

9/25/2015



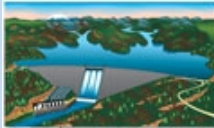
Some Dam – Hydro News™ *And Other Stuff*



Quote of Note: “He who laughs, lasts!” - - Mary Pettibone Poole

*Some Dam - Hydro News → Newsletter Archive for Back Issues and Search <http://npdp.stanford.edu/>
Click on Link (Some Dam - Hydro News) Bottom Right - Under Perspectives*

*“Good wine is a necessity of life.” - -Thomas Jefferson
Ron’s wine pick of the week: 2013 Yorkville Cellars Petit Verdot "Rennie Vineyard"
“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson*



Dams:

(The media keeps printing this stuff. Sooner or later it's going to take hold. There's several things wrong in this letter.)

Let's stop the stupidity on the Snake

It's time to bring salmon and steelhead back to 5,000 miles of Rocky Mountain streams

By Chad Shmukler, Sep 11th, 2015, hatchmag.com

What costs taxpayers \$150 million each year, no longer serves the purpose it was designed to serve, has its usefulness in continuing decline and — through its blockage of passage to over 5,000 miles of pristine, high elevation habitat — has been identified by the best available science as the primary force behind the destruction of the west's wild salmon and steelhead population? For many, that's sort of a softball question, but for those of you that aren't familiar with the single greatest threat to wild salmon recovery, a powerful instrument in the decline of southern resident orca populations



and also that of the pacific lamprey eel — it's the lower Snake River Dam system. In discussing the abject failure that these dams represent, it is important to shine a light on just how prolific the runs of now struggling or completely extirpated salmon populations (wild coho in the Snake are gone, sockeye are considered endangered and both fall and spring chinook are threatened) once were. Estimated run totals, reconstructed primarily from historic cannery records, harvest records and field surveys, indicate that the Columbia and Snake River systems annually saw runs of 11-15 million salmon — 1.7 percent of which remain. Estimates of the historic annual combined Snake River salmon and steelhead runs approach 16 million. The proposed removal of these dams is expected to be incredibly impactful for salmon recovery efforts that have been underway for decades and are largely going nowhere. As noted, removal of the dams would restore wild salmon and steelhead access to the largest tract of intact river habitat in the lower 48. Fish biologist Jim Lichatowich calls removal of the dams the "big jewel in the Holy Grail of salmon recovery" and author David James Duncan refers to it as "the largest possible salmon recovery effort of which humanity is capable".

The Snake River dams are a money-suck. Stimulating local economies through barge traffic was the primary reason behind the dams' construction. Only barge traffic is down 70% and declining. Sure, the dams generate hydroelectric power that serves western communities, but they generally stink at it. At peak capacity — a level at which they very rarely operate — the dams can generate 3,000 megawatts of power. But their actual yearly output is just over 1,000 average megawatts — an amount easily replaced by renewable energy sources like wind. The one bright spot of the dams' construction may be the flood control they provide communities along the Snake River. Oh wait, they don't. All four dams are "run of river" dams, which means they don't store water and reservoir levels can only fluctuate a couple of feet, providing no flood prevention. The picture gets even rosier when you throw in the fact that the west spends around a billion dollars per year on salmon recovery — and the dams go a long way to making sure most of that money yields taxpayers absolutely squat. Put most simply, the Snake River dams are a stupid idea. Seriously stupid. If there ever was a time when they weren't, that time is long gone.

Thankfully, an increasing number of scientists, activists, anglers and otherwise tuned-in citizens have had it and are demanding that the U.S. government begin plans to dismantle the lower Snake River dams. A still-going petition supporting dam removal containing almost 70,000 signatures was recently delivered to president Obama. This October 3rd, proponents of dam removal are also staging a flotilla on the Snake River. Participants will launch from Wawawai Landing and float downstream to Granite Dam. Join the flotilla. Sign the petition. Watch the video below from Patagonia and the folks behind DamNation. It's time to get smart.

(Wonder if this one will look a dam.)

Hope Mills board firming up timeline for operational

By Rodger Mullen Staff writer | 9/11/15, fayobserver.com

HOPE MILLS, NC - A "guaranteed maximum price" for a new Hope Mills Lake dam should be delivered to the Board of Commissioners by Sept. 30, with construction to start in March and be completed by the end of 2016, the board was told Thursday night. The board held a special meeting with representatives of Schnabel Engineering and ASI Constructors on progress toward completing a dam to replace one that failed in June 2010.

Board members encouraged the firms to complete the project as quickly as possible while ensuring that the work is of lasting quality.

"Santa wants to come across in a pontoon boat next year," said commissioner Jerry



Legge. Mark Landis of Schnabel, Mark Barkau of ASI and Kevin Lugo, the town's liaison to the firms, met with the board to discuss progress on the project and get the board's input.

