Rochester Dam Renovation Project Begins

By Rita Dukes Smith, SurfKY News Director, 8/11/19, surfky.com

MUHLENBERG COUNTY, Ky. (8/11/19) — Revitalization efforts are underway at Rochester Dam to improve the barrier at the lock and public safety while striving to keep the historical dam intact. Construction just began on the dam, which was built in the 1830s. John Dix with the Rochester Dam Regional Water Commission gave updates to Muhlenberg County Fiscal Court last week on progress at the dam, where nearly 50,000 people in Muhlenberg, Ohio and Butler counties draw water from the Green and Mudd rivers. Dix gave a historical overview of the dam including its 25-year lease from the U.S. Army Corp of Engineers after passage of the Water Resources Development

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
Act. RDRWC was formed in 2013 to find funding to repair the dam, which had been in limbo under the Corp’s jurisdiction.

In 2016, McConnell secured language in the Water Resources Development Act supporting Kentucky’s water infrastructure and giving more control to Kentucky communities. The McConnell language in WRDA called for the transfer of ownership of several dams on the Green River from the U.S. Army Corps of Engineers to local entities. In 2017, RDRWC was awarded a $3 million renovation grant from the U.S. Department of Commerce Economic Development Administration. “Since then we’ve been in the permitting process,” said Dix. “In August 2019, construction began.” Dix said the commission is working to ensure the water levels are returned to their original elevation to protect the extensive tile work done by area farmers on their lands.

Rita Dukes Smith. SurfKY News Director, Region 3 Vice President

(Education.)
File formats: ePub, PDF, Kindle, Audio book

(Today’s history story.)
Learn Wachusett Dam’s history
By TOM ZUPPA | lowellsun.com | Lowell Sun, August 12, 2019

In 1897, construction of the Wachusett Dam began in Clinton, Massachusetts, impounding the south branch of the Nashua River in the Wachusett Reservoir to provide drinking water to metropolitan Boston. When the Dam was completed in 1905, the Reservoir became the largest public water supply reservoir in the world. The Nashua River Watershed Association (NRWA) invites the public to join us to learn more about “The History of the Wachusett Dam and Reservoir” at our free program on Sept. 7, from 1-2:30 p.m., on the Promenade at Wachusett Dam in Clinton. Our program will be led by the Department of Conservation and Recreation (DCR) Wachusett Rangers and Education Staff. The talk will cover the Dam’s history, who built the dam and what were their living conditions like, how the water system works to supply water to Boston, what does DCR do today to help protect water quality downstream in the Nashua River, and how does it partner to support good watershed management.

The main program will last approximately one hour. For those who are interested, the DCR will lead a walk to the bottom of the Dam following the presentation. This program is most appropriate for ages 12 and up. The program will be held outdoors; please dress appropriately for weather conditions and wear sturdy footwear. Attendees can expect easy walking conditions; those who wish to walk to the bottom of the Dam should be prepared for stairs down and up again. Please note that the walkway on the top of the dam will not be open per DCR policy. For the comfort of all, no dogs are allowed. It is free and open to the public made possible with the support of our Clinton Event Sponsor, Workers Credit Union, a member focused credit union with over a dozen locations, including these Nashua River Watershed communities: Fitchburg, Gardner, Groton, Lancaster, Leominster, Lunenburg, and Townsend. It is part of the year-long series of free programs being presented in NRWA watershed communities as part of NRWA’s celebration of its
Wallowa Lake dam reconstruction funded.
By Ellen Morris Bishop, Wallowa County Chieftain, wallowa.com, 9/13/19

The Oregon Legislature has passed and Governor Kate Brown has signed HB 5030, which provides state lottery-generated funds of $2.5 million to the new integrated health center. Importantly, the bill also includes a $14 million appropriation for the reconstruction of Wallowa Lake Dam. “We are very excited about this opportunity, and we do hope to make the most of it,” said Wallowa Lake Irrigation District (WLID) board member Joe Dawson. **The reconstructed structure will include a fish ladder,** allowing the reintroduction of sockeye salmon to the lake. Because these will be reintroduced fish, when they are placed in the Wallowa River system, they will not be listed as Endangered or Threatened under the Endangered Species Act. “We are very happy that the State has recognized the need in northeast Oregon for the reconstruction of this dam,” said Jim Harbeck of Nez Perce Fisheries in Joseph. “It’s been a long term goal for the tribes to bring sockeye home to Wallowa Lake. They belong in Wallowa Lake. The funding to rehab the existing dam will make that possible.”

The Wallowa Lake Irrigation District, which owns the dam, contracted with McMillen Jacobs Associates of Boise to design the project once the bill, initially including a $16 million appropriation, seemed destined for passage. **The dam will be a reconstruction rather than a remove-and-replace project,** said Mort McMillen, principal engineer on the project. “We will be adding concrete to the upstream face of the dam, and actually encasing the entire dam in new concrete to make it heavier and more stable,” he said. “We will rebuild the spillway and provide a fish ladder. The idea is to encase and reuse the dam, with modifications.” **The basic design has been done in consultation with the Nez Perce Tribe, Oregon Department of Fish and Wildlife, Confederated Tribes of the Umatilla Indian Reservation, and Oregon office of Dam Safety.**

**The reconstructed dam will raise Wallowa Lake only to the level previously set by the existing dam.** “Water levels were lowered for safety considerations until the dam could be modified,” McMillen said. “So the reconstructed structure will seem to raise water levels in the lake. It will — but only back to the level where they were when the dam was functioning properly.” The project’s timeline includes design and permitting processes through 2020, begin dam reconstruction in late August and early September 2021, with completion sometime in 2022. The $14 million appropriation will have to be supplemented by grants or other funds to meet the $16 million cost of the reconstructed dam. But McMillan is confident that the funds will be available. The appropriation for the dam was secured by the work of Sen. Bill Hansell (R-Athena) and Rep. Greg Barreto (R-Cove). **The funding will help refurbish the Wallowa Lake dam to meet current safety standards and will allow fish passage for the first time in more than 100 years.**

