7/24/2015

Some Dam – Hydro News™

And Other Stuff

i

Quote of Note: *"If we don't change, we don't grow. If we don't grow, we aren't really living." - Gail Sheehy*

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"Good wine is a necessity of life." - -Thomas Jefferson
Ron's wine pick of the week: **2012 3 Ball Zinfandel "Paso Robles"**
"No nation was ever drunk when wine was cheap." - - Thomas Jefferson

Dams:

(Is there a war on that we didn't know about? What's happening to our country?)

Federal agency responsible for Hoover Dam requests 52,000 rounds of ammunition

Associated Press, Jul 12, 2015, abc15.com

LAS VEGAS, NV - The federal agency overseeing water and power is in the market for 52,000 rounds of ammunition for its officers at Hoover Dam and the Lake Mead National Recreation Area, raising questions about weapons for nonmilitary purposes. The Bureau of Reclamation put out a bid in June for 41,600 rounds of hollow-point ammunition and 10,400 rounds of shotgun ammunition. The ammo is paid for by revenue from utility companies that buy electricity from Hoover Dam, but the bureau won't say how it will be used or offer details on its law enforcement plan at the popular tourist destinations. A 2008 review of federal law enforcement indicated 21 officers patrolled Hoover Dam, the Las Vegas Sun reported. "We want to limit the amount of information any bad guys might have about our protection capabilities," Bureau of Reclamation spokeswoman Rose Davis told the newspaper.

In addition to the bureau, which operates in Nevada out of its Boulder City office, the Department of Homeland Security and the Las Vegas police department are also called upon to handle Hoover Dam security. The Bureau of Reclamation most recently purchased a large stock of ammo in 2013 and since 2008 has requested ammunition 19 times for use nationwide. U.S. Rep. Mark Amodei, R-Nev., has said he will seek answers from the bureau including how many officers are using firearms and how they are using them. The lawmaker was among a group of GOP congressmen who tried, unsuccessfully, to prohibit some federal authorities from using or buying weapons after a high-profile standoff in Nevada turned tense. In April 2014, Nevada rancher Cliven Bundy and his supporters faced off with the Bureau of Land Management after a federal judge authorized that agency to remove his cattle from public land. No shots fired although both sides were armed.

(Good luck!)

Valley counties push for funds for Temperance Flat Dam

By Gene Haagenson, July 14, 2015, abc30.com

FRESNO, Calif. (KFSN) -- The drought has accelerated the call to build the massive dam on the San Joaquin River, above Friant Dam. It's a priority for Valley farmers and the Fresno County Board of Supervisors wants to form an organization, a joint powers authority, with other counties and agencies to apply for the money to build it. Supervisor Brian Pacheco told his fellow board members at Tuesday's meeting, "Fresno County is not in the Dam building business, nor do we want to be, we simply want to provide the mechanism that provides all of the people of the valley an opportunity to apply for the bond money and this is one way to do it." The Joint Powers Authority would look at applying for money to build a variety of projects including underground storage, but a 600 foot high Temperance Flat Dam is the dream. Mario Santoyo of the Latino Water Coalition is one of its biggest advocates.

Santoyo explained, "Temperance Flat clearly is the main goal here, because that's the one that can go in terms of capacity from half a million acre feet to 1.5 million acre feet and that would make a world of difference for drought years like we have right now." However, critics say citing capacity is misleading since it's not likely the dam would ever be filled. Steve Evans of the Sacramento based Friends of the River, group says Temperance Flat does not provide much bang for the buck. "The main issue is it doesn't produce very much water. The Bureau of Reclamations says it will produce an average of 70 thousand acre feet of water and that's a miniscule addition to our overall statewide water supply. It's not worth the $3 billion or so it's going to cost to build the damn." Environmental groups around the state are opposed to dam building, and the LA Times ran an editorial this week against using water bond money for dams, so dam supporters may have a tough fight ahead, but Fresno County's vote to form a Joint Powers Authority is a first step in that battle.

Hydro:

(Guess pun intended!)

Charlie Baker bill would jolt Mass. use of hydropower

By Jordan Graham, bostonherald.com, July 10, 2015

Gov. Charlie Baker has filed a bill that would help bring hydropower to Massachusetts in an attempt to address spiking energy prices and reduce carbon emissions. “This legislation is critical to reducing our carbon footprint, meeting the goals of the Global Warming Solutions Act and protecting ratepayers already stuck by sky-high energy prices,” Baker said in a statement.
The bill would require utilities to work with the state to get long-term contracts for the generation and delivery of electricity from hydropower. It would also allow the state to collaborate with neighbors including Connecticut and Rhode for joint power purchase agreements. Secretary of Energy and Environmental Affairs Matthew Beaton said adding hydropower will be critical for hitting the state’s goal of reducing carbon emissions by 25 percent by 2020. “We view (hydropower) as being a very cost-effective way to bring a large amount of renewable energy into the region,” Beaton said.

