

3/11/2016



Some Dam – Hydro News™ And Other Stuff



Quote of Note: *Get the facts, or the facts will get you. And when you get them, get them right, or they will get you wrong.* - - Dr. Thomas Fuller

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“Good wine is a necessity of life.” - -Thomas Jefferson

Ron’s wine pick of the week: 2012 John Duval Wines Syrah & Shiraz (Other than French) "Entity"

“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson



Dams:

(This project has too many opponents and not enough proponents.)

Journey down the Susitna River reveals dam's true cost

By Chris Dunn, 2/27/16, newsminer.com

News-Miner Community Perspective:

I tried to imagine being submersed in the cold darkness, more than 600 feet below the surface of the water. The blue skies and warmth of July made it difficult, however, as did the forested canyons and free-flowing river. Most Alaskans will never see this place, not far from where the clear water of Watana Creek pours into the gray Susitna River. This was near the midpoint of my more-than-three-week float down the entirety of the Susitna River, from its violent glacial birth



to its broad, muddy end in Cook Inlet. The journey was an encounter with magnitude and loss. I write to highlight this potential loss and to spur Alaskans to consider the future of their state.

Much has been written about the proposed Susitna Dam. The reader likely knows the basic facts. It is proposed to be 705 feet tall, making it one of the tallest dams in the United States, with an approximately 42-mile reservoir in the center of the remote Talkeetna Mountains. The Alaska Energy Authority estimates the total project cost to be \$5.2 billion and for the dam to generate 600 megawatts of electricity for the Railbelt electrical grid. Detractors question these numbers, however. Studies and proposals stretch back to the 1950s, the most comprehensive and well-funded taking place in 2012 and 2013. Past proposals involved multiple dams, including at Devil's Canyon. Studies will be renewed this summer after a temporary hiatus, despite the dam's uncertain budgetary fate. Regardless of near-term budgets, the fate of the Susitna and its canyons is still in limbo. The desirable dam site locations will always be possibilities for development. The question thus runs deeper than budgets. What will Alaska lose if this dam is built? My journey was an attempt to find out. It began before the river is even born, deep in the Eastern Alaska Range on the giant Susitna Glacier. I paddled in the snow and fog down a long glacial lake bound by sheer, strangely patterned blue walls of ice, small icebergs, and dripping ice caverns. Soon I was dragging my boat over a brutal, confusing labyrinth of moraine and quicksand. Great rapids erupted from the toe of the glacier before calming into the broad Upper Susitna. I floated past the Denali Highway into the proposed reservoir's depths and by the cliffy proposed dam site. The Susitna dug deeper into the Talkeetna Mountains, eventually erupting into the formidable Devil's Canyon. The river here is defined by foam and fury and speed and noise, cut through by gargantuan holes. The river's "banks" are defined by sheer cliffs and brutally thick vegetation – Devil's Club and alder aplenty. It took me three days to float and portage the eleven miles of Devil's Canyon.

I continued past the Alaska Intertie, the Gold Creek rail crossing, the Chulitna junction where the river balloons into a braided plain and Talkeetna. At confluence with the Yanert River, the river becomes Amazonian in appearance. Finally, I reached the endless glacial mud where the Susitna Delta meets the Cook Inlet. I carefully traveled across the metallic silver-grey mud, paddled up the Inlet and crossed the Knik Arm to Anchorage, exposed to Alaska's finicky weather and considerable tides. I finished in Anchorage, strolling down the streets in my mud-covered dry suit. During the journey, I encountered birds, bears, seals, salmon, caribou, a snarling wolverine and Alaska Energy Authority studies in progress. I encountered a living river in the heart of the proposed damsite.

The dam is conceived as part of Alaska's goal of obtaining 50 percent of its energy from renewable sources by 2025. Energy is important, especially energy sources that can serve as alternatives to fossil fuels. However, what will the future of Alaska look like? What I offer here is a firsthand account of the Alaska that could be lost. A remote corner of the state, filled with caribou and canyons, as well as a salmon-carrying river that runs freely from mountains to the sea, could be filled with roads, transmission lines, airstrips and a concrete wall. I hope that Alaska's future will still include places like the Susitna that make Alaska what it is. Alaska's greatest wealth is in its land, in the unique lifestyle that this allows, and in the people that live it. There is also a wealth of renewable energy in Alaska: geothermal, tidal, small-scale hydro, wind, and others. Alaska can live up to its goals and can even be a leader in renewable energy, but there are better ways to do it that don't sacrifice Alaska in the process. *Chris Dunn is an Alaskan outdoor enthusiast. A full narrative of his journey on the Susitna River, along with pictures, can be found at: <http://www.groundtruthtrekking.org/Journeys/Glaciars-To-The-Sea-Susitna-Dam.html>*

(Who said they aren't building new dams, even though this is a replacement?)