Other eastern Oregon projects funded or partly funded by the bill include $1.4 million for an early learning center expansion in the Port of Morrow and $1.6 million for expansion of mental health services for the Umatilla County Jail. In a joint statement, Hansell and Barreto said, “These projects are essential in building up the Eastern Oregon economy and ensuring that our constituents have access to high quality health care in their communities and don’t have to drive hundreds of miles away. The investments in vital infrastructure for irrigation, educational facilities and health care will set a strong foundation for a prosperous Eastern Oregon. **Securing this funding would not have been possible without the hard work of local leaders and engaged**
constituents from throughout the region, who came to the Capitol to make their case. This is a great day for Eastern Oregon.” Both Hansell and Barreto had been meeting with constituent groups since 2017 in helping them secure funding for these projects

(Gotta have more water.)

Federal study planned on raising Boise River dam
BY KEITH RIDLER, ASSOCIATED PRESS, August 14, 2019, idahostatesman.com

BOISE, IDAHO - Federal officials plan to create an environmental study that will look at raising one of three Boise River system dams to capture more water for fast-growing southwestern Idaho. The U.S. Bureau of Reclamation is taking comments through Sept. 9 and holding three meetings involving the proposed project to raise Anderson Ranch Dam by 6 feet (2 meters). That would increase storage by 29,000 acre-feet. An acre-foot is about 326,000 gallons (1.2 million liters). “There's a consensus that the Treasure Valley will see an increase in demand, and the state wants to be prepared for that,” said Cynthia Bridge Clark, water projects section manager at Idaho Department of Water Resources.

The Idaho Water Resource Board, whose eight members are appointed by the governor, is paying $3 million for the environmental study and a feasibility study to raise the dam. Reclamation is also paying $3 million for the $6 million cost for the studies. To do the project, Reclamation must first complete an environmental impact statement to study potential effects. The comments will be used to shape that environmental study. Reclamation is holding the public meetings on Aug. 27 in Pine, Aug. 28 in Boise and Aug. 29 in Mountain Home. Idaho officials have long sought to increase water storage in the Boise River system to supply water to Boise and nearby fast-growing cities as well as create enough space to handle a 500-year flood. A 2015 study done by a water engineering company for the Idaho Water Resource Board and Idaho Department of Water Resources found that the population in the Treasure Valley will more than double by 2065, greatly increasing water demands. Lucky Peak Reservoir, Arrowrock Reservoir and Anderson Ranch Reservoir combined hold about 1.1 million acre-feet. A plan to raise Arrowrock Dam 70 feet (21 meters) at a cost of $1.26 billion fell apart in 2016 when it failed a U.S. Army Corps of Engineers feasibility study. The estimated cost to raise Anderson Ranch Dam 6 feet is $31 million.

Bridge Clark said one of the concerns about water in the Treasure Valley is climate change and the possibility of warmer winters. Currently, a big part of the water strategy for Boise and surrounding cities relies on water stored in snowpack in the mountains. But if precipitation falls as rain rather than snow that could lead to a reduced snowpack and a greater reliance on the three reservoirs. “If the snowpack isn't as robust — if we don't manage to store that water in the snowpack — than there are thoughts that we need a bigger bucket in the reservoirs,” Bridge Clark said. In related action, Republican Idaho Gov. Brad Little earlier this year signed legislation to end years of litigation involving water that refills the three reservoirs following flood-control releases. Ambiguity over who owned the rights to that refill made some water rights holders uncomfortable, leading to litigation.

(Don’t abandon MY dam.)

Mill abandoning dam on East Grand Lake would be ‘devastating,’ business owner says
By Jen Lynds, BDN Staff • August 14, 2019, bangordailynews.com
WESTON, Maine — Early last year, Jason Kreider of Darien, Connecticut, considered buying a camp on East Grand Lake. He had spent many happy childhood summers on the lake, he said Thursday, and was ex bangordailynews.com cited about the possibility of passing on some cherished memories to his three children. At that time, however, he hadn’t fully understood a significant issue that could impact not only the future of that lake and the surrounding waterways, but also the future of the entire region — a controversial proposal by a Baileyville pulp mill to abandon a dam it owns. In late 2016, Woodland Pulp asked the Federal Energy Regulatory Commission for permission to surrender its license to operate the Forest City hydroelectric dam on East Grand Lake. The company said the cost of maintaining and operating the dam outweighed the benefit of using the electricity it generated.

But the residents, tourists, camp and business owners in the East Grand Lake area say the move would destroy the economy of the area, and that the dam is crucial to maintaining the water levels. East Grand Lake is a massive waterbody that lies on the international border between Maine and New Brunswick. Woodland Pulp officials have said meeting the federal agency’s requirements for operating the dam would cost the company $6 million more than it would make from any power generation during the 30-year life of the dam license, which was renewed in 2015. “My best friend’s parents had a camp on East Grand,” Kreider said Thursday. “And I was so lucky in that they invited me to visit them for a few weeks every summer starting from when I was about 10-years-old right up until I was a junior or senior in college.” Kreider said that he wasn’t aware of the controversy over the dam until he started looking into buying a camp himself. “Certainly, that will impact my decision,” he said. “Because who wants to purchase a camp if the value of it is going to suddenly decrease, or if the water levels in the lake are going to go down?”