Much of the discussion centered around the growth that has sprung up in the empty lake bed since the dam failure. Landis said a minimum of 45 acres would have to be cleared before water is put back in the lake. He said a larger area could be cleared, but it would increase the cost. Commissioners said they favored clearing a bigger area, especially on the side of the lake nearest Camden Road, which was popular for fishing. Barkau said more clearing would likely cost between \$2,000 and \$8,000 an acre, depending on how difficult it was to get to the land. Commissioners also said they wanted to make sure that no trees or shrubs were left standing above the water line, and that whatever remained of the growth wouldn't be dangerous to people who use the lake. "I think we've got our marching orders from the citizens of this town," said Mayor Pro Tem Bob Gorman. "They want the lake clear." Barkau said no trees would be above the water line. He said some shrubs might remain above the water line initially, but that they would soon wash away. Landis and Barkau also told the board that walls around Lakeview Bridge near the dam will probably have to be repaired or replaced at some point. However, they said the walls are not part of the dam project and would not affect the completion date. Town manager John Ellis said the Lakeview Bridge project could be bid separately. After the firms give the board a maximum price at the end of the month, negotiations will begin on details of the design. Then permits will have to be obtained through Dam Safety. **The town has budgeted \$8 million for the dam, to come from a \$9.4 million settlement it received from the designers and builders of the failed dam.** Mayor Jackie Warner wondered if the process could be speeded up, but Barkau and Landis said they couldn't promise that. "I appreciate your concern with the time," Barkau said. "We want to get going, too."

[\(Going away stubbornly.\)](#)

Ballville Dam petition to be sent to Sandusky Co. Board of Elections

BLADE STAFF, 9/11/15, toledoblade.com

FREMONT, Ohio — **Opponents of removal of the Ballville Dam won a victory today when the Ohio Supreme Court ordered Fremont's auditor to send a citizens' petition to the Sandusky County Board of Elections.** The decision reverses a ruling last month by the state's 6th District Court of Appeals, which found Fremont City Council's decision last year to remove the Sandusky River dam to not be subject to a referendum. **The elections board now will certify whether referendum petitions contain enough signatures, and if so the question will appear on Fremont's Nov. 3 ballot.** **The dam's demolition was already delayed after the Army Corps of Engineers announced last month it would conduct additional tests of sediments that could be released by its removal.** Test findings could push back any demolition by perhaps a year. **The announcement followed a July federal lawsuit by the Sierra Club, which said the dam's removal could cause harmful silt to enter the river and flow into Lake Erie.**

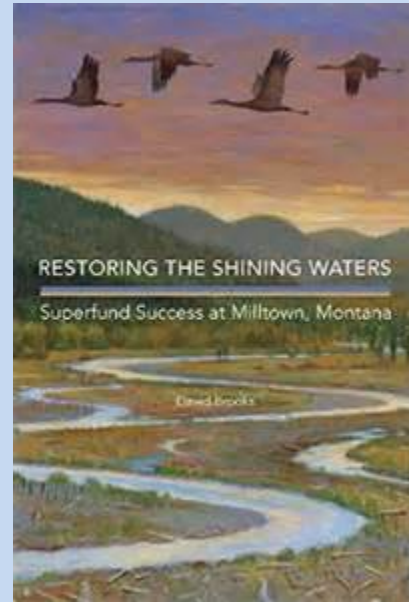


[\(A toxic waste dump cleaned up. Did he mention the dam was declared unsafe?\)](#)

Author: Milltown Dam's removal a 'rare environmental success story'

Cory Walsh for The Montana Standard, 9/13/15, mtstandard.com

A new book traces the history of the Milltown Dam's final days, from its designation as a Superfund site decades ago to its removal in 2008. David Brooks' "Restoring the Shining Waters: Superfund Success at Milltown, Montana," (University of Oklahoma Press, 280 pages) is out at Fact and Fiction bookstore and will be available on Amazon.com on Sept. 24. "This is a rare environmental success story, and it's the effect of what regular people can do in the course of their jobs, or taking time to write a letter or voting on something," he said. Brooks is executive vice president of Heritage Research Center, an environmental history research firm based in downtown Missoula that focuses on Superfund, toxic tort law and watersheds. Brooks said there are numerous books about important environmental laws, but not as many showing how they work after they're passed.



He began writing "Shining Waters" as his dissertation for his doctorate in history at the University of Montana, roughly between 2006 and 2012. He and his wife moved to Missoula in 2000. During the smoky fire season, some friends took him up the Blackfoot River, and talked about the push to remove the dam; he also saw the Clark Fork Coalition's campaign all over town. He knew about the history of dams in the West, but had never heard of one being intentionally removed. He soon saw the dam as a case study for the Superfund program. "By the time I was getting done writing the dissertation I was working part-time here at Heritage and finishing up my writing and had already sent to a proposal to the University of Oklahoma," he said. Making his academic work into a dissertation wasn't an expansion. It was the opposite. "Dissertations tend to be maybe more cumbersome with minutiae and academic context for a story," he said. "It was actually a cutting-down process – a lot of editing," he said.