(Strange title for an article about a dam.)

County Road 12: Martin Dam

By Judd Davis, 07/10/2015, wsfa.com

ELMORE CO., AL (WSFA) - It's an impressive structure that's been working for almost 90 years. "It has been here since 1926," said David Waites, a river manager with Alabama Power. "When it was built it wasn't Martin Dam. It was Cherokee Bluff. They were built for power generation and flood control. Recently there has been a lot of emphasis on recreation. Thousands of people come out here to enjoy this lake. From high above or down below, the size is breathtaking.

"When the spillways open up it looks like Niagara Falls." Waites says. "They had some smart people back in the 20's." The goal is to keep the spillways closed. They only raise them up if there has been a lot of rain. The water that goes through the spillway is water they can't use to make power. Keep this in mind, the technology and engineering here is almost a century old.
These days the hydroelectric dams don't produce a huge percentage of energy for Alabama Power, but the energy they do produce is at a very low cost. "Martin dam produces 186 megawatts of electricity. It's enough to power about 100,000 homes a day." Waites says. The folks at Martin Dam are in constant contact with engineers in Birmingham. Those engineers monitor the levels are Martin Dam every second of the day and then the let them know when it's time to use the water to make power. It's not making power for a good part of the day, but they're always ready to crank things up if the power is needed. Cameras aren't allowed inside the main powerhouse because of security changes after 9/11 but you can see that area for yourself. Alabama Power offers tours of the dam. Call your local Alabama Power office to set up a tour.

(With the Snake River there’s always a controversy!)

Two Snake River hydropower projects stir controversy

By LUKE RAMSETH Post Register, 7/11/15, trib.com

IDAHO FALLS, Idaho — Concerns are mounting over two proposed hydropower projects seven miles north of Idaho Falls. On its surface, the proposed County Line Road Hydroelectric Project, flanking the Snake River on the Bonneville-Jefferson County line, is relatively low-key. It would utilize existing irrigation canals and produce about 2.5 megawatts of power. But at public meetings and a site tour this week, residents, conservation groups and government agencies made it clear they have a multitude of worries about the project and potential impacts it might have on a three-mile stretch of the Snake. They are especially concerned about how much water the irrigation districts would leave in the river during the winter, when flows are lowest. The project is a joint effort between the Idaho and New Sweden irrigation districts. New Sweden has a canal on the west side of the river; Idaho on the east. Both want to build 35 by 35 foot powerhouses on opposite sides of the water to make the power.

The plan calls for rerouting as much as 2,000 cubic feet per second of water from the Snake into the canals, and through the hydropower turbines, before returning it to the river three miles downstream. In the growing season, sufficient water also would need to be sent through the canal for irrigation purposes. Canal banks would be built up by as much as five feet. In April, the districts filed pre-application documents with the Federal Energy Regulatory Commission, which issues licenses for such projects. Three FERC officials were in town this week inspecting the site and holding meetings as the agency prepares to compile an environmental assessment of the project. More than 30 attended a Wednesday site tour. They inspected the canals, headgates where additional water would be diverted from the Snake, and locations where powerhouses would be built. Residents, canal company representatives, officials from several state and federal agencies, including the Bureau of Land Management and the Idaho Department of Fish and Game, and conservation group officials joined the tour. That evening, close to 100 people — many of them neighbors of the proposed project — crammed into a Shilo Inn meeting room for a tense public scoping meeting.

"I wasn't expecting this many people, but I'm glad you're all here," said FERC biologist Matt Cutlip, the lead federal official on the project. The districts have said to make the projects profitable, they must operate the through the winter, when river flows are lowest, and canals usually would be dry. They have requested maintaining a minimum flow of 1,000 cubic feet per second in the Snake River through the season, generally between October and March.
Pulling roughly two-thirds of the water from the river during the winter has many worried about possible impacts to fish and wildlife — as well as pristine views and home values. Studies the companies commissioned on the project said the project would actually be good for fish in the area, said Louis Thiel, a New Sweden board member. Tom Bassista, an environmental biologist with Fish and Game, said his department is in the process of studying the project and compiling a letter it will send to FERC for its environmental assessment. "Our primary concern is being able to craft a minimum bypass flow for the river that provides protection for fish and wildlife resources," he said in a Friday interview. Less winter water might mean the river freezes over more frequently, which could harm fish and wildlife, Bassista said. "We know the irrigation districts require so much water to produce energy and rivers typically have a biological threshold for what they need, so we're trying to balance those two," he said. Bassista said he wasn't yet sure if 1,000 cfs would be sufficient. At the Wednesday meeting, Nick Josten, an Idaho Falls consultant coordinating the FERC application process for the districts, said requiring a higher minimum flow, such as 2,000 cfs, would probably kill the project. Bill Smith, a resident of the Bear Island neighborhood along the river, said he is concerned about buildup of loose "frazil" ice in the winter. The ice could build up around the powerhouses, he said, causing a clog and sending water over the banks. Smith recalled a similar ice-induced flooding incident on the same area of the Snake River in the 1980s, which inundated two homes. "Every property adjacent to the canals is going to be at risk of being flooded," he said at Wednesday's site tour.