Kreider’s remarks are familiar to Wayne Smith, who operates First Settlers Lodge in Weston with his wife, Denise. He said that he fears for the entire local economy if Woodland Pulp is allowed to surrender its license. “I believe it would be devastating for the camp owners, businesses and those who rely on the lake to make their living,” he said Friday. “So essentially, the entire economic area of this region. So much income that is earned by these gas stations, lodges and guide services comes from the lakes.”

Elbridge Cleaves, a lifelong Weston resident, was one of more than 100 people who attended a rally to save the dam at First Settlers Lodge earlier this month. A member of the Greater East Grand Planning Group, he noted that the region is blessed to have a wealth of natural resources and recreation. He stressed that such gifts can’t afford to be lost. “That’s our base, our economic base,” he said. “Anything that affects that negatively affects our area negatively.” In June 2018, the International Joint Commission St. Croix River Watershed Board met in Danforth. Pamela J. Lombard, a hydrologist with the U.S. Geological Survey’s Maine Water Science Center in Augusta, conducted a study to estimate the unregulated monthly, annual and peak streamflows on the impacted waterways. She told the crowd that the report showed “average monthly lake levels would likely be from 1.8 feet to 5.4 feet lower with the gates of the Forest City dam opened than they have been historically.” That angered several residents in the crowd, who said that when water levels in East Grand Lake sank in 1969, the lake turned into a muddy waterbody that few could access. Smith said that he “can imagine anyone who is looking to buy a camp here or who owns a camp here” would be concerned knowing that information. “I mean, it is awful not knowing what the future of the lake might look like,” he said Friday.

(The opposite end of the spectrum.)

Township officials oppose the removal of dam

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
WARREN TOWNSHIP, Ohio — Township trustees continue to oppose the removal of the Leavittsburg dam at North Leavitt Road and West Market Street and plan to have the Ohio Environmental Protection Agency present a public program on it. Trustee Chairwoman Kay Anderson said at a special meeting Tuesday they oppose a plan being discussed by Eastgate Regional Council of Governments to remove nine dams in different areas along the Mahoning River. Township trustees and Trumbull MetroParks officials met a few weeks ago with Eastgate over the dam.

The plan to remove the dams is aimed at speeding up the natural cleaning process of the river and potentially spur recreational or economic development along its banks. Anderson said the meeting with the Ohio EPA has not been scheduled yet. “There is a lot of opposition to the dam being removed. We have had calls from many residents and also heard from people at meetings,” Anderson said. Shirley Combs of the Downtown Leavittsburg Improvement Association and others voiced their concerns Tuesday and at past trustee meetings if the dam is taken out. Residents have expressed concern about health issues if the dam is taken out and what will happen to their properties along the river. Anderson said a dam in Girard originally on the list was removed since it is used by McDonald Steel. Anderson said if the dam is to be taken out, it must be preceded by a public hearing on the matter. Also Tuesday, trustees held interviews with two candidates for a police officer position, but took no action.

(We have many dams in need of repair or modification.)

Many of Oregon’s dams in dangerous condition

By SIERRA DAWN McCLAIN, Capital Press, 8/14/19, capitalpress.com

NEWPORT, Ore. — People in blazers and strapped-on booties waded through the dark intake tunnel of a dam, flashlights in hand, stirring rust-colored silt into the water. Spiders and large black crickets scurried across the wet walls. And water trickled from seepage holes — vulnerable breakage points inside the tunnel. “This is the stuff nightmares are made of,” said Jenny Dresler, grassroots director of the Public Affairs Council. The City of Newport’s engineer was leading about a dozen politicians, community leaders and water experts underground into the intake of Oregon’s second most dangerous dam — Big Creek Dam No. 2 — on Tuesday in Newport, Ore. Gov. Kate Brown approved $4 million for Newport’s dam project Aug. 9, but the money won’t be available until 2021 and the danger is far from over.

Across Oregon, water infrastructure is crumbling, funding is scarce and the disconnect between bureaucrats and communities has exacerbated tensions over water. But small Oregon communities like Newport are showing that citizen activism can make a difference. The two Newport reservoirs, behind Big Creek Dam No. 1 (Lower) and Big Creek Dam No. 2 (Upper), are the city’s sole water supply, and the secondary water source for surrounding areas. According to Tim Gross, the City of Newport’s public works director and city engineer, when these dams collapse, they’ll kill everyone and destroy everything in their path. Imagine rushing water at a rate of 285 average-sized swimming pools per second — and that’s just from the upper dam. The Oregon Coast lies near the Cascadia Subduction Zone, but Gross said it wouldn’t require the Big One for these dams to collapse. To fail, the dams need an earthquake of only 3.0 or greater on the Richter Scale. Constructed in 1951 and 1968, respectively, the lower and upper dams are crumbling, and the soil underneath is at risk of liquefying. Although Gross has been pushing for a
decade for removal of the old dams and construction of a new one, the soils under the dams reached dangerous levels this year.

**Oregon has 75 high-hazard dams**, which means if the dams fail, they will result in significant damage and loss of life. Of that number, nine are in poor condition and seven in unsatisfactory condition, according to Stephanie Prybyl, water policy analyst at Oregon Water Resources Department. Funding is scarce. **Getting a federal dam grant is highly competitive, and the pool of money is meager.** According to Tia Cavender, Newport’s grants consultant of record, the dam project in Newport alone will cost up to $80 million. But for the current fiscal year, FEMA’s National Dam Rehabilitation Program has a grant pool of only $10 million — for the entire U.S. Cavender said dam owners must apply for small grants — local, state and federal — to raise the money that’s needed, and even then, it won’t be enough. To build the dams in Newport, said Gross, the city will ultimately have to tax its residents to make up for whatever portion isn’t funded. “This small community can’t afford much,” said Gross. “If the tax is too high, they’ll leave.” The timeline, said Cavender, also poses a challenge. Grant money often comes with strings attached and specific timeline requirements, and the grants can conflict with one another. **Funding is even more limited for private dam owners**, such as farmers who own small reservoirs, according to April Snell, executive director of the Water Resources Congress. But communities are rallying together to make change happen.

