

3/16/2018



# Some Dam – Hydro News™ And Other Stuff



**Quote of Note:** *“The cardiologist’s diet: If it tastes good, spit it out.” - Unknoswn*

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**“Good wine is a necessity of life.” - -Thomas Jefferson**  
**Ron’s wine pick of the week: 2015 Locations Spanish Red "E5"**  
**“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson**



## Dams:

(Excerpts: Dam removal PR.)

### **Record Year for Removing Dams to Restore Rivers in 2017**

By American Rivers - February 14, 2018, yuba.net

WASHINGTON, DC, Feb. 14, 2018 – A record number of outdated dams were removed in 2017, bringing public safety, new recreation opportunities and improved fish and wildlife habitat to communities nationwide, American Rivers announced today. Eighty-six dams were torn down in 2017, beating the previous high number of 78 dams in 2014. Communities in 21 states, working in partnership with non-profit organizations and state and federal agencies, removed the dams to restore more than 550 miles of streams. Dams were removed in the following states: Alaska, California, Connecticut, Indiana, Iowa, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Nevada, New Hampshire, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, Tennessee, Vermont, Washington and Wisconsin.

In 2017, Pennsylvania had the highest number of removals for the fifteenth year in a row. The top three states removing outdated dams in 2017 were:

- Pennsylvania – 16 dams removed

- California – 10 dams removed
- Massachusetts– 9 dams removed

“The record number of dams removed in 2017 shows that more communities see clean, free-flowing rivers as vital to their health, economy and future,” said Bob Irvin, President of American Rivers. “The river conservation movement in our country is stronger than ever and we applaud all of the people who contributed to this major milestone. Our hard work is paying off.” “While we celebrate this positive momentum, we must remain vigilant. Our nation is in danger of slipping backward when it comes to clean water and river health,” Irvin said. “Budget cuts and environmental rollbacks from the Trump Administration and Congress threaten to reverse the laudable progress communities across the country are making at the local level.” “The river restoration successes from 2017 illustrate the kind of future communities want. Decision makers should pay attention.”

American Rivers is the only organization maintaining a record of dam removals in the United States. The database includes information on 1,492 dams that have been removed across the country since 1912. Most of those dams (1,275) were removed in the past 30 years. American Rivers played a role in 14 of the dam removals on this year’s list. The list includes all known dam removals, regardless of the extent of American Rivers’ involvement. Factors that contributed to the record number of dams removed in 2017 include increased awareness about the benefits of removing outdated, unsafe dams; efforts by American Rivers and others to train organizations and increase capacity to manage dam removal projects; and the cost of maintaining aging dams, which pose liability and safety hazards for their owners. **The American Society of Civil Engineers gives the nation’s dams a D grade in its report card on the nation’s infrastructure. One of the most cost-effective ways to deal with outdated, unsafe dams is to remove them.** When a dam is removed, a river can flow naturally, which has benefits for water supply, flood protection, wildlife habitat and ecosystem health. “Healthy rivers are the veins and arteries of our country. Rivers are our original infrastructure. We need to keep investing in clean, free-flowing rivers if we want a future of secure water supplies, and safe, thriving communities,” said Irvin.-----

[\(What a sight to see! In case you’re interested, that’s 67,647cfs.\)](#)

**See 506,000 gallons of water per second spill across dam**

By Leada Gore, Mar 1, 2018, al.com

**The Tennessee Valley Authority said heavy rainfall has resulted in elevated water levels along the Tennessee River.** Water levels in Gunterville, Wheeler, Wilson and Pickwick Reservoirs are also rising, prompting TVA to increase water releases. **All 18 spillway gates at the Great Falls Dam on the Caney Fork and Collins Rivers in middle Tennessee are operating at 100 percent capacity,** TVA said, releasing over 506,000 gallons per second. The high river flows are being monitored to reduce flooding across the Valley, officials added. **Video released by TVA shows massive amounts of water spilling across the Great Falls Dam:**



[http://www.al.com/news/index.ssf/2018/03/see\\_506000\\_gallons\\_of\\_water\\_pe.html](http://www.al.com/news/index.ssf/2018/03/see_506000_gallons_of_water_pe.html)

[\(Flood control saves millions.\)](#)

**TVA uses sophisticated dam system to prevent flood damage**

**The TVA uses its River Forecast Center to manage water levels across the Tennessee Valley. It’s especially useful during and after rain storms to prevent flooding.**

Author: Sean Franklin, March 1, 2018, wbir.com

**The recent rain has caused flooding all over the Tennessee Valley.** TVA is using its sophisticated system to make sure the damage doesn’t get out of control. **“We’re here 24/7,” River Forecast Center Manager James Everett said.** Even when the waters rise in Tennessee, the TVA knows

how to handle it. "We are highly prepared for this type of weather event," said Everett. The storm rolled through, giving East Tennessee its fair share of flooding in places like Sevierville, Monroe County and in the Smokies. But Everett has an even wider map to look at. "As we get down to Northern Alabama, we've had a tremendous amount of rainfall," said Everett, as he pointed at the huge wall of screens in the office. He can see everything at the River Forecast Center -- all the water levels and data he needs to control the dams.

