rim. On Feb. 11, for the first time in the dam's history, water began pouring over a 1,700-foot-long weir adjacent to the concrete chute and down the hill designated as the dam's emergency spillway. Less than 30 hours later, on the afternoon of Feb. 12, uphill erosion of the type dismissed by the 2014 PFMA had scoured channels as much as 50 feet deep and appeared to be threatening the stability of the weir. The fear of a collapse, which would unleash a catastrophic flood down the Feather River, prompted the emergency evacuation of Oroville and other riverside communities.

That uncontrolled flow in February peaked at about 12,500 cubic feet per second, just a tiny fraction of the 350,000 cubic feet — about 2.6 million gallons — per second it was supposed to handle. (The regulated <u>flow over Niagara Falls</u>, by comparison, is 100,000 cfs during "tourist" hours.)

That theoretical maximum flow over Oroville's emergency weir represented what might happen in a worst-case flood scenario, when both spillways would have a single purpose: preventing water from flowing over the top of Oroville Dam, an event that could lead to the structure's collapse.

The Department of Water Resources and FERC had insisted for more than a decade prior to the February emergency — and through three separate potential failure mode analyses — that even under the duress of extremely high flows racing down the tree- and brush-covered slope, erosion would be limited to just 1 to 4 feet of surface material.

# \$1 Billion Worth Of Claims For Oroville Dam Damages Filed With The State Of California

By Ben Adler

August 4, 2017

http://www.capradio.org/articles/2017/08/04/a-billion-dollars-worth-of-claims-for-oroville-dam-damages-filed-with-the-state-of-california/

One week before the deadline to formally seek payment from the state of California for damages stemming from the Oroville Dam's spillway failure this year, the state has received 93 claims worth a combined \$1.1 billion.

## Prep Work For Oroville Spillway Nearly Complete

By Bob Moffittt

August 8, 2017

http://www.capradio.org/articles/2017/08/08/prep-work-for-oroville-spillway-nearly-complete/

The California Department of Water Resources says most of the prep work for new construction on the Oroville main spillway has been completed.

DWR says crews working on the bottom 2,270 feet of the main spillway have blasted and cleaned about 95 percent of the surface to be used for the new chute.

DWR's Erin Mellon says they have begun to pour nearly a million cubic yards of concrete and will install 55,000 feet of drainage pipe.



California Department of Water Resources

Here is the California Department of Water Resources' official construction update, excerpted with the link:

### Lake Oroville Spillways Construction Updates

California Department of Water Resources <a href="http://www.water.ca.gov/news/newsreleases/2017/080917spillway.pdf">http://www.water.ca.gov/news/newsreleases/2017/080917spillway.pdf</a> August 9, 2017

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

### Continued Construction on the Main Spillway

- Construction efforts at the Lake Oroville spillways have remained focused on repairing and reconstructing the gated flood control spillway, also known as the main spillway, by November 1.
- While this date is an aggressive timeline for construction, it's a conservative date for reservoir operations. The main spillway has only been used before January 1 four times. In fact, the spillway has only been used in 26 of 49 years.
- Demolition, excavation and site preparation is now 99 percent complete for the 2,270 feet that will be reconstructed this year. "The (Board of Consultants) is impressed with the progress and quality of the foundation cleaning." BOC Memo 10
- Placement of roller-compacted concrete (RCC) is now 10 percent complete, with approximately 25,000 cubic yards poured.
- Crews reached a major milestone last week by placing the first structural concrete slabs, which include reinforced steel, on the lower portion of the spillway chute.
- Recently, DWR received approval of the final 2017 design and construction work by federal, State and independent oversight groups.

#### Construction at Emergency Spillway

- After gaining information from thorough geologic exploration and test drilling in June, DWR determined the exact location for the underground cutoff wall, also known as the secant pile wall.
- Now that progress is being made on excavating trenches, drilling bore holes and placing concrete, DWR has a clearer schedule forconstruction of the underground cutoff wall, with a target completion date of late December 2017 or early January 2018.
- Consistent with a recommendation from the independent Board of Consultants (BOC), DWR will relocate temporary transmission towers near the cutoff wall site in a timely manner to minimize their

impact on construction.

• *DWR's* prime contractor, Kiewit, brought in a heavy-duty percussion drilling rig –the BG Bauer 50 – to improve the current rate of drilling.