After the 2019 legislative session, Brown said Aug. 4 she might veto the $4 million appropriation in House Bill 5050 to pay for the Big Creek Dams project. Newport rallied to fight for its water supply.

“Coastal Oregonians are tough people,” said Sen. Arnie Roblan, D-Coos Bay. “They usually get ignored in the legislature, and it’s their resilience that’s made the difference. It’s the rural folks, the fishermen’s wives and the local groups that have banded together to fight for this dam project.” Community members flooded Brown’s office with calls, emails and letters. Roblan, Rep. David Gonberg, D-Central Coast, and others met with the governor, attempting to change her mind. On Aug. 9, Brown did an about-face and decided not to veto the funding.

Mike Harryman, resiliency officer for Brown’s office, was on the tour at Big Creek Dam No. 2 Tuesday. “It’s a good thing the governor didn’t veto the funding,” said Harryman, “or else you’d all be stringing me upside-down by my boots inside the dam.”

Racquel Rancier, water policy analyst at the Oregon Water Resources Department, said the funding is a victory for Newport, but Oregon’s water infrastructure still has a long way to go. “We’ve got to celebrate the little victories,” she said. As the group slogged out of the wet dam intake tunnel, they joked about which of them should get left behind to cover up the constantly-flowing seepage holes, like the fable of the little Dutch boy who put his finger in a dike to save Holland. “It’s too bad it’s not that simple,” said Roblan. He glanced sideways at the dam, an uneasy expression on his face. “Let’s get out of here.”

(What a dilemma. There’s no easy answers)
Washington Wheat Farmers Could Be Toast If Dams Are Removed To Help Hungry Orcas
August 15, 2019, by Eilis O’Neill, npr.org

The southern resident killer whales that live off the coast of Washington state are hungry, because there are fewer and fewer of the salmon they depend on. To help them, the state is looking at removing a series of dams. Dam removal would help salmon travel up the river to spawn and down the river to the ocean, where the orcas can eat them. But the dams are also important to another population: wheat farmers. Washington’s wheat crop brings $700 million into the state’s economy, more than any crop except apples. The vast majority of that wheat gets exported, most of it to Asia. "It'll go into steamed noodles, pastries, cookies, cakes," says Chris Shaffer, a fifth-generation wheat farmer with a 5,000-acre farm near Walla Walla, in the heart of wheat country.

The trick is getting all this wheat to Seattle and to Portland, Ore., so it can be shipped across the ocean. Some of it goes by rail. But more than half of it goes by barge, floating down the Snake River and then the Columbia River to Portland. Shaffer points out the dams make that possible. Without them, the Snake River would be too shallow and too fast-moving for barges. "If you take the dams out, the wheat industry in the state of Washington is going to change dramatically," Shaffer says, "because you’re not going to move by road economically to Portland or Seattle." But those same dams make it harder for salmon to move up and down the river.

A truck full of fish; a barge full of wheat
In Pullman, far east in Washington state, Sam Mace is standing at Wawawai Park, overlooking one of the dams that would be removed. Mace is with Save Our Wild Salmon, a coalition of commercial and sport fishermen and conservation groups. She says, right now, one of the ways salmon get from one side of the dams to the other is that they’re loaded onto trucks, driven around the dams, and then put back in the river.

"I remember seeing a truck full of fish driving by and then I’m looking down at a barge full of wheat going down the river and taxpayers paying for all of it, right?" Mace says. Mace says taxpayers could help wheat farmers by improving roads and building more railways instead of trucking salmon and repairing aging dams. "Isn't there some option of switching this around, where we have the fish in the river and the wheat off the river?" she asks.

Replenishing orcas
Environmental advocates west of the Cascades have seized on dam removal as a way to get more salmon to those hungry orcas off the Washington coast. Sam Wasser, a conservation biologist at the University of Washington, studies these orcas. He says recovering the Snake River’s salmon runs would help get the starving orcas some food during their hungriest months: the early spring, when the orcas are exhausted from a cold winter spent foraging up and down the Pacific Coast. Animals "They’re out on the open ocean, so they’re more energetically spent," Wasser explains. Wasser says that because the Snake River’s salmon run through the orcas’ territory in the early spring, “those fish have become extremely important to replenish these whales from the harsh winter.” This May, the state of Washington commissioned a study looking at how best to help the people who would be affected if the four lower Snake River dams were
removed. The state itself can’t take the dams out, though; only the federal government can. Federal agencies are also weighing that option in an environmental impact statement that opens for comment this coming February.

(Gotta drain them to fix them.)

4 area lakes to be drained amid concerns over aging dams
Lake Gonzales, Meadow Lake, Lake Placid and Lake McQueeney to be drained
By Mary Claire Patton, August 16, 2019, ksat.com

SAN ANTONIO, TX - The Guadalupe-Blanco River Authority announced Thursday that Lake Gonzales, Meadow Lake, Lake Placid and Lake McQueeney will all be drained amid concerns about aging dams.

Lake Gonzales will be the first to start dewatering Sept. 16, and the process will continue upstream to Meadow Lake, then Lake Placid and end with Lake McQueeney.