Flower Creek Dam Completed Near Libby

Contractors will slowly fill the reservoir behind the dam over the next three weeks

By Justin Franz // Feb 26, 2016 // News & Features // latheadbeacon.com

After years of planning, months of construction and millions of dollars, contractors completed the Flower Creek Dam near Libby earlier this month. This week, contractors are doing cleanup work around the dam located just south of the town. They also began filling the reservoir behind the dam, a task that Morrison-Maierle project and construction manager Paul Burnham expects to complete by the middle of March. The new Flower Creek Dam will hold back the city's water supply and replaces an old



concrete structure that six years ago was deemed inadequate. At the time, Morrison-Maierle completed a core sample test of the arch dam and found its concrete strength was less than 1,000 pounds per square inch. Normal strength is between 3,000 and 4,000 pounds per square inch.

Engineers said the dam, built in 1946, could have been compromised by a major seismic event in the area. If that happened, Flower Creek and Libby could have flooded. Libby Mayor Doug Roll said the completion of the new dam was a long time coming. "I don't think the city has ever taken on a project this big and we're just excited to have it done," Roll said. The new dam cost more than \$11.5 million and is part of a large water system improvement project the city of Libby has been undertaking for the last few years. The dam was primarily funded with loans and grants from the United States Department of Agriculture's Rural Development fund. Roll said water rates have risen in recent years to help cover the loan. Other aspects of the water system improvement project include water main repairs throughout the city. Construction of the new dam began in 2014. Completion of the project was delayed by a few weeks in December after floodwaters washed away thousands of yards of soil near the dam. Burnham said the dam itself was not damaged in the flood and any costs related to the incident were covered by the contractor's insurance. Burnham said in the coming weeks, as the water slowly rises behind the dam, engineers would inspect the structure to make sure it is sound. Residents can learn more about the dam project at libbywaterprojects.com.

(Navigation history.)

History Minute: The Arkansas River Navigation System

February 27, 2016 - thecabin.net

The Arkansas River flows across four states, from the Rocky Mountains in Colorado, across the plains of Kansas and Oklahoma, and into Arkansas before emptying into the Mississippi River. Though its importance to Arkansas has always been unquestioned, leaders in Oklahoma and Arkansas began to realize by the 1920s and 1930s that it could be so much more. Through the tireless efforts of two men — John McClellan and Robert Kerr — this dream became a reality with the construction of the McClellan-Kerr Arkansas River Navigation System.



Since the early 1920s, business and political leaders in both Arkansas and Oklahoma had discussed development of the Arkansas River as an economic tool for both states. The river had been used for shipping for generations, but the buildup of silt in the river made navigation difficult for modern ships. It was believed that this could be corrected and a series of hydroelectric dams could be built along the river to contain flooding problems and provide electricity for the region. In

the 1930s, attempts were pushed by business and political leaders in Arkansas and Oklahoma to fund a series of locks, dams, and dredging projects for the Arkansas River, but the plans were scuttled when engineers questioned the feasibility of the project.

In Arkansas, former prosecutor and former congressman John L. McClellan was elected to the U. S. Senate in 1942. The Sheridan native was a powerful and respected figure in the state for decades. Though a man of many accomplishments in the Senate, he worked to ensure that funding for development projects and infrastructure steadily came to Arkansas. In 1946, he won approval for the project in the Rivers and Harbors Act. Sen. Robert S. Kerr of Oklahoma had been a tireless advocate for the development of Oklahoma since his beginnings as an oilman and his tenure as governor between 1943 and 1947. He saw the development of the waterways of the Arkansas River across the heart of his own state as a potential windfall for Oklahoma's economy. When he entered the U. S. Senate in 1949, he made it a key priority for his state. However, in 1954, Senate Republicans all but killed the riverway, pushing it aside for further study. When Democrats reclaimed control of the Senate in 1955, Kerr and McClellan returned funding for the Arkansas River project in a highway appropriations bill. The Oklahoma Democrat died in 1963 while McClellan made sure that support for the project continued. The river plan would begin with a series of locks and dams, starting on the Verdigris River branch of the Arkansas River just east of Tulsa and following the Arkansas River to the Mississippi River.

The river was expanded and straightened in several places to increase the flow of the river and prevent the buildup of silt. Ultimately, seventeen locks and dams were built at a cost of \$1.3 billion to control river elevation and help transport of goods along the river. Thousands of people worked tirelessly to complete what was then called the Arkansas-Verdigris Waterway. The Blue Mountain Dam is western Arkansas near Mount Magazine was completed in 1947 as the first stage of the project, creating Blue Mountain Lake. Keystone Lake and Eufaula Lake were created in eastern Oklahoma in the late 1960s to help control water levels in the navigation system. The Kerr Reservoir, a vital portion of the system in eastern Oklahoma, was completed in 1970. As the last portions of the system were completed, in January 1971 Congress officially named the system after the two senators who spent so many years championing the project. The McClellan-Kerr Arkansas River Navigation System was officially dedicated with great fanfare on June 5, 1971. The riverway spans 445 miles from just east of Arkansas Post to Catoosa, Oklahoma. Today, about 10 million tons of goods is shipped along the river system each year, at a value of \$2 billion to \$3 billion each year. Dr. Ken Bridges, a history professor at South Arkansas Community College in El Dorado, can be reached at kbridges@southark.edu. The South Arkansas Historical Preservation Society is dedicated to educating the public about the state's rich history. The SAHPS can be contacted at PO Box 144, El Dorado, AR, 71730, or at <http://soarkhistory.com>.

(Free money.)

