Dams:
(Dam removal back in the news. The media loves this stuff.)

Salmon federation, conservation group seek removal of Sheepscot River dams in Alna, Whitefield

By Abigail W. Adams, Lincoln County News, Jan. 02, 2015, bangordailynews.com

WHITEFIELD, Maine — The Atlantic Salmon Federation and the Sheepscot Valley Conservation Association have approached the towns of Alna and Whitefield with proposals to either purchase or negotiate the removal of Alna’s Head Tide Dam and Whitefield’s Coopers Mills Dam. Andrew Goode of the Atlantic Salmon Federation and Steve Patton of the Sheepscot Valley Conservation Association
spoke with the Whitefield Board of Selectmen at the board’s meeting Dec. 23. Goode and Patton also recently spoke with Alna First Selectman David Abbott about a similar proposal for Head Tide Dam. There have been several initiatives and proposals to transfer ownership or remodel historic dams along the Sheepscot River to facilitate fish passage, particularly for Atlantic salmon, over the past two decades, according to Lincoln County News archives. All previous proposals have failed.

Atlantic salmon have been declared endangered in 11 Maine rivers, including the Sheepscot. According to the Atlantic Salmon Federation, Atlantic salmon populations in North America have dropped to dangerously low levels. The Sheepscot River is part of the Atlantic salmon’s natural spawning and rearing habitat. However, according to the U.S. Fish and Wildlife Service, dams along the Sheepscot have blocked salmon passage, contributing to their decline. The Atlantic Salmon Federation is engaged in several projects throughout Maine to remove dams that are blocking the spawning habitat of Atlantic salmon. They have identified the Coopers Mills Dam and the Head Tide Dam as potential locations for future projects. “We’re in the discussion phase right now to figure out how to proceed,” Goode, vice president of U.S. operations for the Atlantic Salmon Federation, said. “We’re not trying to rush anything or dismiss any of the good work that came before us.” In 2007, a warrant article to convey ownership of the Coopers Mills Dam to an outside agency was presented at the Whitefield town meeting. The Sheepscot River Watershed Council spearheaded the coalition that lobbied for the warrant article so the dam could be remodeled to allow for fish passage. The warrant article asked voters to give selectmen the power to “convey the Coopers Mills dam on such terms and conditions as the selectmen determine to be in the best interest of the town.” It was voted down 165-101.

According to previous reports in The Lincoln County News, voters were confused about what a yes or no vote on the warrant meant. The proposal to sell or modify the Head Tide Dam in Alna never made it to a warrant article. The Sheepscot River Watershed Council approached Alna selectmen in 2008 to discuss the possibility of removing the dam. However, the Head Tide Dam was sold to Alna in 1964 with the stipulation that it “shall not be destroyed” — a phrase contained in the property's deed.

“We’re trying to take a fresh look at this and bring in some fresh resources for the discussion,” Goode said. The Maine Historic Preservation Commission is one of the resources Goode intends to bring to the table. “Our view is that the dam is not going to last forever,” Goode said. “It’s not permanent. Eventually Mother Nature will take the dams over. Let’s not wait until that point. There may be a better way to memorialize the mills and preserve the historical integrity of the sites.”

In addition to the historic significance of the sites, the Coopers Mills Dam is an important resource for Whitefield firefighters. According to a report by Kleinschmidt Energy & Water Resources Consultants in 2006, the dam maintains a head pond with a dry hydrant used by firefighters to pump water. Whitefield Fire Chief Scott Higgins told Whitefield selectmen Dec. 23 he was ready to sign off on some of the previously proposed plans. However, questions still remained about the permitting and maintenance of a new dry hydrant. “The biggest stumbling block has been fire safety,” Higgins said. “It’s a big concern. There were a lot of meetings but we never got an answer to some of these questions because they’re an unknown.” “We’re trying to restore things to their natural state,” Goode said in agreement, “but there are still as many permits as if we were building something new.” Goode said his organization was committed to answering some of the previously unanswered questions surrounding the creation of a new dry hydrant in Whitefield. He joined Patton at the selectmen’s meeting to request the formation of an exploratory committee to examine different proposals for the dam. Proposals suggested by Goode include transferring ownership of the dam from the town to the Atlantic Salmon Federation or entering into an agreement with the town so the Atlantic Salmon Federation could fund the dam’s modification or removal. Whitefield selectmen debated the best way to proceed. Tony Marple suggested discussing the formation of the committee at the town meeting so residents would have the opportunity to voice their concerns. “We want to keep this in the absolute daylight,” he said. In order to discuss the formation of a committee at the town meeting, however, selectmen believed that a warrant article would have to be drafted. Other selectmen were concerned that if the warrant article was voted down, it would kill the proposal before it was even discussed.

Copy obtained from the National Performance of Dams Program:  http://npdp.stanford.edu
“We own the liability to the dam,” Selectman Frank Ober said. “People need to understand that. At some point, we’re going to have to pay to get it fixed.” Patton and Goode said they would begin to reach out to stakeholders in Whitefield, particularly from the Coopers Mills village, the historical society and the fire department. Selectmen said they would talk with the town attorney to figure out if there was a way to discuss forming an exploratory committee at the March town meeting without having to draft a warrant article. Patton and Goode hope to form an exploratory committee in Alna as well to see if there is public support there for a similar project at Head Tide Dam. “It’s a philosophical argument,” Patton said, “but these dams were built to provide power to the mills. They’re no longer being used for that purpose. We borrowed from nature to make those dams. Now let’s return them to nature.”

(And, now an opinion for!)

Empire Editorial: The Case for Susitna Dam
January 2, 2015 - juneauempire.com

Fifty years ago, Alaskans were arguing about a dam. It would have been a colossal structure — the largest in the world. It would have provided enough clean, cheap hydroelectricity to power every home and business in Alaska. It also would have been an unmitigated environmental disaster. This isn’t the dam you’re thinking about.