“Safety is our top priority. We understand this is an unpopular decision, but one that we feel is unavoidable given the dangers associated with these dams,” said GBRA General Manager and e approximately three days to drain, meaning all the lakes should be dewatered by the end of September. The hydroelectric dams are more than 90 years old, according to a news release from GBRA. A partial dam failure at Lake Dunlap in May was caught on video and showed water rushing out of the lake at 11,000 cubic feet per second. GBRA said in a news release that it is contacting property owners who are expected to be impacted by the draining of the lakes.

To minimize the risks associated with the aging dams, GBRA posted signage near buoys and around dams in addition to installing cameras and sirens to help warn people of the hazardous aging dams. According to GBRA, the “monitoring systems continue to capture people within the restricted areas close to – and in some instances on top of – the CEO Kevin Patteson. "GBRA is committed to working closely with the lake associations and the community to mitigate the impact of this difficult, but necessary decision," Each lake is expected to take dams, intensifying public safety concerns." Video of this can be seen above. GBRA is working with the lake associations that are part of Guadalupe Valley Lakes, in addition to affected residents and county officials to determine the best course of action for identifying, funding and completing the necessary replacement of the dams, a news release said. Updates regarding the lake draining process and subsequent actions can be found on the Guadalupe Valley Lakes website.

(There goes the scenery.)

Mill Pond Dam removal officially underway
wcax.com, Aug 15, 2019

COLCHESTER, Vt. (WCAX) The removal of a Colchester dam is officially underway. The Mill Pond Dam on the Indian Brook is being taken down. The dam owner says it was a financial burden and wants to see the Indian Brook flow freely. Vermont Natural Resource Officials say dams have existed on Indian Brook for years to provide power for sawmills, but the Mill Pond Dam hasn't served that purpose since the last mill burned down in 1941. The dam also raised environmental concerns. A new floodplain and stream channel will be put in its place. Editor Bill Bowman

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
The Sabine River Authority, Texas and Louisiana on Monday will stop generating hydroelectric power for about one month to complete spillway and embankment repairs caused by its largest release in 2016 when an estimated 18 inches of rain fell on the lake and in the watershed, said David Montagne the authority’s executive vice president and general manager. The river authority also has drawn down lake levels to about 166 feet, which is six feet below its full-pool level of 172.5 feet, a level at which it must release water. The drawdown has made it tough for boaters to find ramps into Toledo Bend Reservoir, more so on the Louisiana side than the Texas side, Montagne said. “On the Texas side, they might have to drive an extra 10 miles to find one,” he said.

During the intense storm, the Sabine River Authority let loose 200,000 cubic feet per second of water. That’s 90 million gallons a second, which is about the equivalent of the water from 136 Olympic-sized pools going over the spillway. The sheer volume of water tossed around the boulders placed at the bottom of the spillway to help disperse the water flow. “We’ve had the wettest three years in a row,” Montagne said. That span includes Tropical Storm Harvey in 2017. “The boulders slow down the force of the water. We’re putting down denser rocks. It’s a baffle effect,” he said. The damage to the area around the spillway does not affect the dam, he said, adding that there is no impact on dam integrity. “We’ve been trying to do this for two years,” he said. Recent heavy rain knocked down a coffer dam twice that allowed contractors access to the bottom of the spillway, Montagne said. A coffer dam is a temporary barrier to hold back water to allow access to the spillway. The project is expected to cost $9 million, most of which the river authority is getting from flood insurance. The authority will have to pay its deductible of about $1 million, which is money the authority earns from power sales.

Each turbine — one for Louisiana and one for Texas — earns about $4 million a year with an ability to generate 78 megawatts at peak demand. The river authority needed permission from the Federal Energy Regulatory Commission to close down the turbines, which feed power into the grid operated by MISO, an independent power provider and regional transmission authority that supplies electricity to Entergy and other utilities from the Gulf up through the Midwest and into Canada. “The grid has plenty of power,” Montagne said. “If they needed us, we’d generate a couple of hours in the afternoon for peak demand.” He said he hopes the repairs will be finished in four weeks and bring the reservoir level back to 168 feet by Oct. 1. “We’re at a good level now,” he said. "It'd take a Harvey to refill us (to 172.5 feet), but I don't think that's coming."

Dan Wallach is a freelance writer for The Enterprise.

City of Cushing, OK - The City of Cushing went into emergency mode Sunday after learning that a spillway separating Cushing Lake and fields north of the lake was breached. As or Monday morning, City Manager Terry Brannon reported that no structures nor livestock were harmed as the lake water drained. After the drainage, the problem became visible, as a large crater could be seen below the surface. The lake, which was closed Sunday afternoon, was still closed Monday morning.

Dan Wallach is a freelance writer for The Enterprise.
“The flow of water has dramatically decreased, lessening the danger of a complete failure of the spillway,” Brannon wrote. “City staff will be meeting with engineers (Monday) morning at the safety center to continue the process of developing next steps.” While an emergency plan was activated Sunday evening, it seemed there was never an expectation of total dam failure, and Brannon wrote that no structures would have been in a danger zone. “Since the area north of the dam encompasses mostly fields and livestock, and no structures (houses), Cushing police worked to notify those who have property and livestock immediately downstream of this event so appropriate action could be taken by the property owners,” he wrote. Sunday evening Brannan gave an update that the lake level was continuing to drop, and told residents to respect any barricades put in place while the command center would be closed for the evening.

Cushing police, fire, street and parks department, and emergency management, the Payne County Sheriff's Department, Payne County District No. 1, Professional Engineering Consultants of Tulsa, Gose and Associates engineering firm of Stillwater, Crossroads Survey Company of Cushing, Oklahoma Water Resources Board Dam Safety Unit, Oklahoma Department of Wildlife Conservation Unit and Oklahoma Department of Wildlife Game Wardens all responded to the incident.

