Some Dam – Hydro News and Other Stuff

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8/07/2009

Quote of Note: "This country has come to feel the same when Congress is in session as when the baby gets hold of a hammer." - - Will Rogers

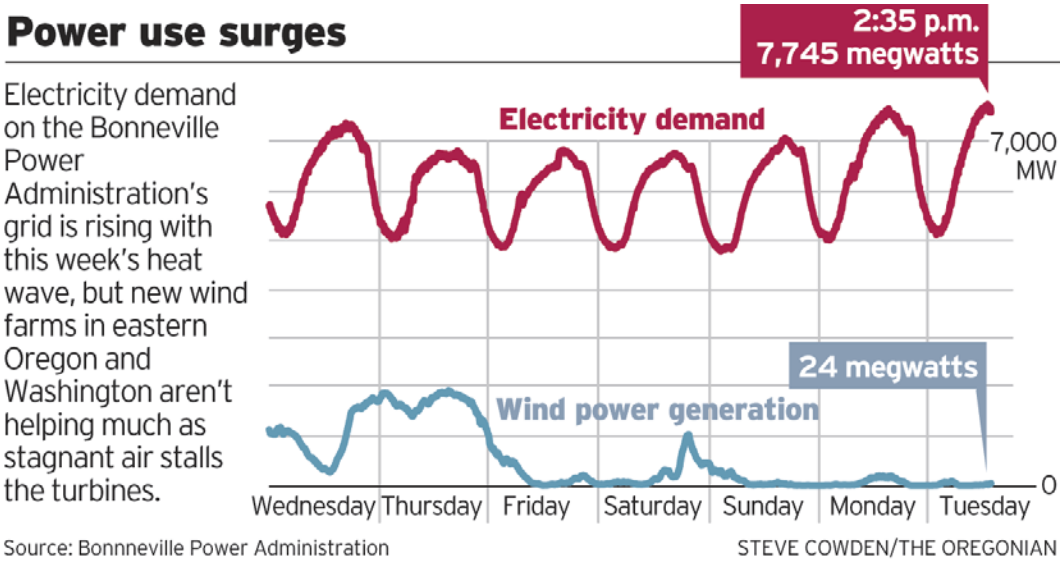
"Good wine is a necessity of life." - -Thomas Jefferson

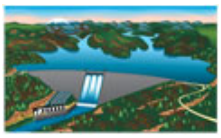
Ron's wine pick of the week: **Concha Y Toro Casillero del Diablo Reserva Privada Cabernet-Syrah 2006 (Chile)**

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

Other Stuff:

(This says it all for wind energy. It truly is "junk" energy. What good is an energy supply when it fails when you most need it? Imagine, 2000 MW to 24 MW in the middle of a heat wave when temperature reached 106 degrees. Good thing Northwest hydro kept churning along. And, they want to remove 4 dams that produce dependable hydropower and replace it with wind power! Someone needs to rethink the power supply strategy in this Country.)





Dams

Test result triggers safety inspection of Warm Springs Dam

By BOB NORBERG THE PRESS DEMOCRAT, July 28, 2009

A team of experts called in by the U.S. Army Corps of Engineers began inspecting Warm Springs Dam Tuesday after a monitoring well showed an unusual increase in the water level at its base. The water level in one of a series of testing wells penetrating the earthen dam rose 14 feet in a week, the Corps said Tuesday. It is located near the base of the dam, about 700 feet from the top. Corps officials stressed that no other monitoring device — there are 194 of them — showed anything unusual and a chemical analysis showed the water came from groundwater, not water from the lake. The investigation is being done as a precaution, said Lt. Col. Laurence Farrell, an engineer and district commander. "There is no concern, the dam is safe, there is no indication of seepage," Farrell said. Excessive water in earthen dams has the potential to weaken the structures, but engineers said there is no excessive water in Warm Springs Dam.

"We are looking at dozens of other instruments and they are reading as they have," said Mike Dillabough, the Corps division chief of operations. "We are setting up sloped stakes and checking it to make sure there are no other changes to the dam face. There has been no change." The monitoring well that showed the increase on July 21 is a one-inch diameter pipe that goes 60 feet into the dam about 700 feet downhill from the top. It was one of five monitoring wells and nine piezometers, which record the pressure of the dam's core, that were installed between November and January. Another monitoring well that is 100 feet away shows no unusual readings, officials said. Among the possibilities, they said, is that the well has tapped into groundwater or a spring. "Right now we are going through the process of elimination, our dam safety officers are read in on it, we have a dozen dam safety engineers working on it trying to figure out what it means. But there is no indication it is a danger," Dillabough said. "We want to make sure it does not lead to that." Farrell said it might just be the discovery of a natural fluctuation in the groundwater at that well site or an underground stream or a spring. A dozen engineers will be studying the dam, testing water quality, checking the dam for any signs of movement or seepage and looking at all of the monitoring gauges and running computer models of water flow. "We'd like to know what it caused it," Farrell said. "It is not a concern for safety, it's an item of interest." The dam's last annual inspection was in September, and no problems were reported except for minor rust on some control valves and minor rodent damage and erosion on the dam face, officials said at that time.

Warm Springs Dam was completed 25 years ago at a cost of $330 million, creating Lake Sonoma as a source of water and recreation and as a flood-control project, taking 5 to 8 feet off flood levels as measured on the Russian River at Guerneville. The water from Lake Sonoma is released into Dry Creek, which flows into Russian River near Healdsburg. The compacted earthen dam, made with 30 million yards of dirt and rock scraped from surrounding hillsides, is 3,000 feet wide and 319 feet tall. The dam created a lake that when filled covers 3,600 acres and has a 73-mile shoreline. Its Dry Creek arm is nine miles long and its Warm Springs arm four miles. It holds a water supply of 212,000 acre-feet and a flood pool of 130,000 acre-feet. The Sonoma County Water Agency on Tuesday alerted the county's Office of Emergency Services, other emergency service providers, property owners' groups along Dry Creek, and local, state and federal official, said spokesman Brad Sherwood. "At this point we just want more information and find out what the research will tell us," Sherwood said. "Public safety is our priority and we want to make sure the dam is functioning and operating as it should." Sherwood said the agency will have daily updates on its Internet site.

(Not good)

Report blames spill on TVA decisions

By Scott Barker, July 28, 2009, knoxvillebiz.com

KNOXVILLE, TN - The Tennessee Valley Authority ignored long-standing safety concerns and could have prevented the Kingston fly ash spill by addressing them, the TVA inspector general wrote in a damning report issued today. The utility's independent watchdog found TVA management has not accepted responsibility for management decisions leading to the catastrophe. Instead, the report found, they limited the scope of an investigation into the cause of the disaster in an apparent effort to shore up its legal defense in lawsuits. The utility's actions, the report concluded, were fueled by a culture resistant to change that looked at ash as insignificant. And, he warned, it could happen at other power plants if TVA doesn't take action.

The report issued by Inspector General Richard W. Moore is the most comprehensive review to date of the spill, which dumped 5.4 million cubic yards of fly ash sludge into the Emory River and surrounding countryside on Dec. 22. No one died, but 26 houses were destroyed or damaged, and the tab for the cleanup could approach $1 billion. Moore and TVA Chief Executive Officer Tom Kilgore testified on the report and the environmental cleanup before the House Subcommittee on Water Resources and Environment this morning. Kilgore told members of the subcommittee, which oversees TVA, that the utility might have to clean house in light of the spill and its aftermath. "We have to change," Kilgore said. "If that means heads have to roll, if people have to leave, so be it." Moore hired the engineering firm Marshall Miller and Associates of Bluefield, Va., to assist in the investigation, and his conclusions are based on their review of documents and facilities, plus his interviews with key TVA personnel. Moore found TVA could have prevented the spill if the utility had corrected problems raised by internal engineers and consultants beginning as early as 1985. That year, TVA's director of engineering projects noted in a memorandum that Dike C - basically an earthen dam that held back the sludge and the facility's dredge cells - wasn't built to design specifications and had a calculated safety factor below acceptable levels. It was the rupture of Dike C that let loose the flood of toxin-laden sludge. A pair of contractors' reports, issued in 2004 after TVA temporarily closed the facility because of a blowout in one of the dredge cells, also should have raised red flags, Moore wrote. One, by Geosyntec, "should have served as a clear warning to TVA regarding the stability of the Kingston ash storage facilities," Moore wrote. TVA didn't follow Geosyntec's recommendations to conduct more studies on the stability of the pond and install improvements to the facility. Moore wrote that Kilgore "was unable to ascertain why" TVA didn't make the improvements. "Had corrective measures been taken in a timely fashion, it is possible that TVA could have potentially prevented to occurrence of the failure," the report stated. One TVA engineer told investigators that "TVA had a cheap solution to ash storage by stacking higher so that is what they did."

(There goes one of the best aerial views of a dam in the world – Hoover Dam Bypass Bridge)

Courtesy Federal Highway Administration - A computer rendering of the completed bridge against the Hoover Dam. Las Vega Sun, Aug.2, 2009

(This is not going to happen. They are also wrong about not having to consult Canada. There is a treaty beyween the two countries that says differently.)

U.S. Dam Threatens to Flood B.C. Valley

Reservoir would inundate endangered ecosystems, First Nations reserve lands

By Joan Delaney, Epoch Times Staff, Jul 30, 2009

A Washington State dam proposal that was first considered back in the 1920s and is now coming to fruition could have serious consequences for a British Columbia valley. The Okanogan County Public Utility District (PUD) is proposing to build a major dam on the Similkameen River just south of the border that would flood a large area of B.C.'s ecologically rich Similkameen Valley. In addition to providing a nominal amount of power, the Shanker's Bend Hydroelectric Project would supply water for municipal and agricultural use in Washington State and provide an important source of cool water for downstream fish during the summer months. But in Canada, the 7,300-hecatre reservoir would inundate more than 9,000 acres of the Similkameen Valley, drowning a delicate ecosystem that includes dozens of B.C.'s endangered species, important sloughs, unique grasslands, a potential national park, and First Nations reserve land and cultural sites. The valley is also a wine-producing area and is known as the organic farming capital of Canada. "It is massive destruction of critical habitat for endangered species in Canada," says Chloe O'Loughlin, executive director of the Canadian Parks and Wilderness Society's (CPAWS) B.C. chapter. "[The area] is already threatened by suburban development and vineyards just cropping up everywhere, and now all of a sudden the U.S. is proposing to flood some of the lush valley bottoms." Both CPAWS, which has been working to raise awareness of the project and rally support against it, and Okanagan Nation Alliance (ONA) have been granted legal status as intervenors to block the dam. ONA is a tribal council representing seven Okanagan native bands.

The PUD proposal consists of three options: an 80-metre dam at a cost of $260 million, a smaller 27-metre dam that would not flood the Canadian side but would cut off important north-south migration routes, or a run-of-river project. While the PUD is focusing on the high dam alternative, O'Loughlin says all three options would have a negative impact in B.C. "The First Nations there are a trans-border First Nations, so they have many coyote sites and sacred sites south of the border as well as in Canada. So all three options are unacceptable to the First Nations and all three options are unacceptable to us." B.C. Environment Minister Barry Penner also applied for intervenor status but his application was dismissed because it was received too late. In a six-page letter to U.S. regulators, Penner, who has visited the proposed dam site, said the Province is opposed to the high dam "because of the anticipated environmental and community impacts in British Columbia." The high dam proposal, wrote Penner, would flood "Indian lands that may be subject to aboriginal rights and title, high quality agricultural land, parks and protected areas, and impact communities and endangered and at-risk flora and fauna. The low dam could have similar impacts in years of high water." Another concern, says O'Loughlin, is that such a large reservoir would have the effect of changing the microclimate, resulting in a "major impact" on the farms in the region. "It changes the climate when you put in a really large cold lake that wasn't there before." Both the PUD and CPAWS participated in a public presentation in Kelowna in March, at which representatives from the utility mentioned the benefits of a dam at Shanker's Bend—none of which apply to Canada, says O'Loughlin. "I actually couldn't believe that they did this presentation in Canada, because they listed the benefits and not one of them is a benefit to Canada." A call to the PUD requesting comment was not returned.

With Washington State having experienced prolonged dry spells in recent years, water has become an important issue politically and funding was given to public utility districts to put toward dams where viable. According to news reports, Washington State Governor Chris Gregoire responded to critics of new dam projects by saying, "If not there, where? We need to store more water in Eastern Washington." And although the Canadian Okanagan is thriving, the same valley across the border is more remote with a sparse population. While Ottawa has said it is monitoring the situation, Alex Atamanenko, New Democrat MP for the B.C. Southern Interior, has written to federal Environment Minister Jim Prentice urging him to notify his counterpart in Washington DC "and all those concerned that Canada unequivocally opposes the project."

Atamanenko says he has met with chiefs of some of the local bands as well as the Mayor of Keremeos and representatives of the regional district, and “everybody is on board.” “We’re watching this very closely. Nobody wants to see Canada flooded,” he says, adding that his office is working on “how to move forward on this to keep that profile high.” The PUD has expanded its feasibility study, which has a two-year timeline, to involve the U.S. Federal Energy Regulatory Commission (FERC). This doesn’t bode well for the Similkameen Valley, as feasibility studies can cost in the millions, says Atamanenko. “They’re spending money, so they’re serious, so we have to ensure that this project doesn’t take place.” O’Loughlin explains that because this is “an American Public Utility District going through an American process—the FERC permitting process,” the utility is under no obligation to consult Canada until they’ve actually been licensed to build the dam. Once they have the license, having by then invested a lot of time and money, the PUD would next go to the International Joint Commission, by which time “the Americans have got all the ammunition they need—they’re totally invested in it and they’re not going to back down.” This is why it’s critical that the project is stopped before it gets to that stage, she says. “It’s really, really important that there’s major public pressure to stop this dam before it gets into this kind of legal process. We need to put major, major, public pressure on to say it’s completely unacceptable. This is not a place to build a dam.”

Hydro

License extension for Mel Price hydroelectric project passes House

July 27, 2009, For The Telegraph.com

WASHINGTON - U.S. Rep. Jerry Costello, D-Belleville, announced Monday that the U.S. House of Representatives recently passed House Resolution 2938, legislation he introduced to extend a Federal Energy Regulation Commission license for a hydroelectric project at the Melvin Price Locks and Dam in Alton. MO. Brookfield Renewable Power obtained the license in 2007 and has been working actively to develop the project - a $400 million to $450 million investment that it says will create 125 construction jobs. The extension, if passed by the U.S. Senate, would allow the company up to an additional six years to bring it online. "This project will have positive impacts on our region in terms of jobs and developing a renewable source of energy," Costello said. "I appreciate the efforts of the Democratic leadership in working with me to get this bill considered by the full House and Brookfield's efforts to bring the project to fruition. It makes sense to provide every opportunity to make a project of this type at Melvin Price successful." The project has a long history in the area. An earlier 50-year license was awarded by FERC in 1987 to the Missouri Joint Electric Utility Commission, then transferred to the city of Alton in 1990 and later terminated after available extensions to begin construction were exhausted. The current license was granted in June 2005 and had been extended the maximum possible length by FERC. HR 2938 would grant FERC the authority to renew the construction license for the Melvin Price Locks and Dam for three additional two-year periods. Further, if the license expires before this legislation is enacted, FERC has the authority to reinstate the license on the date that it expired.

House committee bottles up Alcoa bill

SalisburyPost.com, July 29, 2009, Staff report

The N.C. House Water Resources and Infrastructure Committee voted 8-6 Tuesday against Senate Bill 967, which would establish a Yadkin River Trust and wrest control of the Yadkin Hydroelectric Project from Alcoa Power Generating Inc. "We applaud the committee for standing up for private property rights and voting against an unprecedented government takeover that could have cost North Carolina $500 million or more," Gene Ellis, a spokesperson for Alcoa, said in a statement following the committee meeting in Raleigh. "We remain eager for a new license and look forward to implementing the many positive benefits included in the Relicensing Settlement Agreement." Against opposition from many legislators, local officials and Gov. Bev Perdue, Alcoa has been trying to renew its federal license to operate the Yadkin Project. The hydroelectric project takes in a 38-mile stretch of the river and includes the dams, power-generating facilities and four reservoirs, including High Rock Lake. Federal Energy Regulatory Commission staff members have already recommended issuing a new long-term license to Alcoa, but its receipt of a state water quality certificate has been appealed and blocked for now, while strong sentiment has surfaced in the Legislature for the Yadkin

River Trust concept. Larry Jones, president of the High Rock Lake Association, addressed the House committee in support of Alcoa Tuesday. "We are gratified that the House took the time to carefully consider this legislation and weigh the pros and cons," Jones said. "Once they did that, they voted their conscience."