"Flows are a lot higher, which is why we're trying to hold back as much of the water as we can up in the eastern part of the valley," said Everett. So here's how it's worked with this latest storm: when it rains, water levels across the Tennessee Valley go up. It rained a lot in the western part of the valley in the last couple of days. The water flows down the Tennessee River, from east to west, so the TVA slowed that water down using reservoirs. If they hadn't, the lakes in the western part would've flooded with not just the rain water, but the water coming down the river as well. "When we get these rain events, we're using dams like Douglas, Cherokee and Norris, these are tributary dams," said Everett. "We're going to use those dams to store water." It's all controlled in a room in downtown Knoxville.

"The brown line is how high the river level could've been, and the red line is where we actually regulated the river to," said Everett, as he points to a line graph on the wall. "The difference is about 15 feet, which in terms of damages avoided that's about \$26 million in flood damages that we were able to prevent, just by operating Norris Dam the way we did." Everett said the water they're storing will be released slowly, so that the lakes can lower again, should it rain a lot again this spring.

(Argument for the dams.)

### Snake River dams should remain

By Rex Miller, 3/4/18, union-bulletin.com



Here we go again. Two of our esteemed politicians going pro and con on the removal of the dams in the Snake River. Are they serious, or just a way to get their names in the U-B? You know any dumb animal will seek shelter from a storm. Why then are these two acting dumber than an animal. Take a drive around that neck of the woods and see what those dams have provided, natural cycles govern fish numbers — as history

has proved — and Idaho has all kinds of fish including salmon.

#### Facts:

1. Snake River flow in years past dictated the movement of salmon.
2. They had spring runs and later runs as the water levels changed.
3. There are years and years of silt behind those dams. What are you going to do with it.
4. Power, irrigation, crops, employment.
5. All of that water and debris will need to pass all the way to the ocean.
6. And as for our judges and legal system — they wouldn't know a dam if they were standing on it. A robe and gavel doesn't make you any smarter, it just provides a good pay check.

And finally, leave the damn dams alone and do something that will benefit us, our nation and our moral fiber, and next time vote. Rex Miller, College Place, WA

(Lest we forget!)

### Fillmore, Santa Paula prepare to mark 90th anniversary of St. Francis Dam disaster

By Andrea Howry, Ventura County Star, March 2, 2018, vcstar.com

The St. Francis Dam above modern-day Santa Clarita, five miles northeast of Magic Mountain, broke apart 2½ minutes before midnight. In the 150 seconds it took for March 12, 1928, to become March 13, three people lost their lives in the unleashed water. In the 5½ hours it took for that water to reach the ocean, more than 400 others would meet the same fate. And still it was

dark. The mud, the chunks of concrete dam and washed-out bridges, the houses, the trees, the bodies — everything that got picked up along the water's 54-mile march down the Santa Clara River — hit the ocean at 5:25 a.m.

Sunrise on March 13 wasn't until 6:10 a.m.

"The flood is coming through in the middle of the night," explained John Nichols, a Santa Paula gallery owner who has spent years researching and collecting photographs of the disaster and its aftermath. "They couldn't see it. They couldn't run." When the sun did come up, the surviving residents of Piru, Bardsdale, Fillmore and Santa Paula would have trouble believing what they saw. Many would never speak of it. "The people who survived that didn't want to talk about it or deal with it," said Martha Gentry, executive director of the Fillmore Historical Museum and the daughter of a flood survivor. "There were just a lot of people around when I was growing up who knew all about it and never said a word." She believes that's one reason why, 90 years later, the St Francis Dam disaster remains a lesser-known piece of history, even though it is still the second-worst disaster in California in terms of loss of life. Only the San Francisco Earthquake of 1906 killed more people.



Geologic and engineering studies would later show that William Mulholland had built the dam's eastern abutment on an ancient landslide. Nichols' book explains that a combination of factors led to the collapse, including a reactivation of that landslide. The sides of the dam were washed away, leaving a monolithic center section standing tall. It was soon nicknamed "The Tombstone."

Fillmore and Santa Paula are among the cities preparing 90th anniversary commemorations this month, along with Piru and Santa Clarita. The California Oil Museum in Santa Paula opened an exhibit on dam failures Saturday, a candlelight memorial will be held March 12 in Santa Paula and a plaque honoring the dead and remembering the survivors will be unveiled March 17 in Fillmore. A complete list of activities, plus historical photos and videos, can be found at [www.saintfrancisdam.com](http://www.saintfrancisdam.com).