To research the dissertation and later the book, Brooks relied on four main sources. The first was scholarly literature on environmentalism and the history of dams in America. The second was the huge archive of Environmental Protection Agency papers located here in Missoula. "The University of Montana is regional repository for government documents. And so everything the EPA collected, issued or was submitted to the EPA about this Superfund site was stored right here in the basement," he said. He spent a lot of time combing through the microfilm, including drafts, reports, studies on toxins and sediments, and plans for removing all of those. There were also copies of every one of the thousands of post cards people wrote to the EPA. Local news outlets were also a key resource. "I relied heavily on the Missoulian and other regional newspapers because the Missoulian gave this story as complete of coverage as it's probably given anything," he said. The final sources were oral histories, some of which he recorded himself, that are now held at the University of Montana. Those interviews include key figures such as Tracy Stone-Manning, who was head of the nonprofit Clark Fork Coalition; Peter Nielsen of the Missoula City-County Health Department; Bruce Farling of Montana Trout Unlimited; and Sean Benton of PartnersCreative. His firm did pro-bono work to develop all of the postcards and bumper stickers, including the "Remove the Dam, Restore the River" slogan.

"They're the ones who really made the Clark Fork Coalition's vision of turning environmental issues – local environmental issues, particularly the Milltown Dam issue – into something more fun and exciting. Not gloom and doom and the world's going to hell in a hand basket," he said. The coalition also started the Milltown-to-downtown floats, the first of which exceeded organizers' expectations. "Hundreds of people showed up with all their own boats and tubes and dogs," he said, adding that the regional head of the EPA watched the float from an overpass. The postcard campaign also showed overwhelming support. "In one comment session that the EPA had about what should happen there, 10,000-plus postcards were delivered to the EPA, and over 97 percent of them supported dam removal and restoration there," he said.

"The EPA had never received that many comments on any Superfund site," he said. Brooks said even those opposing the dam's removal had an effect. He argues that their complaints about the future of Milltown "led to the state acquiring the land and that becoming a state park as an engine of economic redevelopment." He said this perspective has reverberated beyond Missoula. "In fact, that happening in Milltown has become a case study for the EPA and for Superfund nationwide: to try to think more about redeveloping sites, not just cleaning them up and letting them be," he said. While the book remains a case study on the Superfund, he also wants to make clear that grassroots efforts drove the removal of the dam. "If I have a big-picture argument to make in this book, it's that little actions by everyday people are what shape history, most of the time. Yes, there are big events in history that we can name, and our presidents matter, and Napoleon mattered, but most history – most of the things that affect our lives in daily, tangible ways are the results of what you and I do," he said.

(Imagine, in the name of historic preservation, they delayed fixing the dam and endangered lives.)

Is there a better chance for Lanesboro dam repairs?

By John Weiss, postbulletin.com, 9/12/15

LANESBORO, NY — Lanesboro officials believe, or at least hope, that the town's chances of snagging up to \$4 million in state bonding to repair the Root River dam took a big step forward when key legislators got viewed the dam Thursday. Members of the House Capital Investment Committee made stops Wednesday in Red Wing, Winona, Chatfield and Rochester, then went to Lanesboro and Austin Thursday. In Lanesboro, they stood near a parking lot below the dam's plunge pool and could see how the face of the dam is deteriorating, said Mayor Robin Krom. They could see big stone blocks missing from the side of the dam built about 150 years ago. And they could see what a potential catastrophe it would be if the dam failed and there were people fishing, relaxing, canoeing or tubing, he said. If the dam failed when the tour was there, legislators realized they would be the first ones swept away, he said.



On warm summer days, "there are hundreds of people on that river," he said. "We don't want it to be another I-35 bridge" in Minneapolis when dozens were killed when the bridge failed suddenly. Seeing the dam was a good teacher, the mayor said. "We felt it went quite well," he said. "We educated them, I think there were a lot of eyes opened." Another potential positive for the city was that legislators also hinted that the money the city has spent thus far for engineering work and replacing some riprap might be enough to be the city's match, he said. The city has spent between \$100,000 and \$500,000 so far, he said. The Department of Natural Resources has been checking the dam annually and using a camera, can record the deterioration, he said. "This last year, the report that they gave us was very very troubling," he said. It's not a question of if it will fail but when, he said. The DNR classifies it as a class 1 high-hazard dam, said City Administrator Michele Peterson. Several years ago, the city was ready to do the work for \$450,000, but found out it had to be done to historic standards, at least doubling the cost, he said. The cost has kept increasing and it could be as much as \$4 million, Krom said.

