

NEWS CLIPS

Published October 27, 2017



**Resource Conservation and Public
Outreach**

Organized by date

School district receives \$107,000 for water science ed



PATRICK GARRETT/Acorn Newspapers

THANK YOU—Angela Cutbill, Las Virgenes Unified School District Board of Education president, accepts a check for \$107,000 from Glen Peterson, Las Virgenes Municipal Water District board president, at the Oct. 17 LVUSD board meeting. The funds will cover programming costs for fourth- and fifth-grade water science education. Also present are water science teachers and Superintendent Dan Stepenosky, far left.

Where does your drinking
water come from?



Join us for a special tour and learning adventure

Saturday November 18, 2017

8:45 a.m. to 1 p.m.

Go "behind the scenes" to look at the planning, infrastructure and challenges to delivering safe, reliable, high quality water to your home everyday.

Reservations are a must for this *FREE* tour.

Preference given to customers of
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43A76B



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*Continental breakfast and light lunch provided.
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No Drugs Down the Drain!

Protect our water – Dispose of drugs properly

National Take-Back Day

Saturday, October 28

at

Lost Hills Sheriff Station
27050 Agoura Road, Agoura

Ventura County Sheriff Station
2101 E. Olsen Rd, Thousand Oaks

Unused or expired drugs pollute the environment when they are flushed down the drain. Everyone should use pharmaceuticals as directed, but if you have unused or expired prescription drugs, they must be disposed of properly.



The best way to control water pollution is to prevent it in the first place. For more information visit: www.nodrugsdownthedrain.org.



43A75B

Trump opposes water project

Proposal aims to install 2 giant tunnels

ELLEN KNICKMEYER ASSOCIATED PRESS
The Ventura County Star 10/26/2017

SAN FRANCISCO - A massive California water project has drawn opposition from the Trump administration, the government said Wednesday, the latest and one of the most serious blows to Gov. Jerry Brown's plan to re-engineer the state's water system by building two giant tunnels.

"The Trump administration did not fund the project and chose to not move forward with it," Russell Newell, deputy communications director for the U.S. Interior Department, said in an email.

Asked if that meant the Trump administration did not support California's tunnels project, Newell said yes. While the plan is a state initiative, it would intersect with existing state and federal water projects and would require approval from the Interior Department to move ahead.

Brown wants California water agencies to pay the \$16 billion price tag to build two, 35-mile-long tunnels to divert part of the state's largest river, the Sacramento, to supply water to the San Francisco Bay Area and central and Southern California.

But the plan has run into its biggest obstacles yet in recent weeks, when two key water districts opted not to help fund it. While the federal government was never supposed to bear the cost of the project, the Obama administration spent millions planning for it.

The Interior Department's inspector general last month challenged that financing, saying the U.S. agency under former President Barack Obama had improperly contributed \$84 million in taxpayer funds to help pay for planning for the tunnels, which would be California's most ambitious water project in decades.

As a presidential candidate, Donald Trump had called broadly for more projects to bring more water to farmers in California, the country's leading agricultural state.

However, his administration had not previously taken a stand on the tunnels project pushed by California's Democratic governor, though federal wildlife agencies gave the green light in June. They found that the plan would not mean extinction for endangered and threatened native species, including native salmon. The project would dig two tunnels, each the width of a three-lane highway, to tap into the Sacramento River. Brown's administration and the Metropolitan Water District of Southern California argued the giant pipes would make for more reliable water supplies, especially for the more arid south.

Supporters and opponents disagree on the impact for struggling native species. Opponents say the tunnels could be used to drain much of the water from the West Coast's largest estuary — the San Francisco Bay and adjoining rivers.

Brown spokesman Evan Westrup and Lisa Lien-Mager, a spokeswoman for the state Natural Resources Agency, did not immediately respond to requests for comment Wednesday on the Trump administration's stand.

"At a minimum, this announcement certainly complicates the state's chances of ever funding and permitting the massive twin tunnels project," said Doug Obegi, a senior attorney for the Natural Resources Defense Council, which opposes the plan. "It's yet another reason for

the state to transparently work with all stakeholders to reconsider this proposal."

The Trump administration has targeted several projects supported by his predecessor, from immigration initiatives to international trade deals.

Trump's policies also directly contrast with many of those backed by Brown, who has referred to the president's supporters as cave-dwellers and last month called Trump's actions in office "stupid and dangerous and silly." Newell, with the Interior Department, released the stance against the tunnels in response to a request Tuesday by California's Democratic members of Congress for a new probe of U.S. spending on the project under Obama.

