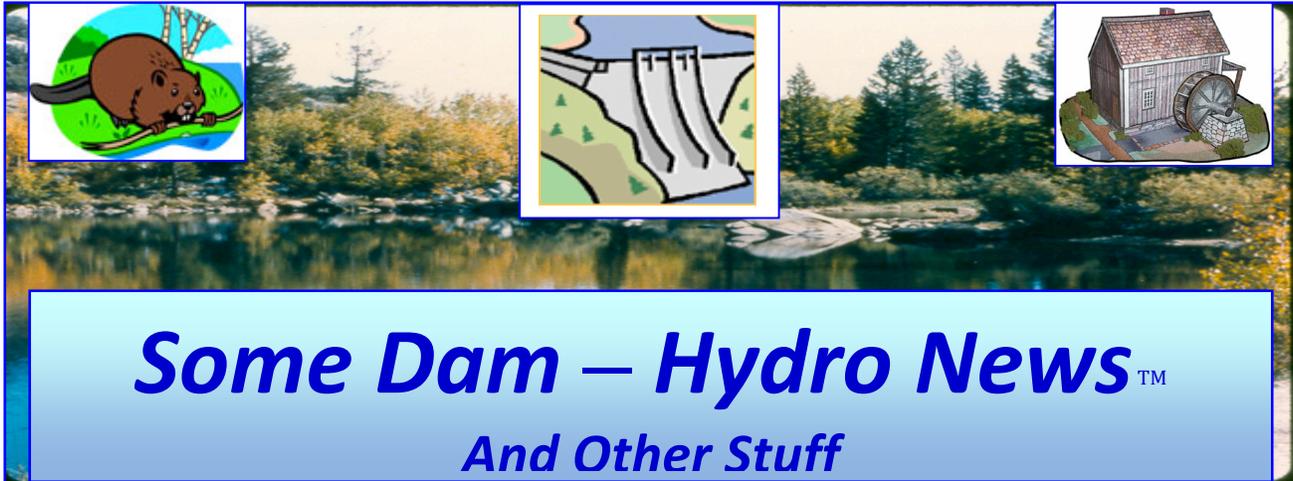


7/27/2018



Some Dam – Hydro News™

And Other Stuff



Quote of Note: *“I haven't failed. I've just found 10,000 ways that won't work.” - Thomas Edison*

Some Dam - Hydro News → Newsletter Archive for Current and Back Issues and Search:
(Hold down Ctrl key when clicking on this link) <http://npdp.stanford.edu/>. After clicking on link, scroll down under Partners/Newsletters on left, click one of the links (Current issue or View Back Issues).

“Good wine is a necessity of life.” - -Thomas Jefferson
Ron's wine pick of the week: 2015 Donnafugata Italy (Other Regional Reds) "Sedara"
“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson



Dams:

(Getting to work on the final stage of Oroville.)

Concrete flows Monday on ‘splash pad’ expansion

By STEVE SCHOONOVER | chicoer.com | Chico Enterprise-Record, July 11, 2018

OROVILLE, CA — Concrete pouring is due to start Monday on the second half of the Oroville Dam emergency spillway “splash pad.” That’s the only milestone reported Wednesday during a media call on progress to repair the emergency spillway and main spillway, which sustained serious damage in February 2017. Use of the main spillway was cut back when a hole broke open in it on Feb. 7, 2017. That allowed the lake level to rise until it flowed over the emergency spillway weir on Feb. 11, and onto what was then a bare hillside below it. Rapid erosion the next day appeared to threaten the soundness of the weir,



Copy obtained from the National Performance of Dams Program: <http://npdp.stanford.edu>

and prompted evacuation orders for 180,000 people. **The work being done at the emergency spillway is designed to prevent such erosion should it ever be used again.** A wall of concrete pillars poured 35 to 65 feet deep down to bedrock has been completed 750 feet below the weir. That is designed to block erosion up the hill toward the weir. The space between is being filled with the splash pad — a layer of roller-compacted concrete at least 10 feet thick. The north half has been completed, and drops down the hill in a series of two-foot steps designed to dissipate the energy of water that might come over the weir, as well as funnel it toward a designed low spot to drain away. It looks something like a giant amphitheater. The south half will look about the same, steps draining toward a second low spot. **The splash pad will have walls on its sides to keep the water under control. The weir also will be buttressed for further protection.**

On the main spillway, the foundation rock is being cleared and leveling concrete is being poured on the top 730 feet, which was left alone last year but is being replaced this construction season. In the center section, which was filled with roller-compacted concrete last year, several feet of the surface have been ground away, and slabs of erosion-resistant structural concrete are being poured. Thirty-seven of what will eventually be 378 slabs have been poured so far. Another 126 wall sections will also be poured here. **On the huge blocks at the bottom of the spillway that dissipate water energy, the surface has largely been removed. They will be resurfaced this year after being beaten up by chunks of concrete washing down the spillway in February 2017.**

The work is picking up just as the heat of summer is settling in. Jeff Petersen, the executive director on the project for Kiewit Infrastructure said extra steps are being taken to ensure worker safety in the heat. Managers and crews are being trained to look out for the signs of heat illness, and shade structures are set up throughout the spillway. **Water and fruit are being provided in prodigious amounts, he said.** Last year Kiewit provided 4,000 pounds of fruit and 40,000 gallons of water at the job site, and Petersen expected to surpass that this year. There are 695 Kiewit workers on the job, he said, and about 100 subcontractors. **All the major work on the main spillway is still on track to be completed by Nov. 1.** Some dry finishing and curing will take place after that, as well as backfilling behind the sidewalls. **Work on the emergency spillway will continue past the Nov. 1 date.**

(Amazing!)