The city and others emphasized not only the safety aspect but also how the dam is part of the city's history and tourism appeal. If it fails, nearly 150 years of silt would be washed into the river, hurting fish and wildlife, he said. Finally, the dam feeds the city's small hydro plant, which generates about a half kilowatt of power, going and that's green energy, he said. While the tour seemed to have gone well, it doesn't mean Lanesboro can count on the money, Krom said. The

town still needs to send representatives to St. Paul and continue talking with legislators before the 2016 session, he said. They might even reach out to the governor, he said. He said local people know what's needed. "I would imagine that someone asks me about the dam at least once a day," he said. They want to know what's happening, what happens if it breaks. "The citizens of Lanesboro are concerned," he said.

(Hope this wasn't what made the Lake placid!)

N.Y. will no longer give a dam

THE ASSOCIATED PRESS, 9/14/15, nydailynews.com

LAKE PLACID, NY — Work is slated to begin shortly on the first stage of removal of Marcy Dam in the Adirondack High Peaks. The log dam was a favorite photo and camping spot for generations of Adirondack hikers, who took in the view of mountains reflecting in the dam's pond. But state officials decided it would be too expensive to repair damage from 2011's Tropical Storm Irene, which broke a notch in the dam and drained the pond. In a notice on its website, the Department of Environmental Conservation says the first stage of dismantling will include the removal of splash boards, top rocks for the first tier, first tier crib pieces and vertical side boards from the walls below the spillway.



(A dam in Florida!)

Good News for St. Lucie River Estuary: \$197 Million Contract Awarded for C-44 Reservoir

Submitted by Nancy Smith, September 14, 2015, sunshinestatenews.com

The U.S. Army Corps of Engineers Jacksonville District awarded a \$197 million construction contract Friday for a reservoir that will clean water bound for the St. Lucie River and Indian River Lagoon.

The reservoir component of the Indian River Lagoon-South's C-44 Reservoir and Stormwater Treatment Area (STA) project is in Martin County -- one of the counties devastated in 2013 by Lake Okeechobee water releases. During periods of prolonged rainfall, millions of gallons of fresh water from the big lake infuse brackish waterways, releasing dangerous toxins and carrying them into local rivers. Though the massive project won't be completed overnight -- it will take five years to build and another two more years to test -- the end product will function exactly as beleaguered citizens of Martin hope to restore their sick waterways. The only pollution it won't clean will be from local basin run-off.



C-44 Canal, Martin County

The \$197 million construction contract was awarded to Barnard Construction Co. Inc. of Bozeman, Mont. According to a Corps news release, the contract involves construction of a 3,400-acre reservoir that will store up to 15 feet of water and provide 50,600 acre-feet (16 trillion gallons) of storage capacity. Construction is anticipated to begin this winter. "The reservoir is the largest component of the C-44 project and a key storage component of the entire Indian River Lagoon-South project," said Orlando Ramos-Gines, Jacksonville District senior project manager. "Getting this contract awarded is a major step forward toward being able to store local basin run-off and improve conditions in the St. Lucie Estuary and Indian River Lagoon."

The contract also includes the construction of the these features:

[The 35,000-foot-long Western Reservoir Perimeter Canal, which runs parallel to most of the northern, western, and southern embankments of the reservoir. It will be used to transmit surface runoff and seepage flow from the embankment internal drain and the trench drain systems.

[A corresponding 50-foot-wide spillway for the Western Reservoir Perimeter Canal that will discharge into the intake canal, which was completed as part of the Corps' first construction contract for the project, in July 2014.

[The 15,000-foot long Eastern Reservoir Perimeter canal, which runs parallel to the eastern embankment of the reservoir. It will convey runoff and seepage from the embankment internal drain and the trench drain system.

[A reservoir discharge tower structure comprised of three slide gates to convey a maximum of 1,100 cubic feet per second (cfs) (600 cfs under normal operations) through two culverts to the system discharge canal.

[Two miles of the system's discharge canal that will convey flows from the reservoir through the Distribution Canal to the Eastern Stormwater Treatment Area (STA) Collection Canal.

[The installation of several box culverts in various locations around project footprint to provide vehicular access across canals. Additionally, the reservoir embankment includes the construction of several boat ramps for access inside the reservoir.

"The reservoir contract will complement the construction already initiated by the state on the reservoir intake canal and associated Stormwater Treatment Area," said Ramos-Gines.