(Hydro's roots.)

Beckman Mill stones give glimpse at past

By Marty Densch Special to the Daily News | July 11, 2015, beloitdailynews.com

As Beckman Mill volunteers escorted some visitors during a routine weekend tour a couple of years ago, they were joined by a bearded gentleman who quietly took notes. The gentleman was Dr. Joseph Hannibal, curator of invertebrate paleontology for the Cleveland Museum of Natural History. While he expressed some interest in the building and its restoration, he was really there to look at the mill stones. Joe, as he prefers to be called, asked permission to set up a few pieces of equipment and pulled from his backpack a microscope, some hand-held magnifiers and lights. He busily scribbled notes while peering through the lenses. He was hunting for fossils. It was common knowledge that the Beckman mill stones were imported from France. What is not so well known is that such mill stones contain ancient fossils that would not otherwise be found in North America. Joe was so interested in studying the fossils that he recently paid the mill another visit and brought a team of geologists and paleontologists with him.

Grist mills were familiar sights during the 18th and 19th centuries and though their designs might vary, common to all of them were the heavy, round stones used to grind grain into flour. The preferred stone for milling was chert or buhr, a type of quartz that is found in both North America and Europe. Quarries in Ohio produced much of the chert for mill stones in the United States, but French chert was considered by many to be superior. It was, of course, more expensive.

The untrained eye cannot tell the difference between Ohio chert and French chert, but for a paleontologist or geologist there is a critical difference — they contain entirely different fossils. Both forms of chert were formed by sedimentation, but French chert was formed under fresh water conditions. Ohio chert was formed under salt water. Also, the French stone is “only” about 35 million years old, while the Ohio stone is hundreds of millions of years older than that. Joe had brought geologists along on this most recent trip not only to show them his find but also to learn from their expertise. For example, as he studied the stones, David Eby, a geologist from Denver, Colorado, noted that the large number of fossils probably made the stone more suitable for milling by making them stronger. He explained that without the network of microscopic pores from fossilization, the stones would be harder but far more brittle and would chip more easily. Geologists first made note of the differences between the Ohio and French stones as early as 1830 but little was made of it until very recently. Now scientists are combing the countryside for old mill sites where they can continue their studies. Hannibal is developing a map of known locations of French mill stones across the country and Newark Township is now on it. He also left a large poster showing magnified images of some of the fossils that he found in the Beckman mill stones. The poster will be on display in the mill later this summer. When the Friends of Beckman Mill set about restoring the familiar landmark in Newark Township, their intent was to save an historic building and bring 19th century technology back to life. Little did they know that they were also preserving a history much, much older than that.

(Pro-hydro opinion.)

Additional hydropower could cut carbon emissions (OPINION)

By Guest Columnist , July 12, 2015, oregonlive.com
By Linda Church Ciocci and Terry Flores

With each passing day, Americans are becoming more mindful about the ways in which energy is being generated. Our nation's reliance on fossil fuels, coupled with the looming challenges of climate change, is giving rise to the movement to reduce our collective carbon footprint. And while many areas of the country find themselves behind the curve, Oregon has been at the forefront of decreasing greenhouse gas emissions through hydropower generation. As such, it should come as a shock to few within the state that Oregon is one of the nation's leading producers of

hydropower – ranking second in the country. In fact, between 2011-2013, waterpower generated a whopping 63 percent of the state's energy from federal and non-federal systems. As a result, Oregon's household electricity prices are well below the national median. More importantly, Oregon continues to demonstrate to the country hydropower's potential as a clean, reliable source of renewable energy.

Therefore, it is fitting that Portland is s
conference, HydroVision Internationa
world are converging on the city to di
and best practices for fish mitigation,
– harnessing waves, tidal, ocean and
innovation, Portlanders today are leve
developed by Lucid Energy to capture
Oregon serves as the ideal backdrop
juxtapose it with the rest of the countr
only 3 percent (roughly 2,400) are eq
power is being produced by a small s
of the nation's energy. At the same time, hydropower is helping the nation avoid over 200 million tons of CO2 emissions annually – the equivalent of 42 million cars.