Amazing Places: Steel and stone dams

By Nigel Reynolds, Courier Columnist, June 24, 2018, dcourier.com

Here is my last article about the Ash Fork area – a follow up to the historic Johnson Railroad Tunnel. Back in the days of steam locomotives, **water was a key requirement in dry Arizona** – a locomotive needed to replenish its water every 90 miles on average.

Johnson Canyon, downstream from the tunnel, was dammed in two places to form reservoirs. **The first dam completed construction in 1898, built by the Aitcheson, Topeka and Santa Fe RR (ATSF). It was the first large steel dam in the world, and one of only three ever built in the United States.** We are lucky to have this dam in our own back yard. The first photo, taken in April 2008, shows the lake held back by the steel dam. It is still functioning 120 years later, unlike the other two steel dams in Montana and Michigan. The reservoir is almost full – just the rusty top of the dam is showing; it can hold 38 million gallons. From the top of the dam to the creek bed below is almost 50 feet. For more photos and information, do an online search for “Williams News, steel dam”. The photo there shows the scalloped shape of the steel plates, visible when the lake level is low. The dam has no overflow channel – it was designed to allow water to flow over the top without damage.



Jan. 26, 2018, Courier columnist Nigel Reynolds captured this image of the back of the steel dam. (Nigel Reynolds/Courtesy)

The second photo shows the back of the dam, with the steel girders holding up the structure. Originally, that back face was covered in corrugated iron – some pieces are still visible on both sides. Its full name is the **Ash Fork - Bainbridge Steel Dam**. Francis Bainbridge was the civil engineer who designed the dam. Ash Fork was founded in 1883 as a railroad town. **The second dam, called the Stone Dam (see third photo), was built by ATSF in 1902, about one-half mile upstream from the steel dam.** It was built from huge blocks of red sandstone, each weighing over a ton. Compared to 184 feet for the steel dam, the stone dam is 600 feet wide, and the lake covers 10 acres when full.



Taken on Jan. 26, 2018, this image is of the stone dam and lake. (Nigel Reynolds/Courtesy)

An extra bonus of driving to the southeast side of this lake is a stretch of old Route 66 – cut off and unused when Interstate 40 was completed east of Ash Fork, around 1980. This stretch of the Mother Road is now named Forest Road 6E, and is almost unknown. Three miles of it still has the original surface, and is drivable after being abandoned almost 40 years ago – but be prepared for some potholes! For directions and maps for the tunnel and

lakes, you'll have to contact me via the Courier's senior news editor, Tim Wiederaenders (twieds@prescottaz.com); subject line: "tunnel and lakes." **Nigel Reynolds was born in England and has lived in Arizona for 40 years, and in Prescott for over 20 years.** "Exploring is in my blood," he says. To see his articles online with the photos in color, visit dCourier.com and enter "Amazing Places" in the search-bar at top right.

(Don't remove my dam in NY.)

Save Tillson Lake group blasts Riverkeeper's endorsement of dam removal

By Frances Marion Platt/July 5, 2018, hudsonvalleyone.com

What happens when tree-huggers stop hugging trees long enough to engage in metaphorical fisticuffs with fellow environmentalists? The current battle over what should be done about the Tillson Lake Dam in the Town of Gardiner is proving an interesting test case of this scenario. Local activists have been mobilizing under the aegis of a new not-for-profit called Save Tillson Lake, seeking help from elected officials and endorsements for their cause from local and regional environmental organizations. But Hudson Riverkeeper isn't playing along, the Walkill River Watershed Alliance isn't taking sides and Hudson River Sloop Clearwater is still pondering its position.



To recap, Gardinerites living in the immediate vicinity of Tillson Lake, NY which is fed and drained by the Palmaghatt Kill, received a "courtesy" letter in late March from Palisades Interstate Park Commission (PIPC) executive director James F. Hall, informing them that the agency was planning to decommission the dam that has been creating the lake since 1930. The reason given was safety to downstream homes, as some water seepage has been occurring at the base of the earthen dam, and the concrete splash pad of its spillway has deteriorated over time. **Estimating that replacing the dam could cost from seven to nine million dollars,** PIPC claimed that there was no funding in its budget available for the purpose. **Instead, the agency proposes to "dewater" the lake and allow its bed to revert to natural stream corridor.**