"Collectively, these features will work together to provide additional storage and treatment, while attenuating damaging flows discharged to the St. Lucie Estuary." In an effort to construct the project as expeditiously as possible, the South Florida Water Management District (SFWMD) has awarded construction contracts for the discharge canal, pump station and STA. The shared efforts on construction contracts will reduce the time needed to fully-construct the project by at least two years. Construction of the C-44 Reservoir and STA is scheduled to be completed in 2020. Upon construction completion, up to two years of operational testing will occur. Once all work is complete, the project will capture local run-off from the C-44 basin, reducing average nutrient loads and improving salinity in the St. Lucie Estuary and the southern portion of the Indian River Lagoon. It will provide, in total, 60,500 acre-feet of new water storage (50,600 acre-feet in the reservoir and 9,900 acre-feet in the STAs) and 3,600 acres of new wetlands. The Indian River Lagoon is considered the most biologically diverse estuarine system in the continental United States and is home to more than 3,000 species of plants and animals. The C-44 Reservoir and Stormwater Treatment Area is the first component of the multi-billion-dollar Indian River Lagoon-South project, an element of the Comprehensive Everglades Restoration Plan (CERP).

(Good question????)

Jim E. Smallwood: Where are the new dams we agreed to pay for?

LETTERS TO THE EDITOR, SEPTEMBER 14, 2015, MODESTOBEE.COM

Why are we paying the legislators? We the people have given them the authority and the funding to do something about the drought, but what have they done? All I can see is they argue, discuss and procrastinate. Where are the new dams or the increase in storage capacity behind old dams? The bond money we have given legislators just sits and will buy less every year. Where are the leaders we need? They are certainly not in the current crop of people we have sent to Sacramento to represent us. We have done what the governor asked and decreased our water use, but the people who study climate tell us the snowpack is disappearing worldwide and while we will get the same amount of water it will be in the shape of rain; this mandates increased water storage. So it is time to tell our legislators that we are tired of talk, and that we want to see some

construction. We have worked with them and it is time for them to show us that they can work together to get us what California needs – and that is more water storage and a good plan for the future droughts. For as we all know, they are coming. *JIM SMALLWOOD, MODESTO, CA*

(70ish is not so old!)

Granite to update Texas dams

Written by Chris Sleight - 15 Sep 2015, khl.com

Granite Construction has won a US\$ 72 million contract from the U.S. Army Corps of Engineers (USACE) to build new outlet structures at the Addicks and Barker Dams in Houston, Texas. **The two earth dams were originally built in 1940s by USACE as part of a flood prevention scheme for the Houston area.** Granite's work on them will see the construction of new intake towers, steel-lined conduits, parabolic chute slabs, stilling basins, cutoff walls and downstream filters, in addition to the grouting and decommissioning of the existing outlet structures in place at both dams. There will also be an additional seepage cutoff wall at Barker Dam. **Construction is scheduled to begin in the fourth quarter of this year. Following completion of the new structures, the temporary cofferdams will be removed and the site restored. Completion of the project is scheduled for May 2019.**



(Jobs done! Wouldn't buy a house downstream.)

Cannonsville Dam repairs complete, DEP says

By WBNG News, by Nick Meriano, Sep 17, 2015, wbng.com

Hancock, NY (WBNG Binghamton) **Efforts to plug boreholes downstream of the Cannonsville Dam were a success, the New York City Department of Environmental Protection released Thursday.** Engineers had been monitoring the dam for more than two weeks, since workers completed the second stage of repairs on Aug. 25.



That stage focused on sealing shut the boreholes that created a cloudy discharge of water into the West Branch Delaware River in early July. In phase one of repairs, relief wells were installed to reduce pressure and provide a new path for the water to flow. This successfully ended the turbid discharge on Aug. 2, according to the DEP. "We had implemented a series of intensive monitoring," said Adam Bosch, DEP Director of Public Affairs. "Many of those steps are going to remain in place until the reservoir refills in the spring." Since then, operations at the Cannonsville Reservoir have returned to normal. Although some resident around the area are nervous about future problems, others are not. **"I've bought a house underneath the dam basically,"** said Dan Sarandis, a Deposit resident. **"I mean, it's one of the first houses the water would come to actually, but it's not that big of a concern to me."** The DEC says it will continue to monitor the dam throughout the spring.



Hydro:

(More free money.)

Energy Department Awards \$6.5 Million to Advance Low Environmental Impact Hydropower Technologies

einnews.com, 9/14/15

Today, the Energy Department announced seven organizations selected to receive \$6.5 million to advance the manufacturing and installation of low environmental impact hydropower technologies. The projects will address three technical areas: rapidly deployable civil works technologies, innovative methods and materials for hydropower construction, and powertrain components. While hydropower already supplies approximately 7% of America's electricity and is considered the leading source of renewable energy, the nation still has significant untapped resources across the country where new hydropower generating capabilities could boost our supply of carbon-free energy.

Through this funding opportunity, the Energy Department has selected seven projects to help advance hydropower drivetrains, which transfer rotational energy from turbines to generators, and structural foundations that could significantly reduce the lifetime operating and maintenance costs and minimize environmental impacts of new hydropower projects.