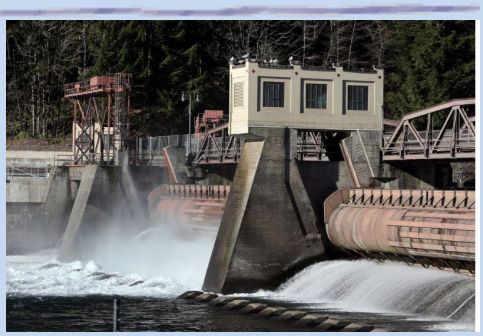
Print Email

Indeed, the potential for hydropower is real. According to the Department of Energy, we could increase our generating capacity by over 12 GW through the addition of power generation to non-powered dams – enough to power over 4 million homes. The good news is that members of Oregon's congressional delegation have been champions of hydropower – supporting the Hydropower Regulatory Efficiency Act of 2013, tax incentives for pumped energy storage and a national marine renewable energy research, development and demonstration center run by Oregon State University. As an industry, we are committed to operating in a responsible and balanced manner that protects and preserves natural resources and environmental values. And we are proud to be meeting in Oregon because it serves as model for how hydropower can effectively and sustainably reduce emissions, fight climate change and keep energy costs affordable for consumers. *Linda Church Ciocci is the executive director of the National Hydropower Association. Terry Flores is the executive director of Northwest River Partners based in Portland.*

(Young for a hydro project.)

Leaburg Hydroelectric Project listed in National Register of Historic Places

By The Register-Guard, JULY 15, 2015. REGISTERGUARD.COM



LEABURG, OR — The Leaburg Hydroelectric Project Historic District is now listed in the National Register of Historic Places, the State Parks and Recreation Department announced Tuesday. The Leaburg project was put into service in January 1930 and continues to generate electric power for the Eugene Water & Electric Board. It is located along approximately five miles of the McKenzie River and consists of the dam and powerhouse; the reservoir, canal and tailrace; and Leaburg Village, built to house dam workers.

The project was constructed between 1928 and 1930 and completed as originally envisioned in June 1950. Designed by the Portland engineering firm of Stevens & Koon, the facility is significant for its engineering design, incorporating innovative technological features such as the Broome Self-Closing Sluice Gate and three 100-foot-long roller gates, the state said. It is also significant

for its art and architecture. The powerhouse was designed by Ellis Lawrence, the founder of the University of Oregon School of Architecture. The bas relief panels on the building were created by nationally prominent sculptor Harry Camden Poole. The powerhouse is considered one of the finest examples of art deco architecture used in an industrial setting in Oregon. Oregon's State Advisory Committee on Historic Preservation recommended the site's nomination at its February meeting. The Leaburg Hydroelectric Project Historic District is the second property in the Leaburg area to be listed in the National Register, the first being the Old McKenzie Fish Hatchery Historic District. The National Register is maintained by the National Park Service under the authority of the National Historic Preservation Act of 1966. More information about the National Register and recent Oregon lists is available online at www.oregonheritage.org.

Company gets federal approval for hydroelectric plant on Mon River

By The Tribune-Review, July 16, 2015, triblive.com

Dallas-based Hydro Green Energy won approval this week from the Federal Energy Regulatory Commission to build a $15 million hydroelectric project at the Braddock Locks and Dam on the Monongahela River, the agency said Thursday. The company's license allows it to operate its planned 5.25 megawatt hydro plant for 50 years, said CEO Mike Maley. The company hopes to begin construction on the project when it receives approval from the Army Corps of Engineers for its building plans. Construction should take about a year, he said. If the project is built, Hydro Green Energy would be the first company to operate a hydroelectric power plant in Allegheny County. The project would produce enough power for about 5,250 homes, according to the company. Hydro Green has 15 projects planned across the country. It is awaiting final licenses for other projects, similar to its Braddock proposal, on the Allegheny River near Oakmont and on the Monongahela River near Morgantown, W.Va.

Water:

(Where would the water come from without dams? LA gets around 80 % of its water from reservoirs!)

Op-Ed

Why the water bond shouldn't fund dams

By JACQUES LESLIE

Inside the $7.5-billion water bond that California voters enthusiastically approved in November is a provision that never should have been included. It requires the expenditure of $2.7 billion — more than a third of the bond — on water storage, which in this case mostly means dams. The bond's billed purpose is to bring California's aging water infrastructure into the 21st century, but the largest allocation in it may keep the state mired in the 1950s. The latest version of a bill by House Republicans to override California's management of its water system and undermine environmental protections — in the name of emergency drought relief and food security — is longer and more detailed than the ones that preceded it, but much the same in its substance:... (The Times editorial board)

Dams are a relic of the Industrial Age, a brute-force solution to water scarcity that sets off a cascade of environmental collapses, from the upstream tip of the reservoir to the river's mouth and beyond.