Grants arrive to help Aiken County fix Langley Dam

Aiken County must match funds

By James Folker, Staff Writer, Feb. 27, 2016, chronicle.augusta.com

Aiken County has begun receiving money from the Federal Emergency Management Agency to help fix Langley Dam. The county applied for a grant from FEMA that could provide as much as \$6 million, contingent on the county kicking in \$2 million of its own money, according to County Administrator Clay Killian. It has received phase one of the grant, \$1.5 million, and must match that with \$500,000, Killian said. More money will come as the county meets milestones such as design approval. Repairs to the dam are



projected to cost about \$13.5 million, leaving the county about \$5.5 million short of total. Loans from the state Department of Health and Environmental Control could help make up the difference, Killian said. He said that he thinks the process will go smoothly and that the dam could be fixed by summer 2018, or possibly sooner. "DHEC wants it fixed and we want it fixed," Killian said.

The leak in the nearly 150-year-old dam was discovered in November 2014, and enough water was released from the lake to ease the danger of a break. As county leaders grapple with finding money to plug the leak, efforts are underway to improve the adjacent park and boost the pond's ability to draw top events once the dam is fixed. Design work on a finish line tower is in the final stages, according to Mark van der Linden, the director of the county Parks, Recreation and Tourism Department. The county is also working on a championship disc golf course and an adaptive playground. "We're building up the park-side amenities while the pond is down," van der Linden said Tuesday. He has told commissioners that the county is missing out on \$2.4 million in economic impact because it can't play host to big rowing events that would draw overnight guests. Every dollar those guests spend would produce about \$3 in economic impact, he said during a recent budget workshop.

The pond has played host to the Augusta Invitational Regatta, the Southeastern Regional Championship Regatta and the swimming portion of an international triathlon. Van der Linden said his department has stayed in touch with event coordinators, especially those who were already considering Langley Pond before the dam began leaking. The finish line tower could help Langley Pond become a "regional draw" for rowing events, van der Linden said. It will make for better racing by improving timekeeping and giving judges a better perspective, and serve as a multipurpose building that can be rented for meetings and social functions, he said. "We visited the one in Atlanta where rowing was held during the Olympics and they told us what we needed to do," van der Linden said. "They've been able to attract major events," such as the Pan Am Games, he said. The tower, which will cost about \$600,000, would be used five or six times a year for rowing events, and "we hope to rent it for weddings and meetings and other events, too," he said.

(Wish they'd get this dam fixed, if it can be, or drain it!)

Iraq's Mosul Dam faces 'risk of catastrophic failure,' U.S. says

By Dana Ford, CNN, February 29, 2016 | cnn.com

(CNN)Iraq's Mosul Dam is facing a "serious and unprecedented risk of catastrophic failure with little warning," the U.S. Embassy in Baghdad warned on Sunday.

At the same time, Prime Minister Haider al-Abadi played down the threat of a potential breach at the country's largest dam. ISIS militants seized the dam in August 2014.

U.S. airstrikes helped Kurdish and Iraqi forces take control of it back that same month. "A catastrophic breach of Iraq's Mosul Dam would result in severe loss of

life, mass population displacement, and destruction of the majority of the infrastructure within the path of the projected floodwave," the U.S. government said in a fact sheet. It stressed it had "no specific information that indicates when a breach might occur," but said it was providing recommendations now "out of an abundance of caution." The 3.2-kilometer-long Mosul Dam holds back as much as 12.5 million cubic meters of water, according to Engineering News-Record, a construction industry website.



A wall of water tens of feet tall

If the structure were to give way, it would unleash a wall of water tens of feet tall that would race down the Tigris River toward Mosul and its inhabitants. It would also bring flooding to major cities farther downstream, including Baghdad. According to the United States, approximately 500,000 to 1.47 million people live along the Tigris in areas at highest risk and would probably not survive the impact of the projected flood wave unless they evacuated. "Proper preparation could save many lives," the embassy said. Painting an alternative picture, Abadi discussed the "unlikely" scenario of the dam bursting in a statement from his office. A rehabilitation operation, funded by the World Bank and to be done by a "premium international engineering company," is set to begin shortly, the Prime Minister said, stressing that regular and ongoing maintenance is already underway. In the event of the dam bursting, however, Abadi advised that people living near the Tigris River move to higher ground, at least 3.7 miles (6 kilometers) away from the river. The statement also sought to assure Iraqis that the government would issue emergency alarms in the event of a breach and would provide for any displaced people. CNN's Yousif Basil, Elise Labott and Jethro Mullen contributed to this report.

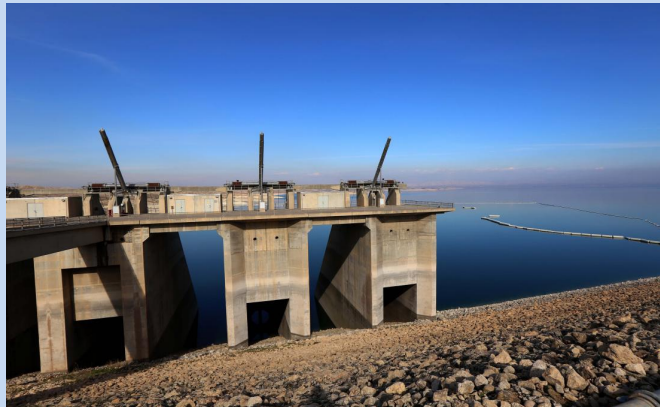
(Lots of people think it's going to go. Hope they're wrong.)

