

7/11/2014



Some Dam – Hydro News™ And Other Stuff

Dams:



Quote of Note: *“The only difference between a tax man and a taxidermist is that the taxidermist leaves the skin.” - Mark Twain.*

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“Good wine is a necessity of life.” - -Thomas Jefferson
Ron’s wine pick of the week: 2012 Merriam Vineyards Pinot Noir “Cuvee”
“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson



Dams:

(Don’t drink the water!)

Duke Energy cited for ‘high hazard’ Cliffside coal ash dam

By Molly Phipps, June 27, 2014, shelbystar.com, Source: Associated Press

This week, the North Carolina Senate approved legislation requiring Duke Energy to close all of its coal ash pits in the state within the next 15 years, according to the Associated Press. Now moving to the House, the bill must be approved there before going to the desk of Gov. Pat McCrory. The bill comes amid widespread coverage of Duke Energy’s coal ash ponds across the state, spurred on by the Dan River spill near Eden that covered 70 miles of the river in coal ash sludge in March. This month, Duke was again cited by NCDENR (the Department of Environment and Natural Resources) for deficiencies in five steam stations in the state, including the Cliffside Steam Station in Rutherford and Cleveland counties. According to a June 13 notice of deficiency, the Cliffside station’s inactive coal ash basin has a dam between it and the Broad River.

"The condition of the...structure appears serious. Your dam is categorized as a high hazard dam," the notice reads. "In the event of dam failure, significant environmental damage to the Broad River could occur due to the release of coal ash stored behind the dam."

Coal ash not only can cause environmental damage, but damage to humans through the toxic metals it contains, including lead, mercury and arsenic, which cause cancer and other health problems.

In March, NCDENR officials were looking into the possibility that the Cliffside plant could have a coal ash spill due to more than 1,100 gallons of water each day being drained from pipes at the station.

Those pipes are connected to the dam in the June notice. Erin Culbert, with corporate communications in Duke Energy, said the pipes are part of the structure that goes through the dam. Culbert said there is an engineered structure of pipes that lets water transfer from inside the coal ash basin to outside the dam's outfall. In March, Duke Energy officials sampled the water draining from those pipes and found no environmental impact from the drainage.



Amy Adams, North Carolina campaign coordinator with Appalachian Voices, dips her hand into the Dan River in Danville, Va. as signs of coal ash appear in the river in March of this year. Up to 82,000 tons of ash were released from a break in a 48-inch storm water pipe at the Dan River Power Plant in Eden, N.C., according to Duke Energy estimates. (Associated Press)

'Infrastructure is safe'

NCDENR requested a response from Duke within 10 days concerning its dam, which was listed in the notice as a "high hazard." In a press release three days later, Duke responded that the company had done third-party inspections and found that the "infrastructure is safe and performing as designed, but some areas of water infiltration were identified." The company is in the process of developing engineering plans to repair or close certain pipes at the recently-cited steam stations, while continuing to monitor others. "Our highest priority remains the safe operation of our facilities and the health and well-being of the communities and customers we serve," said Lynn Good, Duke Energy president and CEO, in the press release. "We will continue working with the agency (NCDENR) to secure the necessary permits to carry out our work and will continue to be responsive to state officials as we all address this important issue for North Carolina." Duke Energy submitted a letter in response to the deficiencies cited by NCDENR on Thursday. Specifically concerning the Cliffside station, Duke officials said they would submit the applications for permits to repair the dam in August. "Once all permits and approvals are received, Duke Energy estimates that implementation of the engineered repair plan will take approximately 90 days, weather permitting," the letter reads.

'Not have any effect on us'

For Cleveland County, a coal ash spill would not cause major problems to county or city water resources, according to water officials across the county. Dewey Cook, vice chairman of the Commissioners for the Cleveland County Water District, told The Star in March that the county's water wouldn't be affected because it doesn't have any intakes below the Cliffside Steam Station. The City of Kings Mountain gets their water from Moss Lake. But Shelby's water could be affected in the long run, if a drought were to occur. Shelby City Manager Rick Howell previously told The Star the city's secondary water intake is downstream of the station, but that the city's never needed to activate the secondary intake before.

What would the proposed coal ash bill require?

The bill, approved by the Senate and now being considered by the House, would require Duke Energy to place ash from dumps at four plants into lined landfills or sell it for the construction industry within five years. A new commission would decide how to dispose of ash at 10 remaining plants by 2029. Duke Energy operates 14 sites across North Carolina that contain at least 32 coal ash dumps.

TVA: Dam Is Safe

By O.J. Early, Staff Writer, 2014-06-28, greenevillesun.com

One of Greene County's oldest landmarks is safe and set to undergo a round of inspections later this year, according to TVA. The Nolichucky Dam, constructed in 1913, contains no "safety deficiencies," TVA spokesman Travis Brickey said. "TVA operates a vigilant comprehensive dam safety program which monitors any changes in the dam including monthly, 15-month and 5-year inspections," Brickey said. "TVA has not noted any dam safety deficiencies."

(Success of the past.)

Fort Peck Dam puts country back to work

Kristen Inbody, June 28, 2014, greatfalls Tribune.com

Editor's note: In 2014 Montana celebrates 150 years as a territory and 125 years as a state. We're marking both landmark birthdays each Sunday with a Montana Moment, a chronological look at key events in Montana's history.