This plan does not sit well with lake neighbors, for whom the artificial lake is a cherished recreational resource (as well as a water source relied upon by the local volunteer fire company). Some of them even have deeded lake rights, and argue that their property values will plummet if the community's greatest amenity is removed. Tillson Lake is a popular fishing destination, home

to largemouth bass and brown trout, as well as a magnet for birders. Last Saturday afternoon, Save Tillson Lake (STL) held its second general meeting at Gardiner Town Hall, once again drawing a large crowd of concerned citizens. Organizer Morey Gottesman updated attendees on the group's successes so far, including resolutions from the Gardiner and Shawangunk Town Boards and letters of support from state and county legislators, as well as from congressman John Faso. A Save Tillson Lake Day drew good turnout; lawn signs are popping up and a letter-writing program is in progress. "We are clearly being heard by our elected officials," Gottesman reported. "However, PIPC is proceeding with the project. They are now prepping the Environmental Assessment Form. We need help to determine the environmental value of the lake." To this end, STL has engaged an environmental lawyer, Dave Gordon, to represent the group, and a wetlands ecologist, Karen Schneller-McDonald, to prepare a wetland delineation analysis. According to Gordon, more than half of the 24-acre lake, on its western/upstream side, is designated as wetland in aerial photographs taken as part of the National Fish and Wildlife Service's National Wetlands Inventory. An additional 3.7 acres of wetland at several points along the lake's perimeter have been delineated and tagged by PIPC in the past couple of years, the attorney said. As it happens, 12.5 acres of wetland is the size parameter beyond which the New York State Department of Environmental Conservation will add a parcel to its wetland maps and assume jurisdiction over it, which Gordon sees as STL's most promising strategy. "Our goal is to get this designated state wetland," he explained. "They would need a DEC wetlands permit to essentially destroy Tillson Lake. To destroy 16 acres of wetland is a big deal." In cases where such a permit is issued, a developer is typically required by DEC to create a new wetland of equal or larger acreage elsewhere, he explained, which would greatly inflate the projected cost of removing the dam.

Gordon, who was a staff attorney for Riverkeeper for 14 years, was scathing in his assessment of that organization's May 14 blog post by habitat restoration manager George Jackman, titled "Save the Palmaghatt Kill — Remove Tillson Lake Dam and Restore Natural Flow." Jackman argued that "Removing the dam would give the Gunks back a bit more of the wildness we cherish, while also enhancing habitat for aquatic invertebrates and wild trout, many of which are threatened over much of their range by introduced species and habitat alterations." "From a philosophical perspective, it is a corruption of nature to deprive rivers of their natural flow of water and seasonal distribution cycles," Jackman's essay continued, adding, "many freshwater species maintain a high degree of uniqueness with limited environmental tolerances that makes them highly sensitive to change and the most imperiled group of organisms in the world...and thus by evolutionary fiat have been granted by nature inalienable rights to habitat that supersedes all other interests, including arbitrary human concepts and constructs." Gordon blasted this as an "alarmingly bad statement" that constitutes "almost environmental malpractice." He recalled his work with Riverkeeper's longtime lead attorney, Robert F. Kennedy, Jr., who, he said, espoused a philosophy that "We don't protect fish for fish; we protect fish for people." Gordon also took issue with Jackman's broad generalizations about dams being "an ecological blight upon freshwater ecosystems" and his characterization of the Tillson Lake Dam, a prized community resource, as a "relic dam" and "obsolete." "They never looked at the local ecology," Gordon complained. "They never even noticed or mentioned the phosphorus issue." Contrary to the Riverkeeper position that keeping a stream free-flowing for the entirety of its length is essential to the transport of nutrients, STL contends that the Wallkill River, of which the Palmaghatt Kill is a tributary, is having major problems with excessive nutrients — especially phosphorus loading, a likely culprit in the Wallkill's harmful algal blooms of recent years. "Dams typically sequester nutrients like phosphorus, because it binds to sediment," he argued.

Gordon objected to Riverkeeper essentially equating a dam about 35 miles from the Hudson River, with a much taller dam in between at Sturgeon Pool, to another dam on the Wynantskill, a quarter-mile from the Hudson, whose removal enabled the return of alewives to their spawning ground. "Alewives are not going to swim up from Kingston to the Palmaghatt Kill," he scoffed. This position found support from Manna Jo Greene, who was in the audience in her capacity as environmental director of Clearwater. "I came to understand what the value of fish migration would be" if the Tillson Lake dam were eliminated, as well as "to see what the community is

thinking," she said. "There's not going to be any substantial migration past the Sturgeon Pool Dam." Moreover, noted Greene, a strong proponent of sustainable energy-generating alternatives, migration is blocked at Sturgeon Pool by one of Central Hudson's most viable and productive hydroelectric power plants. She said that Clearwater was urging the DEC to map streams in the Hudson watershed in a way that distinguishes between their value for fish migration and for hydropower. Greene added that, in Clearwater's view, "The rights of plants and animals are equal to the rights of people; they do not 'supersede' them." Next up in STL's strategic plan is to bring in the highly respected ecologist Erik Kiviat of the not-for-profit environmental research institute Hudsonia to conduct further studies of Tillson Lake and arm the group with more thoroughly documented data. Fundraising will be necessary for the group to cover the costs of all these expert consultants. Beyond aiming for a DEC wetland designation for at least half the lake, STL is also questioning the high price tag quoted by PIPC for restoration of the dam, and urging the agency to seek other sources of funding. "We're absolutely prepared to be more than a NIMBY group," averred Gottesman. "I told Jim Hall, we're here to help you solve a problem."

(Leave your hands off of it.)