Iraq's Biggest Dam Is At Risk of Bursting, U.S. Citizens Told to Make Evacuation Plans

By Mark Rivett-Carnac, 3/1/16, time.com

Baghdad could be inundated within 24 hours of a potential breach

The U.S. has warned its citizens in Iraq to prepare evacuation plans, in the event that the country's largest hydroelectric dam collapses, putting millions of lives at risk. The U.S. Embassy in Baghdad said the Mosul dam could face a catastrophic collapse due to inadequate maintenance, reports Reuters. Although U.S. security officials said there was "no specific information that indicates when a breach might occur." "Mosul could be inundated by as much as 70 feet of water within hours of the breach," a Monday security message read, adding that the capital Baghdad — which is home to about 6.5 million people — could be inundated within 24 to 72 hours.



In the worst-case scenario, up to half a million people could be killed if the dam were to collapse in the spring when water levels are highest, the New York Times reported. But Iraqi Prime Minister Haider al-Abadi described the risk of a breach as "extremely small" and said precautions were being taken. Built three decades ago in northern Iraq, the dam holds 11 billion cubic meters of water from the Tigris River, which travels south through Mosul and Baghdad. It was the center of a military struggle in August 2014 when the extremist group the Islamic State of Iraq and Greater Syria (ISIS) briefly held the strategically significant structure, prompting fears they might destroy the dam or cut off the water supply to the south. After the Iraqi government retook it, Mosul Dam faced a new threat: neglect. Several senior U.S. officials have recently voiced their concerns about insufficient maintenance of the dam, including Colonel Steve Warren, Secretary of State John Kerry and even President Barack Obama, who mentioned the need to improve the dam's structural integrity during a phone call with the Iraqi Prime Minister. An Italian company, Trevi Group, now oversees repairs to the dam, which is built on an unstable foundation and requires regular grouting.

(Free money, when someone offers you money – take it!)

Safety Improvement On The Horizon For Rapidan Dam

By Shawn Loging, Reporter, March 1, 2016, keyc.com

MANKATO, Minn. - The Blue Earth County Board approved the terms and conditions of a grant from the Department of Natural Resources that would pay for the entire cost of improvements to Rapidan Dam. **The improvements would help increase the safety of the dam during a flood.** For over 100 years, Rapidan Dam has been a staple on the Blue Earth River, generating power for the area. But not long ago, there was talk of bringing the dam down. **Blue Earth**



County Commissioner Drew Campbell says, "Years ago, there were some people calling for possibly taking down the dam and in fact I believe the DNR was looking at that too as a proposal." But the focus changed from demolition to improvements. The \$2.4 million dollars needed for the projected was part of the 2014 state bonding bill, given to the county through a DNR Grant. And county officials say that the project will include several measures to improve the safety of the dam. Blue Earth County Public Works Director Al Forsberg says, "Dealing with the spillway capacity, how much water during a flood would the dam be able to releases."

Forsberg says, "There are four tunnels that run through the bottom of the dam. We're going to increase the stability of the dam from sliding or slipping." Forsberg says, "There's also some iron gates at the head end of those tunnels that are old, over 100 years old. **By filling those tunnels with concrete they aren't a concern any longer."** **All measures to help maintain the dam to prevent the worst from happening in the case of flooding.** Campbell says, "If that dam was to fail, not only would it be an environmental disaster, it would be very hard to deal with that whole situation." **The next step for the project is to hire an engineering firm to draw up plans, but it could be a while before work starts.** Forsberg says, "Basically, we'll have to wait till we have low water; it's much efficient and safe to work when you have low water." Forsberg adds the improvement would make sure there's a limited to virtually no chance of the dam failing because of reasonable flooding.



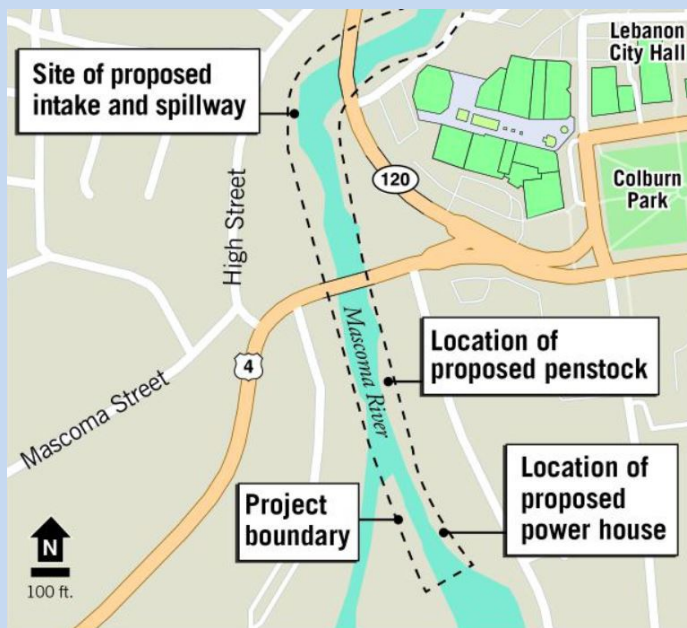
Hydro:

(Hope springs eternal.)