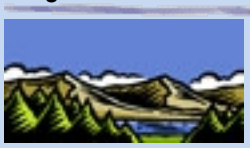
Pine Flat Dam

They're particularly ill-suited to the era of extremes — heat waves, floods and droughts — that climate change has brought on. High temperatures intensify evaporation from reservoirs. Massive floods threaten dams with overtopping and breaching. Droughts defy the very reason for dams' existence: They drop reservoir levels, wasting the "capacity" that goes unused, and cause hydroelectric output to dwindle. The water-storage bond provision, known as Chapter 8, was included largely at the insistence of the Legislature's Republican minority, whose support was needed to reach the two-thirds threshold to qualify the bond for the ballot. The embrace of dams by the state's "water buffaloes"— mostly Republicans but some notable Democrats too — reflects hidebound ideas about dams that were formed before the record of their financial and environmental performance was established. Many water buffaloes seem to view water chiefly as an agricultural input, like fertilizer, whose conduits happen to include rivers. It doesn't hurt their outlook that dam building ensures the distribution of vast sums of money to developers, contractors, consultants, bankers, lawyers and construction workers — many of them constituents or potential contributors.

California already has almost 1,600 inventoried dams, plus thousands more mostly small, privately owned uncounted ones; the sites that remain for new dams are the engineering dregs. The five new or enlarged dam projects most often discussed for Chapter 8 funding together would produce 400,000 acre-feet of water per year, at a cost of $9.75 billion, according to Friends of the River, a state conservation group. All that money would increase the state's yield by less than 1% of its annual water budget of 41 million acre-feet. Despite sound evidence that the dam projects are follies, the California Water Commissions faces enormous pressure to approve at least one dam.- Compare that with the nearly 2 million acre-feet per year that new water management techniques — such as reuse, stormwater capture and groundwater cleanup — have yielded the state in the last decade at a cost of $5.13 billion, according to the California Department of Water Resources. As Doug Obegi, a senior attorney in the Natural Resources Defense Council's water program, recently blogged, "Big new dams simply can't compete economically with these regional and local water supply projects." Add to the cost of the dams the strong likelihood that they'll come in over budget and behind schedule. A pioneering 2014 study by four Oxford University scholars of the costs and benefits of 245 large dams built between 1934 and 2007 found that actual costs were on average nearly double projected costs, and construction took 44% longer than forecast. Dam builders have not even learned from their mistakes: "Forecasts of costs of large dams today are likely to be as wrong as they were between 1934 and 2007," the study said. It concluded that "the actual construction costs of large dams are too high to yield a positive return," and recommended more "agile" alternatives. It's possible that Democrats have inserted enough snares in Chapter 8 to confound the water buffaloes. The projects must "provide a net improvement in ecosystem and water quality conditions," a standard that virtually no dam achieves. In addition, ecosystem benefits must constitute at least half of all public benefits from the project, ensuring that environmental concerns are addressed ahead of things such as recreation and flood control (which is allocated $395 million in another part of the bond). But as an October 2014 report on the water bond published by the Pacific Institute, an independent Oakland-based water research group, explains, "Ecosystem benefits could be funded directly and would most likely produce far greater ecological improvement than the benefits … from … any of the proposed surface storage projects." In a somber opening to wildfire season this month, federal and state officials meeting in Nevada warned that kindling-dry forests and a rainless forecast could lead multiple states in the Great Basin to erupt in flames at once, stretching firefighters and equipment thin across the region. (Cynthia Barnett)

A preferable alternative is to develop the other kind of water storage specified in Chapter 8 — underground. The water bond separately sets aside $900 million for groundwater cleanup and development, but Chapter 8's larger funds can be tapped for groundwater storage too, if a project improves environmental conditions in the highly compromised Sacramento River-San Joaquin River Delta. As it happens, beneath the San Fernando Valley lies a capacious aquifer that is contaminated by industrial effluents. Rehabilitating it requires extracting the water, cleaning it and returning it to the aquifer. It's an expensive process, but it's far more cost-effective than building dams, and increasing the aquifer's capacity could result in less water taken from the delta.

Aquifers have notable advantages over dams: They lose no water to evaporation, they require much less infrastructure construction, and they reinforce natural processes instead of rupturing them. The Pacific Institute report compared Chapter 8's dams with underground storage and found that "groundwater storage has greater water supply potential at a lower cost."
The final allocations will be decided by the California Water Commission, which was moribund until legislation reconstituted it in 2009. One of its nine memberships is vacant; the others are split evenly between those first appointed by Gov. Arnold Schwarzenegger and Gov. Jerry Brown. As they deliberate, they might consider what has happened to the nation's two largest reservoirs, Lake Mead and Lake Powell. Their water levels have dropped so low, currently at 37% and 54% of capacity respectively, that Lake Mead could easily hold both their contents. In fact, environmentalists have quite reasonably proposed emptying Lake Powell into Lake Mead, since doing so would save a huge quantity of water by eliminating evaporation and leakage from porous Lake Powell. Officials have resisted, for the proposal strikes indirectly at the rationale for Lake Powell's creation. Along with the beautiful Colorado River side canyons that were inundated for half a century, the low water levels have exposed the fallacy of dams. *Jacques Leslie is a former Los Angeles Times foreign correspondent and the author of "Deep Water: The Epic Struggle Over Dams, Displaced People, and the Environment," which won the J. Anthony Lukas Work-in-Progress Award.*



Environment:

(Now what, there's no water?)