This was Rampart Dam, which would have dammed the Yukon River and created a reservoir the size of Lake Erie in Interior Alaska. It would have flooded the Yukon Flats, drowned Fort Yukon and turned Eagle into a lakeside community. It took years for environmentalists and fiscal conservatives to defeat the idea of Rampart Dam, and there were casualties. Economists talk about opportunity costs — options you can’t take because you’re doing something else. In the 1960s, environmentalists and others championed an alternative to Rampart. It was smaller, had little impact on fish and waterfowl and would still provide Alaskans with cheap, clean electricity.

This environmentally friendly alternative was the Susitna-Watana Dam. In the final days of December, Gov. Bill Walker announced an administrative order halting six large Alaska projects, pending a financial review. Among these projects is the Susitna-Watana Dam. For the sake of Alaska’s long-term economic and environmental health, we hope the Susitna-Watana Dam project will continue. Among all the projects being reviewed — including Juneau Access — Susitna-Watana provides the most long-term benefit to the most Alaskans. If built, Susitna-Watana will provide enough electricity to power half the Railbelt — all the communities from Anchorage to Fairbanks. It will provide power at a stable price free from fluctuating fuel prices and the manipulation of the global energy market. Most importantly, it will provide that power cleanly, with no greenhouse gas emissions. That is by far the most powerful argument in favor of the dam. If habitat protection was the environmental issue of the 20th century, climate change and ocean acidification are the environmental issues of the 21st century. Alaskans are successfully fighting projects like Pebble Mine and the Chuitna Coal Project, and now they must tackle the next threat to Alaska’s environment.

Talkeetna residents and others who live near the Susitna River say they’re scared of the dam because of its potential effects on salmon in the Susitna watershed. We believe those concerns are ill-founded. There are good dams and there are bad dams. Bad dams, like those built (and

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now being removed) in Washington state and Oregon block salmon migration and disrupt wildlife. Good dams provide energy without harm. The Susitna-Watana Dam will be built above the Devil’s Canyon rapids, which block salmon migration upstream — there are few, if any salmon in the area where the dam will be built. The Susitna River at that point is far upstream of most of the river’s watershed. The Yentna, Chulitna, Talkeetna and other rivers would be completely unaffected by the dam, and the salmon in those rivers will not be affected. Just 17 percent of the Susitna watershed will drain into the dam’s reservoir. Nevertheless, there would be some effect on the flow of the Susitna River. Dams are designed to regulate water, and flows in the Susitna River will be calmer, with fewer floods and droughts. The people behind the Susitna-Watana project are studying what effect that difference will have on the environment; 58 studies have been mandated by the federal government before the Susitna-Watana project gets a permit to build.

While we don’t know for certain what effect the dam will have, a paper shared by the Southeast Alaska Conservation Council (see the salmon-safe hydroelectricity section of SEACC’s website) provides some insight. That paper examined five hydro projects — two in Southeast — and found that in many cases, the dams actually helped salmon downstream. There were fewer floods to wash away salmon eggs, fewer droughts to dry them up. All five projects differ in engineering from Susitna-Watana, but their net effect is the same: They were built in areas with few if any salmon upstream, and they all regulated water flow downstream. If the dam’s environmental costs are low, why is there so much debate?

Money. Dams are expensive to build, even if they’re cheap in the long run, and falling oil prices have suddenly made everyone a fiscal conservative. Cutting funding for Susitna-Watana now, however, is penny-wise and dollar-stupid. Before he left office, Gov. Sean Parnell was planning to request $20 million for the Susitna-Watana project, money that would be use for studies. The dam is still years away from construction, and it isn’t seeking construction funding. We know oil prices will rebound and the state’s economy will recover. Dams are not on-off projects. Progress lost now means years of wasted time, and we have history as an example. In the 1980s, the state was spending millions to study and plan Susitna-Watana (then known as Devil’s Canyon). In the mid-1980s, oil prices plunged and the state slashed budgets. Susitna-Watana was forgotten until 2008, when oil prices reached historic highs and the state remembered that relying upon fossil fuels is a shortsighted idea. Alaska needs new ideas for power. That power must be cheap, so it can support economic growth. It must be clean, so as to fight climate change. Wind energy is promising, but it is too erratic to use on a large scale without major investments on the back end of the power system. Look at Kodiak, which runs entirely on alternative energy. The six wind turbines spinning on Pillar Mountain are photographed daily, but the battery bank and the hydroelectric turbines of Terror Lake are what make those turbines work. In Germany, where wind is the fastest-growing way to make electricity, residents are concerned about the growing number of high-voltage power lines strung across the country. Wind energy is a fine way to make electricity, but it cannot be the only way to generate power. It cannot even be the main way to generate power. It is simply too unreliable. Geothermal energy is promising, but huge investment would be required to transmit electricity from the remote places where it can be generated. Solar is limited in winter, when Alaskans need the most energy. Natural gas is cleaner than coal or oil, but it still contributes to climate change. Moreover, it doesn’t protect Alaska from swings in energy prices. The trans-Alaska natural gas pipeline will provide energy, but it should be energy for export, not for domestic use. Around the world, homes, cities and nations are turning to natural gas for energy. Prices will rise, and Alaska should not subject itself to oil, volume two. Southeast Alaska has depended upon hydroelectric power for almost 120 years. It works, it’s cheap and it’s clean. The rest of Alaska should follow our success, and we hope our state’s political leaders will not cut the future out of the state’s budget. While we look ahead to a new year, we’re also looking ahead to the rest of this century. In the long term, Susitna-Watana is the best option.

(My end to the opinions.)