Letters: Leave our urban Mississippi River as it is, dams and all

By LETTER WRITERS | July 12, 2018, twincities.com



LEAVE OUR URBAN MISSISSIPPI AS IT IS

I'm writing in response to Bob Shaw's article of July 8, about the project that would reshape our stretch of the Mississippi River, a subject near and dear to my heart. Unfortunately, the article primarily presented information about potential "gains" from removing the locks and dams, and "returning the river to its natural and wild state," and did not address the numerous negative consequences of such actions. As a resident of Mac-Groveland who lives four blocks from the river, I enjoy and appreciate the stretch of Mississippi River between the Lake Street and Ford Parkway bridges on a daily basis, as do countless others. The river is beautiful and serene, and supports a variety of wildlife, including eagles, heron, cranes, and much more. And the seasonal changes are spectacular to behold. I am also a member of the Minneapolis Rowing Club and row on the river three to four times a week. Our clubhouse is under the Lake Street Bridge, serves our more than 200 members and also houses boats and other equipment for the St. Thomas and Macalester University rowing teams. The University of Minnesota rowing team clubhouse is upriver from us, and the Minnesota Boat Club (founded in 1870) is downriver on Raspberry Island under the Wabasha Bridge in St. Paul. Thus, hundreds of people row on the Mississippi River multiple times per week during April through October. We also host regattas that draw clubs from around the metro area, as well as regional and out-of-state clubs. We all share a love of rowing, and of the river, and all that it currently offers – beauty, nature, tranquility, and the ever-changing effect of weather and climate. We appreciate and want to preserve and protect the natural beauty and tranquility of our stretch of the Mississippi River as it is.

The age range of our rowing community is wide: We have rowers in their 70s, and the minimum age for learning to row is 11 years. Our club and other area rowing clubs offer several Learn-to-Row classes each season. New rowers are taught not only how to row, but also to respect and preserve the river environment. Rowers are good stewards of our river, and rowing leaves no negative footprint. I am also a frequent visitor to the Minnehaha off-leash dog park, along with my dog, Olive. We, and hundreds of other humans and canines, enjoy the freedom and tranquility of that beautiful park all year long. Hidden Falls Park is across the river from the off-leash dog park. It offers picnic areas, grilling, walking and biking paths, boat ramps, and is frequented by numerous families and individuals. Many other people also enjoy this urban stretch of the Mississippi River, including recreational kayakers, canoeists, and fishermen/women. I fear that removal of the dams would result in severe flooding of these parks and other beach areas – more so than what currently happens in the spring and after heavy summer rains. And consequently prevent hundreds of urban citizens from recreating in those areas for prolonged periods of time.

The article talked about the project proponents' vision of restoring the river to its "original, wild state" and creating miles of rapids downstream from St Anthony Falls. I would speculate that only expert kayakers and canoeists would be able to navigate those rapids.

The article also talked about the vision of people being "able to wade across the river" in the summer when water levels drop drastically, and that "people would be inner-tubing by the thousands." The thought of the Mississippi River dropping to a level so low as to allow people to wade across is not at all appealing. Anyone who frequents the river knows how the quality of the water changes from spring, when the water level is high and the current is swift, to later in the summer when the water level is lower and the current slower. And the thought of people "inner-tubing by the thousands" down this stretch of the Mississippi River is downright appalling. Not only does it mock the vision of a "wild and natural state of the river," but I cannot even imagine the negative ecological and environmental impact such activity would have on the river and its wildlife, and on the quality of life of the people who live near or visit that stretch of the river. Furthermore, the "potential gains" of removing the locks and dams are highly speculative. It is known that removing the dams would negatively impact thousands of urban residents who enjoy and appreciate the river in its current, beautiful state.

I urge everyone who lives near the Mississippi River or who recreates on or near the river to attend one of the public hearings scheduled from 6-8 p.m. on July 16 (Mill City Museum in Minneapolis) or 17 (Highland Park Senior High in St. Paul) to voice your opinions. I also urge you to write to the U.S. Army Corps of Engineers to express your position on this dam removal project that will have many consequences for decades to come. *Karen Marienau, St. Paul, Minn.*

[\(More trouble with dams in CA.\)](#)

Four Ventura County area dams cited as deficient in grand jury report

By Kathleen Wilson, Ventura County Star, July 12, 2018, [vcstar.com](#)

The Ventura County Grand Jury is calling for tightened oversight of area dams and community education on how to respond to a dam failure after investigating the safety of the critical structures.

The civilian panel examined the condition of more than 20 dams in and adjoining Ventura County and found that 14 could cause significant loss of life and property if they failed. Four were identified with existing or potential deficiencies by the California Division of Safety of Dams in a review of close to 100 dams that was spawned by the failure of the Oroville Dam spillway last year, jurors said.

Those dams were identified as the Matilija and Santa Felicia dams in Ventura County and Castaic and Bouquet Canyon dams in Los Angeles County.



State officials have deemed Matilija Dam to be in "poor" condition and the other three dams in "fair" condition, the report said. The rating for 71-year-old Matilija Dam is based on concerns about the structure's ability to tolerate a 7.5-magnitude earthquake, jurors said in the nine-page report. "While the analysis did not appear to indicate complete failure, it indicated a likelihood of significant weakening," the report stated. State officials' concerns center on the damage that could be done by multiple earthquakes, said Glenn Shephard, director of the Ventura County Watershed Protection District, which owns the dam. "That is the basis for the poor rating," he said.