Firm Gets Permit to Study Dams on Mascoma

By Nora Doyle-Burr, Valley News Staff Writer, February 27, 2016, vnews.com

Lebanon, NH — **Federal regulators this week granted a preliminary permit to a Massachusetts-based company seeking to determine the feasibility of generating electricity from two dams on the Mascoma River.** With the permit from the Federal Energy Regulatory Commission in hand, Grafton Hydro LLC will conduct studies of the river's hydrology, determine the equipment necessary to create power, assess public sentiment toward the proposal and evaluate the financial feasibility of constructing a new dam in the city's downtown and generating power from an existing dam at Mascoma Lake. The studies — to take place over the next three years — will be a "massive, glorious undertaking," Thomas Tarpey, the managing member of Grafton Hydro, said in a phone interview on Wednesday.



As proposed in Tarpey's initial filing in October, the company would generate approximately 1.5 megawatts of power from the downtown dam and 600 kilowatts from the Mascoma Lake Dam. One megawatt of power generates enough electricity to power roughly 750 homes, according to the California Energy Commission's website. The downtown dam's intake would be located between High Street and Route 120, behind the Mascoma Village Apartments. A pipe would carry water to a power house located between Foundry Street and Water Street — between Mason Racing and the Whitman Communications building. The proposal — particularly the proposed construction of a new dam — has

elicited concerns in FERC filings from boaters and environmentalists. Paddling groups have stated that the new dam could effectively prevent the recreational use of the river in downtown Lebanon, and environmental groups have said the new dam could destroy or damage habitat for aquatic species. The issuance of the preliminary permit was expected because FERC routinely allows companies to develop and submit an application, said Bob Nasdor, Northeast stewardship director for American Whitewater.

Later in the review process, Nasdor said, he expects FERC will take comments relating to recreation and the environment into consideration. "Generally speaking, I would say FERC does a good job with balancing power generation with other values," he said. At this stage, the filings expressing the concerns of the paddling community were intended to "put them on notice that there's a significant interest of the boating community in protecting the white river boating that's available in downtown Lebanon," Nasdor said. The stretch of the river near Lebanon's downtown is valued by paddlers for its easy access — including its proximity to Dartmouth College and Interstate 89. It is also valued for its difficulty, which is ideal for advanced paddlers, said Nathaniel Goss, the president of Dartmouth College's Ledyard Canoe Club. "It's really a unique section," Goss said. "There aren't many rapids similar to this in New England." Goss — who emphasized that he was speaking on his own behalf, not that of the college — said he would prefer to see the river enhanced to become more of a focal point for residents and visitors. A walking path along the river might be an example of such a development, but Goss said he didn't think such a path would be very popular if the river was depleted by a dam. "A dam like this would be a step backward," he said.

The city's Planning Department is also keeping an eye on the project as it works to develop a vision for the downtown. One piece of the city's aim with its ongoing downtown visioning study is to better integrate the river into the neighborhoods around it, perhaps by constructing pedestrian crossings or thinning vegetation along its banks. Depending on the dam's location, Planning and Zoning Director David Brooks said, the development might offer pedestrians an opportunity to walk out over the river and go fishing. "Who knows what the final proposal is going to look like?" Brooks said. He also noted that Tarpey has not yet directly contacted the city about his plans or received permission to access the river from city property. Tarpey said he did not anticipate beginning work in the river until May at the earliest. He said the initial work would involve examining existing surveys of the river in the area. Other early steps will include meeting with the Mascoma River Local Advisory Committee, city planners and abutters. Before the three years of

the preliminary permit are up, Tarpey will need to have filed an application with FERC to move forward or opt not to pursue the project.

In the meantime, the permit holds Tarpey's place at the front of the line for an operating license should anyone else wish to operate hydroelectric dams on the stretch of the river he is studying. The ultimate deciding factor may be financial. Largely due to the low cost of electricity generated from natural gas, Tarpey — who has been working in the field since the 1980s and is executive vice president of Boston-based Essex Hydro which runs another dam in Hartland — said New England is experiencing historic lows in electricity prices. "Based on the wholesale market price today, nobody's going to be building any renewable generation," Tarpey said. He said he doesn't expect the markets will change much in the next three years, but he is still enthusiastic about the project. "(I'm) not optimistic, but I'm hopeful," he said. He noted that some states have set up incentive programs to encourage small scale renewable energy generation, including hydropower.

(The artsy way to deal with relicensing.)

Community Art Project Draws Attention to Hydroelectric Facilities

BusinessWest, February 29, 2016, Daily News, businesswest.com

GREENFIELD — The Connecticut River Watershed Council and Art for Water are creating a 'river of words' to draw attention to the federal re-licensing of five major hydroelectric facilities from Turners Falls to north of Hanover, N.H. This public-participation, community art project will tell stories to improve the ecological health and recreational opportunities of the Connecticut River. The public is invited to add their voice at Great Falls Discovery Center, 2 Avenue A, Turners Falls on Saturday, March 5 at 1 p.m. "We are working together to bring a public-opinion art installation to the state and federal government," said Andrew Fisk, executive director of the Connecticut River Watershed Council, noting that the government is in the process of making decisions about how these dams will operate over the next 30 to 40 years. "You have a unique opportunity to influence how 200 miles of the Connecticut River and its tributaries ... will be managed, restored, and improved." At the art installation, he added, "we are building an inspiring and influential art exhibit that is made up of your stories and aspirations for our rivers. It's called 'The Power of Water, The Power of Words' because our voices do have the power to influence positive change." To learn more about presentation, call (413) 772-2020, ext. 206.