My Turn: The case for sustainable hydropower in Alaska

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
By BRIAN DELAY, January 7, 2015 - FOR THE JUNEAU EMPIRE, juneauempire.com

The future of the state’s mega projects have been front and center of the news as the Walker Administration addresses budget issues. Given its price tag keeps rising to roughly $7 billion, it is no surprise that the Susitna-Watana Dam leads that discussion. While important for discussion, I was a bit surprised to see the Juneau Empire editorial board weigh in last week with “The Case for Susitna Dam.” In this editorial, the board raises some very important questions about the future of hydropower in Alaska. However, many of the points raised fail to build a case for the embattled Susitna dam and actually undermine arguments for it. It is true that Alaskans do need clean, economical and reliable energy for our state. We have a responsibility to look for reduced carbon alternatives and our options are limited by economic, demographic and circumstantial challenges. Unfortunately, the Susitna dam does not meet any of the Empire Editorial Board’s own criteria. Like me, many residents of Southeast benefit from the smaller hydropower projects near our communities that have been proven compatible with salmon and fisheries. I agree that there are great examples of Alaska hydropower done right. For example, Bradley Lake near Homer, or the hydropower that keeps Kodiak running so efficiently, such as Terror Lake.

However, comparing these projects to Susitna is comparing apples to oranges. Design for the proposed Susitna dam looks nothing like Terror Lakes or Bradley Lake. Despite the wealth of experience gained since the 1950s when the Susitna dam was first proposed, there are still ideologues willing to gamble away the rich fisheries of the greater Susitna Watershed and ask for blind faith that the fate of every other mega dam built on salmon systems in the Lower 48 will not play out on the Susitna. The Empire claims that Susitna is a good idea because this is a “good dam.” “Bad dams, like those built (and now being removed) in Washington State and Oregon block salmon migration and disrupt wildlife. Good dams provide energy without harm,” according to the Empire’s Jan. 2 editorial. We Alaskans cannot ignore the obvious fact that the Susitna dam has much more in common with the mega dams in Washington and Oregon that have decimated salmon runs than it does with the successful dams cited in Southeast Alaska and Kodiak. The Susitna dam, which would be the tallest dam built in North America in the last 40 years, is the same type as those in the Pacific Northwest that have caused the collapse of entire species, jeopardized commercial and subsistence fishing, and cost taxpayers billions of dollars. In fact, there is not a single example in the world of a mega dam that has had a positive impact on salmon. Everything about the proposed Susitna dam flies in the face of the lessons Alaska has learned since the Susitna dam was first proposed as an “environmentally friendly alternative” to the Rampart Dam on the Yukon.

The Empire, taking a cue from Alaska Energy Authority, focuses on the impacts upstream of the dam. In so doing, they not only mischaracterize the impacts of building a 40,000-acre reservoir behind one of the tallest dams in the U.S., they also willfully ignore the dramatic impacts downstream of the dam. Just a few weeks ago, noted salmon expert Jack Stanford laid these points out very clearly in an Alaska Dispatch News opinion piece. As Stanford explains, this dam is a great threat to the river that boasts the state’s fourth-largest king salmon run in Alaska. Stanford is not alone. While it is true that AEA has been investing state funds in many studies, those studies have faced substantial criticism by federal science agencies for failure to properly assess possible impacts to both fish and wildlife in the Susitna drainage. Moreover, the Empire turns to the argument for “cheap power.” Yet, the cost of this project does not pencil out to cheap power. AEA recently admitted this project could cost upwards of $7 billion. Other studies show the project could cost more than $10 billion. The overall cost of the project depends upon many factors, including interest rates for necessary loans. Yet, with the state’s credit rating in jeopardy, we can’t assume low interest rates. In the end, the costs of building the dam would lock up Alaska’s reserves or drive up our debt. The economics clearly argue against Susitna. If we can all agree that hydropower has a critical place in Alaska’s energy future, then the best thing we can do is to stop the wasteful spending on Susitna and more wisely work to truly realize alternatives mentioned by the Empire. With $5-7 billion we could develop salmon-safe hydro projects throughout the state and still invest in overcoming obstacles for other alternatives such as geothermal, wind and the huge potential for hydrokinetic power in Alaska.
In the end, the Empire raises wise critical questions for us to consider. Those questions also get to the heart of why we should cut our losses on the Susitna dam and invest in a comprehensive energy plan for Alaska’s future that does not compromise fisheries resources for power or, in other words, one resource for another. *Brian Delay lives in Juneau and is a Southeast Alaska gillnetter.*

(The real reason behind this is that they want the 4 Snake River dams removed.)

**Letter - Environmentalists try to muddy waters about dredging**
union-bulletin.com, December 30, 2014

Environmentalists are suing the U.S. Army Corps of Engineers to block dredging in the lower Snake River. The U.S. Congress (one that got things done, not this one) authorized that navigation channel in 1945. That law required a channel 250 feet wide and 14.5 feet deep. The Corps constructed four dams authorized and funded by Congress. Ports, typically one for each county abutting the river, developed in conjunction with the dams. Port facilities developed where grains and logs could be transported downriver and fertilizer and fuel could come upriver. Each reservoir is about 100 feet deep at the dam and tapers upstream to about 20 feet deep at the next dam. Each fluctuates 3 to 5 feet with the exception of Lower Granite. The authorized channel is 14.5 feet deep, so 3 to 5 feet must be added for reservoir fluctuation. The channel approaching each lock from downstream must occasionally be dredged to maintain 19.5 feet minimum depth. At the upper end of Lower Granite reservoir, the navigation channel extends up the Clearwater and Snake rivers to Port of Lewiston facilities. In these areas, silts and sands primarily from Idaho farms, fields, roads and logging activities accumulate as the flows slowdown in the reservoir. Lower Granite reservoir would have flooded lower elevations in Lewiston, but levees to prevent it were constructed. Seepage behind the levees collects in ponds and is pumped back into the river.