The actual number of fatalities remains "a moving target," according to Gentry, but sits upward of 450. Some bodies, like those of the dam keeper and his 6-year-old son, two of the first three victims, would never be found. The body of the woman who lived with them was found wedged between pieces of the dam. "There were so many," Gentry said. "And they were finding corpses when they started constructing out here at Castaic Junction, as recently as 1994. If you go deep enough, they'll find something." Identifying the dead was also problematic.

"So many people in those days were without driver's licenses, without Social Security, without documentation like we have today," Nichols said. In addition to undocumented laborers from Mexico, "there were also people who were riding the rails on the railroad, and there were those kinds of camps under the bridges and under the trees," Gentry said. "They called them hobos in those days. There were people like that who would never have been identified if they were even found." When the dam first broke, it was the sheer power of the water that was murderous. In his book, "St. Francis Dam Disaster," the source of much of the information in this article, Nichols describes what initially came down the canyon below the dam as a wall of water 135 feet tall traveling 18 mph. It took less than 70 minutes for the reservoir to be drained of 12.4 billion gallons of water.

After wiping the dam keeper and his son off the face of the Earth, water the height of a 10-story building slammed into Power House No. 2 just two minutes after midnight. Only three of the 28 people at the family camp there survived. By now, chunks of concrete dam and the powerhouse

were in the water, along with uprooted trees and silt. The water turned into a debris flow, which was more buoyant. "So you had 20-ton rocks acting like they're 7-ton rocks," Nichols said. "Things are being picked up into this slurry of water and debris and mud and power poles and dead cows and houses and bodies, and this is moving like a huge, huge snake down the valley, picking up more and tossing things around."

Shortly after crossing into Ventura County, this debris flow, which had slowed to 12.5 mph but was still 60 feet tall, slammed into a Southern California Edison campsite. About 150 men who had been spending their days stringing a power line from Saticoy to Saugus were sleeping in a meadow inside canvas tents with wooden floorboards. "Edison workers are picked up in their tents and swirled around," Nichols said. "Some escaped, some died, some bodies were found with their fingernails ripped out as they tried to claw their way out of the canvas tent." Here, survival came down to one small detail: "If they were fortunate enough to have closed the tent up that night, they tended to survive because it had that air bubble," Gentry explained. "Those tents were on wood platforms and they bounced and moved. And if they went to bed with that tent flap open or unhooked and the water got in immediately, they tended to die." Eighty-four men did.

Nichols' book includes a graphic called "The Path of Destruction" that shows how fast the water was moving as it made its way down the Santa Clara River: 12.3 mph at Fillmore at 2:20 a.m., 11.2 mph at Santa Paula at 3:05 a.m., 7.4 mph at Saticoy at 4:05 a.m. The muck barreled into the ocean at 5.9 mph at 5:25 a.m. It had taken out every bridge along the way except the one at Saticoy. The debris that made it all the way to the ocean was then carried south by the sea. "Whatever went into the ocean, if it floated, it was ending up in San Diego," Gentry said. "They were finding bodies in San Diego by the time this was done."

Geologic and engineering studies would eventually show that the dam was built on a giant ancient landslide that reactivated. Several factors caused the collapse, but the end result was that the sides washed away while the center section remained standing. The monolith was dubbed "The Tombstone." Officials blew it up after a teenager was killed trying to climb it in May of 1929. Fourteen months after the collapse, the dam would claim one more victim. A teenager tried to climb The Tombstone and fell to his death. Shortly after that, officials demolished the remaining pieces of the dam with dynamite.

While the disaster created corpses, it also created heroes. "We can't imagine it in this day of instant communications and cellphones, we can't imagine how basic everything was in those days," Gentry said. So the heroes were the "Hello Girls," the telephone operators who stayed at their posts and made middle-of-the-night emergency phone calls to people who lived near the river. The heroes were Thornton Edwards, who worked for the State Motor Division, the precursor to the California Highway Patrol, and Santa Paula police officer Stanley Baker. They're memorialized in a statue in Santa Paula because they rode a motorcycle through the low-lying parts of the city, waking people up and telling them to get away from the river. According to the March 15 Ventura County Star, Nick Baxter, of Santa Paula, "a disabled veteran of the World War" — World War II was still unthinkable — "plunged into the chilly water" and rescued an 11-year-old girl lodged in a walnut tree. "His record for the day was three lives and three bodies," the paper reported.