Five Democrats, including opponents of the tunnels, asked the U.S. General Accountability Office to determine whether the planning payments were illegal.

"The \$84 million spent in taxpayers' money without disclosure to Congress and kept hidden from the public were decisions driven and executed by the Obama administration and that team," Newell said.

Interior Secretary Ryan Zinke "believes that using tax dollars wisely and ethically is a big responsibility and is at the heart of good government," Newell said.

Federal and state authorities were discussing cooperation on the project since at least 2008, when George W. Bush was in office. Obama's administration pushed for the tunnels, including funding planning costs.

An Interior official under the Bush and now Trump administrations, David Bernhardt, has professional ties with a leading California water district whose support was vital to the project.

However, the district, Westlands, voted last month against participating, saying it did not make sense financially for its rural water users.

State mulls oil firm's use of aquifer near Fillmore

TONY BIASOTTI SPECIAL TO THE STAR
Ventura County Star 10/26/2017

Ventura County environmentalists and the city of Fillmore are fighting an oil company's request for permits to discharge more of its wastewater into the ground a few miles north of Fillmore.

Seneca Resources Corp., the oil and gas exploration and extraction arm of National Fuel Gas Co., has asked the state and federal governments for what's known as an "aquifer exemption expansion" for its operations in the Sespe Oil Field.

When Seneca drills for oil in that field, it draws a mixture of crude oil and water from the ground; the company then separates the oil from the water, and the exemption allows it to inject the water back into the ground. If the expansion is granted, Seneca will be allowed to inject water into additional parts of the aquifer under the Sespe field where it has discovered new oil deposits.

The U.S. Environmental Protection Agency has final say over Seneca's application, but the California Department of Conservation and the State Water Resources Control Board are also reviewing it. On Tuesday, the state Department of Conservation heard public comments

on the proposal at the Museum of Ventura County in downtown Ventura. More than 100 people came, most of them opposed to the expansion.

On the same night, at about the same time, the Fillmore City Council voted 5-0 to draft a letter stating its opposition to expanding Seneca's aquifer exemption.

Though the matter isn't settled, the analysis by the state water board and the Department of Conservation's Division of Oil, Gas and Geothermal Resources supports granting the expanded exemption. That's because, according to the division, it meets the legal requirements: The aquifer in question is not used for drinking water — and never will be used for drinking water — due to the poor water quality and pollution from the naturally occurring petroleum deposits. It is also isolated from the nearest aquifer used for drinking water, the one that supplies the city of Fillmore. The nearest municipal well is about 3 miles from the oil field.

"Science and data show that drinking water will not be at risk if the U.S. EPA approves this exemption," said Pat Abel, a district deputy with the Division of Oil, Gas and Geothermal Resources.

Dozens of people at Tuesday's public hearing took issue with that analysis.

"You said its improbable, it probably won't happen, it's unusual for this to happen," said Ann Ohlenkamp of Fillmore, referring to the possibility of the oil wastewater contaminating Fillmore's drinking water

aquifer. "There is only one water source in Fillmore. We have to do everything we can to protect it."

Other speakers said that even if drinking water isn't at risk, Seneca shouldn't be allowed to further disturb the natural groundwater of the Los Padres National Forest.

"The Sespe is one of the most ecologically sensitive areas in the region," said Jeff Kuyper, the executive director of Los Padres ForestWatch. "It is not appropriate to use a public aquifer in such a valuable public area as a dumping ground for a private company's waste."

Other people at the meeting defended Seneca, including representatives of the oil industry, the Ventura Chamber of Commerce and the Coalition of Labor, Agriculture and Business.

Bob Poole, an executive with the Western States Petroleum Association, said Seneca should be allowed to discharge water in order to help it fulfill California's demand for oil. The alternative, he said, is to import more oil on massive, polluting oceangoing tankers.

"California uses almost 2 million barrels of oil a day, and we have to take responsibility for that," Poole said. "We're not going to be flying around in solar planes on Monday. We're still going to need petroleum for a while."

The Department of Conservation will accept public comments on the matter until Nov. 8. Comments can be emailed to comments@conservation.ca.gov, faxed to 916-324-0948 or mailed to the Department of Conservation, 801 K St., Sacramento, CA 95814.

From volcanic eruptions to riots?

Events across the world may have led to civil unrest in ancient Egypt, researchers say.