Hydro-electric plant being planned for Red River

03/01/2016 - by Garland Forman, avoyellestoday.com

An announcement last fall by a Boston-based company for plans to build a \$130 million hydro-electric plant at John H. Overton Lock & Dam should be welcomed news, but it caught officials who should have been "in the loop" by surprise. FFP New Hydro LLC (FFP NH) acquired Red River Hydro last year and said it plans to build the hydropower plant on Red River, near the Avoyelles-Rapides parish line. "This was the first we have heard of it," Ken Guidry, executive director of the Red River Waterway Commission (RRWC), said at the time of the announcement. "No one has contacted us about the project -- which is a surprise." He said last week that he still hasn't been told officially of the project and only knows what he has read. Larry Sayes of Effie, the RRWC board member for Avoyelles, said the announcement was also the first he had heard of the project. Sayes contacted the Central Louisiana Economic Development Alliance (CLEDA) to see if they had any additional information, but that organization told him they had also not heard anything about a hydropower project on Red River. Guidry said the RRWC has been working with another energy company for lock & dams 3, 4 and 5 between Alexandria and Shreveport. FFP NH has a preliminary permit for a hydropower project at the Lindy Boggs Lock & Dam (L&D No. 1). "Talks to build hydro-electric



plants at those sites have been on-going for years,” Guidry said. “If a hydro-electric plant is put in place at the Overton Lock and Dam, it would be a huge benefit for the area.”

Red River Hydro has a license from the Federal Energy Regulatory Commission (FERC) for a project at the Overton Lock & Dam, which is owned and operated by the U.S. Army Corps of Engineers in Rapides Parish. The project is expected to have a generating capacity of 52 megawatts, enough to power about 52,000 homes. A spokesperson with US Renewables Group in Los Angeles said the company is hoping to have the plant built in 2018 or early 2019. FFP NH plans to spend the next 18-24 months in the final engineering and design phase. The construction phase would follow that, and would also take about 18-24 months. “Development of the project will create hundreds of jobs during construction, operations and maintenance,” Ramya Swaminathan, FFP NH chief executive officer, said in a press release. “The clean, reliable electricity produced by the project will be enough to power thousands of homes and will be a long-term resource for the region.” Paul Jacob, chief commercial officer at Rye Development, said the J. Bennett Johnston Waterway is a strong hydropower resource, from a hydrological perspective. FFP NH seeks opportunities to add hydropower to existing dams. Overton L&D is an ideal candidate for such a project. Jacob said FFP NH holds a preliminary FERC permit for a project at the Boggs L&D in Brouillette, just downstream from the Overton Dam. The company is conducting a feasibility study of the site.

The hydro-electric projects would not affect the operation of the locks and dams. FFP New Hydro LLC has 23 hydropower development projects for dams in Pennsylvania, West Virginia, Ohio, Mississippi, Kentucky, Indiana and Louisiana. The projects would produce over 260 megawatts. FFP New Hydro is owned by affiliates of US Renewables Group and Crestline Investors Inc. The L.A.-based US Renewables Group is a large investment firm focusing on the renewable energy industry. It has more than \$750 million of capital under its management. Crestline Investors is an alternative investment management firm based in Fort Worth, Texas, and manages \$9.9 billion for institutional investors. While the waterway project was in the engineering and design phase, there was an option to construct hydro-electric generating plants in the dams as they were built. The decision was made to forego that option.

(More as hydro marches on.)

Swanton: Hydro eyed at village dam

Hydro plan, fish passage up for review

March 1, 2016 by Elaine Ezerins, samessenger.com

SWANTON VILLAGE — The village’s board of trustees has received a project bid to produce electricity and construct a fish passage at the lower Swanton dam. The dam, part of the village landscape since 1920, has been the subject of much debate over the last several years as state officials have attempted to convince the village to remove it to allow fish to travel up the Missisquoi to spawning grounds at Highgate Falls.



In their request for project development, Recurrent Energy is proposing making the lower Swanton dam hydroelectric, with all of the construction on the side of the dam overlook. The damaged sluiceway, located on the other side of the river, would be fixed before any future developments began, according to the Swanton Village’s manager.

(One down, four to go.)

One Utah County dam upgrade nearly complete, four more to go

By Cathy Allred Daily Herald, 3/2/16, heraldextra.com



The North Utah County Water Conservancy District has five dam rehabilitation projects on a timeline through 2019, with one nearly finished and four to go. "Silver Lake is the one that is almost finished,"

said Dick Mecham, NUCWCD board director and American Fork Irrigation Company representative. Silver Lake is able to collect spring snow melt, and contractors will be able to complete that project sometime after the high runoff is finished during the summer.