To make the waterfront aesthetically more pleasing, the levees were kept low, landscaped, and equipped with restrooms and trails for recreation. To prevent floodwaters from overtopping the levees in the most extreme floods, the reservoir can be lowered as much as 28 feet at Lower Granite Dam. The water level stays the same in Lewiston and slopes down to the dam. When I worked for the Corps in the 1980s, we collaborated with federal and state fisheries and environmental agencies to develop the least damaging time and methods for the dredging. That is what the Corps is doing now — complying with the law’s requirements. A four-barge tow can transport as much as 134 train cars or over 700 trucks. Urban railroad spurs have been removed, and highways have deteriorated since the dams were built. Environmentalists are wasting taxpayer dollars on frivolous lawsuits and have thrown up roadblocks for over three decades to legally mandated maintenance of important infrastructure. *John McKern, Walla Walla*

(Not enough head for a hydro project!)

**Carpentersville dam removal key part of Fox River study**
Over the years some people have advocated for the removal of the Batavia dam.
dailyherald.com, 1/4/15, by Madhu Krishnamurthy

Carpentersville is seeking residents’ input on strategies to enhance recreational uses along the Fox River at a Jan. 21 public hearing. It’s part of a regional study being done by the Chicago Metropolitan Agency for Planning expected to be completed this summer. The study will play some part in the Kane County Forest Preserve’s overall goal to remove the Carpentersville dam on the Fox River. Order Reprint. Print Article “The dam would have to be included in any study of how you would want to use the Fox River for recreation,” Carpentersville Village President Ed Ritter said. Yet, that study doesn’t really control what happens to the dam, he added. “That’s not the focus of it,” Ritter said.

*Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu*
“There's some different options on the table. One option that I would like to consider, rather than removing the dam, if they just breach the center and then we use the dam as a way to get back and forth across the river. You could really put a bike path and bridge there.”

The village's bike trail is on one side of the river and the county forest preserves on the other. "The forest preserve is creating trails near the banks of the river on the Route 31 side," Ritter said. "Eventually we want the two sides of the river joined. This would be a big money saver. It's only a few hundred feet from the dam to the regional bike path. We'd like people to be able to ride their bike from one end of Carpentersville all the way across to the other.”

More than money
The Illinois Department of Natural Resources has targeted the Carpentersville dam for removal, but no money has been allocated for the project at this time, spokesman Chris Young said. The impact or cost of removing the dam has not yet been determined and will be part of an engineering study later on. "We are working with the Forest Preserve District of Kane County," Young said. "We hope to have some sort of a cost estimate prepared for that project soon."

The forest preserve district owns the dam and would oversee any project to remove it. "You just can't take the dam out. You have to provide some restoration," said Monica Meyers, executive director of the forest preserve district. "We're just waiting for the written report that's a culmination of that (Fox River Study Group)." Carpentersville, Algonquin, the Kane County Forest Preserve District and McHenry County Conservation District are partnering on the river study. The study area goes from Carpentersville all the way south to Elgin's water treatment plant.

Ritter said there are other benefits to breaching the dam versus removal. "If they breach the dam, then the river all the way back up to the Algonquin dam will also become a nice fishing river," he said. "How big a breach ... that's going to be the next question.”

Previous discussions
The removal of dams along the Fox River, including ones in Geneva and Batavia, has been discussed for years. The state favors removal of low head dams because of environmental and safety concerns, according to a 2007 report.

In 2011 and 2014, men died in accidents at the Geneva dam. One was pulled over the dam in a kayaking accident. The other was trying to rescue a boy who fell from a rock in the no-entry zone below the dam. The men were overpowered by hydraulic roller effect, commonly called a boil, at the bottom of the low head dam. In Batavia, advocates have argued whether the dam hurts the health of the river; whether removal would increase the fish species; whether the wide flats that would be revealed when the river narrowed would require a lot of maintenance, be damaged by flooding and harbor mosquitoes; and whether it was important to keep the river deep enough to allow motorized pleasure watercraft to use it. Carpentersville Assistant Village Manager Joe Wade said the planning agency study will not only examine ways to enhance leisure use of the Fox River corridor and surrounding areas, trails and forest preserves; it also will determine whether removal of the dam is a good idea. The Fox River Corridor Public Visioning workshop is 6:30 to 8 p.m. at the Carpentersville public works building, 1075 Tamarac Drive.

Castaic Dam undamaged by earthquake
By Jim Holt Signal Senior Staff Writer, January 5, 2015, signalscv.com

Castaic Dam was undamaged by the earthquake that occurred just a few miles north of the body of water on Saturday, officials said Monday. "I talked with our southern field personnel and they tell me they conducted a complete inspection of Castaic Dam and found no damage," said Shawn Jones, southern regional field engineer for the state’s Division of Safety of Dams. Safety officials also inspected Pyramid Dam on Piru Creek, north of Castaic, and found no damage, he said. The earthquake struck at 7:18 p.m. Saturday about six miles north of Castaic.
Dam. It measured 4.2 on the Richter Scale and was one of several local temblors to hit as part of an earthquake swarm, California Institute of Technology seismologist Kate Hutton said Saturday.

Longhorn Dam Safety Concerns
By: Chris Cybulski, 01/05/2015, austin.twcnews.com

Austin Energy built the Longhorn Dam in East Austin in 1960 to provide water for the Holly Street Power Plant. "Well, Holly is gone and we don't need that as a cooling-water reservoir anymore, but it is a wonderful amenity for downtown Austin," Robert Cullick with Austin Energy said. It may do beautiful work in creating Lady Bird Lake, but if you look closely at the dam itself, it's a different story. "A lot of the rollers are bad on them," Dennis Hipp said. "If you was to open one in an emergency, there is a chance you might not get it to close." Hipp worked at the Holly Power Plant and Longhorn Dam for 24 years. He says there are plenty of safety concerns. "During heavy rain and lightning events, the current operation makes you climb on a metal ladder to flip a breaker," Hipp said. Hipp also says many of the electronics didn't work and, even today, one gate is completely stuck. He says it's a result of neglect and a desire not to spend money on it. The city commissioned a report in 2012 that says the dam needs $14 million worth of repairs or could be replaced for $16 million. The city hasn't spent the money because the dam still works. "When you look at all the priorities of the city, you see there really isn't any need right now to spend any money," Cullick said.