VOLCANIC ERUPTIONS in Alaska or Greenland may have kept the Nile River in ancient Egypt from flooding in the summer, creating a ripple effect of events leading to low food supplies and upheaval, experts say. (Khaled Desouki AFP/Getty Images)

DEBORAH NETBURN

LA Times 10/24/2017

Did violent volcanoes in Russia, Greenland and Alaska affect the lives of ancient Egyptians?

It may sound improbable, but according to a new study, the answer is yes.

In a paper published Tuesday in Nature Communications, a team of researchers shows that explosive volcanic eruptions in high northern latitudes of the globe can affect the Nile watershed, causing the flow of one of the world's mightiest rivers to slow.

This in turn could keep the lower Nile from flooding in the late summer months — a regular occurrence on which ancient Egyptians relied to irrigate their crops.

No Nile flooding meant no irrigation, which meant a bad year in the fields, low food supplies and ultimately, researchers say, civic unrest.

“It’s a bizarre concept that Alaskan volcanoes were screwing up the Nile, but in fact, that’s what happened,” said Joseph Manning , a historian at Yale University who worked on the study.

Manning said the idea to compare geological evidence of volcanoes with records kept by the ancient Egyptians occurred to him about two years ago.

He was at a dinner with geographer Francis Ludlow , now at Trinity College in Dublin, who had contributed to a seminal study that redated volcanic eruptions and looked at how they may have affected the climate — and history — at the time.

Around their third glass of wine, Manning asked Ludlow whether he had any data on volcanoes that erupted from 305 to 30 B.C. — the centuries that the powerful Ptolemaic dynasty ruled Egypt, and Manning’s area of expertise.

When Ludlow pulled up the data on his computer, Manning was stunned. He instantly recognized the dates of some of the volcanoes as corresponding with times of upheaval in Ptolemaic Egypt.

“It almost looked too good to be true,” Manning said. “And that’s when we started to work.”

The two researchers teamed up with William Boos , who studies the fluid dynamics of tropical atmosphere with an emphasis on monsoon circulations to try to understand how an explosive volcano in a different part of the world can affect the East African monsoon season.

The authors explain that sulfurous gases released during a powerful volcano can form reflective sulfate aerosols in the stratosphere.

Because these aerosols reflect solar radiation, they lead to a cooling effect that can last for one to two years. This, in turn, affects what is known as the hydroclimate, including the amount of surface evaporation and rainfall.

“It’s an indirect response, but because of atmospheric circulation and energy budgets, we find that large volcanic eruptions cause droughts, particularly in monsoon areas,” Manning said.

He added that the effect on the Nile watershed appeared to be greatest for volcanoes in the high northern latitudes of the globe.

To see how this dynamic played out in the real world, the authors compared the dates of ancient volcanic explosions from ice cores in Greenland and Antarctica with the Islamic Nilometer — an ancient record of the heights of the Nile’s annual summer flood.

The Islamic Nilometer, which stretches more than 1,000 years from 622 till 1902, is the longest-known annually recorded observational hydrological record, the authors wrote.

Through this work, they found that the flood height of the Nile during an eruption year was consistently lower than during non-eruption years — in all but one case.

“On average, the impact of an explosive volcano reduces river flooding by 25% below the mean,” Manning said.

Although the Nilometer did not go back to the time of Ptolemaic Egypt, the authors still were able to compare data about the timing of ancient volcanoes with socioeconomic and political activity from that era. They were aided by a trove of well-dated records, particularly papyri, that survived.

The researchers found an increase in revolts against Ptolemaic rule in eruption years.

That suggested the events might have been triggered by the stress of the Nile failure and not by overtaxation or resentment of Greek rule, as previously has been thought.

And while they discovered no relationship between volcanic explosions and the initiation of wars, the group did find that ongoing wars were more likely to cease after a violent volcano.

This could be because shortly after volcanic eruptions altered the Nile flow, warrior kings had to leave the battlefield and return home to mitigate civil unrest.

For example, after major volcanic eruptions in 247 and 244, historical documents suggest that Ptolemy III was called to address food shortages at home just as he and his troops were about to enter Babylon.

“If he had stayed, he might have conquered the entire Near East — possibly changing the course of human history,” Manning said.

The authors note that there are a lot of causes of Nile flooding variability — not just volcanoes.

The ancient Egyptians were fairly well adept at handling the river’s unpredictability, for example, by relying on grain storage.

Similarly, they point out that there are other reasons besides Nile failure that would have led to revolts in Ptolemaic Egypt: ethnic tensions between Egyptians and Greek elites, heavy state taxation and the cost of having nearly constant military operations.