The Star also interviewed survivors at the Edison camp and told the story of Edward Locke, a disabled night watchman. "It was Locke who first heard the distant rumble of the water as it pounded down the canyon, grinding trees and boulders in its wake," the paper reported. "Locke, the men told The Star, could easily have saved himself had he run to the wall of the canyon when the torrent first swept down upon him. Instead, he scrambled from tent to tent to rouse the sleeping men, and was numbered last night among the missing." To commemorate the 90th anniversary of the St. Francis Dam disaster, Fillmore officials will unveil a memorial on March 17 at City Hall. "We have a rock that we've gotten from the Sespe River," Gentry explained. "It's a

big brownstone rock, weighs about a ton, and it is going to have a plaque put on it that will talk about the St. Francis Dam disaster and the people who perished and the people who survived." Later, it will be taken to its new home at Bardsdale Cemetery. Gentry hopes the dedication of the memorial and the other events taking place this month in the Santa Clara River Valley and Santa Clarita will help educate people about what she feels is a forgotten piece of the past. "It's just amazing," she said. "There's so much history of it that people don't know about."

(A week doesn't go by without a dam removal story.)

## Hamilton Dam coming down as "rewilding" of Flint River flows forward

By Jeffery L Carey Jr., Mar 3, 2018, eastvillagemagazine.org

The crumbling 98-year-old Hamilton Dam on the Flint River is coming down. Currently under demolition, the deteriorated old structure finally is being removed from its position just north of the University of Michigan-Flint campus, with the Fabri Dam further west slated for removal as well. The Hamilton Dam has been a safety concern for many years as the integrity of the dam has been failing.



The removal of the dam is part of a larger overall project, the Flint River Corridor Remediation Project, an estimated \$38 million plan not just to remove the obsolete and potentially dangerous dams from the river but also return the river to a more natural ecology. The "re-wilding" of the Flint River Corridor will allow, according to information provided on the Flint River Restoration Project (FRRP) website, the "rejuvenation of the river and riverfront through the creation of water-based recreational opportunities, park improvements, underutilized property redevelopment, enhanced community connectivity, ecosystem restoration and improved storm-water/flood control".

(If it's a dam it must be good.)

## The best 'Dam' burger in town

ksdk.com, by Randy Schwentker, March 5, 2018

People go to a south city soccer bar (St. Louis, MO) -- not just to watch soccer on tv-- but to sink their teeth into delicious burgers. Photojournalist Randy Schwentker takes us inside a place called the The Dam to show us what's cooking.



(Yeah, we'd like to know. Will the Klamath River dams go?)

## Tell us what rates will be if dams go

Letter to the editor, Mar 6, 2018, heraldandnews.com



The PacificCorp guy who took issue Wednesday with my Feb. 21 letter should tell us what our power cost will be when the dams are gone. I have been a rural Oregon resident for 86 years and know how PP&L's rates compare to those of a Public Utility District (PUD). My father was a Willamette Valley farmer who raised irrigated vegetable crops. In 1970, he and several other farmers got fed up with the high cost of PP&L

power. They were paying rates about twice as high as other Lane County residents who were on public-owned utilities. These farmers decided to create a PUD. This process took many years but they were successful. In 1983 the Emerald People's Utility District was formed. Search Emerald PUD History for the complete story. This is an excerpt from that website: The group's activities were often described as a battle between David and Goliath. It was an apt metaphor — a group of ordinary citizens with limited legal and political expertise and even more limited funds, fighting

to buy a multi-million dollar electrical system from a powerful sophisticated corporation encompassing vast energy, mineral, and technologies. Yet, 13 years and 14 lawsuits later, Emerald became a reality. Howard Paine, Chioquin, OR



## Hydro:

(We take too long to do most things.)

### Want bipartisan infrastructure? Increase domestic hydropower production

BY BOB GALLO, OPINION CONTRIBUTOR — 02/23/18, thehill.com

THE VIEWS EXPRESSED BY CONTRIBUTORS ARE THEIR OWN AND NOT THE VIEW OF THE HILL

In his State of the Union address, President Trump pledged up to \$1.5 trillion through public-private partnerships to meet the country's infrastructure needs. Identifying current problems, the President said, "America is a nation of builders. We built the Empire State Building in just one year. Isn't it a disgrace that it can now take 10 years just to get a permit approved for a simple road?" My colleagues and I hoped that President Trump would cite hydropower as an example of the byzantine process infrastructure projects must go through to become a reality. That's because the same length of time required to build a road in the U.S. – 10 years – is standard to simply license a hydropower facility. Even a nuclear power plant can be licensed more quickly.



Our optimism was buoyed by the fact that the president is a big fan of hydropower, the original renewable energy. Shortly after taking office, he said "You know, hydropower is a great, great form of power. But we don't even talk about it anymore because the permits are virtually impossible. [Hydropower] is one of the best things you can do, but we don't even talk about it anymore." Earlier this year, the president made headlines when he praised Norway's reliance on hydropower while questioning why the United States doesn't follow suit. "I wish we'd do some of that... But hydropower is fantastic, and it's a great asset that you have," President Trump remarked to Norway's Prime Minister during a joint press conference at the White House. President Trump is putting his affection for hydropower into action. The administration's recently released infrastructure plan incentivizes the development of effective and efficient water infrastructure, streamlines the federal procurement process, and ensures life-cycle management at hydropower facilities. These proposals are a good start to what I hope becomes a renewed investment in and support for domestic hydropower resources.