Impending drought raises concerns about Elwha River fish

By Paul Gottlieb , Peninsula Daily News, peninsuladailynews.com, 7/11/15

PORT ANGELES, WA — It's all about fish that are slowly returning to the Elwha River following the removal of two dams. They must be protected from the drought, city and Lower Elwha Klallam tribal officials said last week. Craig Fulton, city public works and utilities director, said Stage 3 drought emergency restrictions on outdoor watering of lawns and gardens will likely be imposed this summer to protect salmon health in the Elwha River. The restrictions won't be to preserve the city's water supply. "Stage 3 would be for the fish," Fulton said. "We have the ability to produce all the water we need for municipal purposes." Fulton said the city is in good shape with five concrete reservoirs built between 1918 and 1966. They hold 18 million gallons drawn from the Elwha that's made potable at the city's water treatment plant, then piped to the reservoirs and city water faucets. The river is flowing at 340 cubic feet per second (cfs) two months ahead of schedule, Fulton told City Council members last week.

Fulton said as it approaches 300 cfs, fish habitat is compromised — and the flow is expected to hit 150 to 180 cfs by September. Elwha Dam was fully removed by March 2012, and the last of Glines Canyon Dam was destroyed in August 2014, opening up about 70 miles of river and tributary to once-legendary fish habitat. The low river flows couldn't have come at a worse time for Matt Beirne, the Lower Elwha Klallam tribe's environmental coordinator. "It is pretty lousy timing for drought conditions in the face of restoration," he said last week. Beirne said salmonids are stressed by water that's warmer than tribal fish biologists have ever seen recorded at the mouth of the Elwha, 5 miles from where Elwha Dam blocked salmon migration for a century. Temperatures have been as high as 24 degrees Celsius — 75 degrees Fahrenheit — and 19 degrees Celsius last week. "I have never seen temperatures at 18 at this time of year," Beirne said. "When you get down there, and the feeling is like it would feel like bath water, it's pretty phenomenal. "It's like nothing we've ever experienced." Salmonids in particular have exhibited signs of stress from warm water in nearshore areas and estuary ponds where the river empties into the Strait of Juan de Fuca. The young fish can't be handled for prolonged periods. They roll over too easily. And they are prone to catch diseases from other fish because there are fewer pools and they are in closer contact.

Water treatment plant
Elwha River water flows to the city's water treatment plant to the reservoirs to the faucets of city residents. Council members have been making efforts to limit water usage in light of historically low river flows for this time of year, the absence of Olympic Mountains snowpack from a dry winter and Gov. Jay Inslee's declaration in March of a drought emergency for Clallam and Jefferson counties. In May, council members rescinded the first year of a seasonal flat water rate they had approved to benefit gardeners and green-lawn proponents. In June, they declared a Stage 2 drought emergency that called for voluntary measures and a city-sponsored public information campaign. Fulton said last week there is a 50-50 chance council members will impose Stage 3 restrictions at their regular July 21 meeting. In that case, the council would impose limited restrictions, with the option of imposing specific times for lawn and garden watering. Fulton said he would not hazard a guess if the council will impose mandatory Stage 4 restrictions that would outlaw nonessential uses, including for garden and lawn watering. If Stage 4 happens, it won't be for lack of water for human consumption. “That would be for the fish,” Fulton reiterated. Fulton and Beirne said the tribe and the city have been working closely to monitor the river's flow and its impact on returning salmon.

Dams not adequate
Robert Elofson, the tribe's Elwha River fish restoration project manager, and Fulton said keeping the dams, and the reservoir-like lakes they created, would not have adequately addressed the drought. Elwha Dam held back Lake Aldwell and Glines Canyon's Lake Mills. “They didn't have the storage capacity to add to the flows for a long period of time,” Elofson said. The gates on both reservoirs were just 20 feet high, he said. As standing water, the warmer flow from Aldwell and Mills also could have added 15 degrees to the river temperature. “There would have been a very good chance that it would cause disease to the salmon from the low flow,” Elofson said. Fulton said the National Park Service employed a “run of the river” practice for water storage before the agency oversaw the largest dam-removal project in the nation's history as part of a $325 million endeavor. “That meant whatever volume of water went into the dams, the Park Service let that same amount of water out of the dams,” Fulton said. “If the city was directly tapped into the dams, then it would be like a huge reservoir. “We never were tapped into the dams.”

(If it’s a dam, I’m against it.)