The full list of selected low-impact hydropower technology projects includes:

Rapidly Deployable Hydropower Civil Works Technologies

- Littoral Power Systems, Inc. of Monmouth Junction, New Jersey, in collaboration with Alden Research Lab, University of Massachusetts Dartmouth, and the National Renewable Energy Laboratory, will develop a proof-of-concept design of integrated modules for an integrated dam section. The full-size prototype will be tested for structural integrity, leak resistance, and ease of installation. The technology has the potential to lower construction and maintenance times and costs.
- French Development Enterprises, LLC of Billerica, Massachusetts, in collaboration with Alden Labs and Oldcastle Precast, will develop a building-block style impoundment technology, which utilizes precast concrete segments with interlocking elements to provide rapid in-field installation and removal. Using pre-fabricated concrete panels in dam construction could significantly reduce construction time and costs.

Innovative Methods and Materials for Hydropower Construction

- Colorado School of Mines of Golden, Colorado, will conduct a study on the use of cofferdams—a temporary enclosure built within a body of water to create a dry work environment—as basis for the design and construction of permanent water-retaining structures to sustainably and cost-effectively harness hydropower. The research could significantly reduce dam construction time and cost.
- North Dakota State University of Fargo, North Dakota, in collaboration with the Institute for Transportation of Iowa State University, will develop a technique that uses basalt fiber impregnation to increase durability and reduce cracking and shrinkage of concrete. This product could reduce the cost and maintenance of concrete used in hydropower projects.

Powertrain Component Innovations

- Percheron Power, LLC of Kennewick, Washington, in collaboration with Utah Water Resource Laboratory, Hertelendy Research Associates, and Pacific Northwest National Laboratory, will develop advanced components for use in Archimedes Hydrodynamic Screw (AHS) turbine systems. The advanced components will help

improve the efficiency of AHS style turbines and could result in domestic manufacturing of a composite AHS turbine.

- Composite Technology Development, Inc. of Lafayette, Colorado, will develop composite turbine runners suitable for small hydropower systems. The use of composite materials can reduce the levelized cost of energy (LCOE)—a measure of the overall competitiveness of different generating technologies—by improving fatigue, corrosion, and erosion resistance while reducing maintenance and transportation costs.
- Energy Hydro of Atlanta, Georgia, in collaboration with Ricardo USA, Georgia Tech, and the City of Atlanta, will develop a platform magnetic gear technology to be used with commercial off-the-shelf components in order to complete the most reliable and cost-effective low-impact hydropower drivetrain available. The technology will improve drivetrain reliability and significantly reduce overall maintenance.

Developing advanced water power technologies is part of the Energy Department's broader

Clean Energy Manufacturing Initiative, which aims to increase American competitiveness in the production of clean energy products and boost U.S. manufacturing competitiveness by increasing energy productivity. Continued innovation and advancements in hydropower technologies and manufacturing will help deliver more renewable energy to American homes and businesses than ever before.

The Energy Department's Office of Energy Efficiency and Renewable Energy accelerates development and deployment of energy efficiency and renewable energy technologies and market-based solutions that strengthen U.S. energy security, environmental quality, and economic vitality. Learn more about the Water Power Program's research and development efforts to advance hydropower manufacturing. To learn more about how hydropower captures energy from flowing water, watch this Energy 101 video.

[\(Anti-hydro article!\)](#)

Hydropower: Does NC's Original Renewable Have A Place In Its Future?

By DAVE DEWITT • 9/16/15, wunc.org

The dank, dark tunnel deep inside the Cowans Ford Dam—about 100 feet or so below the water line of Lake Norman north of Charlotte—is where I learn a little-known fact. **All dams leak.** Jeff Lineberger, Duke Energy's director of Hydro Strategy and Licensing, and Mike Williams, the Cowans Ford facility director, smile and patiently explain to a novice the small waterfalls

cascading down a staircase and into a trough alongside the tunnel. **"These are just pressure relief points to help with uplift on the dam itself,"** says Williams. **"So it relieves the pressure. We do have to keep an eye on it."** Cowans Ford is Duke Energy's largest hydroelectric power plant in North Carolina, capable of producing enough electricity for 240,000 homes. The amount of concrete used to



build this facility is enough to construct a sidewalk from here to California.

Dave DeWitt reports on the boons and drawbacks of hydroelectric power. **The hydropower produced here is renewable, reliable, and available immediately when electricity is needed.**

"We have to match the energy production with the load at all times and hydro is so flexible and so fast," explains Lineberger. "Even this big Cowans Ford Hydro Station, we can take from fully shut down to fully operational in less than ten minutes. We don't have anything else that's that flexible."

At least one of the four Cowans Ford turbines runs once a day, by rule, and is run by remote from Duke Energy's downtown Charlotte headquarters.