The president should have bipartisan support for hydropower reforms at the other end of Pennsylvania Avenue. Both the House and Senate are working on legislation that would improve the licensing process for hydropower facilities – and doing so with the votes of both Democrats and Republicans. Late last year, the House passed legislation that would streamline the hydropower licensing process, and the Senate Energy and Natural Resources Committee continues to work on similar legislation as a part of a comprehensive energy bill. The president's praise for hydropower is perhaps surprisingly similar to the ranking Democrat helping to lead those efforts in the Senate, Sen. Maria Cantwell of Washington. Cantwell has said, "Emissions-free hydropower provides close to three-quarters of Washington state's electricity and keeps our rates among the lowest in the country... more hydropower capability means an increased supply

of affordable clean energy, which helps make Washington state a leading place to live and do business.”

In a town where partisanship often reigns supreme, hydropower is one of the few issues that can unite legislators with otherwise disparate views on so many issues. **The president and Congress have a real opportunity to work together to pass needed legislation to fix aging infrastructure, including our hydropower fleet.**

This opportunity comes at a critical time. Over the next five years, approximately 24 percent of the over 1,000 non-federal hydropower projects will be up for re-licensing through the Federal Energy Regulatory Commission. **These projects represent a significant portion of the country's existing energy portfolio – energy we risk losing if the licensing process is not reformed and owner/operators decide to simply walk away from the projects.** These delays have an impact on future projects, too. The Department of Energy estimated that we could increase domestic production of hydropower by 50 percent through a combination of new projects at non-powered dams, upgrades at existing facilities, and construction of pumped storage hydropower facilities. That's over 50 gigawatts of energy, capable of powering tens of millions of homes and businesses, that we aren't utilizing. But this potential won't be reached without congressional action.

What happens when we increase hydropower production? We create jobs from coast to coast, both in the extensive hydropower supply chain and at the facilities that will last for decades once built, while producing the clean energy needed to power the future. **The president and Congress are on the same page when it comes to hydropower.** They should work together to ensure it remains front and center in any infrastructure bill that becomes law. *Bob Gallo is President Emeritus, External Affairs and Government Relations for York, Pennsylvania-based Voith Hydro, Inc. Voith is a leading worldwide manufacturer of hydropower generating equipment.*

(We need more pumped storage.)

## **DBRS report asks whether pumped hydroelectric storage can increase renewable integration**

By Robin Whitlock, 28 February 2018, [renewableenergymagazine.com](http://renewableenergymagazine.com)

**DBRS Limited <https://www.dbrs.com/about/> has published a commentary looking at whether pumped hydroelectric storage can increase renewable integration, given that over the past decade large amounts of intermittent renewable energy have been brought online.**

**DBRS expects the level of intermittent renewable energy – particularly wind and solar – to continue to increase, as governments around the world target a greater share of their electricity supply from renewable sources.** This increase in intermittent capacity has introduced new issues for electricity grid operators, requiring conventional energy sources, at present, to ensure system reliability. Renewable energy can also sometimes generate too much electricity compared with demand, which causes the renewable sources to be curtailed, resulting in the loss of foregone generation. This effectively limits the amount of renewable capacity that can be integrated into the grid.



Castaic pumped hydro storage plant, California

**Currently, in order to achieve a goal of 100 percent renewable generation, excess energy must be stored during periods of low demand and low prices and then injected into the grid at times of high demand and high prices.** The importance of grid energy storage has led to the research and

development of many storage technologies, including battery storage, hydrogen storage, molten salt energy storage and underwater compressed air storage. All of these technologies are relatively new and expensive, and each project has a small amount of energy storage capacity. Pumped-storage hydroelectric generation is a technology that has successfully provided grid-scale energy storage for many decades and could be a tool to achieve increased renewable integration. This commentary will provide a high-level overview of the key factors surrounding PSHGs.

(New project moving along.)

### **Chamber Luncheon focuses on Sweetheart Lake dam Sockeye salmon population may also improve with construction**

The future of hydropower and increasing the number of sockeye salmon in Sweetheart Lake was presented for those at the Chamber of Commerce luncheon at the Hangar on the Wharf Ballroom Thursday. Duff Mitchell, Executive Director of Juneau Hydropower, talked about where the company currently stands with the dam project at Sweetheart Lake that could provide energy to Kensington Gold Mine, a mine located 45 miles from Juneau which currently uses diesel as a resource. "This



is a shovel-ready project," Mitchell said. Mitchell explained he has been working on the project since 2010 and received his license to do the project in 2016. The project has also gone through the Environmental Impact Statement and all regulation testing, according to Mitchell.