The moment: Construction on Fort Peck Dam begins in 1933. The story: "Now people talk about the Fort Peck Dam as the fulfillment of a dream. It is only a small percentage of the whole dream covering all of the important watersheds of the Nation. ..."

Before American men and women get through with this job, we are going to make every ounce and every gallon of water that falls from the Heaven and the hills count before it makes its way down to the Gulf of Mexico." —President F.D. Roosevelt at Fort Peck, Aug. 6, 1934.

The "New Deal" programs that aimed to alleviate the effects of the Great Depression may have made their biggest mark in Montana, where one of the world's largest earth-filled dams and a 134-mile lake remains. Construction on the Fort Peck Dam began in 1933 and finished in 1940, employing 40,000 to 50,000 workers from across the state and country. The four-mile dam is an engineering marvel, with 125.6 million cubic yards of fill. By the time it was one-fifth of the way to completion, the dam was already the largest in the world. A diverse mix of workers lived in 18 boomtowns around the construction site, with bars, pool halls, restaurants and bordellos.

When he spoke at the dam in 1934, Roosevelt noted the project had national implications, both for its effect on the watershed, on irrigation, on the power supply, on unemployment and in the production of materials for the dam in Pittsburgh, New York, Birmingham, Ala., and along the Pacific Coast — boosting employment across the country in the dark days of the Depression. "It is national in scope and it was undertaken with the idea that it would benefit the whole Nation. And it is going to do it," Roosevelt said. "That is one reason, my friends, the chief reason, that I am glad to be out in these parts today to see the work in its inception; to see the fine spirit of all the people who are engaged in the work," he said. "That is why, also, that I am very confident it is going to be carried through to the success and glory of the Nation. Live the moment: You haven't seen Montana until you've seen Fort Peck Dam. Take a power house tour and check out the dam history (as well as natural history) at the Fort Peck Interpretive Center, and then stick around to fish, swim and boat in the Fort Peck Reservoir or see a show at the Fort Peck Theatre.

(They're getting it fixed, one tendon at a time!)

06/24/14 Press Release - Work continues on Wanapum Dam spillway

Posted on June 24, 2014 by Tom Stredwick

Crews work around the clock on Wanapum Dam spillway



A drill rig bores out a hole for an anchor tendon that will go from the top of the spillway into bedrock below the dam. Each of the 13 spillway monoliths will be reinforced with anchor tendons.

Grant PUD and its contractors continue work on the 800-foot-long Wanapum Dam spillway to prepare for final reinforcing repairs. Various types of drilling are underway as crews prepare for repairs once they are approved by the Federal Energy Regulatory Commission (FERC). This drilling work is the most time-intensive phase of the repair process. Holes are being drilled throughout the spillway in anticipation of high strength cables (known as tendons) being installed from the top of the dam into the bedrock below. Repairs will also likely include additional reinforcing anchor bars in the upstream and downstream sides of the spillway

Work is underway to renovate the Frenchman Coulee Boat Launch while the Wanapum reservoir is lowered in response to the Wanapum Dam spillway. Thousands of pages of technical data outlining repair plans require the FERC approval prior to being implemented. All repairs will occur over the summer allowing the utility to increase the river elevation in the fourth quarter of 2014. Costs are still on track at the \$61 million estimate.



Workers install a spiral exit flume on the Wanapum Dam left-bank fish ladder. The spiral flume will accommodate the record-breaking runs of salmon that are anticipated for this year.

Fish passage modifications to both of the dam's ladders have proven effective, allowing the utility to suspend the trap and haul operation for migrating adult fish in May. Over 23,500 spring Chinook adults have migrated upstream successfully. Spiral flumes have been added to the existing fish ladders in anticipation of the record-breaking of June 22 over 7,000 sockeye and 13,000 summer Chinook have been counted passing Priest Rapids Dam. Excavation and pile-driving work is near completion on both the Vantage and Frenchman Coulee boat

launches. The improved sites will be available to the public by the 2015 Memorial Day weekend. Current low-river conditions have allowed the utility to expedite these projects at a decreased cost to customers. The 38-mile stretch of shoreline from above Wanapum Dam to below Rock Island Dam will continue to be closed as a precaution for public safety and to protect culturally-sensitive sites. The shoreline will remain closed until repairs to Wanapum Dam are in place. While there may be some portions of the shoreline that appear safe, the velocity of water moving through the narrow river channel, and sandy banks creates hazardous conditions for the public. Recreation sites below Wanapum Dam continue to provide recreation opportunities throughout the summer months.

Wanapum Dam remains stable and is operating at approximately 50 percent capacity. The river elevation above the dam has been reduced by approximately 25 feet while repairs occur.

(40 anchors = serious problem!)

Wanapum Dam Construction Starts Fixing Crack

Jul 02, 2014 9:23, by Chris Luther, Reporter - kulr8.com

Beverly, WA - Repair work is now underway to fix the crack in Wanapum Dam, but the area around the dam is still closed off to the public for the rest of the summer.

It's something you may not think about, but the power of water is amazing. We know now that a crack the size of 5 car lengths in the middle of dam was caused by a mathematical error in the original design that didn't allow the dam to withstand the tremendous pressure.



"There wasn't enough steel or concrete in the original construction of the dam," Chuck Allen said. Crews have started drilling more than 40 holes that they will fill with 200 feet of steel from the top of the dam to the river floor below.