Public officials have called for removal of the dam for both environmental and safety reasons, but the cost could exceed \$100 million. Shephard said a large chunk of the funding could be forthcoming. A bond measure headed to California voters in November says \$80 million may be spent for the removal of the dam and related projects. In the meantime, the district plans to apply

for a \$2 million federal grant to do work that will help stabilize the structure. The job involves removing large pieces of concrete on the sides of the dam that remained after a previous construction project. Jurors also noted problems with the Santa Felicia Dam, an earthen structure on Lake Piru that dates from the mid-1950s. This dam at Lake Piru is rated in 'fair' condition

This dam at Lake Piru is rated in 'fair' condition. The dam received a "fair" rating primarily because of deficiencies that make the dam vulnerable if the largest plausible earthquake struck before upgrades are made, the report stated. Engineers are concerned about what would happen if a quake damaged the conduit that runs under the dam, said Anthony Emmert, assistant general manager of the United Water Conservation District, which owns the structure. "It is not a concrete dam," he said. "It could be eroded by flowing water." About 300,000 people live downstream of the dam in an area stretching from Piru to the Oxnard Plain, he said. District officials plan to replace the conduit with one built around the dam and designed for modern earthquake standards, he said.

Jurors noted the district's efforts to replace the conduit and enlarge a spillway to handle more water in the case of a major flood. Emmert said it would cost an estimated \$100 million to do the work on the spillway and the conduit. The district has perhaps \$20 million set aside, he said, and is looking for low-interest loans and federal and state money for the rest. Jurors also commented on the "fair" ratings for two Los Angeles County dams near Ventura County. They said the Castaic Dam had three areas that contributed to the "fair" rating and potential weaknesses. All three areas are being analyzed. The Bouquet Canyon Dam's rating was reportedly based on an outdated seismic evaluation, jurors said. It is owned by the Los Angeles Department of Water and Power, which has improved the monitoring system and is doing more seismic studies, jurors said. Besides examining the dams, the grand jury reviewed how a dam failure would be handled by the Ventura County government. They were critical on several scores. Jurors concluded that plans for responding to dam disasters follow the state's guidance but provide little or no direction beyond spelling out the process for notifying dam owners and the Ventura County Sheriff's Office of Emergency Services. The grand jury also found that methods for notifying people of pending dam disasters relied largely on telephone alert systems that would likely fail in a major earthquake. That was strongly disputed by emergency services officials, who said they use a multimodal system that includes social and traditional media, telephone alerts and contact by officers in person or on public address systems

(Down with the old, a part of history gone.)

Take one last look at this 109-year-old N.J. dam. It's about to be destroyed.

By Steve Novak, Jul 13, 2018, lehighvalleylive.com

After a news conference celebrating the imminent destruction of the Columbia Lake Dam, the 109-year-old structure was still, notably, intact. Issues obtaining the few remaining permits apparently prevented demolition from starting during the outdoor gathering late Thursday morning. So goes the long process to restore this northwest New Jersey creek to its natural state. It didn't stop environmental groups and state officials including the head of the Department of Environmental Protection from congratulating each other on their work. The 330-foot-long, 18-foot-high dam behind them wasn't torn



down Thursday, but it will be torn down sooner or later and that's why this group of six dozen or so people was so excited. "I want to thank Mother Nature ... for the 109-year loan" of the Paulins-Kill for hydroelectric power, DEP Commissioner Catherine McCabe said. "And now, Mother Nature," she continued, holding a prop sledge hammer aloft, "you can have it back." Columbia Lake Dam will be demolished in Warren County. The Paulins Kill is a 40-mile tributary of the Delaware River, and the Columbia Lake Dam is about a quarter-mile upstream from its end, in an

area normally inaccessible to the public. Its removal has long been a goal for the state chapter of The Nature Conservancy, which has pursued the necessary funding and permissions for four years. When finished, it will be the largest dam removed in the state, according to the conservancy.

The removal itself is expected to cost \$7 million, the DEP stated. Almost three-quarters of that cost is covered by a DEP fund supplied by polluters' fines. Another \$1.4 million comes from The Nature Conservancy and its donors. Federal departments and other nature groups are funding the balance. The dam was built in 1909 by the Warren County Power Co., and at the time it is said to have generated enough power from the creek to supply both locals and the Philadelphia area. Columbia Lake formed behind the dam, and around that is the 1,100-acre Columbia Wildlife Management Area, both named for the riverside Knowlton Township community nearby in the shadow of the Delaware Water Gap. Power-generation ceased in 1955 when the land was sold to the state. Great Bear Hydropower started it up again with a 1986 lease, but operation stopped for good in 2016. The power produced is meager for today's needs, supplying less than 200 homes, officials said at Thursday's conference. To continue maintaining the dam, they said, would make little economic or ecologic sense. But its removal will restore about 10 miles of the Paulins Kill to a free-flowing state, which should have a tangible upside.