(I used to hand out at conferences and every other chance I had a blue ballpoint pen with the saying - "Hydro Is Beautiful!". This piece of history proves that saying true. 100 years and it keeps on ticking.)

100 years and still going

By Andy Steinke, Dells Events, capitalnewspapers.com, wiscnews.com

For 100 years the Kilbourn Dam has been a fixture of Wisconsin Dells, providing South Central Wisconsin with renewable energy. Alliant Energy Chairman, President and CEO Bill Harvey held an invitation-only gathering at the dam celebrating its 100 years of continuous service, Wednesday morning, which had been declared Kilbourn Dam 100th Anniversary Celebration Day by Gov. Jim Doyle. The dam dates back to 1906 when Magnus Swenson formed the Southern Wisconsin Power Company and hired Bates and Rogers Construction of Chicago to build a 350-foot long by 55-foot high dam in Kilbourn. In 1909, the dam, built on the Wisconsin River, was finished, and according to author Richard Durbin cost about $2.4 million — or roughly $55 million in present-day dollars. It went online sometime during the first week of August. The dam has changed hands twice since 1909, but has been owned by Wisconsin Power and Light, an Alliant Energy company, since 1917. "We can very honestly label (the dam) as the Midwest's first green facility," Harvey said during a speech. "It was green long before green was fashionable."

When completed, the Kilbourn Dam was also the largest dam west of Niagara Falls. "This little, reliable 100-year-old facility, at the time it was commissioned, was a modern engineering marvel," Harvey said. The dam was built with three generators, later adding a fourth, and can produce 10 megawatts of electricity at full capacity. That much electricity could power about 10,000 homes, which was incredible in 1909, but now is less than a blip on the radar. Many people viewed the dam in a negative light when it was built, Harvey said, because there wasn't much demand for electricity in the early 1900s. The low demand combined with construction costs forced Swenson to sell the dam in 1916. Dam Hydromanager Scott Wilson said one of the reasons the dam was originally built was actually to power street cars in Milwaukee. It also provided power for Madison Gas and Electric. The Kilbourn Dam was among the first electricity generating stations Wisconsin Power and Light purchased, Harvey said, and helped form the company in its primitive years. "Without the Kilbourn Dam, Wisconsin Power and Light might never have existed, or would have come into existence much later," Harvey said. He argued that the dam helped form the Dells, too. "This dam stabilized water flow in the river and increased water depth here," he said, "which helped boats get to the Upper Dells. This dam helped make Wisconsin Dells what it is today." The dam may be 100 years old, but Wilson sees that as a positive rather than a negative. "I like to think of it as we are running antiques," he said. "How many 100-year-old things are still being used?" The dam has been improved over the years, Wilson said, with spillway resurfacing and pier replacements, but it is essentially the same as it was when it was built. Sam Thundercloud, a Dells-area native and technician at the plant for 34 years, is the longest tenure employee at the dam. After 100 years, Thundercloud said the dam has its quirks. Generator No. 1 has been rewound during his career and generator No. 2 currently needs fixing. "Each machine has its own personality," he said. "They are moody." But that doesn't mean they are outdated. "We had really good people here before us to keep it running this long," he said. The power the dam generates goes to the grid for use, Wilson said, but its production pales in comparison to other plants. "When we go online," Thundercloud said, "they (operators in Madison) say the meter doesn't even move." The nearby Columbia Energy Center in Portage, by comparison, produces 1,000 megawatts of power. Following his speech, Harvey presented the employees of the dam with a plaque commemorating the dam's 100 years of service. "This is a wonderful opportunity," he said, "to celebrate a true piece of history."

For more information
"The Kilbourn Dam: A tale of hopes, dreams and schemes," a book written by retired UW professor Richard Durbin, is available at the H.H. Bennett Studio or by calling 253-6658. The book costs $25, and all proceeds go to the Stewards of the Dells of the Wisconsin River. Open house with displays and photographs of the dam construction will be hosted by the Dells Country Historical Society, Thursday, Aug. 13, at the Kilbourn Public Library/Community Center from 7 to 9 p.m.

Hydro Projects Hold Much Promise

By Bert Caldwell, The Spokesman-Review, Spokane, Wash.

Aug. 2--Wherever fresh or salt water flows, there is power to be harnessed, and last week there were 2,000 harness makers in town anxious to throw cold water on the idea that hydroelectricity is the renewable energy of the past. Waterpower XVI, the National Hydropower Association's annual convention, attracted attendees from 40 countries to its seminars, meetings and technical tours, including "SOLD OUT" trips to Grand Coulee Dam and Avista Utilities' Long Lake Project. Hope the buses were air-conditioned. Exhibitors filled the Convention Hall with pipes, valves, turbine blades and other hardware and software. And almost in the middle was a map hydropower advocates say illustrates the enormous, untapped resource at flood-control and navigation dams in the United States that were never fitted out for electricity generation. Of the nation's 79,000 dams, only 3 percent produce electricity, said association President Andrew Munro, who also is a spokesman for the Grant County Public Utility District. Even if environmentally sensitive sites are ruled out, as well as those more than one mile from a road or transmission line, as much as 200,000 megawatts of potential generation remains, he said. That's double the output of existing dams. Munro says hydropower output has been flat-lined for years. That's going to change, he says, and more consideration from the federal government would help.

Last year's energy bill, for example, qualified hydropower for the production tax credits that spurred development of wind and solar power. But hydro gets 1 cent per kilowatt, not wind and solar's 2 cents. Although the economic stimulus package extended the credits two years to 2013, that is not far enough out for utilities considering the big capital expenditures dam or generator upgrades require, Munro adds. Like pump storage development, which in the Northwest could turn nighttime winds into daytime power by using the electricity to pump water into reservoirs. When demand for electricity peaks during the day, the water could be released to enhance hydrogeneration. Energy Secretary Steven Chu is a big fan, and Munro says the Bonneville Power Administration will hold a meeting this month to start looking at the opportunities for pump storage in the region. Meanwhile, Avista and Grant County PUD are adding megawatts to their systems just by upgrading the dams they already have. At the PUD's Wanapum project, the new turbines are being built by Voith Hydro, which is based in York, Penn. Voith President E. Mark Garner says that work and new turbines for Ohio River projects have allowed the company to boost employment 27 percent in one year, to more than 550. He says the industry has commissioned a study that should show just how many new jobs might be created by more aggressive national support for hydropower. New hydro is getting support from an unlikely source, American Rivers, the environmental organization better known for supporting dam removal. John Seebach, director of the organization's hydro reform initiative, says American Rivers and the association have come to a common understanding on what kinds of new developments are appropriate. He notes, too, that the group supported extending tax credits to hydro projects. "It comes down to responsible siting, responsible operations," Seebach says. We can all raise a glass of cold water to that.

(Misleading title for article – seems Canada is building the projects, including wind power, and NY is importing the power)

N.Y., Canada Plan Massive Hydropower Project

Chateaugay, New York - August 3, 2009, *WCAX News*

New York and Canadian authorities are planning a new large-scale international hydropower project. The New York Power Authority would import up to 2,000 megawatts of power from multiple sources, including hydropower from Canada. That means wind farms could have a market for the power they produce. NYPA says the project would cost between $4-and$6 billion and would be phased in over a six-to-eight year period. The power authority says it would be the biggest energy project in the state in more than 50 years.

MMS / FERC Guidance on Regulation of Hydrokinetic Energy Projects on the OCS

FERC, 4 Aug 2009

FERC, Department of the Interior issue guidance document on Outer Continental Shelf hydrokinetics development

http://www.ferc.gov/industries/hydropower/indus-act/hydrokinetics/pdf/mms080309.pdf

http://www.ferc.gov/industries/hydropower/indus-act/hydrokinetics/pdf/mms080309.pdf

(Everyone will now have an opinion on this one – the question is how will it be settled? Water for human consumption should be the priority!)

Poor urban planning to blame for water dispute

OUR OPINION: Ruling favors Florida's water rights, calls for planning

Editorial, Miami Herald, 07.23.09

An important court ruling on water resources may end a nearly 20-year fight between Florida, Georgia and Alabama. The gist of the decision, by U.S. District Court Judge Paul A. Magnuson, favors Florida's claim to the water and also offers words of wisdom to government decision-makers throughout the rapidly growing Southeastern United States. The fight centers around the federally built Buford Dam, which fills Lake Lanier in the Atlanta area from the Chattahoochee River. The dam limited water flowing to the Apalachicola-Chattahoochee-Flint rivers basin, which wasn't a major problem until fast-growing Atlanta asked the U.S. Army Corps of Engineers to allow it to take water from the lake for its drinking supply. The Corps agreed to Atlanta's request, even though the dam project was built for flood control, navigation and hydropower, not for human consumption of its water. Florida and Alabama soon felt the effects of the loss of volume. Less water meant less hydropower and serious damage to Florida's oyster, mussel and shrimp beds. By now the battle between the states over who controls the water has been going on for almost two decades, and no mediation effort ever managed to break the stalemate. So Judge Magnuson's decision, which faults the Corps for overreaching its authority in granting Atlanta's request, is most welcome. The judge agreed with Florida's and Alabama's argument that the Corps should have asked Congress for approval before giving Atlanta drinking-water rights. His decision last week gives Georgia three years to negotiate with its two neighbors over how much, if any, water it should take -- or else seek congressional approval of a plan to use water from the reservoir.

The real culprit in this water war? Poor urban planning. Wrote Judge Magnuson: ``Too often, state, local and even national government actors do not consider the long-term consequences of their decisions. Local governments allow unchecked growth because it creates tax revenues, but these same governments do not sufficiently plan for the resources such unchecked growth will require.'' Atlanta's leaders are not the only ones at fault. The judge was speaking a powerful truth to almost every city and county commissioner in Florida. The challenge for these officials is to take the judge's warnings to heart and start transforming their communities into sustainable metropolitan areas that conserve, rather than squander, natural resources like water.

Environment

(A betting person would probably bet on Duke losing this one even if the facts are on their side)

Sturgeon habitat divides scientists and Duke Energy

By Sammy Fretwell - McClatchy Newspapers, Jul. 26, 2009

COLUMBIA -- Before power companies built dams nearly a century ago, a bony fish with a menacing scowl thrived in the Wateree River near Camden. The shortnose sturgeon would swim from the ocean, where it grew up, to the rocky shoals of the Wateree, where it would spawn. Today, the shortnose sturgeon is struggling to survive - and its future in the Carolinas may depend on the two-state region's largest power company. The federal government is trying to decide how much water Duke Energy should begin releasing through its dams to raise river levels for shortnose sturgeon. The federally protected fish, an endangered species that resembles a prehistoric animal, has suffered because hydropower dams diverted water from rivers the sturgeon once used for spawning. For that reason, two environmental groups are pushing Duke to release enough water through its Lake Wateree dam north of Camden to help the sturgeon during the winter and spring spawning season. But Duke says raising the Wateree River to the levels environmentalists want - just to help a fish - could restrict other water uses upstream. Releasing too much water could cause a corresponding drop in water levels above the Wateree, making it harder for utilities to provide drinking water and Duke to supply power, the company says. "It's an issue of balance," Duke spokesman Jason Walls said. "The more water you release, the less ability you have to manage water levels" upstream. Company officials note that they have for the first time agreed to keep a constant flow in the Wateree River below the dam - just not as much as environmentalists want, officials say.

The dispute between Duke and conservation groups has erupted as part of a company request for a new federal license to continue operating 11 dams along the Catawba and Wateree rivers in the Carolinas. Duke scored a victory Thursday when the Federal Energy Regulatory Commission's staff issued a report that does not call for the higher flows environmentalists are seeking for the shortnose sturgeon. The findings in the environmental report, however, do not end the dispute. The final environmental impact statement will be weighed by the full commission when it decides whether to issue the license. The license could still require higher water levels for sturgeon. Meanwhile, the state Department of Health and Environmental Control has denied a key permit Duke must have before the commission can approve the new license. American Rivers and the S.C. Coastal Conservation League say protecting sturgeon is a key part of their argument against issuing the permit. Duke is expected to appeal the DHEC board's July 9 decision. Duke's struggle with conservation groups was expected. Since the new license to run dams on the Catawba-Wateree river system will be good for up to 50 years, interest groups have lined up to seek changes in the way Duke operates those dams. Other issues that have been discussed are raising river levels for white-water rafting and ensuring drinking water needs can be met. "Humankind - we are the ones who put the dams in the river that led to the decline of this species," said Matt Rice, an associate regional director with the environmental group American Rivers. "So I think, at the very least, it is our duty to restore" the sturgeon. Duke officials, meanwhile, say they have little evidence that shortnose sturgeon still live in the Wateree River. Why, the company asks, should it improve a spawning habitat if there are no fish to spawn? "That's a lot of water for a fish that is not there," the company's Mark Oakley told a state regulatory board recently.

Shortnose sturgeon are found in moderate to small numbers along most of the Atlantic Seaboard, from northern Florida to southern Canada. In addition to the impact of dams on sturgeon populations, the fish also are believed to have declined because of pollution and overfishing. These fish thrive on organisms that live at the bottom of rivers and estuaries. But they like to spawn in rocky areas of freshwater rivers for a simple reason: Stones and pebbles give eggs and newly hatched sturgeon shelter from predators, federal biologist Prescott Brownell said. Brownell, who's with the National Marine Fisheries Service in Charleston, said there haven't been enough studies to conclude that sturgeon don't exist in the Wateree River. But even if they don't live there now, the fish are likely to return if the habitat is suitable, he said. And they will stay there if river levels are kept higher, he said. Brownell said he thinks something will be worked out eventually with Duke, but the question is when. Ideally, sturgeon need anywhere from two feet to 12 feet of water to spawn, Brownell said. He noted that the company already has made some concessions. As part of Duke's request for a new federal license, it has agreed to keep a constant minimum flow in the Catawba and Wateree rivers below dams at Lake Wylie and Lake Wateree - a guarantee it does not now provide. Brownell and conservation groups say that's a major improvement, but it isn't the optimum needed by sturgeon. Duke spokesman Walls noted that 70 government agencies and interest groups have signed off on the company's plan to maintain a minimum river level in parts of the Catawba basin. Among those backing Duke is the S.C. Department of Natural Resources. The power company paid the DNR $1 million and agreed to provide the agency more than five miles of Catawba River frontage to offset the river flows being challenged by conservation groups, records show. DNR officials say the river levels Duke proposed are the right ones to

support a range of uses and fish. Fish that could suffer from higher river levels include the red breast, juvenile white perch and juvenile white bass, said Dick Christie, an agency biologist. "Until we know for sure that shortnose sturgeon will reap some benefits, we do not believe enhancing spawning habitat for the sturgeon in the Wateree River at the expense of resident species is in the best interest of the resource," Christie told the state Department of Health and Environmental Control board earlier this month. Conservationists don't buy his argument. Before dams were built, many species thrived in the Wateree River. So increasing river levels to better represent the natural river shouldn't hurt native species, they argue.

(Ouch – that's gotta hurt. Science!)

Trout take a leap off dam

Data will be used to help steelhead, Chinook

BY BETH CASPER • STATESMAN JOURNAL, July 30, 2009

A rainbow trout's six-second trip over the 463-foot high Detroit Dam is helping scientists learn how salmon will fare on their journey to sea. For two weeks in July, almost 2,000 rainbow trout were tagged with a radio sensor and two deflated balloons. One at a time, the fish were sent down a tube directing them through the spillway, a gate at the top of the dam that spills water from the reservoir. After their plunge, the yellow and orange balloons inflate to help researchers recover the fish at the bottom of the dam. "OK, next fish, No. 154," said Melanie Sharp, a scientist with Normandeau Environmental and Natural Resource Consultants, during a test last week. Researchers in boats radioed a fish's condition back to Sharp: "Minor hemorrhage on one eye and minor bulge on one eye." Collected fish were kept in holding tanks for 72 hours to see if their injuries were life-threatening. For every 20 rainbow trout sent over the dam, a plastic "crash-test dummy" fish goes over as well. The $4,000 device clocks the actual impacts to live fish — things like g-force, changes in pressure and number of collisions.

The data will be used by the U.S. Army Corps of Engineers to meet an important goal: getting a sustainable number of wild spring chinook and winter steelhead in the North Santiam River. The goal is part of the legally mandated 2008 Willamette Basin biological opinion, which established a set of actions that the Corps and two other agencies need to take to mitigate their impacts on spring chinook and winter steelhead. Those fish were listed as threatened under the federal Endangered Species Act in 1999. The Corps' impacts include the 13 dams in the Willamette Basin. The dams adversely affected Upper Willamette River chinook and steelhead by blocking access to a large amount of their historic habitat upstream of the dams and contributing to degradation of their remaining downstream habitat, according to the biological opinion. Detroit Dam is the first in the Willamette Basin being studied by scientists to find the best way to help salmon.