A Free Download monitoring earth dams

(Removing what's left of the dam. They don't know what a real traffic jam is like.)

Corunna Dam project means partial road closures
By Matthew Witkos | Aug 19, 2019, abc12.com

CORUNNA, Mich. (WJRT) (8/19/2019) - It's been a historic site in the city of Corunna for more than a hundred and fifty years, but the days are numbered for the Corunna Dam. This project should begin in September said Corunna City Manager Joe Sawyer. People are concern on this will impact their daily commute." "Obviously got to wake up earlier to get around it. I don't know what the detour is going to be," Adam Dizotell said. North Shiawassee Street in Corunna is a busy stretch of road. "Sometimes it takes me 5-10 minutes to get off Pine Street and onto Shiawassee," Rose Mallery said. This congested street is next to the Corunna Dam. The city plans on removing the dam so it can begin a revitalization project. Sawyer says at some points Shiawassee Street will need to be shut down as crews bring some of the material from across the street. But when and how long is still unknown. "We're hoping to work with the contractor to avoid the bussing hours and school hours and maybe do a couple of hour blocks of time here and there. But we are just not in that phase yet," Sawyer said. Any shutdowns will more than likely disrupt driver’s commutes and already some are looking at alternate routes. "We got to go down past the river and over to 71 to get into Vernon, and that is obviously five days a week," Dizotell said. Sawyer says they're hoping not to burden families too much. Crews plan on working from city property and backyards along the Shiawassee River. "This whole parking lot will be closed. We highly won't allow access into Heritage Park," Sawyer said.

This project will cost around a million dollars to complete. Sawyer says grants are paying for most of the project. He says the money will go toward more than removing the dam, but also give people a river walk for many to enjoy. "The lookout pier, fishing platform, sidewalk work and parking lot paving as well as accessible kayak and canoe launch,” Sawyer said. Sawyer is hoping this project is going to be all completed in 2020.

(There goes another hydro dam.)
White Salmon River dam removal and restoration officially completed
Aug 20, 2019, 8/21/19, thedalleschronicle.com

The Federal Energy Regulatory Commission has formally acknowledged the completion of all requirements for PacifiCorp's physical decommissioning and removal of the Condit Dam on the White Salmon river, WA. Once the only man-made impoundment between Mt. Adams and the Columbia River, the 125-foot dam is one of the largest dams ever removed in the United States.

The 13.7-megawatt Condit Project, located on the White Salmon River in Skamania and Klickitat counties, Washington, was completed in 1913 and produced hydroelectricity for the paper industry in Washington and the growing communities in and near Portland. After nearly a century of serving customers, PacifiCorp began in late August of 2011 to physically remove the dam, fulfilling a multi-party settlement agreement signed in 1999. Steps involved in decommissioning the Condit project included constructing new bridge piers for the Northwestern Lake Road bridge to provide public access across the White Salmon River, relocation of a City of White Salmon waterline and removing the dam and remaining facilities. The historic powerhouse remains intact. The surrender of the FERC license by PacifiCorp marks the restoration of approximately 33 miles of historic spawning and rearing area for steelhead and 14 miles for salmon in the White Salmon River basin.

(Are they going to tear it down and then build it back up?)

Mount Ida Dam to be removed
August 20, 2019, wnyt.com

The city of Troy, NY is removing the Mount Ida Dam on the Poesten-Kill. Engineers found the structure was deteriorating. The city says it has to remove the dam to protect people and properties living downstream, before a big storm compromises the dam. The city is still working on a permanent solution, which means the dam could be rebuilt.

Hydro:
(PG&E is getting rid of good old hydro projects.)
By Mike TeSelle, Reporter, kcra.com, 8/14/19

YUBA COUNTY, Calif. — New jobs, new opportunities and a new sense of pride are being promised by Yuba Water Agency leaders after a 50-year agreement with Pacific Gas & Electric at New Bullards Bar reservoir expired. "This really is like a golden goose," said Yuba Water Agency spokeswoman DeDe Cordell. For five decades, PG&E paid for and operated the Colgate Powerhouse in exchange for the revenue generated by the hydroelectric generation, Cordell said. But now, instead of tens of millions of dollars flowing out to the utility, that agreement has expired and the revenue, potentially as much as $30 million per year, is flowing back into the Yuba Water Agency.

The agency made the decision to reinvest that money back into this community, Cordell said.
"We've been a county that's been through tough times with flooding and other challenges. This money is our Holy Grail to get power revenues for use of the people of Yuba County," said Yuba Water Agency board Chairman Brent Hastey. The only caveat is that the money must be spent in line with the Yuba Water Agency's mission. However, officials will interpret that as broadly as possible in order to have the biggest impact on creating new jobs, new opportunities and a new sense of pride for those living in Yuba County. "I grew up here. I graduated on a Friday, moved away on a Sunday and never in a million years thought I'd come back," Cordell said. "But now I drive through town and I see hope. I see the potential and it's exciting and I want that hope to be contagious," Cordell said. Among the first projects the Yuba Water Agency is considering is a new water education center, Cordell said.

(We should have a headline like this.)

UPC/AC Renewables invest in 550 MW of pumped hydro and solar in South Australia

(Excerpts. Today's bit of history.)

This Week Then: Ross Dam in Whatcom County Turns 70

Plus: Looking back on the first long-distance endurance flight

BY: ALAN STEIN, August 15, 2019, seattlemag.com

This story was originally published at HistoryLink.org. Subscribe to their weekly newsletter.