But it almost never runs at full capacity, because the dam's other main job is water management—and releasing too much water would overwhelm Mountain Island Lake downstream. The Catawba River basin, in fact, is now almost entirely a series of man-made lakes, from the mountains into South Carolina. But it wasn't always this way. The Dukes began the process of damming the Catawba River in 1899 to power textile factories. "This was actually the first river in the United States that was comprehensively planned and developed for electricity generation," says Lineberger. Hydro-electricity has since given way to coal, nuclear, and natural gas as the main sources of power generation. And now renewable energy is growing faster than any of those. A massive wind farm is underway in northeastern North Carolina, and the state is fourth in the country in installed solar capacity. But environmental advocates never mention hydropower as a preferred renewable source, despite the fact it generates more electricity in North Carolina than any other single renewable source, and does it with no carbon emissions. And there's a reason why. "It's perhaps one of the most damaging power sources that we have, actually," says Gerritt Jobsis, the senior director of Rivers of Appalachia and the Carolinas at American Rivers, a conservation organization. "Building dams totally changes the way a river functions naturally. It reduces or eliminates habitat for a number of species that causes them to go extinct or at least be severely diminished." In the southeast, mussels, snails, and fish have all been negatively affected by dams. But despite the relatively small amount of power it generates and the harm it does, hydroelectricity is still big business. That's because all of the rivers in North Carolina that have the potential to make utility-scale electricity have already been dammed up. That's one explanation for the ongoing multi-billion dollar fight over Alcoa's rights to hydropower on the Yadkin River. Even environmentalists say that once a large river is dammed up, it makes sense to get as much renewable energy from it as possible. And Duke Energy says hydropower isn't going anywhere. "It's been a significant part of our portfolio for over a hundred years," says Lineberger. "I really think a hundred years from now it will still be a significant part of our portfolio." Duke Energy is investing \$75 million in the Cowans Ford Dam. The renovations will improve efficiency and safety—but it still won't plug all the little leaks.

(You gotta send it somewhere.)

City Working On Agreement For Hydro Electric Plant

By Aaron Palmer, 09/11/2015, sheridanmedia.com

Officials with the City of Buffalo, WY are working on an interconnection agreement with PacifiCorp concerning the city's hydroelectric plant on Clear Creek. City Attorney Ben Kirven gave his reported to the city council that he and City Works Director Les Hook had a telephone conference with representatives of PacifiCorp concerning the agreement. He said PacifiCorp has completed and initial review of the agreement and he expects a draft of the new agreement in the near future. Kirven said "the wheels are turning slowly." The agreement allows the city to re-sell the small amount of electricity the facility produces back to PacifiCorp.



Proposed expansion of hydroelectric facility in Lyons Falls progressing

By STEVE VIRKLER, JOHNSON NEWSPAPERS, SEPTEMBER 12, 2015, watertowndailytimes.com

LYONS FALLS — The long-anticipated expansion of a hydroelectric facility here is moving forward, with the project now awaiting final state Department of Environmental Conservation approval.

“That’s going to be a major step to our redevelopment for sure,” said village Mayor Catherine L. Liendecker, noting the project will hopefully take place next year.

Northbrook Lyons Falls is proposing to increase its capacity from 5.8 to 11.2 megawatts by replacing its main four-turbine powerhouse with a new two-unit



powerhouse within the footprint of the current powerhouse of the former Lyons Falls Pulp and Paper mill facility, near the confluence of the Black and Moose rivers. “The existing one-turbine secondary powerhouse will be retired; the turbine will be decommissioned and the building will be mothballed,” stated a posting on DEC’s Environmental Notice Bulletin. “The project will continue to be a run-of-river operation. The application will add a seasonal downstream fish movement flow, a seasonal aesthetic flow, and an angled trash rack structure with seasonal overlays.”

The project requires a Clean Water Act Water Quality Certification permit from DEC, but the agency has determined that it is not subject to state Environmental Quality Review and would have no adverse impact on archaeological sites or historic structures. Written comments may be submitted through Sept. 24 to Jessica Hart at NYSDEC Region 6 Headquarters, State Office Building, 317 Washington St., Watertown, N.Y. 13601 or by email at DEP.R6@dec.ny.gov.

Northbrook earlier this year also filed an application with the Federal Energy Regulatory Commission to conduct the project. The plant’s owner, Kruger Energy, for several years has discussed a large expansion project that would replace its aging turbines with new, larger ones. However, the ongoing demolition of several deteriorating buildings — covered by state economic development grants and funding from the county and Kruger — by Lewis County Development Corp. at the adjacent mill site was first needed to provide adequate access to the Northbrook property. “Now, finally, Kruger has a way to get to their facility,” Mrs. Liendecker said.

The company has held several meetings and public hearings with village, development corporation and county officials to keep everyone updated on the progress, she said.