Their tests help in two ways: to find the best way for juvenile fish to get downstream around a dam and how best to get the right water temperatures downstream. Between 2000 and 2005, average temperatures below the dam were 48 degrees in July and 50 degrees in August. Historically those temperatures were between 52 and 56 degrees during those two months. Spilling water over the dam in the summer helps maintain the historic warmer temperatures downstream. That's because water at the top of the reservoir has been warmed in the sun, whereas water pulled through the turbines at the bottom is extremely cold. Spilling water over the dam means money lost. That water isn't going through the turbines to generate power. The Bonneville Power Administration estimates that the testing has cost about $300,000 in foregone revenue so far. The temperature adjustments started June 1. Spilling water hasn't affected the level of water in Detroit Reservoir. That same amount of water would be going through the turbines anyway, said Corps officials. Preliminary data suggest a 70 percent survival rate for fish going over the spillway, said Greg Taylor, the supervisory fish biologist with the Willamette Valley Project for the U.S. Army Corps of Engineers. "It's better than I expected, but in terms of fish passage, it's not good," Taylor said. "We may find that it is better than having them go through the (dam) turbines." Scientists will study the fate of fish going through the turbines in September.

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Some Dam – Hydro News and Other Stuff

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8/14/2009

Quote of Note: "An economist is an expert who will know tomorrow why the things he predicted yesterday didn't happen today." - - Laurence J. Peter

"Good wine is a necessity of life." - -Thomas Jefferson

Ron's wine pick of the week: **Luna Vineyards Freakout (white blend) 2007**

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

Other Stuff:

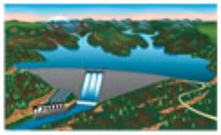
(This says it all about wind power)

Is Texas a Wind-Power Success or Failure?

August 6, 2009, wsj.com, By Keith Johnson

The Lone Star state famously leads the U.S., itself the world leader, in wind power. But how much wind power—really—does Texas have? Less than one-tenth of its official tally of more than 8,000 megawatts, says Robert Bryce in the Energy Tribune. That's because wind power is a lot more fickle than other power sources, such as natural gas, coal, or nuclear power. The Texas electricity authority, ERCOT, figures the state's wind power capacity is only 8.7%. That means for every 100 megawatts installed in a wind farm, power authorities can only count on seeing 8.7 megawatts of electricity produced. That's a lot less than the standard line that wind power in the U.S. produces at about 30% or 35% of its nominal capacity.

Wind power is the biggest source of renewable energy (other than large hydroelectric projects) and it's the great hope of clean-energy advocates. Wind power's success in the heart of the oil patch has been, as Mr. Bryce notes, a talking point for local politicians, the Obama administration, and environmentalists alike. Are things really that grim? Yes and no. Getting a handle on how much power wind farms actually produce is tricky business. ERCOT itself has danced between estimates at low as 3% and as high as 16% in recent years, before settling—temporarily—on the 8.7% figure. Temporarily, because the Texas Generation Adequacy Task Force is "concerned" with how ERCOT arrived at that figure and still aims to determine "the true capacity value of wind." The picture isn't much different in the rest of the country. Electricity regulators and utilities have tried to get a handle on how much juice wind power actually produces, and estimates vary widely—from as low as 5% to as high as 30%. Last year's NREL report has all the details. The biggest problem is in measurement—should you count wind power's production in the summer (not so windy) or winter (windier)? During the afternoon hours of peak demand, or all day? During a single year, or over a several-year period? The bottom line is that wind power is neither quite the laggard that Mr. Bryce makes it out to be, even in Texas—nor the panacea that many clean-energy advocates hope it will become. Things to keep in mind as the debate over America's clean-energy revolution keeps simmering.



Dams

Bill introduced for Snake River dam study

THE ASSOCIATED PRESS, August 4, 2009, The Spokesman-Review

SPOKANE, Wash. -- Congressman Jim McDermott wants a scientific analysis of the Northwest salmon recovery effort, saying most wild salmon stocks in the Snake and Columbia rivers are dangerously low despite billions of dollars spent on their recovery. In a bill introduced last week, the Washington Democrat also calls for giving the Army Corps of Engineers authority to breach the four Lower Snake River Dams. McDermott spokesman Mike DeCesare tells the Spokesman-Review newspaper that the goal is a science-based review of the cost and benefits of breaching the dams, which are blamed for harming fish runs. Rep. Doc Hastings, R-Wash., an opponent of removing the dams, says he will fight McDermott's bill. He says removing the Snake dams would devastate the region's economy.

Holiday Lake Dam in jeopardy, water drained

by Marla Miller | The Muskegon Chronicle, August 04, 2009

OCEANA COUNTY, MI -- A small, privately owned lake in Golden Township is being drained after two inspections determined the dam is in imminent danger of failing. Holiday Lake, which is above Upper Silver Lake, is approximately 100 acres and the Department of Environmental Quality issued an emergency order to drain the lake after being called in to inspect it, said Ed McNeely, a Grand Rapids attorney who represents the Oceana County Drain Commission Office. If the Holiday Lake dam should collapse, it could send a surge of debris and water downstream, affecting residents and property owners living around Upper Silver Lake, McNeely said. The DEQ even said such a collapse could result in loss of life, he said. "If it failed, it would affect lots of people and property," he said. "It would be a major event." The dam, in effect, creates Holiday Lake and the inspections are required by law to maintain the integrity of the dam and monitor the lake's water level, McNeely said. The drain commission office is responsible for maintaining the dam and could be fined, or even face criminal charges, if it does not obey the DEQ's orders, McNeely said. There is a gate on the dam that can be opened to draw down the water, but officials brought in a pump Tuesday to expedite the process.

"If we use a pump, it draws water off the top, so there won't be as much sediment (coming) from the bottom, and less impact on Upper Silver Lake," McNeely said. It could take two weeks or more to drain the water, diagnose the problem and begin to fix the dam, McNeely said. Drain officials are working with DEQ engineers to monitor the draw down. McNeely did not want to broach the liability issue, only to say: "The best thing is to get the problem taken care of, get things fixed, get the lake (level) back up and everything's fine." Spicer Group, an engineering company hired by the drain commissioner's office to inspect the dam, did an inspection in July. Engineers found it was in imminent danger of failing and contacted DEQ officials. The DEQ then ordered an immediate draw down of six to 12 inches per day. Drain Commissioner Jesse Beckman was at the scene and could not be reached for comment.

(Excerpts – full article at: http://www.areawidenews.com/story/1560075.html)

Dam listed on National Historic Register

The News, Salem Arkansas, August 5, 2009, Emily McIntosh, Staff Writer

----------. The Mammoth Spring Dam and Spring Lake have been placed on the National Register of Historic Places. The dam is a gravity dam. According to the National Register nomination form, although there are other gravity dams in Arkansas on the National Register of Historic Places, the Mammoth Spring Dam is the only one that was used to create electricity. ----------. The dam is a masonry gravity dam. "This masonry gravity dam was built by stacking six limestone slabs on a solid rock base. The widest slab was positioned on the bottom, and each slab was slightly narrower than the one below it, forming a series of small steps. This method of dam construction, devised by French engineer M. De Sazilly in the 1850s,

ensured that the hydrostatic force of a body of water would not be enough to overtake the weight of masonry used for the dam," according to the nomination form. The old town of Mammoth Spring soon grew from a sleepy hollow of 25 people to 950 in 1897. Because of the growing fad of bathing in natural spring waters for

their curative powers, Mammoth Spring became a vacationing ground for wealthy individuals from large cities. In 1957, Mammoth Spring became a state park and developed in about a 20-year period to consisting of 62.5 acres, the dam, a restored 19th century railroad depot and much more. From about 1925 to 1972, the dam was used by the Arkansas-Missouri Power Company for hydroelectricity. "Constructed in 1887-88 by the Mammoth Spring Improvement and Water Power Company, the Mammoth Spring Dam powered the Mammoth Spring Roller Mill and Elevator, which ground soft wheat into flour, and the Mammoth Spring Cotton Mill and Cotton Gin," according to the National Register nomination form. "After the Arkansas-Missouri Power Company purchased the Mammoth Spring Dam in 1925, the south turbine well was retrofitted to produce hydropower." According to the National Register nomination form, it cost the Arkansas-Missouri Power Company $10,670 to purchase the necessary equipment to convert the dam to produce electricity. When in operation, the hydroelectric dam generated about 2,128,875 kilowatt-hours and provided electricity to Mammoth Spring, Ark., Thayer, Koshkonong, Brandsville and West Plains, Mo. ----------. In 1972, the Arkansas-Missouri Power Company donated the dam to the state park because the company decided running the dam was not economically feasible. "The power plant could only operate for 30 minutes out of every hour before it had to shut down and let the lake refill," according to the nomination form.

(And, that's the way it is in the wild wild West)

Old West melodrama on the Snake River dams

By the Herald editorial staff, Aug. 09, 2009, tricityherald.com

Environmental extremists have a reliable gunslinger in Rep. Jim McDermott, D-Wash., and once again he is spinning the cylinder on his Colt. He's in quick-draw practice for trying to shoot holes in the four lower Snake River dams. This time Doc Hastings is cast in the role of Shane. Our money's on Doc. McDermott, long a tool of the extreme left wing known for his hair-trigger and erratic aim, has come up with a proposed piece of legislation that would authorize the secretary of the Army -- in the guise of saving salmon runs -- to breach the four dams on the lower Snake River. Yep. That old B-movie plot. According to Herald reporter Pratik Joshi, McDermott's proposed legislation has 20 co-sponsors including Rep. Earl Blumenauer, D-Ore. It would authorize the Secretary of the Army (read U.S. Army Corps of Engineers) to remove the dams to "clarify that lower Snake River dam removal is within the Corps' authority." Wow! The Corps, under this nonsensical bill, would go from being a tool of public policy to making public policy. For such a law to be enacted, it seems to us, it would re-quire not just a change in the hierarchy of decision making but a rewriting of the Constitution, making the Corps of Engineers a fourth branch of government, as, Congress, the administration, the Supreme Court and the Corps of Engineers. Maybe McDermott's next step will be a proposal to have all the lieutenant colonels and generals of the Corps elected by the people of the districts in which they serve.

Rep. Hastings, R-Wash., is more than up to the task of facing down this absurd legislation concocted in the bunkhouse of the old Left-Leaning D Ranch. "One of the first places this dam removal bill will land in Congress is on my desk as the top Republican on the House Natural Resources Committee, and I pledge to do everything in my power to stop it," Hastings said. "Dam removal is an extreme action that would have devastating consequences on our region's economy. These four dams are valuable components of the Northwest's clean, low-cost hydropower system that thousands and thousands of jobs rely upon. Dam removal would kill jobs, lead to huge increases in greenhouse gas emissions, and there's no scientific proof that it would actually guarantee salmon recovery." Right. And for that matter, the power to operate those smoking hot computers in McDermott's Seattle office comes from Northwest hydropower. What is he thinking? "This risky gamble has been rejected again and again, yet dam removal extremists continue their lawsuits, their fundraising campaigns and their fight to spoil agreement on policies that will actually recover fish in the Northwest," Hastings said. "Professional activists who make a living off of pushing their dam

removal agenda may not like to hear it, but Northwest citizens understand we can protect our clean, renewable hydropower dams and recover salmon at the same time." McDermott, of course (to stretch this metaphor about as far as it can go), is out to make and keep a reputation for himself as an environmental bad actor. He's being upstaged by Shane. Oops. We mean Doc.

Hydro

Press Release, August 4, 2009

NHA Applauds Senate Action on Doubling DOE Waterpower Program

NHA hails Sen. Patty Murray for her vision on hydropower

Washington, D.C. (August 4, 2009) – Following is a statement from NHA Executive Director Linda Church Ciocci regarding the Senate's approval of the 2010 appropriations bills for federal energy and water programs, including the U.S. Department of Energy (DOE), the U.S. Army Corps of Engineers, and other agencies. The measure provides $60 million for DOE's Waterpower Program, doubling the White House budget request and increasing the House-approved funding level substantially. "The National Hydropower Association applauds the vision and leadership the Senate has shown by approving an energy and water appropriation that includes $60 million in funding for the DOE Waterpower Program. By doubling the funding levels in the budget request and increasing the House appropriation, the Senate is showing its commitment to developing affordable, domestic, renewable energy resources. "These funds will help support the development of both new and conventional hydropower technologies. With new technologies that generate electricity from waves, tides, and other resources on the vanguard of the energy industry -- and exciting efficiency and performance developments at some of the most reliable long-time hydroelectric resources in the country -- the hydropower industry welcomes the opportunity to expand its federal R&D partnerships.

"NHA would also like to congratulate and thank Senator Patty Murray (D-WA) for championing the funding increase. Along with many others, Sen. Murray understands the environmental and economic benefits hydropower offers from seeing it first-hand in her home state of Washington. With this increase the full Senate has shown its commitment to clean, abundant energy resources is an important bipartisan issue. "We'd also like to salute the efforts of Sen. Byron Dorgan (D-ND), chairman of the Energy and Water Development Appropriations Subcommittee, for his leadership in bringing this bill to the floor. Sen. Dorgan's work demonstrates his vision for ensuring that all Americans will benefit from both waterpower resources and a vibrant, clean environment. "NHA looks forward to continuing its work with both the House and the Senate as they pursue this and other measures that secures new hydropower resources."

(It's tempting to be cynical about how easy it is for some organizations to build hydro, but that's considered "Not PC" – any hydro is a good thing)

Yakamas start producing their own power

by Philip Ferolito, Yakima Herald-Republic, August 03, 2009

YAKIMA, Wash. -- The Yakama Nation is officially in the power generating business with the recent revival of a hydroelectric generator in the Wapato Irrigation Project. The electricity it generates will eventually be used to power homes on the 1.2-million-acre reservation. With the current hydroelectric system nearly tapped out in the Northwest, the tribe has been looking, for about five years, at its own wind, water and wood fuel to generate power. The long-term plan is to revive all three generators in the irrigation project and add another three to generate about 8 megawatts, enough to power about 6,000 homes, said Ray Wiseman, manager of the tribe's utility, Yakama Power. Tribal officials will unveil the refurbished generator during a private gathering Aug. 11. The overhauled generator at pump house No. 2 near Harrah will produce up to 2.5 megawatts, and has been running the past week at about a fifth of its capacity for testing, Wiseman said.

"It's practically brand new," he said. "There's hardly any original parts in there. We've put quite a bit of funds into this one to get it rebuilt." For the past five years, Yakama Power has worked on a plan to revive the

generators in the ailing 145,000-acre irrigation project, which is operated by the Bureau of Indian Affairs. Last year, the BIA agreed to let the tribe have the generators that date back to the 1950s and once powered irrigation pumps. Not only will the generators help power the reservation, but also plow money back into the irrigation project, which is mired in about $200 million in deferred maintenance. Recently, the tribe secured a $1 million grant from the Department of Energy to put three more generators in the irrigation project, he said. Also, the tribe recently received a $10,000 grant from the state Department of Commerce to conduct a feasibility study of a biomass plant that would use timber waste to generate power. Currently, Yakama Power has supplied the tribe's casino, government buildings and a retirement home with power it buys from the Bonneville Power Administration.

Aquamarine Power plans wave energy project for fall

Scottish startup now installing device off the Orkney Islands for demonstration of its technology

August 4, 2009, cleantech.com

Edinburgh, Scotland-based Aquamarine Power is installing its first project on the seabed off the coast of the Orkney Islands in Scotland. Energy Efficiency News reports that Aquamarine plans to start demonstration trials in the fall of the wave power system that places all of its power generation equipment onshore for easy access. Aquamarine raised $3.1 million in October 2007 from Sigma Capital Group, announcing plans to deploy its first wave power device for testing six months later. The company was formed as venture of Aquamarine Power and Scottish and Southern Energy, which invested £6.3 million ($10.6 million) in the startup (see Swiss group spreads the cash around). That collaboration with a utility has been key to the success in the marine power sector, according to a 2008 report from industry analysts Frost & Sullivan. The research firm named Aquamarine as one of the standout companies in the sector, alongside Ocean Power Technologies and Pelamis Wave Power (see UK holds half of Europe's wave energy potential). The report said wave energy could produce 750 to 2,000 terawatt-hours of energy a year. Aquamarine's wave power device, dubbed the Oyster, contains a hydraulic oscillator and pistons that pump water through a pipeline to the shore, where traditional hydroelectric equipment converts the water into electricity. According to Energy Efficiency News, the Oyster is best deployed at depths of 12 to 16 meters (29 to 52 feet), where waves are more consistent, minimizing wear and tear. Each is expected to have the capacity to generate 300 to 600 kilowatts of power. The company says its biggest potential markets are Spain, Portugal, Ireland, the UK, the Northwest United States, South Africa, Australia and Chile. *http://www.energyefficiencynews.com/i/2310/*
Source: Energy Efficiency News

(Finally! This project has been around for around 50 years and it's just now getting done. Wow, I worked on the original)

Groundbreaking Held on Hydroelectric Facility in Hancock

By Beth Wilberding, Messenger-Inquirer, Owensboro, Ky.