Among the benefits stated in Thursday's conference: Fish like the American shad will be able to return to their natural spawning grounds upstream, unobstructed by the dam. Free-flowing water won't get as warm as it did in the lake, which should improve the creek's quality. Sediment washed into the Delaware will help the marshes far downriver. And there is the tourism aspect to consider. "You're going to be able to kayak from Blairstown all the way down to the Delaware River," said Barbara Brummer, New Jersey State Director for The Nature Conservancy.

Columbia Lake was lowered last month and fish and mussels relocated to prepare for the eventual demolition. Noise from the demolition of a smaller dam just downstream was audible during Thursday's news conference. Once the main dam is gone, modifications to an I-80 culvert just upstream may be needed to widen the stream. Leaders from Knowlton Township were not among the nine speakers at the conference. The township has had a number of complaints with the DEP over the last several years, and this project was no exception. In 2016, the township's elected leaders criticized the dam-removal plan, saying the now-drained lake is an attraction for outdoor activities and was used by firefighters as an emergency water source. Brummer said the conservancy worked with the fire department to establish a new emergency water system. The Columbia Lake Dam may be the biggest project on the Paulins Kill, but there is still more to do if the creek is to be fully restored to a natural state. The DEP said it is working with its partners to remove the Paulina Dam in Blairstown Township, nine miles upstream.

(Don't usually use foreign articles, unless it's a dam failure. Looks eerily like Oroville.)

Laos Dam Collapse: Hundreds Are Missing as Homes Are Swept Away

By Mike Ives, July 24, 2018, nytimes.com



Auxillary Dam Failure

HONG KONG —

(News reports say the main dam did not fail. It was an Auxillary dam.)

Hundreds of people were missing on Tuesday after a billion-dollar hydropower dam that was under construction in Laos collapsed, killing several people and displacing more than 6,600 others, a state news agency said. KPL, the official Lao



Main Dam

news agency, reported that the Xe-Pian Xe-Namnoy hydroelectric dam collapsed at 8 p.m. on Monday, releasing five billion cubic meters of water (roughly 175 billion cubic feet) and sweeping away homes in the southern province of Attapeu, which lies along the country's border with Vietnam and Cambodia. The agency did not give an exact death toll. Heavy rain and flooding caused the collapse, according to a South Korean engineering and construction company that Reuters said was building the dam. The company, SK Engineering & Construction Co., has sent helicopters, boats and personnel to aid rescue operations, the South Korean Foreign Ministry said in a statement.



"We are running an emergency team and planning to help evacuate and rescue residents in villages near the dam," a spokesman for SK Engineering, known as SK E&C, told Reuters by telephone. Prime Minister Thongloun Sisoulith of Laos suspended a government meeting and led members of his cabinet to monitor rescue and relief efforts around the collapsed dam, the KPL agency reported on Tuesday.



Hydro:

(New publication.)

New tools launched for assessing hydropower good practice

By Press Release, July 11, 2018, bnamericas.com

Press release from the International Hydropower Association



A multi-stakeholder coalition of civil society, industry, governments and financial institutions today launched an expanded suite of tools for assessing hydropower projects against sustainability performance criteria.

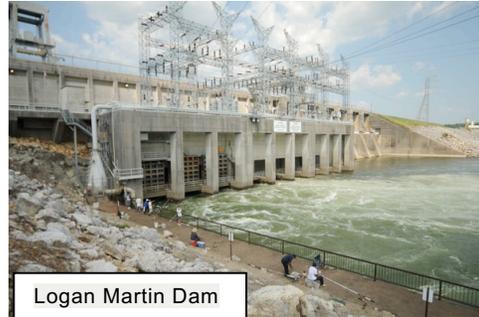
The Hydropower Sustainability Assessment Protocol, the world's leading scoring framework for evaluating hydropower projects, has been updated to examine hydropower's carbon footprint and resilience to climate change. In addition, a new tool will enable project proponents and investors to identify and address gaps against international good practice. The new suite of tools was developed over 18 months by the Hydropower Sustainability Assessment Council, which is constituted by organisations such as the World Bank, The Nature Conservancy, and the International Union for Conservation of Nature, WWF, the Inter-American Development Corporation, hydropower companies and governments. "Today marks the most significant expansion in the tools available to assess hydropower performance in almost a decade, following extensive consultation within and beyond the hydropower sector," commented Mr. Roger Gill, Chair of the Hydropower Sustainability Assessment Protocol's governance committee. "This is good news for both project proponents and concerned stakeholders who want to measure projects against international practice. Developers and investors now have a targeted, cost effective way of assessing sustainability, while governments and communities can be confident that evaluations are based on robust, objective criteria," he added. The full release is available here: <https://www.hydropower.org/topics/featured/hydropower-sustainability-assessment-protocol>

(Relicensing in the courts. This will send shock waves!)

Alabama Power's Coosa River dam licenses fail to protect wildlife, court rules

By Dennis Pillion, Jul 12, 2018, al.com

A three judge panel at the U.S. Court of Appeals in Washington, D.C. has ruled that licenses issued to Alabama Power Company to operate hydroelectric dams on the Coosa River in Alabama don't go far enough to protect wildlife, including federally protected species found in the river. The panel vacated Alabama Power's 30-year license to operate seven hydroelectric dams along the Coosa River, remanded the issue back to the Federal Energy Regulatory Commission, which had renewed the dam



license in 2013.