Dam legislation would hurt fish, rivers (OPINION)

By Guest Columnist, July 12, 2015, oregonlive.com
By Bob Irvin

Participants at this week's HydroVision industry conference in Portland will talk about how hydropower is clean energy, while at the same time members of the National Hydropower Association are pushing federal legislation that would let dam owners avoid complying with critical safeguards for clean water and endangered wildlife. The legislation, proposed by Rep. Fred Upton, R-Michigan, Rep. Cathy McMorris Rodgers, R-Washington, and Sen. Lisa Murkowski, R-Alaska, would roll back protections for fish, wildlife and endangered species, strip states and tribes of their authority to hold hydropower dam owners accountable

for water quality violations and make it difficult -- if not impossible -- to secure fish passage and other dam improvements.

Under existing law, communities can strike a balance between hydropower and healthy rivers. For example, in 2004 Portland General Electric entered into an agreement with the Warm Springs Tribe, anglers and conservation groups to provide significant fish passage improvements on its Deschutes River dams. Today, these dams are still major power producers and, for the first time in 40 years, salmon and steelhead are returning to the Metolius, Crooked, and middle Deschutes rivers. This is just the beginning of the agreement's implementation and more work needs to be done, but all partners are dedicated to ensuring this river restoration enjoys success for decades to come. The hydropower industry's legislation could roll back this broad-based agreement and stop future successes like it. The state of Oregon opposes the legislation because it would take away Oregon's authority to protect water quality in the state's rivers. The U.S. Department of the Interior opposes the legislation because it would undermine federal land management agencies' ability to manage public lands for recreation and the protection of fish and wildlife. It would make it nearly impossible to secure fish passage for the region's iconic salmon or to protect endangered species. The bill would also strip local communities of their say in how dams on their rivers are managed, transferring that authority to the Federal Energy Regulatory Commission, an energy-permitting agency based in Washington, DC.

The Pelton re-regulation dam on the Deschutes River in Central Oregon, seen in 2004. (File photo)

Poorly managed dams can dry up rivers, pollute drinking water, kill fish, harm wildlife and eliminate opportunities for fishing, boating and other outdoor recreation. Do we really want dams operated without the protections of modern environmental laws or the input of local communities? I know from my years as a student in Eugene and practicing law in Portland that Oregonians pride themselves on their strong conservation ethic and connection to the outdoors. American Rivers is proud to share these values. The hydropower industry's attempt to pass a bill to exempt dam owners from laws that protect fish, wildlife, water quality and recreation presents a very real threat to our rivers, local economies and quality of life. We urge Oregon's congressional delegation to join with more than 100 conservation and recreation organizations in opposing this legislation.
Bob Irvin is the president and CEO of American Rivers, a national river conservation organization. He is a 1983 graduate of the University of Oregon School of Law.

(Guess there's something to celebrate.)

Fish passage at Ice Harbor Dam anniversary celebrated

By Andy Porter, July 16, 2015, union-bulletin.com

BURBANK — It's a massive device with an odd name, and it has had a major impact on helping threatened salmon make their way to the sea. A bevy of officials turned out Wednesday to celebrate the 10th anniversary of Ice Harbor Dam's removable spillway weir. The 850-ton structure is credited with allowing 95-98 percent of juvenile salmon passing over the dam spillway to survive.

In the 1990s, survival rates for juvenile fish traveling past dams was in the upper 80 percent to lower 90 percent range, said Rock Peters, senior fish program manager for the U.S. Army Corps of Engineers.

Fabricated at Swan Island near Portland, the five-story-tall weir was barged up the Columbia and Snake rivers to the dam in 2005. After its installation, "the era of surface fish passage had begun," said Lt. Col. Timothy Vail, commander of the Corps' Walla Walla District, which oversees Ice Harbor and the three other Lower Snake River dams. The $13 million structure and others like it "are sort of a poster child in

intelligent investment" to meet salmon recovery goals, said Elliot Mainzer, Bonneville Power Administration administrator. The Ice Harbor weir and other structures now in place on the Lower Snake and Columbia river dams have become "a very, very effective way to help fish get past the system," he said. The Ice Harbor spillway weir allows juvenile salmon and steelhead to stay in the upper 10 to 20 feet of the river as they migrate downstream to the ocean instead of having to dive to depths of 50 or 60 feet, where the existing spillway gate is located. The lower depth subjected the fish to high pressure and high velocities, whereas the spillway weir acts like a giant water slide to get the fish past the dam.