Aug. 6—HAWESVILLE, KY -- Representatives from federal, state and local government were in Hancock County on Wednesday for the groundbreaking of a hydroelectric facility on the Cannelton Locks and Dam. It is the largest project of its kind in the country, according to Marc Gerken, president and CEO of American Municipal Power, the company building the plant. Power from the 84-megawatt hydroelectric plant will eventually be sold to municipal electric systems in 79 communities in Kentucky, Ohio, Pennsylvania, Michigan, Virginia and West Virginia. "I'm determined that Kentucky will be a leader in the production of energy for this nation," Gov. Steve Beshear said following the groundbreaking ceremony. The project will cost $416 million, and 200 to 400 construction workers will be employed. The hydroelectric plant is expected to begin commercial operations in 2013 and will employ nine to 12 full-time operators. "What a gift from God you have, the Ohio River," U.S. Rep. Brett Guthrie told the group at the groundbreaking. Guthrie said Hancock County workers were among the people he's been thinking about when the U.S. House of Representatives discussed a cap-and-trade policy to limit carbon emissions because of the industries in the county -- and the energy costs to those plants. Alternative energy sources are "certainly something we can't ignore," he said. Beshear was the last of several AMP, state and federal officials to speak during the ceremony. "What an exciting day for Hancock County and the entire commonwealth of Kentucky. ... We need to take every advantage of the Ohio River," Beshear said.

Jim Price of Aiken, S.C., first began looking at building a hydroelectric facility at the Cannelton Locks and Dam in 1985. W.V.-Hydro, the company Price works for, had a license for the project in 1991, which it subsequently sold to AMP. "It's a great day. ... It's an excellent project," Price said. Hydroelectric plants last many years, and a hydroelectric facility near Louisville was built in 1928, Price said. "This plant will probably

last 100 years," he said. AMP is also working on hydroelectric projects on the Ohio River for the Smithland Locks and Dam in Livingston County, Meldahl Dam in Bracken County, the Willow Island Locks and Dam near Waverly, W.Va., and the Robert C. Byrd Dam near Gallipolis Ferry, W.Va. Those projects are in various development stages. Linda Church Ciocci, executive director of the National Hydropower Association, attended Wednesday's groundbreaking and said hydroelectric facilities create clean, renewable energy. "This is absolutely exciting for us," she said. "We commend AMP for their vision and leadership." Though the plants are expensive to build, more groups have shown an interest in exploring hydroelectric facilities as an alternative energy source, Ciocci said. AMP's first hydroelectric plant opened 10 years ago in Belleville, W.Va. "The plant has been very successful and beneficial to the 42 communities in the project," Gerken said. Hydroelectric facilities are just one of the alternative energy projects AMP is working on. AMP is exploring additional wind and solar generation resources and a significant expansion in energy efficiency efforts, the company said. It is also in the development phase of a new clean-coal generation facility proposed for southern Meigs County in Ohio. "I can assure you, AMP will be a great addition to the commonwealth of Kentucky," Gerken said.

(And here's the other god news)

Hydroelectric plant a job creator in western Ky.

Associated Press, chicagotribune.com, August 8, 2009

HAWESVILLE, Ky. - A hydroelectric plant being built along the Ohio River in western Kentucky will eventually provide power for communities in a half-dozen states. The $416 million project on the Cannelton Locks and Dam will employ 200 to 400 construction workers, the Messenger-Inquirer in Owensboro reports. The plant being built in Hancock County by American Municipal Power is expected to begin commercial operations in 2013 and will employ nine to 12 full-time operators. The newspaper reports that power from the 84-megawatt hydroelectric plant will eventually be sold to municipal electric systems in 79 communities in Kentucky, Ohio, Pennsylvania, Michigan, Virginia and West Virginia. "What a gift from God you have, the Ohio River," U.S. Rep. Brett Guthrie said at a groundbreaking ceremony last week that also featured Gov. Steve Beshear and Marc Gerken, president and CEO of American Municipal Power. AMP is also working on hydroelectric projects on the Ohio River for the Smithland Locks and Dam in Livingston County, Meldahl Dam in Bracken County, the Willow Island Locks and Dam near Waverly, W.Va., and the Robert C. Byrd Dam near Gallipolis Ferry, W.Va. Those projects are in various development stages. Linda Church Ciocci, executive director of the National Hydropower Association, said hydroelectric facilities create clean, renewable energy. Though the plants are expensive to build, more groups have shown an interest in exploring hydroelectric facilities as an alternative energy source, Ciocci said. AMP's first hydroelectric plant opened 10 years ago in Belleville, W.Va. "The plant has been very successful and beneficial to the 42 communities in the project," Gerken said. Hydroelectric facilities are just one of the alternative energy projects AMP is working on. AMP is exploring additional wind and solar generation resources and a significant expansion in energy efficiency efforts, the company said.

(I guess this is a pumped storage project but they seem to never say that)

Hydropower company discusses proposal for Verplanck site

BY ROBERT MARCHANT • LOHUD.COM • AUGUST 7, 2009

A hydropower company gave its first public presentation last night at Cortlandt Town Hall on plans to build a large electrical generator at a quarry in Verplanck, a project that could excavate 15 million to 20 million tons of soil and rock, and public concerns about the idea are already growing. John Douglas, the president of Riverbank USA, said the power plant would use 1 billion gallons of water in the old quarry to power four turbines built 2,000 feet underground. The water would flow down into an underground reservoir, generating power in the day during peak demand. It would be pumped back to the surface at night, when power is cheaper. Douglas stressed that the company has not made a final decision to build at the Verplanck quarry. The company is looking at a number of sites in the Northeast before deciding where to build. Riverbank filed an application recently with the Federal Energy Regulatory Commission.

"We have questions, and there's a huge amount of information to collect," Douglas said, and drilling and an analysis of the site would take about three years. "We're interested in hearing people's concerns. ... There is no point in trying to develop a project in a community where there's no support for the project." The $2 billion project would take four years to complete, if approved. The excavated material would be removed by barge. Douglas said the technology was part of a clean-energy initiative that would benefit the region and the environment. About 30 people attended the information session, and a number of speakers raised concerns. Resident Rose Mason said, "We have a beautiful little town, and we've worked hard to improve it. Four years of construction will put a heavy burden on it. It's going to be a lot to withstand." Jim Bell said the

technology sounded like a good one for the country. But he said, "This is 300 to 600 feet from people's homes. To ask residents to put up with a massive construction project is in my mind unacceptable and poor judgment. You should seek a more remote location." The quarry site lies on Consolidated Edison property.

(Yogi said – "It's not over until it's over", but I guess it's over!)

Yadkin trust bill dies in N.C. House

Charlotte Business Journal, August 7, 2009

An effort to create an N.C. trust to compete with Alcoa Inc. for Yadkin River federal watershed licensing may be dead. The N.C. House voted Thursday night to reject the idea, which Gov. Bev Perdue supported. The bill failed on a 66-39 vote on second reading. Now it's back to the starting block for those who oppose Alcoa Power Generating Inc.**'s** 50-year relicensing for the series of dams and hydro-power plants along the river. Alcoa wants to retain control over the river despite closing a huge aluminum smelting plant in Badin in 2007.

Green Mountain: A look at hydropower

BY JOEL BANNER BAIRD • Burlington FREE PRESS STAFF WRITER • AUGUST 9, 2009

No one's calling Vermont's hydro-electric dams ugly. They hug the valleys and dot the rivers, well below ridge-top wind farms. Who doesn't have a soft spot for a brimming, backwater lake or the misty cascades below a spillway? Who isn't transported back to the quaint, mill-spun days of early European settlement — and forward, to a low-carbon energy future? Short answer: It's complicated. Vermont's 78 hydropower dams are popular with many ecologists — and condemned by many others. The pros and cons have supplied a bracing charge of alternating current to Vermont's green movement. "It's hard to see people who are normally bedfellows in the environmental movement banging heads," said Jack Price, a habitat specialist with Central Vermont Trout Unlimited. Price is among those who have measured, with increasing accuracy, the long-term degradation of a watershed wrought by dams — and who simultaneously acknowledge hydropower's utilitarian virtues. The cost-benefit debate swirling around the Green Mountain State's dams parallels (at a less catastrophic pitch) our conundrum over nuclear power. Hydropower plants generate 143 megawatts (MW) of emissions-free electricity (about 12 percent of the state's total), compared with 620 MW from the Vermont Yankee nuclear plant. The dams' downsides are dwarfed by the nuke's, advocates say. But they are legitimate and sobering: Dams blockade rivers and take a considerable toll on fish spawning grounds. But dams are immune from out-of-state transmission snafus, and they fine-tune Vermont's grid and rekindle it after blackouts. They also frustrate the downstream passage of nutrients and debris, critical to a wide array of wildlife. Upstream, they raise water temperatures and lower dissolved oxygen counts.

So where are we now? Decades of debate have diluted into a truce. Dams with little potential for hydropower are slated for removal; those that generate electricity are modified to stabilize riverbanks and accommodate fish passage. "You try for the best solution for as many people as you can," said John Voyer, Green Mountain Power's manager of power production. "You look for a rational balance." Waterwheels and turbines have dutifully cranked out the kilowatts in Vermont since 1882. They've kept on ticking overnight and during wind lulls. They've belched no exhaust, expelled no barrels of spent radioactive waste. They've evolved plug-and-play connectivity to the grid. The bank of four cast-iron dynamos at the Essex Junction dam, owned by Green Mountain Power, date from 1915. In concert with the turbines at five other dams on the Winooski River, they generate the cheapest electricity in that company's portfolio. Gary Galbraith, the plant operator, has worked at the Essex hydropower plant for 37 years. The original hardwood floors shine. The SUV-sized generators hum. To a visitor incautious enough to remove his earplugs, the engines roar. Later, in the lunch room (a converted coal bin), Galbraith praised his workhorses. "They have a lot of moxie and a lot of potential," he said. "They're bulletproof." Yet there's finesse beneath the behemoths. Hefty, two-handed throw-switches and pie-plate-sized gauges, rheostats reminiscent of old Hollywood horror films — all remain on display, but their work's been taken over by winking panels of processors. Up and down Vermont's rivers, computers and remote sensors stabilize lake levels, river flow and the pitch of every turbine blade. Ospreys nest upstream of the Clark Falls hydropower station in Milton. The plant, installed a decade after the great flood of November 1927, houses a single, vertically mounted 3MW turbine.

Downstream on the Lamoille River, two other plants owned by Central Vermont Public Service re-use the same water molecules.

Statewide, increased flow from this year's ultra-rainy summer worked in hydropower's favor. In July, Green Mountain Power and Central Vermont reported more than twice their predicted generation levels. U.S. Department of Energy climate-change models predict more of the same in the coming century.
Will wetter forecasts float new hydro projects? "It depends on how comfortable you are with the tradeoffs," said Kim Greenwood, a staff scientist at the nonprofit Vermont Natural Resources Council. The appeal of cheap hydropower typically coincides with heightened public awareness about energy shortfalls, she continued. In the mid-1970s, investors rushed to renovate dam sites. This time around, she added, investors have no easy pickings: The best falls have been developed; tighter water-quality regulations stretch timelines and raise price tags. Industry leaders in Vermont say they have no plans to build new hydro projects. But all of them plan to invest in upgrades that might squeeze an extra 10 percent out of existing facilities. Longevity is hydro's blessing and its curse, environmentalists say. After a long and contentious re-certification process that ended in 2005, the Peterson hydropower dam (a CVPS facility on the Lamoille that lies closest to Lake Champlain) is likely to remain operational, economical — and disruptive to generations of land-locked salmon, walleye, lake sturgeon and other fish species, said Central Vermont Trout Unlimited's Jack Price. He and hundreds of other volunteers who challenged the utility have since shifted their efforts to other, less-costly habitat-improvement measures, such as rain gardens and streambank restoration. Nonproductive dams, such as the one in downtown Swanton, likewise have proved resilient against the efforts of fisheries advocates to have it removed: Loyal residents claim their dam still holds historic, cultural and even sonic value. Conversely, the Middlebury Selectboard recently made a case to the Public Service Board that aesthetics and economics should slow the addition of a turbine on the downtown Otter Creek dam. Has political, ecological and hydrodynamic inertia reached a state of equilibrium for Vermont's dams? For now, yes. "People are inherently conservative about anything that might change their landscape," Price said.

Water

Report: Raising Hagg Lake best option

Dam upgrade would cost millions, but doing nothing "not an option"

BY KELLEY HUNGERFORD, The Forest Grove News-Times, Aug 5, 2009

Washington County's (Oregon) Henry Hagg Lake can and needs to be expanded to meet long-term water supply needs, according to a study released Tuesday. The report, from the Tualatin Basin Water Supply Partnership, suggested that "doing nothing is not an option."

The Dam Raise Appraisal Study, ----------, concluded that the reservoir behind Scoggins Dam can be developed to produce 50,000 acre-feet of new water for the region. Water needs in the region are expected to double in the next 45 years, according to the Tualatin Basin Water Supply website. "We know we need to find new sources of water to meet our future needs, and it makes sense to develop these resources together, as a region," said Hillsboro Mayor Jerry Willey. The report, which took a year to complete, provided construction options for the project, which include building a new dam downstream of the existing one or raising the current dam by 40 feet. But while estimates for the local share of the dam raise and expansion of the water delivery and treatment system range from $696 million to $978 million, the report said that the expansion must be done because the dam has to undergo improvements to meet current seismic standards anyway. And these improvements may cost more than any new construction. "We must work with our federal partners to address the dam safety improvements and meet our region's water needs in a timely manner," said Beaverton Mayor Denny Doyle. Cost estimates cover expanding pipelines, pumping facilities and water treatment capacity necessary to deliver the needed water. Richard Kidd, mayor

of Forest Grove, said despite the latest report, discussions on what to actually do about the dam are still up in the air.

The partnership is a coalition of various local governmental bodies including Clean Water Services, the Tualatin Valley Water District and the Cities of Beaverton and Hillsboro. The group is looking to secure federal funding for seismic modifications necessary on the existing dam. The U.S. Bureau of Reclamation, which created the lake in 1975 with the construction of Scoggins Dam, is working with local governments to evaluate alternatives for meeting future water supply needs. The bureau is also conducting its own evaluation and calculating cost estimates of seismic upgrades at the current Scoggins Dam. The bureau expects a decision in early 2010. The partnership, Tualatin Valley Irrigation District, Washington County, the City of Forest Grove and Lake Oswego Corporation are also exploring title transfer of Scoggins Dam and Hagg Lake from the federal government to local ownership. Kidd said having a locally owned and operated facility would lessen red tape for projects in and around the dam, allow local control of water distribution and increase recreation around the dam. But the federal government currently pays a percentage of retrofit expenses, essentially expenses to upgrade the dam according to seismic standards. If ownership becomes local, Kidd said the city hopes the federal government would continue to pay those fees rather than transfer that burden to local taxpayers.

Environment

(They need to take more time to think about a lot of things)

Obama administration given more time on dam/salmon plan

August 10, 2009, Lewiston Tribune

The Obama administration has been granted more time to decide how it wants to proceed with efforts to reconcile Snake and Columbia River dam operations with salmon and steelhead recovery. The president's team is reviewing a salmon and dam plan, known as a biological opinion, that spells out what measures should be taken to help the threatened and endangered fish runs. The administration was supposed to announce its position by Friday, according to a deadline imposed by U.S. District Judge James Redden in Portland. But today the administration sent a letter to Redden asking for an extension to Sept. 15. Redden granted the extension. According to the letter signed by Coby Howell of the Justice Department, the administration wants time to "discuss and explain our process and position on the (biological opinion) with all of the parties before formally presenting our position to the Court. In these discussions with the other parties we will be seeking to determine if there is common ground that can be achieved based on our review. Therefore, we respectfully request additional time to conduct these discussions on our final position to the Court on September 15, 2009". Redden has signaled through a series of letters to the parties of the litigation, that the current plan, while being close to acceptable, has a few serious short comings.