Paul Rogers of the San Jose Mercury News was the first to break the story back in February of the warnings about the vulnerability of the emergency spillway had been raised more than a decade earlier and ignored by the Department of Water Resources. His report below on repair construction is one of the most thorough I have seen. Excerpts only.

### Oroville Dam: Six months after disaster, a race to repair before next winter



More than 100 construction workers race to rebuild on the lower chute of Oroville Dam spillway in Butte County, California. Photo taken July 31, 2017.

By <u>Paul Rogers</u> August 6, 2017

http://www.eastbaytimes.com/2017/08/06/oroville-dam-six-months-after-disaster-a-race-to-repair-before-next-winter/

Six months ago, relentless winter storms dumped nearly 13 inches of rain in four days on the Sierra Foothills, tearing an enormous hole in the spillway at Oroville Dam, the nation's highest, and leading to an unprecedented emergency that prompted the evacuation of 188,000 people from nearby towns.

Today, what could have been ground zero for America's worst dam disaster is now a hotbed of construction activity. Hundreds of construction workers are laboring 20 hours a day, six days a week with huge dump trucks, cranes, excavators, bulldozers, concrete pumps and other equipment to demolish and rebuild the 3,000-foot-long main spillway — a massive chute as wide as 15 lanes of freeway—by Nov. 1, before the next winter rain season begins anew.

"We are on target. We have done about 95 percent of the demolition that needs to take place, and we are already placing new concrete for the new spillway," said Erin Mellon, a spokeswoman for the state Department of Water Resources, which owns the dam. "Progress is pretty substantial."

In all, for both spillways, crews will install 8.5 million pounds of steel rebar, and 55,000 feet of drainage pipe, enough to stack 10 miles high. They will pour 946,000 cubic yards of concrete over the

next year — enough to fill nearly 100,000 dump trucks.

But the crisis isn't over. Major questions remain. And disaster could happen again.

Outside dam experts say the current repairs — which are scheduled to finish in 2018 — are only the beginning. The state Department of Water Resources needs to do far more to modernize other huge dams across California, they say, and to make additional fixes at Oroville, where the aging steel gates atop the dam's main spillway have numerous cracks and a mysterious green spot in the face of the 770-foot-tall earthen dam has some people worried whether the dam is slowly leaking.

Bea, of UC Berkeley, also investigated levee failures in New Orleans after Hurricane Katrina, the BP oil spill in the Gulf of Mexico and PG&E's 2010 pipeline explosion in San Bruno. He said the entire hillside at Oroville's emergency spillway should be armored with concrete, the steel gates on the main spillway should be replaced, and that the state needs to do an immediate, detailed investigation into the green spot on the dam, which state officials say is a harmless natural spring.

Bea said California needs a top-to-bottom change in dam safety, with much more preventative work to avert future disasters that could kill thousands.

"There is no free lunch," he said. "You pay a little now, or one hell of a lot later."



Oroville Dam and damaged spillways are seen Friday May 26, 2017

### Spillway reconstruction: Review board concerned about temporary concrete

By Steve Schoonover, Chico Enterprise-Record

Posted: 08/09/17

http://www.orovillemr.com/general-news/20170809/spillway-reconstruction-review-board-concerned-about-temporary-concrete

Oroville >> The independent consultants reviewing plans for the Oroville Dam main spillway reconstructions expressed some concerns in two recent memos about construction of the center part of the project.

That part of the spillway will get a temporary fix this year with roller compacted concrete (RCC), which isn't as strong at the structural concrete that will ultimately surface the faces of the spillway

chute.

### Cutoff Wall But No Chute This Year For Oroville Dam Emergency Spillway

By Bob Moffitt

August 7, 2017

http://www.capradio.org/articles/2017/08/07/cutoff-wall-but-no-chute-this-year-for-oroville-dam-emergency-spillway/

Tons of earth washed down the hillside below the Oroville Dam emergency spillway in February. Three projects have been approved for the site. But none of the projects include the construction of a concrete chute to carry water to the channel below.

The Department of Water Resources has identified a list of factors that may have contributed to damage to the area below the emergency spillway. They include the lack of concrete to disperse water flowing over the spillway, "erodible rock and soil" and the "absence of erosion protection downstream."

Erin Mellon with DWR says crews will not address the area directly below the spillway this year, but instead are building a cutoff wall 750 feet down the hill.

"The top of the wall is going to be flush with the ground" says Mellon. "So the wall is going to be dug underground 35-to-65-feet deep."