The court ruled that FERC, the federal body that regulates hydroelectric dams, used environmental assessments that were flawed because they did not account for previous impacts to the rivers caused by the dams and ignored evidence that the relicensing could cause "100 percent take of multiple endangered mussels, a large loss of indigenous fish, and perilously low dissolved oxygen levels for substantial periods of time."

Alabama Power and FERC will have to restart the licensing process for the seven dams licensed collectively as the Coosa River Project: Weiss, Neely Henry, Logan Martin, Lay, Mitchell, Jordan and Bouldin. The appeals court ruled that renewing the licenses was "arbitrary and capricious" because "the Commission's environmental review and a biological opinion it relied on were unreasoned and unsupported by substantial evidence." Alabama Power spokesman Michael Sznajderman said the company was disappointed in the court's decision and was currently evaluating its "procedural and other options" going forward. No immediate operational changes were required by the decision, Sznajderman said. "We believe the record at FERC and the Department of the Interior both fully support the licensing decision in the Coosa River Project proceeding," Sznajderman said via email. Environmental groups Rivers America and the Alabama Rivers Alliance challenged the FERC's 2013 decision to grant new licenses for the Coosa River dams in spite of documented impacts to wildlife in the river.

The groups argued that the license violated the National Environmental Policy Act, the Endangered Species Act, and the Federal Power Act because they lacked adequate environmental studies, sufficient protections for threatened and endangered species and critical habitat, and didn't require Alabama Power to maintain minimum dissolved oxygen levels in the river system for water quality. "This important ruling is a powerful example of how essential it is for citizens and conservation groups to be at the table when decisions are made about the health of our rivers," Cindy Lowry, executive director of the Alabama Rivers Alliance, said in a news release. "Since the relicensing of these dams only happens every 40 to 50 years, we must get it right or the water quality will suffer and we stand to lose even more species.

"After participating in this process for more than a decade to protect the integrity of the Coosa River for generations to come, we are ecstatic about the outcome of this case and what it means for future dam relicensing projects." The Coosa River was once one of the most ecologically diverse in the country, but the construction of the large hydro dams, beginning in the 1920s, resulted in the extinction or extirpation of 36 aquatic species, according to a report by the World Wildlife Fund. The U.S. Fish and Wildlife Service described the damming of the Coosa as "one of the largest extinction rates in North America during the 20th century." The river still has a wide range of aquatic species, including at least 15 federally endangered or threatened species of fish, mussels or snails. Read the full appeals court ruling here: https://www.southernenvironment.org/uploads/words_docs/American_Rivers_et_al_v._FERC_Opinion.pdf

(Nothing about stabilizing the cold joint.)

Work to improve safety at Priest Rapids Dam nearly done

By Shawn Goggins, Jul 12, 2018, ifiberone.com

MATTAWA, WA - Work to mitigate further leakage at Priest Rapids Dam is nearly done. In March, leakage was found in the dam's spillway monoliths. An analysis shows that a disbonded lift joint is the source of the leakage. A lift joint is the area between two concrete blocks poured at different times. A monolith is the structure that supports the piers holding up the spillway gates. Throughout the next month, crews hope to finish the project by installing additional instrumentation that will help detect any future monolith movements within the spillway. PUD officials say after the additional monitoring equipment is installed, they hope the Federal Energy Regulatory Commission (FERC) will remove the lower operating level restriction that is currently in place for the Priest Rapids pool.



(Getting new stuff.)

Dam Retrofit Project Begins

By Miczulski, BY SHEET STAFF— 13 JUL, 2018, thesheetnews.com

On Monday, July 9 Southern California Edison (SCE) hosted a Project Scoping Meeting for their planned upcoming project on the Rush Creek hydroelectric system. SCE owns and operates three dams in this system which are located 14 miles south of Mono Lake. The Rush Creek hydroelectric system is made up of the Agnew Lake Dam, Gem Lake Dam and Rush Meadows Dam on Waugh Lake.



The Federal Energy Regulatory Commission (FERC) requires that SCE be able to control water levels in these lakes so that in the event of above average water accumulation or seismic activity, the public will be protected. Seismic activity is a concern because of the dams' proximity to the Silver Lake Fault, which runs along Highway 158; and the Hartley Spring Fault, which is 5 miles east, running roughly parallel to the Silver Lake Fault. The project in question is focused around the Rush Meadows Dam. This concrete dam was built in 1925 and is 50 feet high and 463 feet wide. SCE intends to retrofit the dam by removing a 22-foot high by 12-foot wide notch at one end of the dam that is intended keep water levels in Waugh Lake safe for downstream residents in case of an earthquake. This modification will allow SCE to comply with FERC regulations.

(Now what!)

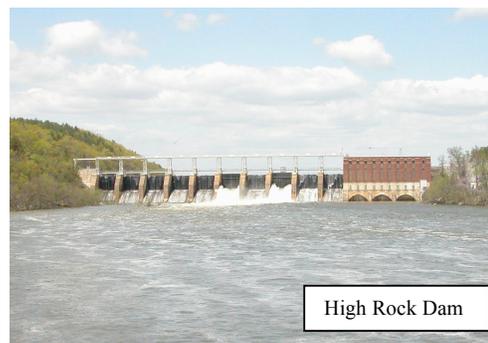
NC Dams Owner Loses Bid to Force Duke Energy to Buy Power

The new owners of North Carolina dams that the state fought to claim as a public resource are losing their bid to force Duke Energy Corp. to buy the generated hydropower.