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Some Dam – Hydro News and Other Stuff

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8/21/2009

Quote of Note: "If you think health care is expensive now, wait until you see what it costs when it's free! - - P.J. O'Rourke

"Good wine is a necessity of life." - -Thomas Jefferson

Ron's wine pick of the week: **Layda Classic Sauvignon Blanc (Chile) 2007**

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

Other Stuff:

(I rest my case – wind power IS junk energy)

Not a Carbon-Free Breeze - Commentary

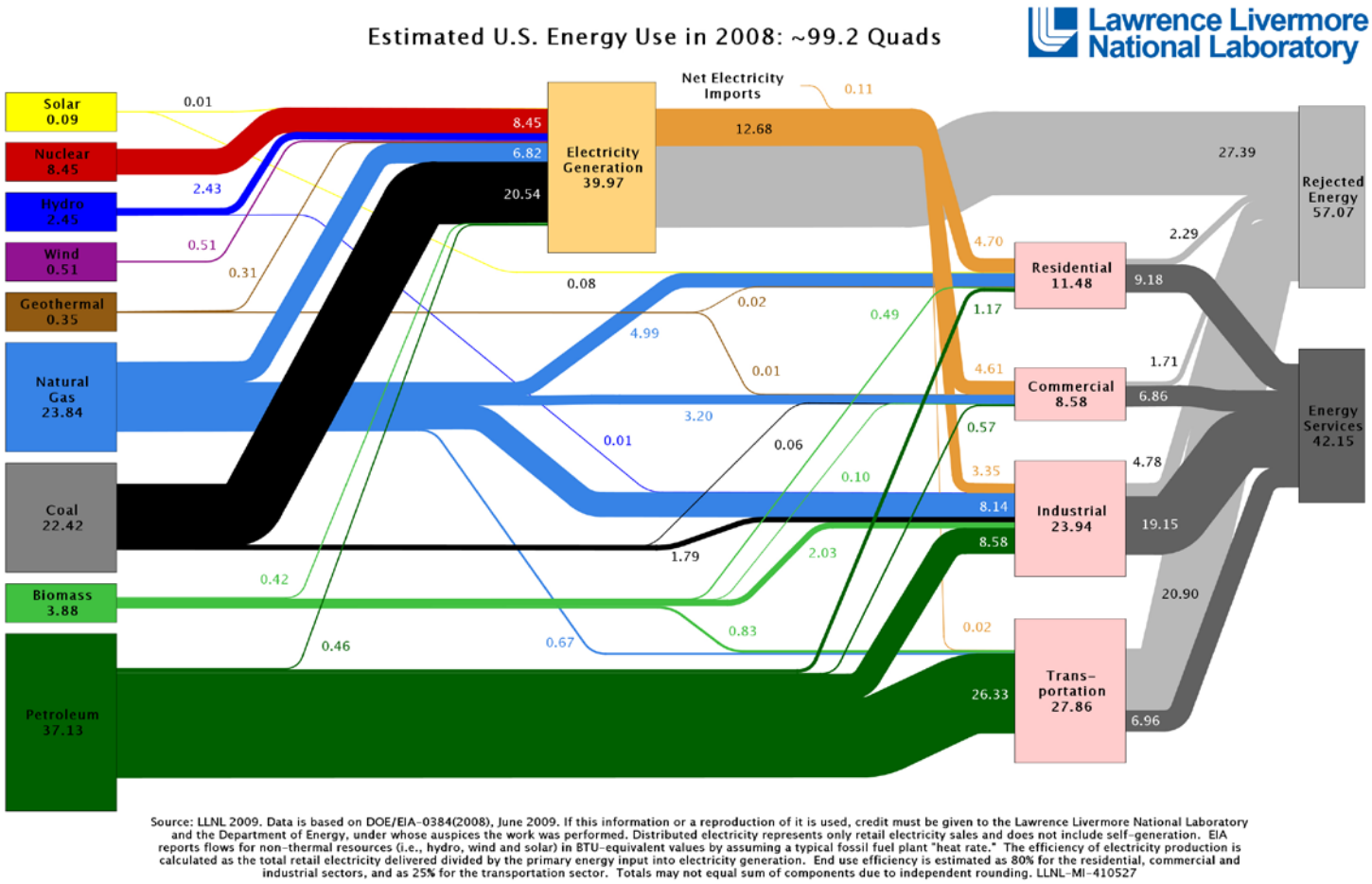
Filed under: Carbon Cartel Education Project, Climate Change, Environment, QuickPoints! — Sarah Ross, August 11, 2009, cascadepolicy.org

Why are Governor Ted Kulongoski and the Oregon Legislature spending millions of dollars pursuing what could prove to be carbon-emitting energy? While Oregon's commercialization of wind power may appear to be carbon-free, it can bring a hidden carbon footprint. Because of the unreliable nature of wind power, running a backup energy source is necessary at times when wind is forecasted to generate electricity but fails to do so. While wind is unreliable, demand for electricity is constant. Backup sources must remain running to compensate for any spikes in demand and lulls in wind generation. In many areas, this backup energy source, which is generating emissions but no electricity, comes in the form of carbon-emitting fossil fuels such as coal or natural gas. In the Pacific Northwest, this back-up energy source has been hydroelectricity. This means that wind power is not actually offsetting carbon emissions, but trading one renewable resource for another instead. The Bonneville Power Administration, the federal power authority for the Pacific Northwest, has announced that hydropower can no longer compensate for wind's unreliability, and BPA is considering building fossil fuel plants to use as a backup source. Although wind power may seem to reduce carbon emissions, wind power's unreliable nature makes these carbon reduction claims questionable. Politicians in Oregon should stop funding wind farms that will effectively create more carbon emissions or simply displace hydropower, a carbon-free energy source.

The following chart shows U.S. energy use for 2008. The following was gleaned from the chart re electricity:

	% (rounding - doesn't add to 100 %)
Coal	51.4 (20.54 Quads)
Nuclear	21.1 (8.45)
Natural Gas	17.1 (6.82)
Hydro	6.1 (2.43)
Wind	1.3 (0.51) - (Note: wind, biomass, geothermal, & solar total is about ½ hydro)
Biomass	1.1 (0.42)
Geothermal	0.7 (0.31)
Solar	0.02 (0.01)

(Please excuse the HUGE chart, which is still hard to read! Get that magnifier.)



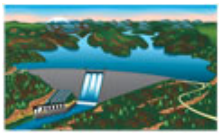
Source: LLNL 2009. Data is based on DOE/EIA-0384(2008), June 2009. If this information or a reproduction of it is used, credit must be given to the Lawrence Livermore National Laboratory and the Department of Energy, under whose auspices the work was performed. Distributed electricity represents only retail electricity sales and does not include self-generation. EIA reports flows for non-thermal resources (i.e., hydro, wind and solar) in BTU-equivalent values by assuming a typical fossil fuel plant "heat rate." The efficiency of electricity production is calculated as the total retail electricity delivered divided by the primary energy input into electricity generation. End use efficiency is estimated as 80% for the residential, commercial and industrial sectors, and as 25% for the transportation sector. Totals may not equal sum of components due to independent rounding. LLNL-MI-410527

(Waking up is hard to do, but there are signs that people are doing just that)
(Excerpts – full article: http://lohud.com/article/20090813/OPINION/908130370/-1/SPORTS)

State energy plan will mean higher costs, less reliability

BY MAX SCHULZ • AUGUST 13, 2009

Gov. David Paterson released his draft State Energy Plan this week, and after reading its 123 pages, one thing is crystal clear: This is a draft that should be dodged at all costs. Utterly divorced from economic realities, the Paterson energy plan is a mishmash of feel-good proposals based on super-sized servings of wishful thinking. If enacted, the result would be higher costs, less reliability, and greater susceptibility to blackouts The Paterson plan hinges on something called "45 by 15." By 2015, New York should decrease overall electricity usage by 15 percent through energy efficiency, while generating 30 percent of its power from renewable energy sources. Neither is likely to happen. New York already has an energy-efficient economy because of the high number of apartment dwellers and because high energy prices have driven heavy manufacturing away. Hopes for finding substantial efficiency gains to lower consumption are slim without a prolonged economic slump, which is hardly consistent with calls for robust economic growth. Meeting the renewable power goal will be a stretch as well. Renewables make up about 21 percent of New Yorkers' electricity already, but that statistic is a mirage. Large-scale hydropower accounts for 19 percent; while wind and biomass are less than two percent combined (solar power is virtually nonexistent in New York). The state's hydropower resources are already developed, so the difference can't be made up there. Getting to 30 percent will require adding five times as much power from other renewables, which are much more expensive than coal. That means much higher subsidies, paid for through increases in ratepayers' bills. ----------.



Dams

(A simple fix for little money a little too late for two people)

Work progresses on dangerous Franklin County dam

Rocky Mount officials hope stones will break up the deadly hydraulic cycle at a Blackwater River low-head dam

Roanoke Times, August 12, 2009

Work continues on the low-head dam near the Rocky Mount, VA water treatment plant on the Blackwater River. Tuesday, a crew from Shively Construction finished dropping stones in front of the dam, a process called "facing." The stones are used to break up the troublesome hydraulic cycle created below the dam that can trap swimmers and boaters and cause them to drown. Two Franklin County residents have died at the dam this summer. Work will continue this week on a new portage area -- where boaters can exit and enter the river to avoid the dam, Town Manager James Ervin said. "We hope to make it a much safer site," he said. The work cost about $23,000 and will be shared with the county. Similar work has been done on the dam before, Ervin said, but the stones have been swept away with time. The decision to face the dam was to provide an immediate safety fix as well as keep the town's options open in the future, he said. The town owns a similar dam on the Pigg River near Veterans' Memorial Park. County and town officials have also discussed ways of eliminating the danger at that low-head dam.

BPA disputes SOS claims of exaggeration

Submitted by Rocky Barker, VoicesIdahoStatesman.com, 08/13/2009

Save Our Wild Salmon, the coalition of environmentalists, fishermen and sporting industries that are pushing for breaching four dams on the Snake River, said in a press release earlier this week that documents that they got using the Freedom of Information Act that showed that the Bonneville Power Administration exaggerated the amount of power that would be needed to replace the four Lower Snake dams in Washington. But BPA officials said today the documents in the FOIA request were referring not to dam breaching, but a competing plan to draw down reservoirs on the Columbia River, take more water from Idaho and spill more water over dams instead of running it through hydroelectric turbines. This so-called aggressive non-breach plan would force BPA to replace up to 3,000 megawatts of electricity at a cost of $800 million, BPA said. I called Nicole Cordan, legal and policy director of the Save Our Wild Salmon coalition and asked her how they got this wrong. She wasn't ready to concede that the briefing slide on which SOS based its claim, clearly identified the costs link to aggressive non-breaching. "It wasn't clear to me what they meant," She said. BPA spokesman Michael Millstein said a simple call could have cleared up a misunderstanding. "Maybe she should have asked us what we meant," he said. Here's the text of the slide make your own judgment.

> "Reliability Issues
> • The Plaintiff's proposal would reduce generation by 2000 to 3000 MW on average in most fall and winter months during critical water periods
> • It is unlikely this magnitude of additional resource could be acquired through market purchases, posing an unacceptable risk to power system reliability or, alternatively, to meeting fish obligations
> • It would take three nuclear power plants to replace this capacity
> • The four lower Snake River dams produce almost as many aMWs as BPA's conservation programs achieved in 27 years – at an investment of $2.3 billion
> • These projects provide necessary voltage regulation; absent these projects, certain major transmission lines would have reduced carrying capability"

Paul Norman, BPA's senior vice president of power sales wrote Cordan and Pat Ford, SOS executive director responding to the press release. Among his concerns were their use of the BPA slide's statement suggesting the 3,000 megawatts would take three nuclear plants to replace. "The statement about three

nuclear plants was not in reference to dam removal, but rather was in reference to your proposals for major increases in hydro spill and flow augmentation," Norman said. "It was not a forecast that three nuclear plants would need to be constructed. Rather, it was simply a way of illustrating how large the loss of power would be from these proposals." Norman also challenged SOS's portrayal of the Northwest Power and Conservation Council's estimate of the costs of dam removal. He says the council estimates the cost of replacing power from the four dams would be $550 million annually, $100 million higher than the low end of BPA's cost range. "We stand by the high end of our $450 to $850 million range of costs of dam removal," Norman said. SOS puts the cost at less than $320 million. What I find most interesting about this exchange is that the aggressive non-breach proposal, which is mostly pushed by Oregon, is higher than the council's estimate of dam breaching. Oregon argues this is the only competing plan to breaching that has any chance of meeting the federal Endangered Species Act. Cordan didn't miss that point either. "The truth is a truly aggressive non-breach approach is more expensive than dam breaching that that's what we've been saying all along," she said. Here's a link to the FOIA documents and more.

Army Corps looking at Martis Creek Dam stability

Sierra Sun Staff Report, August 14, 2009

TRUCKEE, Calif. — The Army Corps of Engineers are ramping up end-of-summer work on Martis Creek Dam before winter weather arrives. According to a press release, increased crews and heavy equipment will be on and around the dam for the end of summer. The Corps is investigating the dam's stability, ranked as one of the six riskiest Army Corps dams in the country. The dam was built more than 30 years ago on glacial till, which could allow seepage under the dam, destabilizing it. Recent studies also indicate earthquake faults near or under the dam. The risk to down-stream residents in kept to a minimum, however, by keeping the lake at a very low level, according to the release. To learn more, go to www.spk.usace.army.mil/projects/civil/Martis_Creek/Index.html

(If you haven't been there, it's a must see dam and place. The impressive stats are that it's almost 80 years old, its reservoir shoreline is over 1,150 miles, and it took only 2 years to build. We can't build an outhouse that fast today. It's perfect for a hydro conference.)

FactFinder: Bagnell should survive disasters

By Mallory McGowin, August 17, 2009, connectmidmissouri.com

LAKE OF THE OZARKS, MO -- For nearly 80 years it has been holding back the 600 plus billion gallons of water that make up the Lake of the Ozarks. Workers began work on Bagnell Dam in 1929 and finished the structure two years later in 1931. Despite its age, engineers say the structure is safe and sound. "You would think in 1931 they didn't have as good of engineering practices as we have today," Bagnell Dam Engineer Alan Sullivan said. "What we've found is they did a great job of over-designing not only the structure itself, but all the equipment inside. And we have some equipment still operating in the condition that it was in 1931." Bagnell Dam was built in the midst of the great depression and three-quarters of a century later the owner of the dam, Ameren UE, has installed warning sirens to alert those down river of a dam emergency. But dams have failed, even another one owned by Ameren UE. The Taum Sauk Reservoir collapse in 2005 destroyed most of Johnson's Shut-Ins State Park and injured a family of five. So what makes Bagnell Dam so strong?

There are five main reasons national experts say dams fail. Bagnell Dam is put to the test. The first reason: structural failure. Faulty construction material can cause structural failure and while there are cracks in the surface concrete, Sullivan said there is nothing to worry about. "Our exploratory borings, when we've actually drilled into the dam, have revealed very, very solid concrete inside the dam," Sullivan said. "Plus they put a lot of reinforcing steel in the dam. So there is not a structural deficiency because of the design of that era." Also, engineers said Bagnell's design is the preferred type of concrete dam, a "gravity dam." It's shaped like a right triangle with the base resting on bedrock. Ameren said it has since improved upon the

initial construction. "In the 1980s, we drilled over 300 holes in the dam and installed a post-tension anchoring system," Sullivan said. "Those are actually nine inch steel rods that go down into the bedrock below the dam and actually tie the dam into bedrock." While Ameren touts that anchoring system, a study presented to the Association of Dam Safety officials criticizes the method used in Bagnell Dam for not using corrosion protection. The study says that inspections of a dam in California that used the same anchoring method showed that the steel rods had corroded giving the structure no added strength. Sullivan said that they are aware of that issue and are exploring a way to inspect Bagnell's steel rods without damaging the structure. Structural failure can also occur from an earthquake. But Sullivan said that Bagnell should survive a quake coming from the most likely source: the new Madrid Fault in the Bootheel. Sullivan cites a study that showed fractures in the earth's surface between the dam and the fault will keep the full strength of a quake from reaching the dam.