The cutoff wall is designed to prevent erosion at the bottom of the hill from creeping uphill and threatening the structure at the top.

Drilling began on the first of nearly 500 holes two weeks ago through the top layer of dirt and rock and down into the bedrock. The holes will be filled with concrete to make the wall.

Nothing will prevent erosion above the wall if the emergency spillway is used within the next twelve months.

### Wildfires

### Some wildfires simply can't be fought

By Fernanda Santos

August 6, 2017

http://www.latimes.com/opinion/op-ed/la-oe-santos-some-wildfires-cant-be-fought-20170806-story.html

There is a cadence to fire season and a predictability to the headlines: A wildfire is burning, homes are threatened, residents are urged to evacuate.

We've grown used to watching the air-and-ground assaults. The image of a DC-10 dumping retardant on burning brush is an indelible symbol of our attempt to control nature. We've come to expect that firefighters will bring flames into submission because they so often have — and this has made us

comfortable.



Plumes of smoke rises as the northern front of the Detwiler wildfire burns outside of Coulterville, Calif., on July 20. (Los Angeles Times)

Perhaps too comfortable. Despite the reassuring images of firefighters conquering wildfires, the truth is that once a large fire is burning, there's very little that firefighters can do to stop it, or to protect homes nearby. Faced with the decision to risk their lives to save somebody's property or let the property burn, firefighters know that there is only one sensible choice.

Fire feeds on grass and fallen leaves. It uses brush and toppled branches to climb onto the crowns of trees, where it then takes off. You cannot subdue rushing flames with shovels, picks, power saws and axes — the tools that firefighters carry. The best strategy is to retreat.

If firefighters don't withdraw or hold back when they should, they pay the ultimate price. State forestry officials made the wrong calculation in Arizona in 2013, for instance, and 19 firefighters died. The men, all members of an elite, highly skilled team called the Granite Mountain Hotshots, were swallowed by a giant wave of flames as they trudged through thick, unburned brush toward a community they were trying to protect. Their deaths serve as an awful reminder that some fires simply can't be fought.

This is increasingly the case, as forests in the United States become ever more flammable. Larger areas are primed for burning, choked by overgrowth and parched by a warming climate that quickly turns grass into kindling. Wildfires have become bigger, more intense and more frequent. In most Western states, the number of large wildfires ignited annually has at least doubled since the 1970s, and the fire season is longer by almost three months.

Overgrown forests have struggled through a punishing six-year drought in California. More than 100 million trees died during these years, according to the California Department of Forestry and Fire Protection. The drought had weakened them and bark beetles had finished them off. Although last winter's rain and snowfall lifted the state out of drought, the moisture also created the perfect conditions for wildfires. Much of the vegetation that sprouted from the moist soil dried up when the temperatures climbed.

# Yes, Let Them Fight; May They Both Lose

Environmentalists say proposed cannabis grow rules fail to protect wildlife

By GUY KOVNER

THE PRESS DEMOCRAT | August 9, 2017, 4:07PM

### http://www.pressdemocrat.com/home/7271220-181/environmentalists-say-proposed-cannabis-grow

Four environmental groups have faulted proposed state rules for commercial cannabis cultivation for failing to protect imperiled species, including the reclusive Pacific fisher, from rodent poison frequently used at unregulated grow sites.

The Center for Biological Diversity, a national conservation nonprofit, and three allies filed a 36-page comment alleging numerous shortcomings in the California Department of Food and Agriculture's draft report on the proposed standards for growing legal marijuana.

In particular, the groups said, the standards fail to protect wildlife — fishers, foxes, eagles, owls, bobcats, raccoons and others — from harm that comes from eating poisons or rodents killed by toxins.

Federal and state regulators, as well as University of California researchers, have documented the impact on wildlife from the rodent poisons dispersed at illegal pot gardens to prevent damage to plants and irrigation lines.

The environmental groups' comment challenged other portions of the state report, including the assertion that legalization will move cultivation within the law without expanding the size of the crop.

Disputing the claim of an essentially stagnant industry, the comment noted that marijuana acreage in the Emerald Triangle doubled following the move in 2010 to reduce possession of an ounce of pot from a misdemeanor to an infraction, similar to a traffic ticket.