"We are restoring Wanapum spillway to the condition it was prior to the fracture," Allen said. "But we're going beyond that and we're making it stronger than it was before the fracture." To begin this work, dam officials have brought water levels to historic lows. But that caused a huge problem with the thousands of salmon who run through during spring migration. What you're looking at is the Wanapum Dam fish ladder. Even though it looks more like a fish water slide. This was just built in the last couple months, because after they lowered the water, the salmon couldn't pass through here. Now they can. "We had to come up with a plan b and it seems to work quite well," Curt Dotson said. "In 5 weeks we went from we got a problem to we got a solution. It's very impressive." More than 20 thousand Sockeye and Chinook salmon leap into the makeshift steel box each day. Something that is a beautiful sight to officials who frantically put the system together so the salmon population wouldn't suffer. When officials first discovered the crack, they didn't know how bad the damage would be. Now, repairs have begun while successfully maintaining the spring salmon migration. It appears that the biggest loss will be the canceled summer recreation. "We really do appreciate the public's patience and understanding," Allen said. "This is a very unique situation. And we anticipate that once we are finished with all the work that we have to do here, that we're not going to see issues like this anymore." The drilling has already started at Wanapum dam, even though it hasn't been officially approved on the federal level yet... officials fully expect that it will be and the end price tag for this entire project... 61 million dollars.

(They'll be lucky to see anything at all.)

An Arkansas River Task Force is proposing a plan to build dams in Arkansas River in 2017

Liz Bryant, kjrh.com, Jun 30, 2014

Tulsa residents have heard about it for years, possibly even decades- the idea to have water in the Arkansas River. Don't hold your breathe because the earliest you could see any work is 2017.

At Monday night's "City Hall in Your Neighborhood" meeting, Councilor Blake Ewing unveiled the proposed plan. An Arkansas River Infrastructure Task Force (ARITF) have worked on their findings since November of last year. ARITF members want to build four low water dams in Zink Dam, South Tulsa/Jenks, Sand Springs and Bixby. **The belief is that water in the river will spur developers to build restaurants, shops and apartments along the waterway.** "I don't want it to be miles of restaurants, casinos, turning into a little Branson. That's what we're afraid of" said Tulsa residents Stan and Marva Bair. The long time Tulsa residents want more outdoors things like kayaking, fishing and nature trails. "I don't even like to use the word development because that says to me commercialized. I want the river to be revitalized back to its natural prairie state where we can enjoy it," Marva Bair said.

Here's the cost for each low water dam:

1. Zink: \$35 million
2. South Tulsa/ Jenks \$53 million
3. Sand Springs \$73 million
4. Bixby- an engineer hasn't estimated that cost.

There's a lot of "what ifs" on how to pay for the low water dams. The money must come private donor, state and federal grants, and taxpayers. That means asking Tulsans to pay more sales tax by renewing Vision 2025 and having the Muscogee Creek Nation donate since it's building Margaritaville at River Spirit Casino.

[\(Morning glory spillways are scary!\)](#)

Denver Water upgrading 50-year-old infrastructure at Dillon Dam

coyotegulch.wordpress.com, 7/2/14

Here's the release from Denver Water (Stacy Chesney/Travis Thompson): Beginning July 7, and ending in early 2015, Denver Water will be upgrading Dillon Dam's outlet works facility, which houses the system that controls the flow of water from Dillon Reservoir into the Blue River. The facility's gates are more than 50 years old and need maintenance due to normal wear and tear. The focus of the work is to restore the gates to near original condition. "We don't expect this project to have much of an impact on traffic in the area, or on recreational users of the reservoir and the river," said Jeff Archer, project engineer. "We're working closely with county officials, as well as Colorado Parks and Wildlife. Fishing on the reservoir and the Blue River will remain available during the project."



A Denver Water contractor will carry out the work. The majority of the construction will take place inside the fenced-in area near the Morning Glory spillway toward the Frisco side of the dam road. During construction, the contractor will occasionally be moving heavy equipment — such as cranes, loaders, excavators and trucks — around the dam area. Daily construction traffic should not impact traffic around Dillon Reservoir; however, there may be limited traffic impacts when the contractor transports large equipment at the beginning and end of construction. In order to work on the gates, the contractor will reroute the normal flow of water around the construction in the outlet works using a bypass system that will redirect water into the Blue River while the gates are out of service. While construction activities are slated to begin in July, the bypass system likely will operate from August through December. The flows in the Blue River are expected to correspond

with average flows for that time of year. In addition, a barge with a crane will be placed on the reservoir within the buoy lines near the spillway as part of the bypass system for a week in the fall. The barge will not interfere with normal activities on the reservoir. This \$3.4 million project was previously announced in 2012, but was postponed due to drought conditions, which made the project not feasible because of the bypass system needed to carry out the work.

(Free money gets votes.)