Another reason a dam can fail: overtopping. That's what happened at Taum Sauk. A computer software problem caused the reservoir to continue filling above its normal level. A failure at the Truman Dam, nearly 100 miles upstream, could also overtop the dam. But engineers at Bagnell said that the anchoring system installed in the 80's should protect against any overtopping failure. Dams have also failed after inadequate maintenance and upkeep by its operators. Sullivan said different inspections are done on a daily, weekly and quarterly basis at Bagnell Dam. Ameren also does more in-depth checks every year and again once every five years. Another likely cause for a dam failure: cracking caused by movement, like the natural settling of a structure. Sullivan said that's not a problem at Bagnell Dam. "We also do a movement survey so we can tell if the dam, with survey instruments, we can tell if the dam is moving at all," Sullivan said. "And we are not seeing significant movement of the dam, just seasonal expansion and contraction." The fifth a dam likely fails: piping. When a leak in the dam collects sediment, it forms sink holes in the dam's interior. Sullivan points out that scenario cannot happen at Bagnell Dam because it is a concrete dam, not an earth-filled dam.

(The photo says it all. If you want to enlarge the photo, click on it and drag the lower right corner.)

Photos: More than 60 missing after Russian dam disaster

August 18, 2009, by Ron Nurwisah, nationalpost.com

Russian emergency workers are doubtful that they'll be able to find the dozens of workers still missing from an accident at a dam on Monday. A senior official at a local hospital near the Sayano-Shushenskaya hydroelectric plant said the death tally had officially risen to 12 from the 10 given on Monday night. But 64 people were unaccounted for after a turbine room flooded early on Monday at the power station, Russia's largest. Emergencies Minister Sergei Shoigu confirmed this figure on Tuesday when he arrived on the scene.

Hydro

For Immediate Release

NHA Presents Henwood Award to Brookfield's David Youlen

Award honors Youlen's leadership, vision, and contribution to hydro industry

Washington, D.C. (August 10, 2009) – National Hydropower Association is pleased to announce that it has presented David Youlen, senior vice president of Brookfield Renewable Power, with the prestigious Dr. Kenneth Henwood Award for individual achievement. "Dave Youlen brings a passion and commitment to his work that has changed our industry and helped secure the benefits of hydropower resources for all Americans," said Linda Church Ciocci, NHA's executive director. "Through his leadership, NHA has evolved to serve member interests more broadly and meet today's needs."

Youlen served as president of NHA from 2006 to 2007 at a point when both industry leaders and policymakers were just beginning to understand the role hydropower must play in an integrated approach to energy, climate, and economic policy. In accepting the Henwood Award during a special ceremony at the Waterpower Conference last month in Spokane, Youlen referred to this period as a "crucial time of NHA's realignment and achievement." "My NHA presidency introduced me to the converging national issues of energy independence, climate change, and environmental stewardship, while maintaining electric system reliability," Youlen said. "Hydropower presents one compelling solution at the intersection of these needs. I believe we've made tremendous progress." A licensed professional engineer who received his bachelor of science in civil engineering from Rensselaer Polytechnic Institute, Youlen has spent more than 35 years working on the development, management, and operation of hydropower facilities and other renewable energy resources. In his work at Brookfield Renewable Power, Youlen currently is focusing on the development of pumped storage facilities. "Dave Youlen, with his passion for advancement and excellence in both the technical and policy sides of the hydropower industry, embodies exactly what we look for in a Henwood winner," said Dan Jarvis, Henwood selection committee chairman. "Through his experience managing and operating hydropower plants, he learned firsthand what it means to be a good resource steward and a reliable electricity supplier. As a developer, he managed regulatory, financial, and legal issues and learned the industry's challenges in all those arenas. As an NHA president and board member, he brought all of this experience to bear, along with his boundless enthusiasm and commitment to our industry." The Dr. Kenneth Henwood Award is the hydropower industry's most prestigious individual achievement award. NHA established the award in 1990 in memory of Kenneth Henwood, an NHA board member, engineer, and developer who died while working on a project in California. Henwood winners must show persistence in the face of institutional obstacles, exhibit fair dealing and plain speaking, and depict an appreciation of the relationships between project engineering, the environment, and economics. "In honoring Dave Youlen with the Henwood award, the selection committee is recognizing something that we in the hydropower industry have observed for many years – Dave Youlen is one of our most accomplished and dedicated leaders," said Church Ciocci. "On behalf of NHA and the entire industry, I'd like to congratulate Dave on this award and thank him for his unflagging support."

US Department of Energy launches wind and hydropower database

12th August 2009, New Energy World Network Ltd. England, newenergyworldnetwork.com

The US Department of Energy's wind and hydropower technologies programme has launched a new database containing information on the test capabilities and services of various US hydrodynamic test facilities. The database covers 81 commercial, academic and government facilities and offshore berths in 18 states and will test tidal wave technologies. The DOE hopes it will serve as a platform for marine and hydrokinetic technology developers to identify a US facility where they can test and validate their prototype devices. Researchers will be able to examine the hydrodynamic characteristics of how the kinetic motion of water interacts with their devices. This allows technology developers to refine or validate their devices structurally, mechanically, or electrically.

(Bad geology – no pumped storage project. Can you believe the stupid analogy by the Sierra Club? They really don't have a clue what a pumped storage project can do!)

Firm pulls plug on Sparta quarry

August 14, 2009, Jim Lockwood, STAR-LEDGER STAFF

A Toronto firm has pulled the plug on its plan to convert a quarry in Sparta into an underground hydroelectric generating facility, because test drilling showed the deep rock is just not hard enough for massive reservoirs, the company president said today. Riverbank Power proposed converting the former Limecrest Quarry into a hydroelectric facility. Sparta officials were eagerly anticipating the facility creating environmentally friendly energy and becoming a financial boon for the town. But examination of test bores determined that the location wouldn't be feasible for the facility. "We did complete the (test) drilling and the bottom line is the rock just isn't suitable, it's not hard enough," said Riverbank President and CEO John Douglas. It's

unfortunate it didn't work out. It's as much a scientific exercise as an economic one." The news was cheered by Jeff Tittel of the New Jersey Sierra Club who opposed the plan. The idea was to generate off-peak electricity at night, and then sell it to a regional grid for use during the day, when demand is higher. "We thought all along it was a bad location and a bad project," Tittel said. "We didn't consider it clean energy, because you would use more energy than you produce, but it would make money. We said all along it was a ponzi scheme."

Douglas disagreed, saying the underground reservoir concept has been around for a century, and more of it will have to be done if the country is going to find renewable sources of energy and meet growing demand. "I'm not sure they (critics) really understand pump-storage, it's been around a long time. We were proposing to put the reservoir underground. This type of storage system is critical for the U.S. to meet its needs," Douglas said. Riverbank has 15 sites in the U.S. and Canada that it is pursuing such an underground facilities, he said. In Sparta, Riverbank drilled 2,200 feet -- deeper than anyone ever did at the quarry that was founded a century ago by Thomas Edison, Douglas said. While the rock in Sparta was deemed too soft for an underground hydroelectric plant, there probably is enough rock to support another century of mining of various aggregate rock products there, Douglas said.

(It's all sun power anyway)

Paterson hydroelectric plant slated for solar panels

From the Web via YellowBrix 8/14/2009

PATERSON, N.J.: Alexander Hamilton's vision in 1791 to harness the power of the Great Falls helped build a nation into an industrial powerhouse. Two hundred and eighteen years later, the Great Falls is still cranking out power -- and producing the kind of "clean" energy that President Obama is pushing to rebuild the economy. On Monday, Sen. Robert Menendez (D-N.J.) and Rep. Bill Pascrell (D-Paterson) visited the shimmering Great Falls to announce that the hydroelectric plant below the falls soon would be fitted with solar panels -- part of a $1.3 million federal block grant that Paterson has received to increase its energy efficiency. Paterson also plans to use some of the grant money to explore installing small turbines at other points along the industrial raceway leading to the falls, as a way to generate even more electricity. "Hamilton had a vision of a new America powered by the Great Falls," Menendez said. "Now it is up to us to complete the circle and reinvent Hamilton's vision, and build an American economy on the great natural resources and natural ingenuity, creativity, and pioneering spirit that is uniquely American."

Paterson's $1.3 million grant is part of $73 million that Congress has doled out to New Jersey municipalities and counties for clean energy programs as part of the Obama administration's economic recovery package. Monday was the deadline for local governments to submit their requests for the grant. Pascrell noted that only about 25 percent of the $787 billion federal stimulus package had been allocated so far, and said more help was on the way from Washington. "The best is yet to come," Pascrell said. The hydroelectric plant, built in 1914, has four turbines and generates about 11,000 kilowatts of clean energy per hour. Paterson leases the plant to an energy company, Algonquin Power, for about $100,000 a year, officials said. Algonquin in turn sells the energy to PSE&G which puts the electricity on the grid. Although the turbines work fine, the building itself is energy inefficient. Paterson Mayor Jose "Joey" Torres said installing solar panels on the roof would enable the plant to generate even more electricity. The city also plans to upgrade its lighting on streets and recreational fields to make it more energy efficient. Installing mini-turbines at points along the raceway has never been tried before, Torres said. The raceway is a canal system built by the silk mills, locomotive and gun works that first set up shop at the Great Falls in the early 1800s. Pascrell said that any new electricity generated by the raceway could be used to power the lighting at the new Great Falls National Park, which Congress dubbed earlier this year. Paterson is working with the federal government to develop an overall plan for the park, which celebrates the Great Falls' role in powering development of three key American industries following the Revolutionary War: locomotives, guns, and silk. "At a time when there is renewed national appreciation for the historic significance and natural beauty of Paterson's Great Falls, I am proud to stand here today on the cusp of a project that seeks to tap into the power surging through these

caverns," Pascrell said. "The investigation of the Great Falls as a potential source of hydroelectric and solar power is a renaissance in itself of the hope and vision Alexander Hamilton had when he looked upon this great waterway more than 200 years ago."

Hydroelectric project generates public support at unveiling

By Chad Lawhorn, August 14, 2009**,** LJWorld.com

Artist's rendering

The ink is barely dry on the design for the Bowersock Mills & Power Company's proposed $13 million hydroelectric power plant on the north bank of the Kansas River. But Bowersock plant manager Rich Foreman can already picture it in his mind: A slender glass structure just east of the downtown Kansas River bridges that will shine at night to show beautiful blue generators producing green electricity. "It is going to be a real gem over there on the river," Foreman said. Bowersock officials on Thursday evening hosted a meeting for about 70 members of the public to unveil the design of the power plant they hope to build directly across from their existing plant on the Kaw. The project won some key support from an area neighborhood group. "We're 100 percent in support of it," said Ted Boyle, president of the North Lawrence Improvement Association. "We think green energy is going to be a big part of the future."

Now, the project has to win key federal permits and find funding. Lawrence-based Bowersock announced in July that it had filed for a permit for the plant with the Federal Energy Regulatory Commission. Thursday's public meeting at the Lawrence Visitor Information Center was part of the permit process. Bowersock executive Sarah Hill-Nelson said the company hopes to know whether it will secure the necessary permits by late 2010. People who attended the meeting left with one definite impression: The building will change the skyline of North Lawrence. The plant only will be 40 feet wide, but it will be about 60 feet tall. The building will be slightly taller than the Kansas River bridge, which will be just west of the building. The plant also will jut into the river about 150 feet, taking it to the north edge of the existing Bowersock Dam. The building will be designed so water can flow through it, and when the water reaches certain levels, the back side of the plant will feature a cascading waterfall. Thus far, the size and prominent nature of the building haven't sparked concern. "I think it will complement the big City Hall on the other side of the river," said Mike Thompson, a Lawrence resident who attended the meeting. Plans call for the project to also increase public access to the river. Hill-Nelson said Bowersock would build a new area where canoes could be launched into the Kaw, and also a new fishing platform that would be near the downriver side of the plant. The plant won't interfere with the hiking trail atop the adjacent river levee. The project will require a federal environmental study, but hasn't yet faced major objections from environmentalists. Carey Maynard-Moody, a Lawrence resident who is on the executive committee of the Kansas chapter of the Sierra Club, said the group is still reviewing the project. But she said the group would balance any concerns the project may create for the river with the need to produce more green energy. "We are one of the species, too, and we have a lot to lose with the destabilization of the climate," Maynard-Moody said. "We know we need to find new ways to produce electricity." The new plant would more than double the amount of electricity the company could produce. Hill-Nelson estimated that the north plant, combined with the existing plant, would be able to produce enough electricity for about 4,500 homes. In addition to the plant — which would have foundations 40 feet deep to ensure that it doesn't float away — the project would include installing taller flash boards to the top of the existing dam. The new boards would allow the upstream pool of the river to rise by about 1.5 feet, but Bowersock leaders said a study showed the higher water levels would not produce significant upstream flooding. Bowersock leaders also assured the crowd that the Army Corps of Engineers would be doing assessments to ensure that the plant would not create too much pressure on the Kansas River levees. Hill-Nelson said the next step for the project will involve finding funding. The company hopes to sell a long-term power contract to a small Kansas community that operates its own electric utility.

Water

(For those interested, the Columbia River Treaty in the NW is something to think about because it won't be long before its renewal could be on the table. This will be one of the most important issues in the history of the NW.)
(Excerpts – full article: http://columbiavalleynews.com/news/2009/08/14/the-columbia-river-treaty/)

The Columbia River Treaty

August 14, 2009 by Columbia Valley News

Haven't we all heard the complaint that the BC Liberal Government is selling us out by sending our power to the US? Well, folks, don't blame the Campbell government! Long, long before BC voters elected the current Liberal government, the Columbia River Treaty was put in place and so let us look at this treaty, why and how it came about and what is its meaning for us in the Columbia Valley today. The 1964 Columbia River Treaty is an international agreement between Canada and the United States for the cooperative development and operation of water resources for the upper Columbia River. Though the treaty was ratified in 1964, its history goes back to the 1940's as the need was growing for increased energy production and flooding control. In the US, the Rock Island Dam in Washington State in 1932 was the first power production facility on the Columbia River. Next, the construction of the Bonneville Dam in 1933 and the Grand Coulee Dam in 1934, provided jobs for thousands in the depression years. At the time the Grand Coulee Dam became operational in 1942, there was little demand for power, but soon World War II industries saw the huge potential, and the economy and population of the Pacific Northwest grew rapidly. A number of smaller dams on the Columbia River and its tributaries followed but provided little storage so a coordinated plan was developed by both the Canadian and the US governments, to address the energy needs and also flooding concerns.

In 1944, Canada and the US formed the International Joint Commission to study the development of the water resources of the Columbia Basin. Then, in 1948 came a devastating flood which killed many and left thousands homeless. The result was the Columbia Basin Study which took 15 years to complete. In this study, a number of dam sites on the Columbia-Kootenay system were considered for development. It was recommended that upriver storage would benefit both countries. Principles were recommended for determining fair compensation for the use of storage. Benefits to both countries would be the regulation of water flows which would lessen the risks of flooding and also a greater amount of usable and dependable energy. Negotiations began in 1960 and less than a year later, President Eisenhower and Prime Minister Diefenbaker signed the Columbia River Treaty. Canada would provide 15.5 million acre-feet of storage by building three dams: Duncan, Arrow (Hugh Keenleyside) and Mica. In exchange for providing and operating the storage facilities, Canada received an upfront payment of 50% of the estimated future flood control benefits in the US until 2024, and was entitled to half the estimated average usable energy that could be generated downstream as a result of the Canadian storage. ----------.

The Columbia River Treaty has no specific termination date but either country can terminate it on or after September 16, 2024 after a minimum of 10 years written notice. With that date looming in the not-too-distant future, agencies in both Canada and the US are beginning to evaluate future options regarding the treaty. ----------.

Environment

Oregon and its allies slam Obama's handling of salmon plan

by Matthew Preusch, The Oregonian, August 11, 2009

The state of Oregon and its allies in a lawsuit over the future of Northwest salmon don't like how the Obama administration is handling the issue. In papers filed in federal court today, the state, environmental groups and the Nez Perce Tribe of Idaho say they've been effectively shut out of the administration's deliberations over how to run the region's network of big, power-generating dams without pushing salmon closer to

extinction. The criticism comes from some of the same people who not long ago were applauding the Obama team's entry in the decades-long and multi-billion dollar conundrum surrounding the imperiled and iconic fish. "It just seems that if the intent was to really sit down with the parties and resolve our differences, there certainly has been little or no significant dialogue between us and the federal agencies to lead us to believe that is happening," said Mike Carrier, Gov. Ted Kulongoski's natural resource advisor. The state and other groups are suing the federal government over a plan introduced during the Bush administration to operate hydroelectric dams on the Columbia and Snake rivers without violating federal environmental protections for salmon. Today they asked the judge overseeing the case for a "status conference" to air their concerns. Federal courts have struck down three previous plans, called biological opinions, and the Portland judge handling the lawsuit over the current one has expressed serious concerns about its legality.