Mitchell provided a brief history lesson on the lake before fully discussing how this project could become a "big battery for Juneau." The lake, which is 33 air miles south of Juneau, is \$140 million project that Mitchell said would provide jobs and another resource of energy to Alaska's capital city. At this time, Mitchell said Juneau Hydropower is working with AEL&P on an interconnection agreement allowing them to connect into Snettisham Hydroelectric Project, which would be the last piece of the construction puzzle.

"Right now we are working with AEL&P (Alaska Electric Light & Power) on getting an interconnection line agreement," Mitchell said. "I am sure we will get it done." Once Juneau Hydropower gets that worked out, moving onto the project will take financing. Mitchell said Juneau-area investors have contributed with the project and that Juneau Hydropower has secured a loan with the U.S. Department of Energy. Mitchell said he would like to get started as soon as possible.

"This project would take two or three construction seasons," he said. "We want to get this started because Kensington wanted power yesterday." Mitchell explained Kensington would like the hydropower as soon as it could get it because it is cleaner and more reliable than the diesel power it uses now. "(Kensington) burns through a lot of energy," Mitchell said in an interview. Mitchell, through a Powerpoint presentation, showed the group what it will take and what will be done putting in the powerhouse and dam. The dam will be 111-feet tall and 280-feet high and was considered a "small dam" and will have no environmental impact through the EIS, according to Mitchell. Mitchell showed a slide where the power plant would be blocked from sight with a mound built up that would block the sound and keep the area picturesque. The construction will be done without a road. A 9,000-foot tunnel will allow enough room for trucks and equipment through. Once the project is completed, the tunnel will then act as another line for water. Mitchell also discussed how Sweetheart Lake could become a great area for collecting sockeye salmon. The idea with the dam, Mitchell said, is to have an area called a "collecting barge" that the salmon would believe is an outlet out of Sweetheart Lake. The fish would go into the "barge" and into

buckets that would be transported down to the lower level of the area. "This would increase fish in Sweetheart Lake by 50 percent because of the mortality rate of salmon going down the falls," Mitchell said. "The commercial and personal fisherman will benefit from this." If all goes through according to plan, Mitchell believed the Sweetheart Lake could become an even more important factor in the area. Mitchell explained the Sweetheart Lake power source could act as a viable backup if it was ever needed in Juneau. "In the end, this is ultimately good for Juneau," he said.

(A friend joins opposition.)

## **PUD hydropower project is too costly, will hurt salmon**

March 6, 2018, heraldnet.com

### **Opinion:**

I would like to join the Tulalip and Snoqualmie tribes in opposing Snohomish Public Utility District's hydropower project on the South Fork of the Skykomish River, WA.

With reduced river flow, the fish population, already at an historic low, would be further impacted. We need to protect our fish. As a PUD ratepayer, this has already been a costly project with minimal future benefit in power output. This project would also have an adverse impact on recreation and the scenic beauty of our free flowing river. *Patty Hughes*



### **Water:**

(How are you going to get water without dams? Do you think American Rivers influenced the scores?)

## **CALIFORNIA DEBATES NEWS DAMS AS DROUGHT LOOMS**

**With the threat of another year of drought, California is embroiled in a hot debate about the best way to spend public money to improve the state's water supply.**

By Steve Rothert | February 28, 2018, americanrivers.org

As California appears to be headed into another year of drought, a debate is raging about how to spend the \$2.7 billion provided for increasing the state's water supply by the 2014 Proposition 1. The California Water Commission, through the new Water Storage Investment Program (WSIP), must allocate the funding with a competitive application process by 2022. Water agencies, and one NGO, have submitted 12 proposed projects to the WSIP, ranging from a \$22 million groundwater project near the San Joaquin River National Wildlife Refuge, to the \$5.2 billion Sites Reservoir to be located in Antelope Valley some 10 miles west of the Sacramento River.





Proposed Sites Reservoir location | Photo: Sacramento River Preservation Trust

The Water Commission worked with staff and stakeholders, including American Rivers, for over a year to develop regulations for spending the money. The WSIP can only fund costs associated with the “public benefits” of projects, defined as: ecosystem improvements, water quality improvements, flood control, emergency response, and recreation. The Water Commission also established numerous eligibility criteria, and therein lies the rub. The criteria require that the “public benefit ratio” must be greater than 1, meaning the value of the public benefit provided by the project must be greater than the cost of providing it. Project applicants provided estimates of their public benefit ratios that ranged from 1.47 to

6.10. However, the Water Commission evaluated the ratios according to their stated methodology, and revised all of them downward, dramatically. The Commission gave four projects a score of zero – meaning they saw no credible benefit to the public – and no project scored above 1.