Workers at Holly used to be able to open the flood gates in 10 minutes. Now, Austin Energy crews have to drive across town to get to the dam. While flooding is a concern, the city says during large storms, there isn't much it can do. "There's simply many more times the amount of water that can come in the lake than can be discharged at the dam," Cullick said. It's not perfect, but it is working for now. "As long as that dam is there, it needs to operate or be constructed to where it takes care of itself," Hipp said. Cullick says there's no reason to do extensive repairs or replace it right now. "When we look at it, yeah, we can make it more efficient or change some operations, but now there isn't an overwhelming reason to do it," he said. "It certainly won't stop flooding from occurring." Austin Energy spent $650,000 fixing some flood gates last year. Now that the Holly Street Power Plant is gone, the utility is talking about shifting ownership to another department.

(With all the hacking going on, this is no surprise!)

FBI eyes Chinese hacking of dams database
NOAA worker charged in case
By Bill Gertz — The Washington Free Beacon - - January 6, 2015, washingtontimes.com

A federal weather service employee charged with stealing sensitive infrastructure data from an Army Corps of Engineers database met a Chinese government official in Beijing, according to court documents that reveal the case to be part of an FBI probe of Chinese economic espionage. Xiafen “Sherry” Chen, an employee of the National Oceanic and Atmospheric Administration office in Ohio, was arrested in October and charged in a federal grand jury indictment with illegally accessing the Army’s National Inventory of Dams. The national inventory is a sensitive database containing information on all U.S. dams. U.S. intelligence officials have said the database was compromised by Chinese hackers in 2013 as part of covert efforts by Beijing to gather sensitive information on critical U.S. infrastructure for possible use in a conflict.

indicating that the two met in Beijing that year and that she was searching for, and would provide, dam-related information for him. "It was very glad to meet you in Beijing after so many years and impressed with your achievement and contribution to the nation in water resources development and management," Ms. Chen stated in a May 15 email. "I am back home now and have been looking for the dam related information you are interested" in, she added.

(Technology on the run!)

**Bluestone Dam to get geospatial data management**

By Michael Hardy, News Editor, January 6, 2015, c4isrnet.com

The Army Corps of Engineers is looking for an architect-engineering firm to design a geospatial data management system for the Bluestone Dam Safety Assurance Project in Huntington, West Virginia. A pre-solicitation notice published on FedBizOpps says that the contract the Corps will eventually award "will include the initial design and creation of the base system and may include any additional changes to the finished product for a time not to exceed five years from the award date."

(Half of the cost of this project is for recreation facilities, What?)

**Dam delay costs Oconee**

oconeenterprise.com, January 7, 2015, by Michael Prochaska

The Hard Labor Creek Regional Reservoir Management Board in December voted to pay an extra $410,000 to the engineering firm responsible for the construction of the dam that is now scheduled to conclude by the beginning of April. The additional payment to Alpharetta-based Schnabel Engineering brings the total cost up to $1.333 million from the original payment of $923,000, a 44.4 percent increase. Under the Georgia Safe Dams Act, explained Project Manager Jimmy Parker of Precision Planning, the engineer oversees the construction to ensure that the dam was built in compliance with the design drawings. Oconee will pay $118,080 based on its 28.8 percent of ownership, whereas Walton will pay $291,920 based on its 71.2 percent ownership. The reservoir will provide a water supply for the aforementioned counties through midcentury. Parker said he hoped Layne Heavy Civil, the Fairburn firm with the $17.8 million-contract for the dam and reservoir, can absorb some of the cost. "There is a portion of that additional cost that may be attributed to delayed construction or errors during the construction, but I can’t say that definitively," said Parker, explaining that he will visit with representatives from Layne Heavy Civil once he has more data.

In late December of 2013, heavy rains damaged the cofferdam. Later, a second change order was needed because of an unexpected hole 14-feet deep. Several other hiccups, however, only set back completion of the dam by several months. The dam itself is 1,900 feet long with a depth of

**Copy obtained from the National Performance of Dams Program: [http://npdp.stanford.edu](http://npdp.stanford.edu)**
82 feet. At the base it is 630 feet wide. The pool area will cover 1,327 acres and store 12 billion gallons of water, which will be 700 feet above sea level. Two bridges on Social Circle-Fair Play Road are 760-feet and 160-feet long, respectively. The total project budget is estimated at $158.9 million. Recreational sites constructed east of the reservoir will cost an expected $800,000, of which Oconee County will pay $230,400. The sites will include a parking area, a 30-foot double boat ramp and dock, a fishing pier, restrooms and a permanent kiosk where patrons can pay for parking and obtain park information. The first phase will start this summer with grading of the ramp. Parker estimates it will take two and a half years for the reservoir to fill up. By 2017 or 2018, workers will raise the restrooms and other amenities. Walton could be responsible for financing a passive park. More information can be found at hardlaborcreek.com For more on this story, see the Jan. 8 edition of The Oconee Enterprise, on sale now at convenience stores and grocery stores and newspaper boxes throughout Oconee County. To subscribe, go to oconeeenterprise.com or call (706) 769-5175.

Hydro: 
(This is a development that could happen in Alaska.)