"We are hoping to get Tibble Fork started. We will have the contractors by March or April and then they can start doing things," Mecham said.

The contractors can start building berms around the lake at first, and once the worst of the water runoff is done, Mecham said they could work on the Tibble Fork Dam and be done by the district's deadline in November. An estimated cost of \$6 million to \$9 million for each current project has been met. The federal Natural Resources Conservation Service supplies approximately 65 percent of the funding. "The other three won't be that much; they are much smaller projects," said Hunt Willoughby, district chairman. The federal agency gets its funding through a 2014 National Farm Bill providing \$262 million for rehabilitation of 151 dams in 26 states. The state chips in some funding, too. "We have a wonderful relationship with the NCRS, the Utah State Department of Dam Safety and the National Forest Service. They are really working well with us," Mecham said. The rest of the funds are garnered from the NUWCD itself.

"It's not overwhelming because we have good help, but it is certainly a monumental undertaking." Willoughby said. "All these projects have been needed for some time. We have everything laid out so the funding worked out."

The NUCWCD is a county-appointed organization founded in 1959 and made up of a board of directors who meet monthly to maintain and oversee north Utah County's water infrastructure, water conservation, development and stabilization of water supply for domestic, irrigation, power, manufacturing and municipal uses. "The North Utah County Water Conservancy District is a taxing entity so we tax the residents," said Ernie Johns, district board director.

The NUCWCD takes a very minute bite out of the total property tax revenue to meet its needs, he said. The cities of Alpine, American Fork, Cedar Hills, Highland, Lehi and Pleasant Grove are included in the district's area. Utah County commissioners appoint individuals to the board to represent the various cities and interests. The district's project timeline is variable and dependent on the seasonal climate in Utah County. "Down the road, maybe it's 2017 and 2018, Battle Creek and Grove Creek in Pleasant Grove, and then we are looking at 2018-2019 for Dry Creek,"

Mecham said of the timeline. The only other project left in Utah Valley on the NRCS list needing rehabilitation is the Santaquin Debris Basin Dam. The process for the dam upgrades includes four stages: dam assessment, planning, design and construction. Projects chosen for funding by the NRCS were based on recent rehabilitation investments and the risks to life and property if a dam failure occurred. "As far as safety, that is the concern," Mecham said. "We are concerned for the folks down here in the valley. If the dams were to break there would be a flood of the canyon."

"These projects have been planned for many years and we have been saving up for it," Willoughby said. "It's good to see it finally happening."

(More people need to figure this out.)

DeLeo makes clear that hydro, wind will have place in energy plan

By Andy Metzger, March 2, 2016, wwp.com

BOSTON, MARCH 2, 2016.... Hoping to promote a “natural pair” of electricity sources, House Speaker Robert DeLeo on Wednesday told business leaders the House would push to add offshore wind and imported hydroelectricity to the state’s energy portfolio.

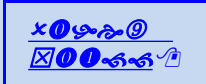


“Hydroelectricity is a low-emission renewable and reliable source of energy,” DeLeo told the Greater Boston Chamber of Commerce. “When partnered with wind resources, hydropower can provide energy when the wind doesn’t blow. These two are complementary, and I believe that they are a natural pair. DeLeo’s overture on hydro harmonizes with Gov. Charlie Baker, who has long argued that importing hydropower is the best course to ensure reliable renewable energy. DeLeo said the bill would create a competitive procurement process for hydroelectricity and would also encourage the development of offshore wind in the waters around Massachusetts.

After his speech at the Boston Park Plaza breakfast, DeLeo told reporters offshore wind would not compete against hydropower. He said, “Wind will be an energy sector of its own,” while allowing that hydroelectric generators can have a wind-energy component. Asked if the bill would require utilities to purchase a certain amount of power in those renewable energy sectors, DeLeo said, “We’ll set forth a certain amount of megawatts that they will have to hit for them to be considered and in doing so they will make their proposals.” DeLeo spokesman Seth Gitell then said the bill would be available “very soon.” Touting the benefits of competition, speaker said the bill would aim to secure “good contracts” for energy and he said the offshore wind industry is excited about the prospects of doing business in Massachusetts. “Massachusetts is probably the first big state that they’re coming to in this country. We’re excited about that,” said DeLeo, who said he attended the U.S. Offshore Wind Leadership Conference held in Boston. Dan Dolan, president of the New England Power Generators Association, said the governor’s bill would carve out an additional 33 percent of the state’s energy usage to be supplied by renewables on top of existing law that brings the renewable carve-out to 20 percent by 2020. Dolan, whose group represents most of the power plants in New England, including renewables, said under the governor’s bill “more than half of the market would be carved out and given to the winners the state picks in the process.” Citing a study commissioned by the association, Dolan said Bay State ratepayers could expect to pay another \$777 million under Baker’s proposal. Noting that the transportation sector has substantially grown in its share of emissions and that the region has a cap-and-trade program for power plant emissions, Dolan said, “We’re willing to do our share, and we have frankly done more than any other sector of the economy.” The speaker unveiled other proposals at the gathering, including restrictions on the use of non-compete contracts, which generally bar employees from leaving their position to work for a competitor.