Tester, Walsh help secure funding for Flower Creek Dam project

tester.senate.gov, 7/1/14

(MONTANA) - Senators Jon Tester and John Walsh announced that the city of Libby will be receiving nearly \$8 million in federal assistance to help replace the Flower Creek Dam. The U.S. Department of Agriculture has approved a \$3.2 million loan and a \$4.7 million grant to help pay for the project. "This is a great example of tax dollars being put to their best use," said Tester - who urged the USDA to approve the grant. "The Flower Creek Dam is the only water source for the community of Libby and its rapidly deteriorating. This project is critical to health, safety and economic development in Lincoln County." "The families of Lincoln County can thank the strong leadership and tireless work ethic of their community leaders who addressed this problem head on," said Walsh. "The replacement of the Flower Creek Dam will critically improve the water quality for local residents, bring good-paying jobs to Northwest Montana, and address public safety." These Rural Development funds will enable the city to construct a new dam which will be located 85 feet below the existing dam. The project will serve more than 2,600 residents. Tester and Walsh both met with Lincoln County Commissioners back in June to discuss this project.



Hydro:

(Hydro lasts forever it seems.)

Minnesota Power honors Little Falls as home of hydro plant

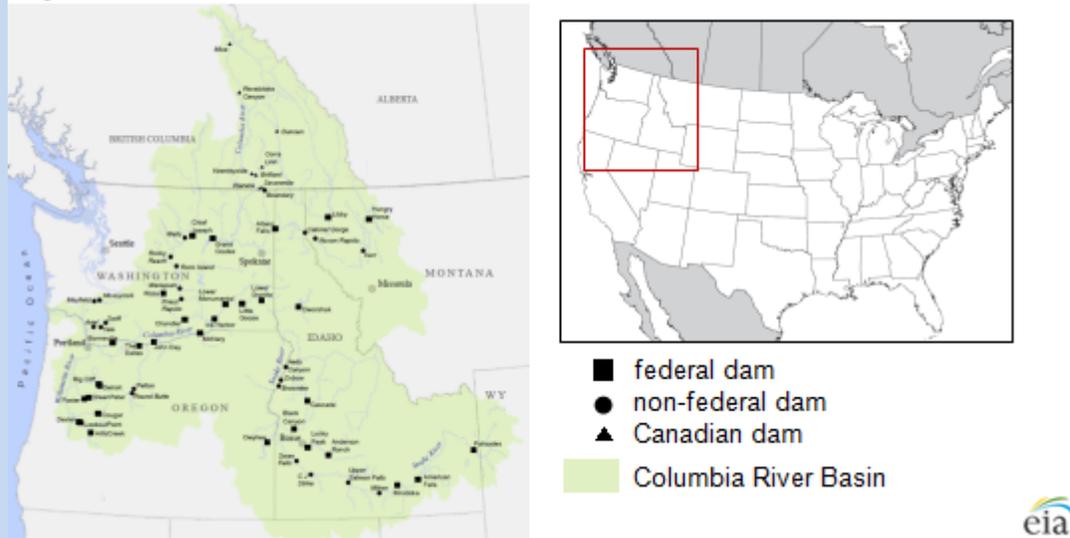
June 27, 2014, mcrecord.com

Minnesota Power honored the city of Little Falls with a medallion during its "Year of the Hometown Hydros." Minnesota Power has been traveling the state honoring the cities where a hydroelectric generation station (hydro plant) is located. Little Falls is one of 11 cities that is home to a hydro plant, with origins dating back to 1849, when the Little Falls Mill and Land Co. was formed to build a dam and a sawmill. The original dam was destroyed by flood in 1860, and the new Little Falls Water Power Co. built a new dam in 1888, and was acquired by Minnesota Power and Light in 1923. The original electric generators were installed in 1906 on the units in Little Falls that continue to generate power. It is the oldest hydro plant in the state. The Little Falls plant is part of the western division hydro which also includes Blanchard, Pillager and Sylvan. The presentation of the medallion was made during the festival that celebrates the dam, the Dam Festival, June 21. Pictured are (from left): Minnesota Power hydro plant manager, Bonny Carlson; Minnesota Power COO Brad Oathes; Little Falls Mayor Cathy VanRisseghem and Little Falls Public Works Director Greg Kimman. The hydro plant uses the Mississippi at the dam to generate electricity for its customers.

(Just how valuable is that?)

The Columbia River Basin provides more than 40% of total U.S. hydroelectric generation

Major dams within the Columbia River Basin



Source: U.S. Energy Information Administration, from [Bonneville Power Administration](#)

Note: [Click to enlarge.](#)

Hydroelectric power plants located in the Columbia River Basin account for a little more than one third of all the hydroelectric capacity in the United States. The Columbia River runs from the Canadian Rockies and flows 1,214 miles through Idaho, Oregon, and Washington, but the river basin also includes parts of Montana, Nevada, Wyoming, and Utah. Hydroelectric power plants located on the river and its tributaries account for 29 gigawatts (GW) of hydroelectric generating capacity and contributed 44% of the total hydroelectric generation in the nation in 2012. The steep gradients of the Columbia River and its tributaries make it ideal for the production of hydroelectric power. The size of these facilities can vary significantly. With a net summer capacity of 6.8 GW, the Grand Coulee Dam, located in Grant County, Washington, is the largest hydroelectric power plant in the United States and the sixth-largest in the world. Other large hydroelectric plants in the basin include the Chief Joseph and John Day plants, both of which are larger than 2 GW. However, the basin also includes many smaller facilities under 100 megawatts (MW).