Project proponents had until Friday, February 23 to appeal the revised public benefit ratio, and the Commission will make final determinations on the ratios by May 3rd. The Water Commission will determine by the end of July 2018 how much funding any proposed project could receive.

The prospect that no project would receive funding from Proposition 1 has caused a predictable ruckus in Sacramento, with eight pro-dam legislators sending a letter recently to the Water Commission urging it to fund new dams, and the leaders of the Assembly and Senate applauding the Water Commission for its rigorous review of applications. If this winter continues its current pace as the third driest on record, the Water Commission can expect to face increasingly desperate calls to fund new dams.



Bear River (Proposed Centennial Dam) Photo: Gary Moon

(American Rivers is wrong. You can't do it without the dams.)

## Come 2050, Californians Will Wish They Had More Dams

By Bill McEwen, February 28, 2018, gwire.com

# Opinion:

A new University of California report forecasts kick-to-the-gut climate-change realities for California farmers, especially those who grow permanent crops in the Central Valley. In a nutshell, the report anticipates big trouble ahead for crops

such as almonds, peaches, table grapes, corn and rice. Scorching summer heat and longer periods of sustained drought will reduce yields. Higher temperatures also will provide a perfect incubator for insects and diseases. Some longtime Valley staples won't be grown here at all. Ag is nimble in adapting to challenges. But the question remains: What can be done to stave off economic disaster and maintain California's status as a global agricultural leader?



### How Farmers Can Survive Climate

## Change

As the authors of the report note, California produces more than 400 types of commodities. Breaking it down further: Our state grows more than a third of the country's vegetables and two-thirds of its fruits and nuts. Finally, global crop production needs to double by 2050 to meet the projected food demand. The report, whose lead author was UC Merced researcher Tapan Pathak, says that "research to breed and test new plant varieties that are heat-tolerant or better adapt to water stress is of high priority." Another priority should be research focused "on documenting crop-specific potential threats due to existing and new pests and diseases." And that brings us to water. The report summarizes today's version of climate change, accompanied by groundwater depletion, as adding "further pressure to the existing strain of the state's agricultural water supply." Unsurprisingly, the UC researchers recommend that every snowflake and raindrop be treated as a precious resource. Future climate change, they say, will demand it.

## Dams Must Be Part of California's Water Arsenal

In my opinion, that will require state leaders to utilize every available tool to store and move water — including dams. I know there are environmentalists who hate dams. Not only do they oppose new dams and reservoirs, but they want to see old ones torn down. I won't be around in 2050 but my children and grandchildren and future great-grandchildren will. Climate change will require state leaders to utilize every available tool to store and move water — including dams.

Predictions call for extreme weather volatility. In California, that could mean long periods of drought punctuated by years of heavy snow and rain. Dams will protect us from flooding. And they will allow us to store more water in wet years. That extra water can be used to irrigate crops, recharge groundwater basins, protect fisheries and restore wetlands. That stored water also will flow to cities and into homes. Moreover, if dams are properly maintained and continually upgraded with new technologies, they will become increasingly efficient. Can you imagine how accurate the sensors of 2050 will be? Strategically timed releases of cold water stored behind dams will enhance fish survival.

## Voters Spoke Loudly in 2014: They Want New Dams

Judging by 67.13% voter approval of the \$7.12 billion Proposition 1 water bond in 2014, most Californians believe that dams are important to the state's future. That bond specifically designated \$2.7 billion for water storage projects, dams, and reservoirs demonstrating public benefits. Moreover, funding for dams was sold by state leaders — Democrats and Republicans alike — as one of the bond's marquee features. Let's remember, too, that only two of the state's 120 Assemblymembers and Senators voted against placing the bond on the ballot. And that the bond was crafted with heavy lifting from state leaders. For example, lawmakers met Jerry Brown's demand that lawmakers cut \$4 billion from an earlier bond proposal the governor called "pork-laden." Funding for groundwater clean-up, improving drinking water in disadvantaged communities, protecting watersheds, increasing water recycling and strengthening flood protection were also identified for funding.

## State Water Commission Project Scoring Triggers Protests

Perhaps the "dams are important" message never reached the staff of the State Water Commission, whose board is charged with deciding which of the 11 proposed water-storage projects get slices of that \$2.7 billion pot. Incredibly, the commission announced Feb. 1 that all of the projects, according to the staff's initial analysis, would deliver little to no public benefit. You can imagine how that went over. Especially among supporters of the proposed \$3 billion Temperance Flat dam above Friant. They were told that their project wasn't worthy of even a penny of funding. The commission's scoring of the water-storage projects triggered loud, angry bipartisan protests from lawmakers, including Joaquin Arambula and Jim Patterson of Fresno.