Dam site eyed near Denali
Denali By Jeff Richardson, newsminer.com, Jan. 5, 2015

FAIRBANKS — A site south of Denali National Park and Preserve is being eyed as the potential location for a hydroelectric dam. The Native Village of Cantwell filed a preliminary permit application with the Federal Energy Regulatory Commission in November to explore a dam, powerhouse and other infrastructure along Carlo Creek. The creek is at 224 Mile Parks Highway, about 13 miles south of the park entrance. Gordon Carlson, vice president of the Native Village of Cantwell, said it's one of two sites being considered in the region as a possible dam location. He said the village is looking for a viable alternative energy project to generate revenue by providing electricity to the Golden Valley Electric Association grid, but cautioned that the proposal is "extremely preliminary." "We’ve got to find out if it's even plausible," Carlson said. "We don’t know if the water’s there, we don’t know if the terrain is there." A variety of studies could follow, including those that look at possible energy production, water quality, environmental impacts and more. Although the village owns the land at the dam site, it would require agreements with other land owners in the area, most notably the Alaska Native Regional Corporation Ahtna. Wasilla-based Northwest Power Services has done a preliminary review of the project, including a glimpse of what it may include.

The 10-foot-high dam would power a 1.6-megawatt turbine — a small-scale development, as far as hydroelectric projects go. In comparison, the proposed Susitna-Watana Hydroelectric Project has a 600-megawatt capacity. But an early look at the Carlo Creek project includes the possibility for significant infrastructure. A roughly 12,000-foot-long road would be built from the Parks Highway to the dam site, and the project would also require a 25-by-35 foot powerhouse and a 1,500-foot transmission line to connect with the existing electric grid. The estimated cost for a three-year study and licensing process is at least $1 million, according to documents filed with FERC. Carlson said the Native Village of Cantwell will look for grants or other funding sources to help in the early stages of the project. He said the findings of those studies would determine how quickly the village works to move the project forward, or if it does at all. "It’s not something that’s a hop, skip and a jump and it’s going to get built," he said.

The proposal, however, has caused a stir among residents and business owners in the Carlo Creek area. When the preliminary permit application was published in the Federal Register on Dec. 22, it rapidly generated questions about how local properties may be affected. Bill Madsen,
who lives along Carlo Creek and until recently operated a nearby business, Denali Mountain Morning Hostel, said little is known about the plan. That uncertainty has left some people uneasy, he said. “My specific concern is the quietness about it,” Madsen said. “Nobody has said anything, nobody has approached any of the neighbors.” Carlson said the village is also in the early stages of reviewing a hydro project on the Jack River in the Mat-Su Borough that is considers more promising. That project is much larger in scope and would be capable of generating an estimated 4.2 megawatts of electricity. More than five miles of access roads would be built to reach to the proposed dam. A 60-day comment period on the Carlo Creek permit application began on Dec. 22. Instructions on how to comment, as well as additional details about the Carlo Creek project, are available at https://federalregister.gov/a/2014-29873. For more information about the Jack River project, go online to the FERC website at www.ferc.gov/docs-filing/elibrary.asp, and enter docket number P-14646.

(In case you didn’t know!)

Top 10 Things You Didn’t Know about Hydropower
By U.S. DEPARTMENT OF ENERGY on January 07, 2015, breakingenergy.com

This article is part of the Energy.gov series highlighting the “Top Things You Didn’t Know About…” Be sure to check back for more entries soon.

10. Hydropower is one of the oldest power sources on the planet, generating power when flowing water spins a wheel or turbine. It was used by farmers as far back as ancient Greece for mechanical tasks like grinding grain. Hydropower is also a renewable energy source and produces no air pollution or toxic byproducts. Learn more about the history of hydropower.

9. When most people think of hydropower, they imagine the Hoover Dam — a huge facility storing the power of an entire river behind its walls — but hydropower facilities can be tiny too, taking advantage of water flows in municipal water facilities or irrigation ditches. They can even be “dam-less,” with diversions or run-of-river facilities channeling part of a stream through a powerhouse before the water rejoins the main river.

8. Niagara Falls was the site of the country’s first hydroelectric generating facility — built in 1881 when Charles Brush connected a generator to turbines powered by the falls and used the electricity to power nighttime lighting for visiting tourists. America’s first commercial hydropower facility was built in 1882 in Appleton, Wisconsin — powering lighting for a paper mill and multiple homes.

7. Every state uses hydropower for electricity, and some states use a lot of it. About 66 percent of Washington State’s electricity comes from hydropower. America’s hydropower industry has more than 100 gigawatts of hydropower capacity and employs an estimated 200,000-300,000 people.

6. Hydropower costs less than most energy sources. States that get the majority of their electricity from hydropower, like Idaho, Washington, and Oregon, have energy bills that are lower than the rest of the country.

5. Over the last decade, hydroelectricity provided about seven percent of the electricity generated in the United States and 63 percent of the electricity from all renewable sources, finds the Energy Information Administration. Learn how hydropower captures the kinetic energy of flowing water and turns it into electricity for our homes and businesses. | Video by the Energy Department

4. Some hydropower facilities can quickly go from zero power to maximum output, making them ideal for meeting sudden changes in demand for electricity. Because hydropower plants can dispatch power to the grid immediately, they provide essential back-up power during major electricity disruptions such as the 2003 blackout that affected the northeastern states and southern Canada. Read a recent report about other services hydropower can provide to the electric grid.

3. Another type of hydropower called pumped storage works like a battery, storing the electricity generated by other power sources like solar, wind, and nuclear for later use. It stores energy by pumping water uphill to a reservoir at higher elevation from a second reservoir at a lower elevation. When the power is needed, the water is released and turns a turbine, generating electricity.

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
2. Devices at dams can help fish and other wildlife move freely around dams and between sections of rivers. Fish ladders and fish elevators are just some of the techniques used to help fish migrate.