The Columbia River Basin includes both public and privately owned facilities. Nearly 70% of the capacity of the facilities in the basin are owned and operated by the federal government through the U.S. Army Corps of Engineers and U.S. Department of Interior's Bureau of Reclamation. The electricity generated at these units is transported and marketed by the federal Bonneville Power Administration (BPA). Another 19% of the basin's hydroelectric capacity is owned and operated by municipally owned utilities, including the 1,040-MW Boundary plant owned by the city of Seattle. The remaining 12% of the basin's capacity is owned by private firms. A significant amount of hydroelectric power generated in the Northwest is consumed by California customers. In the late 1960s, BPA constructed two 500-kilovolt transmission lines capable of carrying power from the Pacific Northwest to the Los Angeles area. The Pacific Northwest-Southwest intertie was completed in 1971, giving Los Angeles consumers access to hydroelectric power originating from the Pacific Northwest.

The Canadian province of British Columbia, where the Columbia River forms, is also a major producer of hydroelectricity, which accounted for 92% of all electricity generated in the province in 2012. BC Hydro and Power Authority, a provincial crown corporation (similar to a state-owned utility), operates 31 hydroelectric power facilities, three of which lie along the Columbia River. Of the three dams, only one is designed to produce electric power while the other two were designed to provide water storage for downstream U.S. hydroelectric power production. The Columbia River Treaty (CRT), ratified in 1964 after 20 years of negotiations between the United States and

Canada, led to the construction of the three storage dams in British Columbia. These storage dams capture the spring snow runoff for release later in the year, thereby lessening the seasonal fluctuations from waterflow. The treaty effectively doubled the water storage capability on the Columbia River. The CRT is currently being renegotiated; either party can terminate the treaty as early as 2024 provided they give 10 years' advanced notification. Neither party has signaled any intent to end the treaty, but both have raised financial, energy, and environmental concerns that will warrant discussion as part of any treaty modernization.

Susitna dam a perfect fit for power needs

By Chuck Gray, June 29, 2014, Fairbanks Daily News-Miner Community Perspective, newsminer.com

Fairbanks, Alaska — **If the Susitna hydro project had been built, as it almost was, in the late 1980s, our power bills would be significantly lower than they are now.**

In 1980, the two-dam project would have provided all the power for the Railbelt, but it was doomed by a recession, low oil prices and a lack of foresight in state leadership. Now the project has been resurrected and is moving slowly forward, but faces some of the same apathy that doomed the project 30 years ago. **It is important that we all keep our legislators' feet to the fire, because some of them are getting weak kneed.** They only gave the governor half the money he requested this year to continue the required studies toward federal permitting. Instead of building Susitna in the late 1980s, the state opted for a much smaller project, the Bradley Lake Project in the 1990s near Homer. **This dam produces about 10 percent of the Railbelt's current energy and is Golden Valley Electric Association's lowest cost of energy. It will continue to be so for many years after the state's oil and gas is gone.** Hydroelectric power is a natural for low cost, clean power generation. Wind, for instance, is expensive for several reasons: It doesn't make power when the wind isn't blowing, or if it is blowing too hard, or if the blades are iced up. Wind turbines are expensive to build, have a relatively short life span, and have to be backed up with substitute power. Surplus power cannot be stored.

However, wind is a natural companion to hydro power. When the wind is blowing, the source of hydro, water, can be saved.

Coal is the most viable and immediate source of power for Interior Alaska. But it is under attack by not only the Obama administration but also the whole environmental industry. It will prove to be our best source of additional power until it is completely ruled out and hydro can come online.

GVEA is trying to get the mothballed Healy No. 2 plant online in the next two years.

Hydro, on the other hand, has almost unlimited life. Regardless of the initial expense, power cost will remain constant for a hundred years or more. Rates can come down as initial financing is amortized. And surplus power can be stored. You simply don't use the water when power is not needed. **In most places in Alaska, a hydro project would cause trouble with wild salmon runs. In this case, there really isn't one.** Current studies are confirming there is no substantial salmon run above the dam site. The most recent data, from 2013, shows that 603 king salmon (about 10 percent of the Susitna run) were tagged at Curry in the lower river. Eighteen made it to Devil's Canyon, three made it through the canyon and only one past the proposed dam site. In spite of the tremendous value this project will have for 85 percent of Alaskans residing in the Railbelt area, there will be opposition. Remember the Golden Valley Intertie line built across the Tanana Valley flats 20 years ago? GVEA jumped through all kinds of hoops trying to please some of the locals in order to get the line built. People thought it would spoil the view of the flats and the Alaska Range. One tour company even put money into opposing the project for this reason. Now that it is finished, no one seems to know it is there and we have a backup intertie line suitable for obtaining more power from the Healy No. 2 power plant if it does come online or from sources farther south, like Susitna.

The price tag for the Susitna dam has been pegged at \$5 billion to \$6 billion. That doesn't seem so much when you consider that the state is obligated to its retirement fund for state employees to the tune of more than \$10 billion. No doubt the hydro project will be financed by loans and bonds, running up the cost. The State should fund the project from the Constitutional Reserve Fund, or

part from there and part from the Permanent Fund. That will raise a few eyebrows, but it is reasonable. The money in these funds came from a non-renewable resource (oil), and to reinvest it in a renewable resource (hydro) which has an indefinite life makes perfect sense.