Power and Light

Seventy years ago this week, on August 18, 1949, Seattle City Light completed work on Ross Dam, located on the Skagit River in Whatcom County. The dam and Ross Lake, which was created by rising waters behind the structure, were named in honor of J. D. Ross, the "Father of City Light," who fought to secure the sites and construct the hydroelectric project on the Upper Skagit River. Ross was named head of City Light in 1911, one year after the utility became an independent city department. Before that, Ross supervised construction of the Cedar River hydroelectric project, and in his new position he set his sights on the Skagit River and its potential to strengthen and expand Seattle's power grid. In 1921 Gorge Dam -- the first of three dams on the river -- was completed, and three years later it transmitted its first hydroelectric power to the city.

To gain public support for the hydroelectric project, Ross introduced tours of the dams that included an overnight stay at Newhalem, the town built to house City Light workers. In 1930 Diablo Dam was completed, and at 395 feet was the world's highest at the time. When Ross died in 1939, Seattle radio station KOL memorialized him with a coast-to-coast broadcast of The Romance of Power, a half-hour program produced live at the Skagit River. In 1961 the Gorge High Dam was completed, replacing the original Gorge Dam. Today the Skagit River Hydroelectric Project supplies approximately 20 percent of Seattle City Light's power requirements and contributes to the vast Northwest Power Pool, which delivers huge amounts of reliable electricity to most of the region. In 2016 the complex of three dams became the first large hydroelectric facility in the nation to be certified as a Low Impact Hydropower Project by the Low Impact Hydropower Institute.

(Pumped Storage and those other renewables.)
Pumped-storage hydropower can help Washington meet its 100% clean-energy goal

By Nate Sandvig and Matthew Hepner, Special to The Times, Aug. 16, 2019, seattletimes.com

As Washington state begins its transition to a carbon-free electrical supply, a new project under development near Goldendale has the potential to deliver an abundance of clean electricity to support the Northwest energy grid. This project already has the support of a wide range of stakeholders. The proposed Goldendale Pumped Storage Project, eight miles south of Goldendale next to the Columbia River, would create 1,200 megawatts of clean electricity to integrate into the existing power grid, as well as tap into and use power already being generated by the Northwest’s wind and solar-energy projects. During periods of excess energy from these other sources, water would be pumped from a lower reservoir near the river to an upper reservoir on the bluff some 2,400 feet above. Water in the upper reservoir would then be held and released to the lower reservoir via an underground pipeline, generating electricity as it passes through three hydroelectric turbines, enabling Northwest utilities to meet peak electricity demand. The hydropower project would be built at the former Golden Northwest Aluminum smelter and would generate roughly the same capacity as the nearby Bonneville Dam. It could power all the homes in Seattle for 12 hours. Rye Development and National Grid, two of the leading hydroelectric developers and grid operators in the world, have teamed up to finance and build the project.

Various power-grid analyses indicate that due to future power demands and the retirement of regional coal plants, the Pacific Northwest faces a potential deficit unless new power generation is added. The need for energy storage will increase substantially with the recent passage this legislative session of Washington’s landmark 100% clean-electricity bill. Several studies have demonstrated that moving away from coal and natural gas toward 100% clean sources of electricity will create the need for significant expansion of renewable energy generation and energy storage needed to meet periods of peak demand. The project’s proposed design is called “closed loop,” meaning that once the lower reservoir is filled, the water is recirculated over and over between the upper and lower reservoirs. When renewable electricity is too plentiful and cannot be used, such as in the middle of the night for wind, or during peak sun hours, the plant will use that surplus to pump the water from the lower to the upper reservoir. Then, during peak demand hours, the water is returned by gravity to the lower reservoir passing through the turbine generators along the way.
The proposed project, built on private lands, will involve no river or stream impoundments, allowing for minimal potential environmental impact. Initial fill water and periodic makeup water would be purchased from the Klickitat County Public Utility District. The project would infuse $2.14 billion dollars into rural Washington and generate the equivalent of more than 3,000 full-year jobs over a four-year construction period. An estimated 50 to 70 permanent jobs would be created along with millions of dollars in annual property taxes for Klickitat County to fund schools, roads, libraries and other infrastructure. The proposed timeline project is to have a permitting decision by 2022. The plant could be operational by 2028. The project has filed a preliminary application with the Federal Energy Regulatory Commission (FERC) to secure a license with construction beginning within three to four years. That schedule fits well the anticipated capacity needs of several Washington and Oregon utilities, including Puget Sound Energy, Avista and Portland General Electric.

In July, FERC hosted the first of many meetings with interested parties to discuss the project and the licensing process. Not surprisingly, a diverse array of stakeholders back the project, including the Washington State Labor Council, Certified Electrical Workers of Washington, renewable energy advocates, Klickitat PUD, Klickitat County and the city of Goldendale. National Grid also reached out to the Yakama Nation Tribal Council in 2018 to conduct a cultural resource study of the area. We want to make sure concerns of the Yakama Nation are addressed. Do you have something to say? Share your opinion by sending a Letter to the Editor. Email letters@seattletimes.com and please include your full name, address and telephone number for verification only. Letters are limited to 200 words.

It is time for the Pacific Northwest to build a new regional energy project. As was the case with the region’s development of its hydroelectric system, this project will provide decades of value to utilities and customers and help Washington move toward 100% clean electricity. This vision of a pump storage project at Goldendale has been talked about for many years because of the location and proximity to the regional power grid, and its natural elevation gain of more than 2,000 vertical feet between the top and lower reservoirs. Another similar but smaller project, Swan Lake North near Klamath Falls Oregon has approval by FERC and has a capacity of 400 megawatts at an estimated cost of $866 million. The creation of closed-loop pumped storage has been in use for many decades throughout the U.S. and in countries around the world. Soon, this same technology will be needed right here in the Northwest in order to meet our region’s growing demand for clean energy. Nate Sandvig is director, National Grid Ventures. Matthew Hepner is executive director, Certified Electrical Workers, International Brotherhood of Electrical Workers

(Excerpts. Hope it works!)