1. Dams are built for a number of uses in addition to producing electricity, such as irrigation, shipping and navigation, flood control or to create reservoirs for recreational activities. In fact, only 3 percent of the nation’s 80,000 dams currently generate power. An Energy Department-funded study found that 12 GW of hydroelectric generating capacity could be added to existing dams around the country. View the full report and the interactive map on the energy potential of non-powered dams.

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**Water:**
(Things are getting a little testy!)

**Opinion**

**U.S. is ripping us off on water**

By Tom Fletcher - BC Local News, Jan 6, 2015, thefreepress.ca

VICTORIA – The U.S. has Canada over a barrel on water as well as oil these days, but the tide is turning. Last week I mentioned a new book called The Columbia River Treaty – A Primer by members of Simon Fraser University’s climate adaptation team. This slim volume makes the case that B.C. has ended up with a shockingly bad deal from this 1964 treaty, which concerned itself entirely with flood control and hydroelectric power.

In those days there was little or no environmental assessment. Agriculture, fish habitat and aboriginal impacts were ignored.

More than a decade after the disastrous flood year of 1948, once Ottawa stopped its bureaucratic delays, U.S. public and private power utilities paid B.C. $254 million to build three dams on the Columbia system. Those dams (and one at Libby, Montana that mostly floods B.C. land) hold back the huge spring runoff from the Rockies and then dole out water for power production in B.C. and for the 15 hydro dams previously built downstream in the U.S.

The U.S. payment was for half the power over 30 years, which B.C. didn’t need at the time. Then our American cousins cut us another cheque for $64 million, an estimate of the value of flood protection from 1968 all the way to 2024. Boy, did we get taken. The SFU team calculates the value of that flood control to the U.S. at more like $32 billion. That’s not even the worst of it. The Kootenays were once the leading fruit and vegetable growing area in B.C., bigger than the Okanagan. Now in the Arrow Lakes and other reservoirs, levels rise and fall dramatically to steady the flow south. In addition to the large areas permanently flooded by the Mica, Duncan and Hugh Keenleyside dams, this renders more of B.C.’s prime bottom land impassable.

B.C. is paid precisely zero for this sacrifice, while Washington state has developed a $5 billion-a-year farm economy using our stable irrigation source. That has helped their tree fruit growers

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Copy obtained from the National Performance of Dams Program: [http://npdp.stanford.edu](http://npdp.stanford.edu)
push some Okanagan orchardists out of business. As U.S. billionaires continue to bankroll environmental attacks on B.C. and Alberta energy projects, it’s worth noting that long before the treaty, the U.S. military-industrial complex had wiped out the Columbia River salmon runs. The U.S. Army Corps of Engineers and its private power partners dammed everything they could find, exterminating a fishery bigger than the Fraser that had sustained aboriginal people on both sides of today’s border for thousands of years. B.C. Energy Minister Bill Bennett and SFU’s Jon O’Riordan both described to me their experience at the Columbia River Basin conference, held last October in Spokane. Their main impression was that Americans, including traditional tribes, want those salmon runs restored. Vast amounts have been spent on hatcheries and habitat to speed recovery below the Grand Coulee dam, which stands like a giant tombstone for migratory fisheries above it. Should the Americans ever manage to get salmon above their biggest dam, it will largely be up to B.C. to provide sufficient cool water to keep them alive. That service has an increasing value to the U.S. as well as an ongoing cost to B.C. Bennett surprised some in Spokane when he said the U.S. needs to pay more for the benefits from the Columbia River Treaty. The flood control agreement expires in 2024. The treaty requires 10 years’ notice for either country to exit. Climate shifts are expected to make B.C. water more important than ever. Your move, Uncle Sam.

Environment:
(Do you know any other energy source that funds thus stuff? We’re talking big free money!)

Dam relicensing funding is boon to kayakers at popular Spokane River rapid

By Rich Landers, 12/4/15, spokesman.com

Kayakers are enjoying ritzy new facilities at Trailer Park Wave. A $480,000 access to the Spokane River geared especially for nonmotorized paddlers, floaters and anglers has been completed by Avista Utilities downstream from Post Falls Dam. The site includes parking for five vehicles, a vault toilet and a paved trail kayakers can use to carry their boats safely down to the river. “It’s an awesome improvement,” said Steve Bailey, a local firefighter and ardent kayaker. “Winter is one of the prime times for best flows at the wave,” he said as he donned his special paddlers’ dry suit made for cold-water immersion. Avista purchased the undeveloped site in 2012 for $280,000 from a private property owner, said Rene’ Wiley, Avista’s recreation, land use and cultural resource specialist. “We went door to door looking for a seller.” Completed in December, the $200,000 spent on facilities, trail construction, tree planting and other landscaping is appreciated by people in the neighborhood, she said. The Trailer Park Wave access is named for a natural water feature prized by kayakers. River hydraulics at certain flows create a hole and rapid that allows play-boaters to do tricks where the south channel downstream from the dam meets the north channel to form the main river.
For years, paddlers have had to climb down a steep bank, carrying their boats over boulders and paddling upstream a half a mile to play at the wave. Occasionally parking issues occurred over the years as the public tried to access the river in this area, along with trespassing and answering the call of nature in the streamside bushes. That's changed with the latest improvements completed under agreements Avista made in 2009 during the federal relicensing of five hydropower dams on the Spokane River. The new trail zigzags down to the river, crossing the old Corbin Ditch that once delivered irrigation water from Lake Coeur d'Alene to the Spokane River Valley. The trail ends at the river's north bank directly across the river from the wave. “With the old access, by the time I got geared up and paddled to the wave, I barely had time to do much before I had to head back to pick up the kids,” said Bailey, who preaches the merits of paddling regularly year-round to keep skills sharp. “Every kayaker has been in a situation where he wishes he’d done a little more practicing,” he said in a presentation to the Spokane Canoe & Kayak Club last year. “We’re blessed to have the Spokane River right here where we can get in a play-training session even if we only have a couple hours to spare.” The preferred flow for getting the most out of Trailer Park Wave is roughly 3,300 to 6,000 cubic feet per second, Bailey said. However, skilled paddlers are finding windows to enjoy it almost year-round, depending on how flows are coming out of the dam, said Judd Keiser. He’s one of the experienced local members of whitewater groups that consulted on a flow study to help dam operators understand the relationship of flows to recreation.