Although Lower Granite Dam was the first to have a spillway weir installed in 2001, the Ice Harbor weir was the first "full production" spillway weir in the system, said Kevin Crum, project manager at Ice Harbor and Lower Granite dams. The Ice Harbor system is "removable" because, thanks to a water ballast system, it can be submerged to the bottom of the dam to restore the spillway to its full capacity in the event of a major flood. At Wednesday's event, Vail and Mainzer were joined by Lesa Stark, deputy regional director for the U.S. Bureau of Reclamation; Rob Lothrop with the Columbia River Intertribal Fish Commission; Rob Rich, president of the Columbia River Towboat Association, and Terry Flores, executive director of Northwest River Partners. All of the speakers touched on how, despite diverse aims and goals, agencies and organizations have managed to overcome obstacles to find ways to work together on salmon recovery. "The commission can trace its origins to times when conflict, not cooperation, was overriding," Lothrop said. "The removable spillway here at Ice Harbor Dam, the lamprey passage ramps at Bonneville Dam, the spillway wall at The Dalles (dam), construction of the Treaty Fishing Access Sites and Columbia Basin Fish Accords represent successes built on cooperation and collaboration." But Lothrop noted, the work is far from finished. "As long as the dams and their effects are here, there will be continuing obligations and new challenges," he said.

Other Stuff:

(22,000 acres and 460 feet tall – WOW! Birds and bats better watch out!)

Taller towers, bigger turbines enable first big wind farm in Southeast

By Jason Dearen, Associated Press July 12, 2015, csmonitor.com

On a vast tract of old North Carolina farmland, crews are getting ready to build something the South has never seen: a commercial-scale wind energy farm. The $600 million project by Spanish developer Iberdrola Renewables LLC will put 102 turbines on 22,000 acres near the coastal community of Elizabeth City, with plans to add about 50 more. Once up and running, it could generate about 204 megawatts, or enough electricity to power about 60,000 homes.

It would be the first large onshore wind farm in a region with light, fluctuating winds that has long been a dead zone for wind power.

After a years-long regulatory process that once looked to have doomed the plan, Iberdrola spokesman Paul Copleman told The Associated Press that construction is to begin in about a month.

Right now, there's not a spark of electricity generated from wind in nine states across the Southeast from Arkansas to Florida, according to data from the American Wind Energy Association, an industry trade group. But taller towers and bigger turbines are unlocking new potential in the South,

according to the US Department of Energy, and the industry is already looking to invest. And with the electricity system in the region undergoing a period of change as coal plants are phased out, some experts believe the door is open for renewables like wind.
Federal energy researchers have found stronger winds at higher elevations that can be tapped by new towers and bigger rotor blades. New federal maps of onshore wind flows at higher elevations than were previously available indicate that this new technology significantly increases the areas that wind can thrive, especially in the Southeast. "If you go higher, the wind is better," said Jose Zayas, director of the Wind and Water Power Technologies Office at the Department of Energy. "The question is how you get there responsibly and economically."

The average tower height now in the US is about 260 feet; the new technology allows turbines to mine air at 460 feet. The project in North Carolina was not viable just a decade ago, company officials said. But the new, larger turbines unlocked the area's potential. "In the past this site barely showed up on old [wind] maps. It was a little brown smudge," said Craig Poff, one of the developers, referring to color-coded wind resource maps. "The larger-diameter rotors are really the game-changer here." Spiraling wind farms in 36 states already generate about 5 percent of US energy – low compared to other countries like Denmark (28 percent), Portugal, Spain and Ireland (16 percent each). South Dakota and Iowa already derive about 20 percent of their electric energy from wind, according to the National Renewable Energy Laboratory. The Energy Department believes the US can generate 20 percent of the country's power with wind by 2030, and opening up the Southeast and other new areas is a key to achieving that goal.

There are hurdles: Utilities in most Southern states have not invested heavily in renewable energy. Also, only North Carolina has adopted a state law mandating utilities to increase their renewable energy portfolios. But other factors are already forcing change in the region's energy market. Abundant natural gas, coal being phased out and aging nuclear plants are creating a potentially robust market for wind power as utilities seek the next best investment to add to their energy mixes, said Jonas Monast of Duke University's Nicholas Institute for Environmental Policy Solutions. "It's conceivable that we can see a dramatic growth in wind as we've seen in solar because utilities are entering into a new phase," he said. Florida, Alabama, and Georgia have signed contracts to start importing wind power from other regions to help with fuel price volatility. Wind farms have been proposed in Kentucky, Virginia, Alabama, and other areas, the industry group said. Still, without state renewable energy mandates like North Carolina's, the growth could be slow going, experts said. "Quite frankly, often this is driven by customer demand and I don't really sense consumer demand in the Southeast, particularly in Alabama," said Clark Midkiff, a mechanical engineering professor at the University of Alabama who studies energy issues in the region. Another issue facing wind farms in the Southeast is protecting the region's birds and bats. The danger of wind turbines to birds like rare golden eagles and bats has plagued or derailed major projects in the West. Avian research is now factored into decisions on where to put wind farms, and can make or break a project. Because no wind farms exist anywhere in the South, little research has been done on the issue. Researchers and developers will have to catch up.
"This is a community that has not experienced a lot of wind," said Zayas, of the Energy Department. "And understanding and recognizing we can deploy these responsibly with biological and agency (studies) of species is a priority."

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