“Needless to say, everybody is very favorable for it,” the mayor said. Mrs. Liendecker said she is particularly hopeful that any business that ultimately locates on the former mill site could take advantage of cheaper energy from the expanded hydroelectric facility. The project has been in existence since 1920, when the hydro units were put in, and it was federally licensed in 1986.

In 2006, a redevelopment project was proposed to have a new powerhouse on the east side of the Black River, but there were concerns about developing that side of the river. Some residents suggested that development on the east side of the river would affect recreational, scenic and cultural resources, causing Northbrook officials to focus instead on redevelopment at the existing site on the river’s west side.



Water:

(Dangerous flooding. The fatalities are now up to 16, ten of which were children.)

Deadly Flooding at Utah-Arizona Border: Streets Littered With Mud and Sand

By ABC NEWS, Sep 15, 2015, abcnews.go.com

Nine people, including a 10-year-old boy, are dead after flash floods tore through the town of Hildale, Utah, Monday night, on the Utah-Arizona border, authorities said. The victims had stopped their cars at a point where waters from Maxwell Canyon cross Central Street, authorities said. They exited their cars, then got back in, when a massive flash flood swept them away, authorities in Colorado City, Arizona, said at a news conference today. Hildale serves as a sister town of Colorado City. Rick Bowmer/AP Photo



People look on as crews clear mud and debris from a road following a flash flood, Sept. 15, 2015, in Colorado City, Ariz.



Scott G. Winterton/The Deseret News/AP Photo

Members of the Mojave County search and rescue team use dogs to search for bodies after a flash flood on Sept. 15, 2015 in Colorado City, Ariz. [more +](#)



A car sits on the side of the road after being pulled from Short Creek by construction equipment that is removing flood debris from Short Creek as it crosses Central Street, Sept. 15, 2015 in Hildale, Utah [more +](#)

The 10-year-old's body was found over 6 miles downstream from the incident, authorities said. One adult and three children are still missing. The flash flooding left streets littered with mud, sand, boulders and debris. George Frey/Getty Images

Damaged homes and power outages were also reported, according to Washington County



Emergency Services Public Information Officer Pete Kuhlmann.

George Frey/Getty Images

PHOTO: Several women watch as large construction equipment is used to remove flood debris from Short Creek, Sept. 15, 2015 in Hildale, Utah. [more +](#)



Mark Lamont/AP Photo

PHOTO: Debris and water cover the ground after a flash flood, Sept. 14, 2015, in Hildale, Utah



Other Stuff:

(Here's a dreamer. You can't get something for nothing!)

Letter: Harness ocean's power for energy source

The Berkshire Eagle, 09/15/2015. berkshireeagle.com

To the editor:



Environmental concerns dictate the need to explore alternative energy sources and also establish one starting point — the sea. The oceans are the building blocks from wherein we evolved. The sea can continue to serve us if we can also learn to sustain its epic power beyond hurricanes, global warming, and tidal floods. We must somehow learn to harness the energy of the sea, using its force as a source of hydropower. Rising sea levels can be

utilized as a natural energy source by means of funneling tidal salt water. The alternative is to continue to work against the tides, daring Mother Nature, and thereby bringing a wasteland of storm damage to the coast. Storms have been hollowing out the faces of beach front property during hurricanes and coastal flooding in recent years. Engineers can realize and find a soluble solution to generate energy on planet Earth by returning to the sea. Through human ingenuity, we can capitalize by invoking through the power of the ocean's currents a new means of hydropower. This new energy source can be channeled, not unlike electricity, through proper conduits whose size and shape somehow contract, trap, capture, recycle the immensity of waves from tidal forces. Oceanic hydropower can be processed through equipment which acts like a mill to power devices through the forces of nature for energy hydropower.

To illustrate the potential of water: when flow is restricted by rocks, whitewater rapids result as water is forced to course around a barrier. In much the same way, visualize controlling water by first using a dam to pool the oceanic tide, and then channeling the ocean through tube-like conduits to create a rush of hydropower, as in the action of funneling sea water for fuel. Gravity would force sea water through underground receptacles. Coral or reef material or volcanic rock could be turned into natural subterranean channels — serving as aqueducts. Rock or even the seemingly endless supply of plastic, much of which is used to store water and energy drinks, could be recycled and used, along with these natural materials, in constructing channels. The sea generates or supports the biosphere that we now enjoy and choose to pollute, which will lead to our expunging of the very globe which sustains human life. Sea water could be channeled naturally and sent through underground pipes to a hydropower plant which could convert and generate energy to power homes and businesses. If we can pipe drinking water all over the country, then we can make use of the practice of oceanic hydropower as a new source of energy. Joanne Dumas Hinsdale



ⁱThis compilation of articles and other information is provided at no cost for those interested in hydropower, dams, and water resources issues and development, and should not be used for any commercial or other purpose. Any copyrighted material herein is distributed without profit or payment from those who have an interest in receiving this information for non-profit and educational purposes only.