## Other Stuff:

(They want to keep BPA! Politically charged article.)

## Power Play

cascadiaweekly.com, February 14, 2018



**POWER PLAY:** The Trump administration's war against renewable power escalated this week with a proposal to sell off the transmission assets of Bonneville Power Administration, the great engine of hydroelectric power to the Pacific Northwest and—notably—Whatcom County heavy industry. The proposal is part of a promised infrastructure initiative that attempts to goad state and local

governments and private industry to spend more on projects without major new federal investments. In doing so, the plan proposes to privatize or otherwise dispose of a broad array of government assets, from airports to highways to power grids. Without the tinkering of a succession of Republican administrations that have sought to overextend BPA contracts or part out its assets to investor-owned utilities, BPA is self-funding and covers its costs by selling products and services. The bulk of BPA revenues come from the sale of 22 gigawatts of power from 31 federal hydropower plants to 142 electric utilities throughout the Northwest. These utilities include Whatcom County Public Utility District #1 and its customer base. Altogether, the BPA provides about 28 percent of power used in the Northwest. It also operates and maintains about 75 percent of the high-voltage transmission in its service territory, which includes Idaho, Oregon, Washington, and parts of all the western states. The Trump proposal to sell these assets was blasted by Northwest senators in the nation's capital.

"Selling off BPA's transmission system and abandoning cost-based rates would raise electricity rates and throw sand in the gears of the Northwest economy," U.S. Senator Maria Cantwell warned. "Northwest consumers already cover the full costs, with interest, of building and operating our region's hydropower system," said the ranking member of the Senate Energy and Natural Resources Committee and Washington Democrat. Cantwell pledged to work with her Northwest congressional colleagues to head off this challenge. "Our investment shouldn't be put up for sale to free up money for runaway military spending or tax cuts for billionaires," Oregon Senator Ron Wyden stormed. "I fought off efforts to privatize Bonneville a decade ago and I'll do everything in my power to stop this misguided scheme."

A decade ago the Bush administration sought to require BPA to sell power at market rates, instead of based on the cost to produce the power. That unrealized plan was widely seen by critics as a step toward privatization. But unrealized or not, the administrative changes destabilized BPA—and with it, the balance sheets of a score of Northwest industrial employers. "Our public power customers have made it clear that BPA's pattern of rate increases since 2008 is unsustainable," agency officials admitted in a strategic plan for reorganization released earlier this year. "They are also facing competitive pressures and are prepared to look for alternative suppliers when it comes time to renegotiate long-term power contracts in just a few years." Powered by the Columbia River network, BPA remains a centerpiece of the Northwest's energy industry and economy, historically the low-cost provider of electricity. But it has been struggling to maintain competitiveness amid fast-changing markets and technology. Because the BPA's profile is predominantly hydropower, the agency is also heavily reliant on the amount and timing of precipitation in the Columbia watershed.

The agency was punched hard by the previous Republican administration, which arbitrarily increased BPA's customer base and destabilized sweetheart power rates to heavy industries like the Alcoa Intalco aluminum smelter at Cherry Point. In more recent years, lower natural gas prices and a rush of new renewable power coming online—including a growing surplus of solar power in California—have cut the bottom out of BPA sales of surplus hydroelectricity, a source of secondary revenues that help cover administrative costs and keep rates low for public utility customers. The agency faces major capital costs to maintain and modernize aging dams and transmission assets, which BPA needs to operate with more flexibility amid a changing energy market. Bonneville Power administrators outlined these challenges in their strategic plan. There is

a balancing act that attempts to transition the Northwest into a renewable power portfolio with reduced reliance on dammed river systems, but it must be accomplished amid new power capacity additions that are driving down power prices. The more-with-less balancing act is playing out amid flat demand, increasing costs to meet fish and wildlife obligations, and the need to maintain required payments to investor-owned utilities in the region. The agency is stretched financially. Projections in its most recent rate filing show that its \$7 billion borrowing authority with the U.S. Treasury—a transfer from one federal agency to another—could be exhausted by 2023. By design, BPA's rates have been increasing faster than those of other utilities or prices in wholesale power markets. **The agency raised power rates by 5.4 percent in July and transmission rates by 0.7 percent.**

Scott Corwin, executive director of the Public Power Council, which represents BPA customers, said **the agency faces a host of issues that it needs to deal with before renegotiating contracts.** "They only have a few years, and there's a lot of work to do to make sure they're in the best position," he said in a statement. "The focus is on responsiveness to customers and the urgent need to make progress toward future competitive products and services," he summarized. Trump administration meddling only increases the difficulty in transition; and the recent federal budget rejiggers how BPA sets rates for power it markets from dozens of dams in the Northwest. The meddling exacerbates a narrative that BPA cannot be not competitive and must be sold off. **With it goes the very model of renewable public power in the Northwest.**



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