You might ask: Why invest so much money in hydro power if it will only furnish about half the energy for the Railbelt? Consider this. The energy saved by hydro can extend the supply of other energy sources, which can be sold or used elsewhere — for instance, to heat your home. Speaking of good sense, why does an 86-year-old ex-newspaper publisher care about a project that he will never see finished? This is the greatest legacy my generation can leave to future Alaskans. This newspaper supported the project in 1980 and regrettably it came to naught. I hope they will support it again. Here is one more chance to do it right. There will be ups and downs in the economy between now and then. There will be naysayers aplenty when and if a gas line producing lots of low cost fuel comes on line. But all of these things will pass. Hopefully, the Susitna hydroelectric system will eventually be in place churning out electricity at the same rate it did when it was built, while all other sources of fuel steadily increase in cost. As for me, I'm not voting for any legislator who does not actively support the Susitna hydro project. I encourage others to do the same now — and in future elections when I'm not around.

Hydroelectric Power Coming Back To Farmington River

by John Charlton, Reporter, WTIC - Hartford, CT, foxct.com

Canton will bring back hydroelectric power by utilizing the Farmington River. FOX CT's John Charlton has more. Thanks to government approval, the town of Canton can move ahead with a plan to recharge an old way of making power. The Collinsville Dam, as well as another dam nearby, will start generating hydroelectric power again on the Farmington River.

Generation is expected to start within four years after 10 to \$15 million in renovations are done to the dams and their abandoned powerhouses.

Upwards of two megawatts could be produced, able to power upwards of 2,000 homes. The town of Canton, however, plans to direct that electricity back to the grid.

"We'll be selling it into the grid and using it to replace power that we would have had to purchase," Canton's 1st Selectman, Dick Barlow, said. Barlow claimed the money saved for the town could one day give everyone else in town a break on property taxes.



Environment:

(Fix the dam and we won't have to worry about the fish!)

Fish passage modifications at Wanapum Dam working, 23,500 spring Chinook migrated upstream

Columbia Basin Bulletin, June 28, 2014, thedalleschronicle.com

It would appear to be business as usual for spawning salmon, even though Grant Public Utility District and its contractors continue to work to repair and reinforce the damaged 800-foot-long Wanapum Dam spillway on the mid-Columbia River in central Washington.

On Feb. 24, a worker at Wanapum Dam noticed that part of the dam's spillway deck had shifted slightly. When divers were called in to inspect the area on Feb. 27, they discovered a fracture below the water line on Wanapum's spillway pier monolith No. 4. The dam has 12 such piers and

spillways that allow the passing of excess water. The fracture – a two-inch opening -- ran in a horizontal direction across the 65-foot width of the monolith, which raised fears of potential structural failures. To relieve pressure on the pier, the elevation of the reservoir backed up by Wanapum was dropped by 26 feet. While the problem was evaluated and since repairs have begun, the reservoir has been operated at an elevation of from 541 to 545 feet, well below the normal minimum operating level – 562 feet. The dam's federal license calls for operations between 562 and 571.5 feet, according to Grant PUD spokesman Chuck Allen. The drawdown has created a variety of problems. It fouled up operation of fish ladders both at Wanapum and 36 miles upstream at Rock Island Dam just before spring Chinook salmon were expected to arrive. The lowered reservoir level took away the Wanapum fish ladder water supply, so pumps were installed to feed the passage device. And the top of the ladder was reconfigured and a fish "slide" installed to ease what was now a considerable descent into the reservoir upstream. Because of Wanapum's lowered pool elevation, work has been done to extend Rock Island's ladders into the reservoir to assure access for migrating fish. Rock Island is the next dam upstream of Wanapum. The fish ladder renovations were largely complete by mid-April, just in time for the arrival of the first spring fish.

Rock Island is the next dam upstream from Wanapum. Wanapum, and Priest Rapids downstream on the mid-Columbia, are owned by Grant PUD. Rock Island is owned by Chelan County PUD. The fish passage modifications to both of the dam's ladders proved almost immediately to be effective, according to Grant PUD. That allowed the suspension of a stop-gap "trap and haul" operation in May. That plan was in place just in case adequate fish passage was not restored. It aimed to trap fish at Priest Rapids and haul them upstream for release above Wanapum. The spring season went smoothly with more than 23,500 spring Chinook adults having migrated upstream successfully to be counted as they passed over Rock Island's fish ladders. That compares to a 10-year average count of 14,700 adults, according to data compiled by the Fish Passage Center. The overall upriver spring Chinook return to the mouth of Columbia – fish bound for the mid and upper Columbia and the Snake River -- proved to be well above the 10-year average. Since the end of the spring run, the fish slide at Wanapum fish ladder exits has been further enhanced with the installation of spiral flumes that are expected to ease the trip down to the reservoir above the dam. Those modifications were completed last week, just in time for the summer Chinook migration and what are expected to be mammoth sockeye and fall Chinook runs. Federal, state and tribal fisheries experts have predicted that the sockeye return to the mouth of the Columbia will total 347,100 adults. That pre-season forecast is 63,400 Wenatchee stock and 272,500 Okanogan stock that are heading upstream of Wanapum, as well as 1,200 returning to the Snake River. The forecast is nearly twice (178 percent) the 2004-2013 average return of 194,600 fish. Through Thursday, a total of 224,262 sockeye had been counted passing over the lower Columbia's Bonneville Dam. Bonneville is located 146 miles upstream from the mouth of the Columbia. Priest Rapids is at river mile 397.1. A total of 78,415 sockeye had been counted at McNary Dam as of Thursday. The count Thursday alone was 19,847. McNary is 146 miles upstream of Bonneville. The fish must swim another 105 miles to get to Priest Rapids. As of Monday, more than 13,000 sockeye had been counted passing Priest Rapids Dam, according to data posted by the FPC. And still to come is a record fall Chinook run, including nearly 1 million upriver fall chinook bound for the Columbia and Snake. Most of those fish will be forging upriver from August-October. Meanwhile, Wanapum repairs are under way, aiming for a return to normalcy before next summer.