Path to paradise? Alaskan village hopes to replace fossil fuel with water power
By RICHARD READ, SEATTLE BUREAU CHIEF, AUG. 17, 2019, latimes.com

GIUGIG, Alaska — Residents of Igiugig, a Native village far from roads and off the grid, have tried for years to wean themselves off the diesel that fuels their electrical system. It’s expensive — and polluting. A World War II-era propeller plane delivers the fossil fuel, priced up to $7.55 a gallon, to this community near the shores of Iliamna Lake, 240 miles southwest of Anchorage. The tanker’s emissions exact an environmental toll, even if a drop never spills into the crystal clear water that’s home to wild sockeye salmon, rainbow trout and rare freshwater seals.

Now the village is pinning its hopes on hydroelectric power. But instead of building a conventional dam that would block migrating fish, local leaders opted for a twin-turbine “hydrokinetic”
generator. After many logistical challenges, the turbines — mounted on pontoons — were anchored at the bottom of the swift Kvichak River, which flows southwest from the lake toward the Bering Sea, and preliminary testing started Aug. 5.------------------

(Guess they got divine help.)

Work begins on Notre Dame hydroelectric plant and upgrades at Seitz Park in South Bend
By South Bend Tribune Report, 8/20/19, southbendtribune.com

Large machinery removed trees from Seitz Park in downtown South Bend on Monday as construction began on the park renovations and installation of the new University of Notre Dame hydroelectric plant. The hydroelectric facility, which will be primarily underground, is expected to generate about 7% of the university’s electrical needs and offset nearly 9,700 tons of carbon dioxide annually. Improvement work in Seitz Park also kicked off in conjunction with the hydro facility construction. Notre Dame will pay the city $1 million to help with renovation of the park, which is adjacent to the dam. Initial concepts for the park’s redesign include a building with restrooms and a vending kiosk, a new performance area, improvements to the Riverwalk and a new park entrance. The park will be closed to the public until late 2021, according to Aaron Perri, executive director of Venues Parks & Arts.

(Celebrating dam removal.)

BLOEDE DAM REMOVAL COMPLETE!
Following years of hard work and dedication of American Rivers staff and partners, the Bloede Dam Removal Project is completed!
By Jessie Thomas-Blate | August 19, 2019, americanrivers.org

Bloede Dam was on the Patapsco River in Patapsco Valley State Park in Maryland. The dam was the most downstream structure, and therefore, the lynchpin to reconnecting upstream habitat. American Rivers removed two dams upstream in 2010—Simkins Dam and Union Dam. Finally, more than 65 miles of spawning habitat for blueback herring, alewife, American shad, hickory shad and more than 183 miles for American eel have been reconnected in the Patapsco. Bloede Dam had served no functional purpose for decades and posed a serious public safety hazard in Patapsco Valley State Park. There were a number of injuries and deaths, with at least nine dam-related deaths since the 1980s, the most recent of which occurred in June 2015.

Of course, here at America Rivers, no person is an island. We work as a team. The river’s ready for you to come visit! Have a seat on a bench in an overlook, bring a fishing rod and toss in a line, float around in a tube, have a picnic on a gorgeous exposed rock, or take a hike or bike down the new trail. The Patapsco is a beautiful place to visit (and now safer too!). You can watch a river do its own work to restore itself over the coming years as we will be doing. Nature can do amazing things

(Selling the little guys.)

Duke Energy Sells 5 NC And SC Hydroelectric Plants
By DAVID BORAKS • AUG 20, 2019, wfae.org

Duke Energy has completed the sale of five small hydroelectric plants in the western Carolinas that it says have become too expensive to maintain and operate. It's taking a loss on the sale, which it eventually hopes to recover from customers. Northbrook Energy is paying $4.75 million

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
for the plants — three in the Nantahala area and two in the Broad Rivers Basin of North and South Carolina. Northbrook will sell power back to Duke under a five-year contract. In its request for regulatory approval, Duke calculated that the deal would reduce costs for ratepayers.

The century-old plants generate a total of 18.7 megawatts of electricity — less than 1% of hydroelectric generation in Duke's western Carolinas region. They are:

- Bryson Hydro Station, Whittier, Swain County, N.C., opened 1925
- Franklin Hydro Station, Franklin, Macon County, N.C., 1925
- Mission Hydro Station, Murphy, Clay County, N.C., 1924
- Gaston Shoals Hydro Station, Blacksburg, Cherokee County, S.C., 1908
- Tuxedo Hydro Station, Flat Rock, Henderson County, N.C., 1920

Duke says it will lose $40 million on the sale, based on the plants' book value, but hopes to recover $27 million from customers with a future rate increase. Duke did not say how many employees are affected by the sales. A spokeswoman said some would go to work for Northbrook, while others could find jobs elsewhere at Duke. Northbrook Energy is based in Scottsdale, Arizona. It's a private, independent power producer with hydroelectric plants in 12 states.

(Some Californians are nuts.)

**Commentary: California refuses to enlist clean, cheap hydropower in fight against climate change. It makes no sense**

By Adam Gray, Aug 19, 2019, napavalleyregister.com

Is the cleanest, greenest electricity in the world green enough for California? For years, the people of the northern San Joaquin Valley have been trying to get hydropower recognized for what it is: the original source of clean electricity. Our efforts have been stymied by people who feel entitled to decide what is, or isn’t, green enough. That's why I have begun the process of modifying our state Constitution to recognize safe, abundant, carbon-free hydropower as a reliable source of renewable energy in our fight against climate change.