July 17, 2018, by The Associated Press, usnews.com

RALEIGH, N.C. (AP) — The new owners of four North Carolina dams that the state fought to claim as a public resource are losing their bid to force Duke Energy Corp. to buy the generated hydropower. The North Carolina Utilities Commission decided that Cube Yadkin Generation missed a deadline to trigger Duke Energy's legal obligation to buy the clean hydropower. The dispute started before Cube completed its purchase of the four Yadkin River dams in 2016.

Cube spokeswoman Christina Chen declined comment Tuesday. Cube bought the dams from Alcoa



Corp., which for decades used the hydropower to run an aluminum smelter that once employed 1,000. The dams generated more than \$225 million in revenues in the decade after the smelter closed and electricity has been sold to commercial customers.

(All about hydropower in Europe, not too helpful in U.S.)

Hydropower fact sheets launched

18 July 2018, waterpowermagazine.com

Eurelectric and VGB PowerTech have announced the development of hydropower fact sheets that outline capabilities, challenges and key figures including policy recommendations. The fact sheets were launched at a high-level event in the European Parliament in Brussels, hosted by Angelika Mlinar, MEP, last month. The fact sheets are supplemented by a leaflet "Facts of Hydropower in the EU" presenting all relevant data and facts about hydropower in Europe. In a statement the firms said they had launched the new fact sheets because it is often overlooked that hydropower plays a major role in meeting Europe's ambitious energy transition goals today. In particular, it complements the increasing share of variable renewables in the European power system. With increasing ambition for decarbonisation the need for sufficient flexibility, firm capacity and the ability to balance variable generation is set to increase.

The Hydropower Fact Sheets and leaflet are available to download here:

https://www.vgb.org/hydropower_fact_sheets_2018.html



Other Stuff:

(Watch where you drive.)

10 Best, Worst Cities for Getting Behind the Wheel Florida, Texas, and North Carolina all offer appealing options

By Jenn Gidman, Newser Staff, Jul 11, 2018, newser.com

(NEWSER) – "Comfort and reliability" are two of the reasons people cite for using their cars instead of mass transit to get around—but in some parts of the country, the driving commute is neither comfortable nor reliable. WalletHub looked at the 100 most populated cities in the US across four categories—traffic and infrastructure, cost of vehicle ownership and maintenance, access to vehicles and maintenance, and safety (including accident likelihood and car theft rates)—to see which cities are more enjoyable to drive in, and which are ... not. Just three states claim the cities in the top 10, and they're all in the South:



Best cities to drive in

1. Raleigh, NC
2. Corpus Christi, Texas
3. Orlando, Fla.
4. Greensboro, NC
5. Plano, Texas
6. Winston-Salem, NC
7. Durham, NC
8. El Paso, Texas
9. Jacksonville, Fla.
10. Tampa, FL

Worst cities to drive in

1. Detroit
2. San Francisco
3. Oakland, Calif.
4. Philadelphia
5. Seattle
6. Boston
7. New York
8. Newark, NJ
9. Los Angeles
10. Chicago

See where other US cities rank here: <https://wallethub.com/edu/best-worst-cities-to-drive-in/13964/> (The best US cities for public transit: <http://www.newser.com/story/248993/5-best-us-cities-for-public-transit.html>).

(Another survey.)

In Presidential Rankings, There's a New No. 1

Nearly half of all Americans say No. 44 was best president of their lives in Pew survey

By Jenn Gidman, Newser Staff, Jul 12, 2018, newsxer.com

(NEWSER) – Ask Americans who the best president has been in their lifetimes, and one man ranks significantly above all others—though he didn't always. Barack Obama won the top spot in the Pew Research Center survey, based on phone interviews with 2,000 US adults during the week of June 5-12; 44% of respondents ranked No. 44 as either the best or second-best president during their years on Earth. Bill Clinton came in second with 33%, while Ronald Reagan ranked third at 32%. Though Donald Trump gained only 19% of the vote, Courthouse



News notes those numbers seem to align with how sitting presidents typically do in the Pew survey: In 2011, while he was still in his first term, Obama took in a 20% share. Here, the rankings based on the combined percentages of being selected as either a first or second pick:

- Barack Obama, 44%
- Bill Clinton, 33%
- Ronald Reagan, 32%
- Donald Trump, 19%
- George W. Bush, 14%
- John F. Kennedy, 12%
- George HW Bush, 10%
- Jimmy Carter, 4%
- Dwight Eisenhower, 2%
- Franklin Roosevelt, 1%
- Richard Nixon, 1%
- Lyndon Johnson, 1%
- Harry Truman, 1%
- Gerald Ford,

More on how the presidents rated, including within different generations and political parties, here: <http://www.people-press.org/2018/07/11/obama-tops-publics-list-of-best-president-in-their-lifetime-followed-by-clinton>



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