### Calaveras sheriff to illegal growers: stay out of our county

August 3, 2017

http://www.uniondemocrat.com/localnews/5494328-151/calaveras-sheriff-to-illegal-growers-stay-out-of

Starting on July 31, the Sheriff's Office raided multiple illegal marijuana grows throughout Calaveras County following an investigation related to the environmental damage wrought by the pot cultivation. Over four days, the Calaveras County Sheriff's Office arrested 35 suspects and seized a total of 25 tons of marijuana (27,000 marijuana plants), 11 firearms and \$7,000 in cash. The charges against the suspects include felony and misdemeanor 11358 H&S (marijuana cultivation), 182 PC felony criminal conspiracy, 148 pc misdemeanor resisting a public officer and 29800 PC felony possession of a firearm while a felon.

# Infrastructure and the Credit System

Just a couple of items for this section this week. First, think about the President's proposed \$1 trillion over ten years to be invested in U.S. infrastructure. The first item below makes the point that since the depreciation of U.S. infrastructure each year is \$100 billion, the President's proposal would net out at zero real investment. There is no other choice than that proposed by Lyndon LaRouche of a comprehensive and total financial-economic reorganization. *LaRouche's Four Laws:* https://www.youtube.com/watch?v=vKD20EjUYi4.

The second item is an example of the insanity of the financial system, in which a utility is betting on interest-rate swaps, looses it shirt, gets a piece of it back, and thinks all this is normal.

### As Belt and Road Projects Grow, U.S. De-Invests in Infrastructure

Aug. 7 (EIRNS)—Despite the intentions announced by the Trump administration before and after election, infrastructure investment in the United States is going down, not up. Even while the Belt and Road Initiative launched by China is developing great projects of new infrastructure from Southeast Asia to Central Africa, American infrastructure investment continues to be net below zero, and has shrunk further in 2017.

According to the Commerce Department Bureau of Economic Analysis, net (of depreciation) Federal spending on non-defense infrastructure fell to \$10 billion in 2013—effectively, to zero—and has been well below zero since. Federally supported infrastructure depreciates by about \$100 billion a year in accounting terms, but since major facilities are well beyond their life expectancies, they require complete replacement. Thus far more investment than \$1 trillion (\$100 billion/year over a decade) is required to accurately speak of "rebuilding" or "building" new infrastructure platforms.

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.

Now in 2017, another BEA analysis reported in Reuters Aug. 5 finds that municipal infrastructure bond issuance is down nearly 20% from 2016 to 2017, totalling only about \$50 billion so far this year. Infrastructure bonds for electric power projects have dropped by more than 50%. Municipal funding has, since 2000, provided three times as much new infrastructure investment as Federal funding. The municipal bond market is about \$4 trillion and it has been the main driver of the little infrastructure investment there is.

For the United States to join the Belt and Road Initiative is not an option, therefore, but a necessity; and it requires that a national credit institution, a Hamiltonian National Bank, be formed to generate the credit to make that link.

### Metropolitan Water District Has Paid Almost \$88M to Get Out of Risky Swap Deals

The Metropolitan Water District of Southern California, a powerful regional agency that provides water to 19 million people, paid nearly \$88 million to exit interest-rate swap deals, and still has a \$71.5 million liability on the books. Such payouts and the liability that remains show Metropolitan got the raw end of the deals and lost.

By Ashly McGlone | August 4, 2017

http://www.voiceofsandiego.org/topics/economy/metropolitan-water-district-paid-almost-88m-get-risky-swap-deals/

The agency that supplies water to most of Southern California has paid tens of millions of dollars since 2008 to exit risky and complex financial deals it made before the Great Recession hit.

The Metropolitan Water District of Southern California entered two dozen interest-rate swap deals, which, in a convoluted way, aimed to stabilize debt interest rates, but amount to bets on the way interest rates will go. If interest rates move one direction, the swap becomes an asset. If they move the other direction, it becomes a liability.

Metropolitan, a powerful Los Angeles-based agency that provides water to 19 million people across Southern California, paid nearly \$88 million to exit interest-rate swap deals, and still has a \$71.5 million swap liability on the books, records obtained through the California Public Records Act show.

Such payouts and the liability that remains show Metropolitan got the raw end of the deals and lost.

Neither would have existed if interest rates had gone up, instead of down.

As part of a review of local public agencies that did swaps, Metropolitan's swaps stood out because leaders there invested more heavily in them than the rest – tying nearly \$2 billion in debt to swap contracts – and paid a heftier price for doing so when it wanted out of the losing deals.

Government officials' appetite and tolerance for such risk-taking with public money has waned in recent years, but much of the damage was already done.