Various types of drilling are ongoing as crews prepare for repairs that can be implemented once they are approved by the Federal Energy Regulatory Commission, which licenses the dam's operations. The drilling work is the most time-intensive phase of the repair process, according to Grant PUD. Holes are being drilled throughout the spillway in anticipation of high strength cables (known as tendons) being installed from the top of the dam into the bedrock below. Repairs will also likely include additional reinforcing anchor bars in the upstream and downstream sides of the spillway. Thousands of pages of technical data outlining repair plans require the FERC approval

prior to being implemented. All repairs will occur over the summer allowing the utility to increase the river elevation in the fourth quarter of 2014. Costs are still on track at the \$61 million estimate. "It won't happen until Oct. 1, and maybe later," Allen said of a return to the minimum operations level, 562 feet. Once the reservoir is lifted to that "intermediate" level, evaluations will be conducted, and work will continue to shore up both Pier 4 and the rest of the spillway piers. Allen says that, unless problems arise, the repair work is expected to be complete by the end of March. That would allow the full range of operations, from 562 to 571.4, by the start of next year's recreation season. "That would be the goal," Allen said. Public use of the river-reservoir is now shut down. Excavation and pile-driving work is near completion on both the Vantage and Frenchman Coulee boat launches. The improved sites will be available to the public by the 2015 Memorial Day weekend. Current low-river conditions have allowed the utility to expedite these projects at a decreased cost to customers, Grant PUD says.

The 38-mile stretch of shoreline from above Wanapum Dam to below Rock Island Dam will continue to be closed as a precaution for public safety and to protect culturally-sensitive sites. The shoreline will remain closed until repairs to Wanapum Dam are in place. While there may be some portions of the shoreline that appear safe, the velocity of water moving through the narrow river channel, and sandy banks creates hazardous conditions for the public. Recreation sites below Wanapum Dam continue to provide recreation opportunities throughout the summer months.

Wanapum Dam remains stable and is operating at approximately 50 percent capacity. The river elevation above the dam has been reduced by approximately 25 feet while repairs occur. For additional information, visit: <http://www.grantpud.org/your-pud/media-room/wanapum-dam-spillway-response>. The Washington Department of Fish and Wildlife has extended the closure of four water access sites along the Columbia River behind Wanapum Dam through Oct. 31, while work continues to repair a fractured spillway. WDFW officials closed the sites and access to the beach in March, after Grant County Public Utility District drew Wanapum Reservoir down. Jim Brown, WDFW regional director for north-central Washington, said the extended closure is necessary to protect public safety, fish habitat, and archeological and cultural resources. "For their own safety, we're asking people to stay off the beaches and any other areas that were under water before the drawdown," Brown said. "Repair work on the spillway is coming along well, and Grant County PUD expects it will be able to raise the water level in a few more months." The closures affect the Yo, Old Vantage Highway, Sunland Estates and Frenchman Coulee water access sites. WDFW also has closed the lower ends of roads that lead into the reservoir at the Colockum and L.T. Murray wildlife areas in Kittitas and Chelan counties, and at the Columbia Basin Wildlife Area in Grant County. The upland portions of the wildlife areas above the ordinary high-water level remain open to the public, Brown said. Closures will be enforced by WDFW law enforcement officers in cooperation with local sheriff's offices, he said. Grant County PUD has also closed 38 miles of shorelines it owns stretching from above Wanapum Dam to below Rock Island Dam in response to the extreme low water level.

(Fish swim upstream)

Group says herrings surging since dams out

seattlepi.com, June 28, 2014

Augusta, Maine (AP) — Environmentalists say the removal of the Edwards Dam in Augusta and Fort Halifax Dam in Winslow has allowed river herring populations to prosper in the Kennebec River. The Edwards Dam was removed July 1, 1999 and the Fort Halifax Dam on July 17, 2008. The Natural Resources Council of Maine says the number of alewives who have reached spawning habitats has surged since then. The group says the number was just over 500,000 in 2008 and it has topped 2 million every year since 2011. The group says the resurgent herring population has also allowed bald eagles to thrive. Maine state officials counted 58 bald eagles on June 6 along a five-mile stretch of the Sebasticook River leading from the Kennebec River to the Benton Falls fish lift.

(Yet, another study)

Snake River Fishery Studied to Measure Effect of Dams

Imtribune.com, June 30, 2014

Snake River Fishery Studied to Measure Effect of Dams 0 comments

Idaho fisheries biologists are conducting a special study on an isolated section of the Snake River to determine the effects two proposed hydroelectric dams might have on fish in the area.