Yesterday, the government asked U.S. District Court Judge James Redden for, and the judge granted, an additional 30 days to finalize its position on the plan. "Because this process has been inclusive of various parties' concerns from the beginning, in particular the parties to the litigation, we would like to discuss and explain our process and position on the FCRPS BiOp with all of the parties before formally presenting our position to the Court," Coby Howell, an attorney in the U.S. Department of Justice's Environment and Natural Resources Division, wrote to the judge. The judge had previously given the administration an additional 45 days in July and early August to review the plan, but Carrier and others now say during that time there has been a dearth of substantive interaction between the federal agencies and their opponents in the lawsuit. "It has become clear that the unilateral process federal defendants have followed to finalize their decision jeopardizes any opportunity that may remain to resolve this controversy," the documents filed in Redden's court today say. Opponents of the plan told the judge they think the administration has already decided what its course will be on the salmon plan, and they fear the 30 days the judge granted the government will be used to "sell that decision to political leaders and the public outside this case," the documents say. "If this administration indeed does what it appears it's about to do, which is adopt this plan with some additional bows and shiny glitter, that is a true message to salmon communities that this administration is not abiding by the science," said Nicole Cordan, attorney for Save Our Wild Salmon, a coalition of environmental and fishing interests. Federal fish managers said the plan would not be made public until the new deadline, September 15, and critics should reserve judgment until they see what it includes. "Things are still being discussed within the federal family," said Brian Gorman, a spokesman for the National Oceanic and Atmospheric Administration in Seattle. "We took very seriously Judge Redden's admonition to us to engage in a collaborative discussion with all the parties. We think it worked out remarkably well," said Gorman. "There are some outliers, but everyone anticipated going into this that we would not get agreement from all the parties." Also today, a group of more than 100 fisheries experts sent a letter to Secretary of Commerce Gary Locke and NOAA Administrator Jane Lubchenco asking them to reject the 2008 biological opinion. "This Bush salmon plan is completely inconsistent with President Obama's public statements about relying on sound science," said Jim Martin, former Chief of Fisheries of the Oregon Department Fish and Wildlife and a signatory to the letter. The letter is the latest in a series of communiqués from scientists, senators, editorial writers and others seeking to sway the administration's salmon policy.

Steelhead count shattered at Bonneville Dam yet again

Posted by Mark Yuasa, The Seattle Times Company, August 13, 2009

It didn't take long for the new single-day steelhead count at Bonneville Dam set on Tuesday, Aug. 11 to get broken again. This time, 28,314 steelhead were counted at Bonneville Dam on Wednesday, Aug. 12. According to Joe Hymer, a state Fish and Wildlife biologist, today's [Aug. 13] count may be even higher as 1,700 fish were counted in a single hour on the Washington side this morning. By the way, the first pink salmon of the season was tallied today too. On Aug. 11, 18,671 steelhead were counted. The previous record since counts began in 1938 was 14,432 fish on Aug. 3, 2001.

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

Some Dam – Hydro News and Other Stuff

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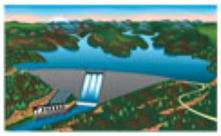
8/28/2009

Quote of Note: "The best way to realize the pleasure of feeling rich is to live in a smaller house than your means would entitle you to have." - - Edward Clarke

"Good wine is a necessity of life." - -Thomas Jefferson
Ron's wine pick of the week: **Terra Andina Reserva Chardonnay (Chile) 2007**
"No nation was ever drunk when wine was cheap." - - Thomas Jefferson



Dams

(Everyone doesn't get it. This is a cause and the precedent that dam removal advocates want and they think it's now or never.)

Dam removal extremists on the march in NW and DC

othellooutlook.com, Aug 19, 2009, U.S. Congressman Doc Hastings

Idaho - Dam removal extremists are aggressively pushing their agenda from a federal courtroom in Portland, Ore., to the halls of Congress in Washington, D.C. In May, Judge Redden threatened to upend a new salmon recovery plan that resulted from an unprecedented level of collaboration among all federal agencies, three states and the region's major Indian tribes. Redden warned bipartisan agreement on a scientifically-based plan may not be good enough for his personal tastes and he was contemplating a move to single-handedly inject Snake River dam removal into the plan. With this action, Judge Redden chose to take up the fight of the dam removal extremists who are funding the lawsuit against the salmon recovery plan. What's most important to understand is Redden has no authority to order dam removal. Federal law doesn't allow dam removal and no Democrat-politician-turned-activist-judge can rewrite the law (before Jimmy Carter appointed him to a judgeship, Redden was a Democrat elected official). Only Congress has the power to authorize dam removal. Since Redden issued his dam removal threat, the Obama Administration has been working on how it will reply.

While the President's position is still unknown, I've spoken with administration officials and hope they understand dam removal would have devastating consequences for our region's economy. The four Snake River dams are invaluable components of the Northwest's clean, low-cost hydropower system that thousands and thousands of jobs rely upon. Dam removal is an extreme action that would kill jobs in the Northwest, raise power bills and lead to huge increases in greenhouse gas emissions. And there's no scientific proof it would guarantee salmon recovery. Yet, these facts didn't stop Seattle Congressman Jim McDermott and other powerful Democrats from introducing legislation on July 31 that targets the four Snake

River dams for removal. One of the first places this dam removal bill will land in Congress is on my desk as the top Republican on the House Committee on Natural Resources. I've pledged to do everything in my power to stop it. I've no doubt dam removal activists will continue their lawsuits, their fundraising campaigns and their fight to spoil agreement on policies that will actually recover fish in the Northwest. I have a very clear message for these professional activists who make a living off of pushing their dam removal agenda: Northwest citizens understand we can protect our clean, renewable hydropower and recover salmon at the same time.

Snake River dams: Don't forget the carbon

THE NEWS TRIBUNE, 08/21/09

Given the specter of climate change, 1,000 megawatts of carbon-neutral power – enough to power all of Seattle – are a precious commodity. Somehow, that fact seems lost on the people who remain bent on breaching the four hydroelectric dams on the Lower Snake River. Once again, U.S. Rep. Jim McDermott, D-Seattle, has offered Congress a bill designed to expedite the effective dismantling of those dams, which do in fact routinely generate 1,000 megawatts and can more than triple that to meet spikes in demand. McDermott wants to empower the Army secretary to remove the earthen portions of the dam to give salmon easier passage up and down the river. Congress already has the power to breach the dams or tear them out entirely; this bill is a ploy to yank that decision from the democratic process.

To their credit, neither of Washington's U.S. senators, Maria Cantwell and Patty Murray, supports the measure. Neither does Norm Dicks, D-Belfair, the state's 800-pound gorilla in the House of Representatives. Dicks, Murray and Cantwell are supposedly bucking their environmentalist supporters. Are environmentalists really monolithic on this issue? Anyone concerned about global warming ought to feel at least some qualms about the loss of such a vast source of renewable, carbon-free electricity. Many opponents of the dams brush off the carbon problem. They talk as if wind power and conservation will readily replace the dams' nearly 3,500 megawatts of combined capacity. We'd much rather see the conservation and wind first replace the dirty coal power that accounts for 20 percent of the Pacific Northwest's electricity. When they finish replacing the coal, they should start replacing the natural gas turbines that – though far cleaner than coal – still emit carbon dioxide. From a climate-change perspective, it would be madness to shut down 1,000 megawatts of clean hydro while leaving fossil-fuel plants merrily spewing carbon into the atmosphere. This isn't just a question of climate, of course. The dams do hamper the passage of fish, including several endangered salmon runs. But those species have been kept alive – though close to the edge – for many years now with fish-friend-liar river management. In any case, there's no guarantee that breaching the dams would save the runs, which are heavily impacted by ocean conditions, especially temperature. Temperature – as in what goes up when there's more carbon dioxide in the air. It's understandable that certain groups – including Idaho tourism and sport-fishing lobbies – are fixated on the salmon side of the equation. But there's a real disconnect when someone who professes deep concern about global warming is willing to kiss off dams that produce so much power and so little carbon dioxide.

(This is one of those dumb headlines that should be on the web site: http://probablybadnews.com/)
(Excerpts)

Firefighters to burn Lake Mendocino dam, Thursday

Ukiah Daily Journal Staff, 08/25/2009

In preparation for an upcoming inspection of Coyote Dam at Lake Mendocino area fire fighters will singe the dam of vegetation during training Thursday. Smoke will be visible in the Ukiah and Redwood Valley areas, from about 6 p.m. to 9 p.m. Thursday. The burn is intended to help the lake's operators, the U.S. Army Corps of Engineers, get a good look at the dam for an earthquake inspection ----------.

(The Corps of engineers doesn't issue the license, they approve a project if doesn't interfere with its Federal purpose. The FERC issues the license. Oh well, that's about what to expect from the media – poor reporting)

Retrofitting Dams to Generate Electricity

By Kate Galbraith, August 19, 2009, New York Times

Ohio River - Environmental opposition often means that new hydropower facilities are non-starters. But there may be a way around that: retrofitting existing dams. Only 3 percent of the 80,000 dams in the United States are used to generate power, according to Norm Bishop, a vice president at MWH, a water engineering firm. They were built for other purposes, like flood control, recreation, irrigation or water storage. To expand the nation's hydropower capacity, "We should be looking at the dams in the 97 percent range that have no existing power facilities," Mr. Bishop said.

One such effort is happening along the Ohio River. American Municipal Power, a large power supplier based in Ohio that is working with MWH, broke ground earlier this month on the first of five planned hydropower retrofit projects on the river. The total cost will come to around $1.9 billion, according to Marc Gerken, AMP's chief executive, and the projects should be completed between 2013 and 2015. Total power production will be 350 megawatts, enough to supply 350,000 homes. "These powerhouses will last 70 years," Mr. Gerken said. "Once you construct them, and once debt service is done, you basically have free fuel." He cited renewable energy and climate policies as part of the motivation for retrofitting the dams, which would be a clean source of power. Carbon regulation is "coming, and you'd better manage your carbon footprint," he said. A Sierra Club representative in Ohio said that he fully backed AMP's project. "Retrofitting dams to produce hydropower can displace dirty energy from the grid," said Nachy Kanfer, who is with the group's Beyond Coal Campaign. "There's really nothing to dislike with this proposal." The existing dams along the Ohio River were built in the 1950s and 1960s, for navigation and watershed purposes, according to Mr. Gerken. A.M.P. also retrofitted the Belleville Dam, along the Ohio River in West Virginia, in 1999. Getting a license from the Army Corps of Engineers, which operates the dams, tends to be a painstaking, multiyear process, according to Mr. Gerken. "I had envisioned starting all of these projects six months ago, and obviously I only got one started," he said. Another power developer, Brookfield Renewable Power, has a retrofit project under construction on the Mississippi River in Minnesota. That project would add 10 megawatts of power capacity to an existing Army Corps dam. This 2007 federal survey of hydropower capabilities identifies other dams that with retrofit potential. Asked about whether he had received money from the stimulus package for the projects, Mr. Gerken of A.M.P. responded that he had gotten "not one red nickel." "What's really ironic to me," he added, "is how hydro has just totally fallen under the radar screen" in terms of incentives, relative to wind and solar.

(One small step for hydro, more dependable and renewable kW)

FULL OPERATIONS INITIATED AT NATION'S FIRST COMMERCIAL HYDROKINETIC POWER STATION

FERC Commissioner Phil Moeller "Flips the Switch" During His Tour of Hastings, MN Power Project; Briefed on First-Ever Direct Hydrokinetic Fish Impact Study Validating Superior Fish Friendliness

HOUSTON, TX – August 20, 2009 – While visiting the nation's first federally-licensed hydrokinetic power project, Philip D. Moeller, a Commissioner with the Federal Energy Regulatory Commission, today initiated full commercial power operations. In Hastings, MN, Commissioner Moeller released the brake on a 100 kW nameplate capacity hydrokinetic turbine manufactured by Hydro Green Energy, LLC, allowing uninterrupted, 24/7 power generation to commence. Commenting on his visit, Commissioner Moeller stated, "I was thrilled to be here today to witness another step forward in the advancement of hydrokinetic technologies. I look forward to continued innovation and advances in reaping the benefits of this clean, renewable resource." "Today is another first for Hydro Green Energy and for the U.S. waterpower technology industry," stated Wayne F. Krouse, Chairman and CEO of Hydro Green Energy. "Commissioner Moeller has done something no one else can claim: he initiated full operations at the first licensed hydrokinetic power turbine in U.S.

history. We were honored to have Commissioner Moeller, a strong advocate of new waterpower technologies, „flip the switch" at the Hastings project."

Hydrokinetic power refers to the generation of electricity from moving water without impoundments or diversionary structures that are typically used at conventional hydropower facilities. The City of Hastings is installing a two-turbine, barge-mounted hydrokinetic power project downstream from its 4.4 megawatt run-of-river hydropower plant at U.S. Army Corps of Engineers Lock & Dam No. 2. The Federal Energy Regulatory Commission approved the project by a 5-0 vote on December 13, 2008. Hydro Green has been successfully testing and calibrating the turbine and its power output since mid-February. The second turbine, a beta unit with increased power and efficiency, is targeted to be installed next spring. During his tour, Commissioner Moeller was also briefed on the completion of the first direct fish survival study performed on an installed hydrokinetic power turbine. The study was conducted from June 1-13, 2009. "As enjoyable as it was to have Commissioner Moeller mark our full commercial operations, it was important for him to understand our commitment to advancing the understanding of the environmental performance of hydrokinetic technologies and to learn firsthand of the environmentally superior nature of our hydrokinetic product," said Krouse.

At the project, Normandeau Associates (www.normandeau.com), a highly regarded environmental consulting firm that provides ecological, environmental and natural resources management services, evaluated the direct effects to fish by the hydrokinetic unit. To accomplish this task, Normandeau, induced 504 balloon and radio tagged fish of a variety of species and sizes into the hydrokinetic turbine to study fish survival. The performance of those fish was compared to 250 control group fish that experienced the full experimental procedure except for passage through the hydrokinetic turbine. Environmental scientists studied fish survival and injury rates after recapture of nearly all the tagged fish. Pre-installation computer modeling indicated an estimated 97.5 percent fish survival rating for the turbine. "The preliminary results on the Hastings fish study confirm what we knew, and in fact, exceed our expectations and modeling. We look forward to completing the report and sharing it with the public as swiftly as possible. By disclosing this scientific data, all stakeholders will better understand how these technologies perform from an environmental standpoint – and that is exceptionally well," said Krouse. "This stakeholder education will allow the industry to grow and to better contribute to achieving the energy, economic and environmental goals laid out by the Obama administration. And, I predict that this landmark study will be used not only in the U.S., but throughout the world, including in the tidal turbine sector." Known as the "HI-Z Turb N" Tag" methodology, Normandeau's patented methodology has been utilized at scores of conventional hydropower projects, including participation in the Department of Energy's Advanced Hydropower Turbine System program, but never on a hydrokinetic turbine. This methodology uses a controlled experiment approach and produces comprehensive, statistically reliable and verifiable results on injury and survival of fish passed through a turbine, spillway or over falls. The results of the Hastings fish study, presently being written, will be released to the public for full stakeholder community review in approximately three weeks. Hydro Green Energy is a privately-held renewable energy systems developer and integrator operating in the waterpower sector. Hydro Green Energy, a start-up company based in Houston, TX, closed its Series-A funding in April 2008 with a $2.6 million investment from the Quercus Trust, a prominent investor in alternative energy companies with intellectual property. Hydro Green expects to soon close its Series-B financing, which will place the company in a position to aggressively move forward on its U.S. and international project pipeline, vigorously defend its intellectual property, continue technology innovation and add several executive level, engineering and regulatory employees. Hydro Green Energy's technologies operate in open rivers, at existing hydropower facilities, at lock and dam infrastructure, adjacent to non-powered dams and in cooling water systems at thermal power plants. The company holds U.S. Patent # 6,955,049, three international patents and has multiple dozens of additional U.S. and international patents pending on the company's technologies. The company is presently developing waterpower projects in Alabama, Alaska, Iowa, Illinois, Kentucky, Louisiana, Minnesota, Missouri, Mississippi, North Carolina, Ohio, Oklahoma, Pennsylvania and Wisconsin. The company's project pipeline will result in the development of nearly 500 MW of clean, renewable energy.