The authors are not saying that volcanoes caused all civil unrest in Egypt, but they do think the eruptions could have been a factor.

The work suggests that humans may be a little less in control of our destiny than we realize.

“As current events have shown, we still live in nature,” Manning said.

Nation & World Watch

From Gannett and wire reports

Flint, Mich.: City seeks time to pick water source

A judge apparently is letting a Monday deadline slip after the City Council in Flint, Michigan, asked for more time to choose a long-term source of drinking water. The council asked federal Judge David Lawson to reconsider his decision. In response, the judge told the state of Michigan to file a reply by Tuesday.

Gov. Rick Snyder's administration is suing Flint to force it to approve a 30-year deal with the Great Lakes Water Authority, which has been serving the city since a lead disaster was declared in fall 2015

Ventura County Star 10/24/2017

How many delta tunnels are enough?

LA Times 10/23/2017

Scaled-down versions of the twin-tunnel project cost less but may not deliver the main benefits.

If two massive, 40-mile long, 40-foot-diameter tunnels that would direct Sacramento River water around the fragile Sacramento-San Joaquin River Delta to Central and Southern California are too big, too expensive and too scary to contemplate, how about a single tunnel?

That's been the response of some officials and observers after the fate of the twin-tunnel California WaterFix was put in doubt by a number of the water agencies that were slated to participate in the \$17-billion project.

The Southern California Metropolitan Water District — the wholesaler serving cities and agencies that supply water to about half of the state's population — approved its own \$4-billion stake in the project, and a majority of other participants voted yes as well. But several districts called for limits on their investment and one opted out altogether, leaving WaterFix short of the funding it needs to move forward with the full-size project, at least as things stand now.

Environmental groups proposed a "portfolio alternative" years ago that featured a variety of water sources, including a single tunnel with a maximum flow capacity of 3,000 cubic feet per second — a third of the WaterFix's capacity. They argue that the smaller project would allow more water to flow through the delta and out to sea to sustain migrating fish and stem the ecological collapse of the estuary. L.A. Mayor Eric Garcetti has expressed support for a single tunnel. Even the Metropolitan Water District has a single-tunnel backup plan — with up to two-thirds the capacity of the WaterFix — in case financing for the full project fails to materialize. The question now is whether Gov. Jerry Brown, the WaterFix's champion, is prepared to pivot to a smaller, single-tunnel project — and if he does, whether it looks more like the environmentalists' alternative or the Met's.

On paper, the value of the full-size twin tunnels is that they would be big enough to divert large pulses of stormwater that come during the handful of winter storms that provide about half of the state's supply within the space of a couple weeks. Capturing water from those few deluges will presumably become increasingly important as a warmer climate delivers less snow and more rain. Warmer winters will mean smaller snowcaps and more volatile runoff that will rapidly, but only briefly, fill rivers.

In theory, the two large tunnels would capture enough water to significantly reduce pumping at the south end of the delta — pumping that currently is so powerful, it reverses the direction of the lower San Joaquin River and sucks migrating fish into either the screens that protect the pumps or the mouths of waiting predators.

A single tunnel would fail to fully capture the storm pulses and would not reduce reliance on the south delta pumps. Construction costs would be lower, but with proportionately less water per dollar spent.

Granted, the project's critics dispute the WaterFix numbers and contend that the plan is to keep up south delta pumping one way or the other. The infrastructure alone doesn't dictate how it will be used. Only the operating rules can do that — and the proposed rules are subject to interpretation.

The important issue is what California gets out of the project and what will be the trade-offs. Enough water must be allowed to continue flowing through the delta to sustain not just the migrating salmon but also the human-made structures that hold back the salty bay water, keep levees intact and direct mountain runoff to Californians in the Bay Area, Los Angeles and nearly everywhere in between. There must be enough water to sustain the world's most productive agricultural region (although at some point we just have to ask how much almond milk and almond soap we really need). There must be enough to back up Southern California's supply while it develops its local stormwater-capture and recycling abilities (and it's fair for all those almond growers to ask just how many lush green lawns we need).

And of course there will not be enough for anybody. The already-crippled delta needs more. Whether it's to be one tunnel or two, the rest of us will have to learn to make do with less. The Times supports the full two-tunnel project as best able to provide the state what it needs, but if it can't get built we need something that can. It's now up to Brown — with his unparalleled political capital, but entering the final year of his uniquely long tenure as California's leader — to decide how much less is still enough.

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