Critics have said non-compete contracts hamper the fast-paced innovation economy while business leaders have said they protect against the acquisition of corporate secrets through hiring. DeLeo mapped out non-compete legislation, describing it as “compromise,” that would limit the contracts to 12 months, require notice of the non-compete clause to prospective employees, and prohibit their use with low-wage workers. Referencing the widely covered controversy around sandwich chain Jimmy John’s using non-compete agreements with its employees, DeLeo said that type of non-compete is out of bounds. “For the kids who make sandwiches, they had non-competes,” said DeLeo. “That was absurd.” Former Gov. Deval Patrick proposed a ban on non-competes as part of a jobs bill in 2014, but it went nowhere. DeLeo said there had been “strong feelings on both sides of the equation,” and both sides agreed on “the need to do something” after last session ended, as non-compete opponents worried that the state was losing talent to California, where non-competes are outlawed. DeLeo also proposed a \$2 million fund “to promote the use of big data and analytics,” which he said could “unlock discoveries.” The House on two

prior occasions has included funding for big data only to see it cut midyear by the governor, according to the speaker's office, which said that had occurred under both Baker and former Gov. Deval Patrick. The speaker said Jim Rooney, the chamber president, joined him for a roundtable in Springfield earlier in the year and the Boston chamber will work on expanding economic growth throughout the state, starting formally with a Baystate Business Link forum in the spring. DeLeo also asked the business leaders to help create an Early Education and Care Business Advisory Group to gather ideas for how business can address early education access and quality.



Other Stuff:

(Sent to me by a Newsletter reader – if the website doesn't open when you click on it, copy and paste it into your browser.)

<http://www.rivermenrodandgunclub.com/cool-and-different-pictures.html>

(Blowing in the wind, it's still not dependable power/)

Wind on track to top hydro as the leading U.S. renewable after 2017

By Herman K. Trabish | March 1, 2016, utilitydive.com



- Hydropower, long the leading source of renewable energy in the United States, is slated to be overtaken by wind generation by the end of 2017, Generation Hub reports. At the end of 2015, wind accounted for 6.33% of the U.S. power mix and hydro made up 8.41%.
 - There are 12,329 MW of wind in construction or planning but only 317 MW of hydropower capacity in construction or planning at present, according to recent FERC numbers. By the end of 2017, wind is likely to account for about 8.4% of the U.S. electricity supply and challenge hydro for the U.S. renewables lead.
 - Wind's growth is expected to accelerate over the next five years as the extension of its \$0.023 per kWh production tax credit (PTC) peaks before phasing out after 2022. Hydropower is likely to continue to grow slowly due to project permitting rigors and financing challenges that can take ten years.

Dive Insight:

Wind led all new U.S. utility-scale capacity additions in 2015, beating the 5,942 MW of capacity added by natural gas and the 2,157 MW of new utility-scale solar, according to Federal Energy Regulatory Commission numbers. While the Department of Energy estimates that wind could be the single biggest source of electricity capacity in the United States by midcentury, DOE isn't giving up on more traditional sources of zero-carbon energy. The department is working to streamline hydropower growth, its Wind and Water Power Program Manager Hoyt Battey told Utility Dive last year. There is a 12 GW technical potential for new capacity in "new stream-reach development," which is building new facilities in untapped waterways, according to a 2012 DOE study. The more controversial upgrading of non-power dams to generate electricity could provide another 65 GW of new capacity, according to a separate DOE assessment. Upgrades at existing hydropower facilities to increase efficiency and capacity and the development of pumped storage facilities also offer potential, Battey said. Pacific Gas and Electric, Southern Company, and Duke Energy are among the investor-owned utilities leading the sector.

(For your health and kWh.)

It's Astounding What Another Glass of Water Can Do

Upping your plain water consumption the tiniest amount can have an effect

By Kate Seamons, Newser Staff, Mar 2, 2016, newser.com

It's a frequent entrant on New Year's resolutions lists: Drink more water. Now, research out of the University of Illinois provides some compelling reasons to make the Herculean effort to pick up another glass. Researchers found that upping the proportion of plain water consumed by one percentage point—you read that right—reduced the amount of calories, sugar, sodium, and cholesterol ingested; those who upped it by a cup or two saw those benefits grow significantly. As reported in *Journal of Human Nutrition and Dietetics*, the researchers analyzed consumption data provided by 18,311 adults as part of a National Health and Nutrition Examination Survey that ran from 2005–2012. Researcher Ruopeng and found the average adult consumed 4.2 cups of plain water daily (tea and coffee weren't a part of this total).



That made up just more than 30% of their total dietary water intake, which did include other beverages, per a press release. But just a "one percentage point increase in the proportion of daily plain water in total dietary water consumption" resulted in eating 8.58 fewer calories, 0.74 fewer grams of sugar, 9.8 fewer milligrams of sodium, and 0.88 fewer grams of cholesterol. But add a whole extra glass or two or three and the numbers get meatier: as many as 205 fewer calories, 18 fewer grams of sugar, 235 fewer milligrams of sodium, and 21 fewer grams of cholesterol. The findings held regardless of race, ethnicity, and income, suggesting we could "promote plain water consumption... in diverse population subgroups without profound concerns about message and strategy customization," says An. (But you may not need eight glasses.)



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