Known as the Mountain Sheep and Pleasant Valley dams, they will be located on the Snake river between Hell's Canyon and the mouth of the Salmon river. The work of the Idaho biologists is part of a two-year project to provide information on the effects the dams might have on fish and wildlife in Oregon and Idaho. Participating in the project are the Idaho Fish and Game Department, Oregon Game Commission, the Oregon Fish Commission and the U.S. Fish and Wildlife Service. Pacific Northwest Power Company, who has made application to the Federal Power Commission for permission to construct the two dams, is providing the funds to carry on the studies. From the findings of the overall project will come recommendations as to what can best be done to protect fish and wildlife interests, should the dams be built.

MIGRATION DATA SOUGHT

Idaho's segment of the study will include finding facts concerning the time of passage of the migratory fish through the area affected by the proposed dams, and gathering information on the resident fish. With this information they can determine the best times and methods to catch migratory fish and pass them over the dams, provided successful passage facilities are devised. The information will also be valuable for planning spawning or transplanting operations, should these be recommended. Forest Hauck, fisheries research supervisor at the Idaho Fish and Game Department, is in charge of the Idaho operation. Hauck said the studies so far have determined that there is a good population of resident fish in this stretch of the river, including channel catfish, small-mouth bass and sturgeon. "The high summer temperatures of the water in this stretch of the river probably accounts for the apparent lack of trout, other than the migratory steelhead," Hauck said. He said that few fishermen visit the area, due to its relative inaccessibility. Hauck said trapping and tagging operations were begun in October, 1955, but it has just been during the last few weeks that steelhead have been taken in large numbers. The biologists expect the spring run of chinook salmon to reach the trapping site in early May.

Winter Movement Slow

The first steelhead tagged in this area and caught by a fisherman was taken from the Powder River in Oregon. It had traveled only 90 miles in 115 days. A steelhead tagged October 13 was recaptured March 19 in a trap only two miles upstream. "This demonstrates the slow migration rate of steelhead during the winter months," Hauck said. "During the spring run just prior to spawning, steelhead average about 20 miles per day." Hauck asked fishermen catching tagged fish to send the tag and information on where it was caught to the Fish and Game Department, 518 Front Street, Boise. "The success of our tagging operations depends upon return of the tags," he said. "We will be glad to send information to the fisherman about the migration and history of his tagged fish."



Other Stuff:

(One sock doesn't fit everyone!)

Guest: Obama's regulatory cap-and-trade does not work for Washington state

Washington state would be penalized under the EPA's proposed rules to cut carbon-dioxide emissions, writes guest columnist Cathy McMorris Rodgers.

By Cathy McMorris Rodgers, Special to The Times, July 2, 2014, seattletimes.com

Washington state is one of the cleanest, greenest states in the country, and its use of renewable energy is a source of great pride.

But drastic energy regulations could cause Washington families to see higher energy bills. And those higher bills, coupled with a weakened economy, would hurt moms and dads already struggling to make ends meet.

The Environmental Protection Agency (EPA) recently announced proposals that would require Washington state to cut its carbon emissions by a staggering 72 percent — a rate higher than anywhere else in the nation.

While coal makes up just over 3 percent of the state's energy production, the stringent methodology behind the EPA's calculations treats Washington as a top emitter. The

state's residents are being penalized, even

though Washington is leading the way when it comes to clean energy. It just doesn't add up. In considering national carbon emissions, the EPA proposal disregards the great strides states like Washington have made to increase renewable energy. In fact, the majority of Washington state's power comes from renewable sources — 70 percent of electricity needs are met by clean, renewable hydropower. But still, these one-size-fits-all regulations hit Washington state families the hardest.



Roughly 70 percent of the state's CO2 emissions from power plants come from the TransAlta coal plant in Centralia. It must stop burning coal in 2025 under state legislation.

Inexpensive, renewable hydropower is a competitive advantage that draws jobs to Washington state and helps expand opportunities for everyone here. Yet, when the EPA calculates renewable energy levels, it does not include hydropower in its baseline calculations, overlooking one of the cleanest and most abundant energy sources available. Hydropower is the nation's leading renewable resource, and the EPA should fully acknowledge this. The EPA has encouraged states to meet its goals by increasing renewable energy production. Washington state has already done that. It is counterintuitive that Washington state, which has one of the largest renewable energy portfolios, is hardest hit by the EPA's regulations. Ultimately, these are redundant policies that disregard the innovation being developed today. Instead, the U.S. should be looking to the horizon to expand cleaner energy opportunities. That's why I introduced the Hydropower Regulatory Efficiency Act, which was signed into law last August. This law streamlines the permitting process for small hydropower projects perhaps in streams or irrigation canals by cutting red tape so this affordable energy supply can more quickly power communities. The time is now to encourage these innovative approaches to energy generation and look to the future for new opportunities — not push policies that would crush the state's workforce, make life harder for hardworking families or reduce the state's competitive advantage. There are alternative approaches to take, and I am committed to working with my colleagues on and off the House Energy and Commerce Committee to pull back these regulations that disproportionately impact our state. As one in four people continues to struggle with long-term unemployment, our country must make every effort to pursue innovative energy opportunities that are pro-job and will continue spurring America's energy renaissance — a renaissance that will strengthen the economy for the future and leave a stronger America for our children and grandchildren.

U.S. Rep. Cathy McMorris Rodgers, R-Spokane, represents Washington's 5th Congressional District.