“Some people are finding ways to boat the wave at 2,300 cfs – a level the average paddler would say is too low,” Keiser said. “Then in spring, at 14,000 cfs, some call it a world-class wave – for experts only,” said Dave Turner, who was paddling with Keiser recently. “But at around 6,500 cfs, the wave washes out.” The trick, they said, is to learn how the flows from the north channel blend in to affect the Trailer Park Wave at the base of the south channel. “Basically, more water has to be flowing out of the south channel than the north channel to make it work,” Bailey said. “A new flow regime that results in more water out of the south channel started two years ago and we’re still learning it.” Other boons to recreation along the Spokane River under agreements with the Federal Energy Regulatory Commission include higher base flows below Post Falls Dam for native redband trout fisheries as well as for aesthetics. “So far, it appears that what’s good for the fish is good for kayakers,” Keiser said. “We’re very pleased at the improvements in flows.” Bailey said he’s a regular at Trailer Park Wave in January through March and then June and July. “Basically, the flows are too low in July and August, and in the last couple years they haven’t picked up enough for Trailer Park until November.” Other recreational improvements Avista is developing under the relicensing agreement include 10 boat-in only, semiprimitive campsites on Lake Spokane completed last summer. “They were immediately popular,” said Chris Guidotti, manager of Riverside State Park, which administers the sites. A $60,000 nonmotorized boater take out was completed this winter near Nine Mile Dam. The takeout provides a safe place for kayakers and canoeists to pull out of the river after launching upstream in Riverside State Park at Plese Flats. Mary Tyrie, Avista communications manager, said other projects planned for development this year include:

- Q’emiln Park overlook and boat staging area in Post Falls.
- Higgins Point boat launch and shoreline stabilization on Lake Coeur d’Alene.
- Centennial Trail extension form Sontag Park to Nine Mile Recreation Area in Riverside State Park, a two-year project.

(Getting near the finish line.)

**Restoring public access to Wanapum Dam reservoir shoreline**

khq.com, January 7, 2015

EPRHATA, Wash. (AP) - The Grant Public Utility District says public access to most of the shoreline at the Wanapum Dam reservoir will be restored at noon Wednesday, including the boat launch at Wanapum State Park. The shoreline was closed last March after the utility lowered the water level 26 feet in response to a crack in the spillway. Repairs have allowed the utility to raise the reservoir level by 17 feet. Some areas of the shoreline are still off limits. Repair work

**Copy obtained from the National Performance of Dams Program:** [http://npdp.stanford.edu](http://npdp.stanford.edu)
continues at the Columbia River dam near Ephrata. The utility says the reservoir should be back to normal this summer.

Other Stuff:
(It's about time hydropower be considered a renewable! Easy to do in the NW where they have hydro.)

I-937 drives us toward new renewables
January 6, 2015, Opinion, Northwest Opinion Columns, bellinghamherald.com

The Boeing Co.’s recent announcement that it will no longer use energy generated by fossil fuels shows its willingness to help Gov. Jay Inslee lead this state toward a sustainable future. Unfortunately, several state senators plan to use the aerospace giant’s clean energy commitment to try to evict Washington’s 2007 citizen Initiative 937, known as the Energy Independence Act. The law requires large utilities to get at least 15 percent of their power from new renewable resources by 2020. It also requires the utilities to actively promote energy conservation among their customers. Last month, after the governor announced his 2015-17 budget, which includes a new carbon emissions tax, Boeing said it would use only renewable energy to manufacture its 737 airliners. Eschewing coal, natural gas and other fossil fuels, Boeing said it will invest in wind power credits and use more hydropower. That's great news, and a positive response to Inslee’s "polluters pay" plan to raise state revenue and achieve cleaner air and water. Conservative voices from Eastern Washington now say that if Boeing regards hydropower as a renewable energy source, the state should, too. It's a ridiculous argument. Of course the state recognizes hydropower as a renewable source. That wasn’t the point of I-937.

The law excludes hydropower, even though it is a clean energy source, because it's been around for decades, supplying 74 percent of our energy. (The federal government had the foresight to build hydroelectric dams on the Columbia River starting in the 1930s.) The point of the initiative was to require utilities to develop new sources of renewable energy, such as wind, solar, geothermal and others, to reduce the use of coal and other dirty fuels, which still account for one-quarter of our electricity. Allowing utilities to count hydropower as a new strategy for reducing greenhouse gases would make the law meaningless.

Not all of the state’s public utility districts see the law as a financial burden. Those PUDs that embraced the Energy Independence Act and made investments in new renewables continue to support the law and oppose those who would weaken or rescind it. Peninsula Light Co., for example, got on board early with four other Northwest public utilities to create Harvest Wind, a wind farm located near Goldendale. It began producing 99 megawatts of power from 43 turbines in mid-2009. This single investment will enable PenLight to meet the 15 percent requirement by 2020. Other utilities could have made similar investments. Instead, many have chosen to back repeal of the initiative, and have found support from ultra-conservatives like Sen. Sharon Brown, R-Kennewick. She proposed a bill last year to thwart the state’s clean energy efforts, and will promote it again during this session. Brown represents those who would turn the clock back to a time when industries dumped toxic waste into our waterways and smokestacks spewed carcinogenic pollutants 24 hours a day. Our abundant hydroelectric power doesn’t absolve us from the responsibility to discover, test and perfect new and better sources of renewable energy. This work cannot stop until we have completely eliminated our reliance on fossil fuels.