(A bunch of hand ringing by a bunch of environmntal frenzy. There were over 1,000 small hydro projects built in the late 70'3 and early 80's and guess what – the environmental problems were minimal – I was there when it happened)

Deep in the Wilderness, Power Companies Wade In

Small Hydroelectric Dams Catch On in Remote Spots; Critics Fear Environmental Toll and See More-Efficient Options Elsewhere

AUGUST 21, 2009, By JIM CARLTON, Wall Street Journal

SULTAN, Wash. -- A big public utility is on the cusp of building a hydroelectric-power plant on a picture-perfect stream in the Pacific Northwest, but the plan has yet to draw the usual opposition. That is in part because the approved project, which involves building a dam on a tributary called Youngs Creek, is so small and remote that it has attracted little notice. It will generate only about 7.5 megawatts of power at its peak, enough electricity to power between 3,500 and 7,500 homes. By contrast, the much bigger Henry M. Jackson Hydroelectric Project on the nearby Sultan River can produce up to 112 megawatts, or enough power for 56,000 to 112,000 homes. So-called small hydro plants like Youngs Creek are sprouting up across the country, with around 500 potential sites identified by a federal study in Washington state alone. Power managers are seeking ways to meet the growing demand for electricity without turning to sources like coal plants that are widely thought to contribute to global warming. Generating power from streams and rivers, while often controversial, produces few emissions. "We're in a situation where we're doing what our customers and society want," says Steve Klein, general manager of the Snohomish County Public Utility District north of Seattle, which is spearheading Youngs Creek and plans as many as 10 more.

But the small-hydro trend is beginning to raise eyebrows in environmental and recreation circles, especially in the West where much of the activity is taking place. The concern is that dozens, if not hundreds of dams and small power plants could industrialize vast reaches of spectacular backcountry, while providing relatively little power. Aside from ruining prized whitewater rafting runs, the projects could kill fish, critics say, while carving up habitat for other wildlife, such as for bears and eagles, with roads, transmission lines and other infrastructure. According to the U.S. Hydropower Resource Assessment for Washington state in 1997, more than 2,500 megawatts of power could be added by simply improving efficiencies at existing hydroelectric plants and adding hydro to non-generating dams, such as those used for reservoirs or agricultural irrigation. By contrast, the report estimated that developing all the state's potential hydro sites, including small ones, would add only 762 megawatts. "One plant here, one there, maybe we would support that," says Thomas O'Keefe, Northwest regional coordinator of American Whitewater, a rafters' group. "But with so many on the drawing board this really gets to be an issue of cumulative impacts." Already, about 60 small-hydro projects have been licensed over the past 10 years in British Columbia, with at least one big U.S. utility, San Francisco-based Pacific Gas and Electric Co., saying it is considering using the power to add to its portfolio. In Colorado, Gov. Bill Ritter's energy office is working to get "10 to 15" small-hydro projects built out of about 200 potential sites federal officials have identified in the Rocky Mountain state, says Todd Hartman, a spokesman for the office. The sites the governor's office is pushing would use existing infrastructure like dams or irrigation ditches, and so wouldn't entail as much stream disruption as other places, Mr. Hartman says.

The Federal Energy Regulatory Commission, which oversees the plants, has applications pending for about 14,000 megawatts, enough electricity for roughly seven million to 14 million homes, from mostly small-hydro projects nationwide, says Andrew Munro, president of the National Hydropower Association trade group. That is a more-than-20% increase from two years ago, he says. In some cases, small-hydro plants have met fierce resistance. In 2008, a clean-energy company called Principle Power Hydro of San Francisco unveiled plans for nine small-hydro plants along a 34-mile stretch of Oregon's McKenzie River that would generate a combined 83 megawatts of power. But environmentalists and recreation enthusiasts complained the hydro plants would despoil a popular whitewater river in Oregon, and FERC officials ended up denying the company's request for a preliminary permit. And in Montana, American Whitewater has joined some other groups in protesting plans by Hydrodynamics Inc. to build a small-hydro plant on the famed Madison River outside Yellowstone National Park. The groups say diversion of water for the plant would harm fish and other wildlife on the river. Ben Singer, project engineer for the Bozeman, Mont., builder of small-hydro plants, says the company believes it can design a project that would have no impact. Federal officials are still considering the company's request for preliminary permit to explore building a plant there. But often, plants like Youngs Creek are meeting little, if any, opposition in part because of their sheer remoteness. Youngs Creek, the place where the Snohomish utility wants to build a small-hydro plant, is situated in the Cascades foothills about five miles from the nearest town. Like most similar projects being considered, this would be built above where salmon and other threatened migratory fish go, and so can't be challenged on those grounds. The utility purchased property and rights for the hydro facility in 2008 for $745,000 from a private firm. "We decided not to oppose Youngs Creek because we couldn't find anyone who really used it, and it would just take too much of our resources for such a small project," says Rich Bowers, Northwest coordinator of the Hydropower Reform Coalition, which represents about 140 environmental, recreation and other groups. But Mr. Bowers added he still questions the viability of the project, which utility officials say is expected to cost $30 million and be completed in 2011 after a construction bid is issued in a few weeks. The project originally had been issued a federal license 20 years ago, but wasn't built then because the market for alternative energy projects generally foundered after oil prices declined. FERC officials reauthorized the project in February. One issue these plants face, Mr. Bowers says, is that the creeks they depend on are often seasonal, with sharply reduced flows in late summer. Snohomish officials say that when flows are low,

they won't be generating electricity from the plant. Although the utility, like many around the West, is drawing ever more power from wind farms, they say creeks and small rivers are an important backup source much of the year. "We have a lot of wind, but the problem is when it turns off," says Barry Chrisman, plant superintendent of the Jackson Hydroelectric Project, where officials plan to remotely control both Youngs Creek and another small-hydro plant, Woods Creek. The utility bought that existing 500,000-kilowatt plant from a private company for $1.1 million in 2008. "That's why low-impact hydro is important, to pick up the slack."

(Has anyone ever seen a wind mill, coal plant, Nuke, etc. that looks this picturesque?)

1870s Ind. grain mill switching to hydropower

Associated Press, August 21, 2009, chicagotribune.com

BRIDGETON, Ind. - A 19th century mill in western Indiana that grinds grain into flour with old-time stone grinding equipment is switching from electricity to hydropower. The owners of the Bridgeton Grist Mill want their old, red mill to go green by installing water turbines that will generate free electricity to power the grinding stones. Owners Mike and Karen Roe are overseeing the rebuilding of special "gates" on an adjacent dam over Big Raccoon Creek that will direct water into the turbines. The mill and a covered bridge that runs along the dam are the stars of the annual Parke County Covered Bridge Festival in Bridgeton, about 15 miles northeast of Terre Haute. A store in the mill, which has been in operation since the 1870s, sells Bridgeton Blue Grits, red cornmeal, oat bran and other grain products.

The covered bridge crosses over the mill pond created by the mill dam. It is just above the waterfall over the dam. It's called the "Dam Waterfall". Having a covered bridge over a waterfall makes it Indiana's Most Famous Covered Bridge.

- The dam is nine feet tall and 225 feet long.
- The dam is covered end to end only during high water. It is in bad shape.
- The covered bridge is 267 feet long. (The postcards say 245 feet).
- It is a double span Burr Arch built by J.J. Daniels in 1868.
- The covered bridge was "Set Aside" or closed to traffic in 1968.

At the end of the dam sets the Historic Bridgeton Mill.

(This is Interesting from a State that has been strongly opposed to some hydro development and has actually been at the forefront on dam removal)
(Excerpts – full article: http://www.ibrattleboro.com/article.php/20090821111639940)

Examination of Green Jobs Development Policies in Vermont

ibrattleboro.com, August 21 2009

U.S. Senate Committee on Environment and Public Works - Green Jobs Subcommittee Hearing in Montpelier, Vermont

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MONTPELIER, August 20 – Sen. Bernie Sanders (I-VT), chairman of the Subcommittee on Green Jobs and the New Economy, held a field hearing Thursday in the Statehouse in Montpelier to examine clean energy job development policies in Vermont and their applicability nationwide. ----------.

Vermont has the lowest carbon footprint in the nation, in part due to the use of clean sustainable energy from hydropower. Vermont gets more than one-third of its electricity from hydropower. In addition, Vermont gets roughly 6 percent of its power from biomass. ----------.

Schwarzenegger: New dams critical for water supply

By SAMANTHA YOUNG Associated Press Writer, 08/18/2009, MercuryNews.com

SACRAMENTO, Calif.—Gov. Arnold Schwarzenegger on Tuesday said he will reject any proposal to overhaul state water policy that fails to include funding for new dams. The governor made his comments Tuesday outside the Capitol as lawmakers were holding a hearing on a package of bills intended to upgrade California's decades-old water-delivery system. Schwarzenegger and lawmakers from both parties have made water-related issues a top priority now that the state's fiscal mess has been addressed. Yet the legislative package before lawmakers this week was written by Democrats and omits funding to build reservoirs, prompting critical comments Tuesday from GOP lawmakers and the Republican governor. Schwarzenegger has joined Republican lawmakers and some Democrats who represent districts in the Central Valley in pushing for dams and expanding underground water storage. "I will not sign anything that does not have above-the-ground and below-the-ground water storage," Schwarzenegger said during a news conference on the steps of the Capitol, surrounded by Central Valley farm workers bused to Sacramento for the day. "We need a whole package to restore our water today and ensure that we have water for tomorrow."

The Central Valley is among the nation's most productive agricultural regions but has seen soaring unemployment over the past year, with jobless rates exceeding 30 percent in some communities. Farmers blame a three-year drought and federal reductions in water pumping that have forced them to fallow thousands of acres of crops and orchards. State water managers also worry about the long-range effects of global climate change, which is expected to reduce the Sierra snowpack that is crucial to California's summertime water needs. Democrats say they aren't ruling out money for dams but say the Legislature must first address problems with the Sacramento-San Joaquin Delta, the ecosystem that serves as the main conduit moving water from north to south. Water quality and conditions for fish have worsened in the delta in recent years, leading to federal limits on the amount of water that can be pumped from the region to farms and cities. At the same time, scientists have raised concerns about the stability of some 1,115 miles of earthen levees. If they are breached, the delta could be inundated with salty water from San Francisco Bay, tainting the drinking water supply for two-thirds of California's 38 million residents. Sen. Fran Pavley, D-Agoura Hills, who co-chaired Tuesday's legislative hearing, said rebuilding California's water system while protecting the environment will be a big challenge. "The status quo is not acceptable," she said.

Republicans complained during the daylong hearing that Democrats did not include money for dams in their plan, which they said should be a key element of any comprehensive water solution. "This does not appear to me to be moving forward. This is looking backwards," said Senate Minority Leader Dennis Hollingsworth, R-Temecula. Democrats also have proposed establishing a seven-member governing council to manage the delta, saying one agency needs to be in charge of decisions for a territory that is the size of Rhode Island. It would be responsible for restoring habitat while ensuring that water exports continue. It also would have the final say about an evolving proposal to build a canal that would divert fresh water out of the Sacramento River and funnel it around the delta directly to the pumping plants. Assemblyman Tom Berryhill, R-Modesto, questioned whether the Legislature should relinquish its authority to set major state water policy. "The one thing we're not going to stand for is another Coastal Commission," he said, referring to a body that has been criticized for protecting California's coastline at the expense of recreation and development.

(This is nothing new. If water is withdrawn from a reservoir under an FERC license, the water agency pays for lost power. This is a standard requirement in all licenses.)

$59 million lost, according to Southeastern Federal Power Customers

Electricity co-ops say they're owed for diverted water

By Kristi E. Swartz, The Atlanta Journal-Constitution, August 23, 2009

As Georgia tries to figure out how to win back the use of Lake Lanier, a group of Southeastern hydropower users is hoping to get back something as well. Millions of dollars. That money, if it's ever paid, would come

out of your pocket if you live in Atlanta, Fulton, DeKalb, Cobb or Gwinnett. That's because you've been drinking water that, instead of running through your tap, should have been running through the turbines at Buford Dam, generating cheap power, according to a federal court decision. In the back pages of that landmark ruling in the tri-state water litigation last month, Senior U.S. District Judge Paul Magnuson concluded that the U.S. Army Corps of Engineers has consistently shorted an obscure group of power users in favor of serving up water to metro Atlanta. The group is known as the Southeastern Federal Power Customers, nearly two dozen electric membership cooperatives and municipal utilities that are supposed to get inexpensive power generated by dams on the Chattahoochee, among other rivers. Because the Corps diverted water from turbines to taps, the judge found, the Federal Power Customers didn't get the electricity they needed and were forced to go out on the spot market and buy it for astronomically higher prices. The Power Customers say that has cost them $59 million over the years, and they want the money back.

"The Power Customers seem to think that the water providers owe them something, and we don't," said Atlanta Regional Commission Director Chick Krautler. "We owe them for storage, and we would be prepared to pay a reasonable amount for storage" of the water at the dam. In other words, the cities and counties don't pay for the water, but they pay the Corps to store the water and to operate the dam so the water flows at certain times. The amount they pay varies, Krautler said. "That's Georgia's water, but we pay for the storage," he said. The Power Customers hope that Magnuson's ruling, which requires Congress to enact a law governing the use of the Chattahoochee River by Georgia, Alabama and Florida within three years; will lead to a resolution for them as well. "We're waiting to see if the parties can find a settlement that they all can agree to," said Clinton Vince, a lawyer representing the hydropower users. "We want and would insist that if there is going to be a reallocation of water that the hydropower customers be made whole." A clue as to how the Power Customers might get their money — or some of their money — back lies in a settlement agreement that the parties entered into after the group sued the Corps in 2000. The agreement was later thrown out by a federal appeals court. But under that plan, water users in the cities of Atlanta and Gainesville and counties of Fulton, DeKalb, Cobb and Gwinnett were to pay extra for their water, and the additional revenue would be passed through to the Power Customers. The not-for-profit hydropower customers group includes most of the consumer-owned power systems in eight Southeastern states. The group said it paid millions to build and operate dams and reservoirs managed by the Corps, which would sell its members hydropower as long as the water flowed over the turbines.

The court found that the Power Customers have been harmed in two ways: First, the Corps hasn't provided sufficient flows of water to generate hydroelectricity in the quantities it agreed to decades ago. The annual output from Buford Dam is supposed to be 170,000 megawatt hours, but the dam has hit that target only four times in the past 15 years, the court said. And in five years during that period, the dam generated less than 100,000 megawatt hours. Second, the dam is no longer producing power at so-called peak times — between 4 p.m. and 8 p.m. — when people are home from work, children home from school, and people are using lamps, computers, stoves and other appliances. Instead, the water turns the turbines on Saturday and Sunday rather than Monday through Friday, when the hydropower users say their need is greatest. "It's a triple whammy for us. Some of the water doesn't flow through the turbines — when it doesn't flow through the turbines, it doesn't generate electricity," said Mark Crisp, a managing consultant with C.H. Guernsey & Co. "And it's not flowing through at the times we need it the most." Magnuson agreed. "Because non-peak power is much less valuable than peak power, the harm to hydropower from this change in operations is obvious," he said in the ruling.

The hydropower is marketed by the federal Southeastern Power Administration, which must turn to the open market to acquire the power it needs when it doesn't get enough electricity from water power. Those costs are passed on to the Southeastern Federal Power Customers, who pass them along to their residential and business users. The price for hydropower was set 60 years ago. Government regulators allow for the price to be as cheap as possible but to still cover the cost of operating the dam. That's about 2 cents a kilowatt hour, said Crisp, a water expert in Atlanta who's been involved in the tri-state water wars since they started. If SEPA has to buy electricity generated from natural gas, for example, the cost balloons to about 85 cents a kilowatt hour. "That's why [hydropower is] so valuable," Crisp said. Krautler, at the Atlanta Regional Commission, points out that, like the cities and counties, the hydropower users are customers of the Corps of Engineers. And they have a nice deal in getting cheap electricity. "The Power Customers have gotten a good deal by being able to buy cheap power, and they will continue to receive cheap power," he said. "If the amount of power they receive is reduced for some purpose, that's between them and the Corps." Whether the power users get reimbursed hinges on the outcome of the water-allocation negotiations. "If we assume the best happens in this case ... then there will be recognition of compensation," Crisp said.

Environment

Can salmon undo Yosemite dam?

By Bill McEwen / The Fresno Bee , Aug. 22, 2009

With salmon on the California coast disappearing, I wonder how many billions of dollars will be spent on hatcheries, habitat restoration, fish ladders and even trucks in an attempt to save the species. I also wonder how long government will rely on these failing approaches until confronting the obvious: the dam in Yosemite's Hetch Hetchy Valley must come down if salmon are to thrive again in the Sacramento-San Joaquin Delta. Environmentalists fought -- and won -- a long legal fight to reintroduce salmon to the San Joaquin River below Friant Dam. Indeed, the river will flow year-round for the first time since the 1940s after restoration begins in October. But if the goal is to create better habitat for salmon spawning, rearing, and migration to the ocean, I question why environmentalists focused on the San Joaquin and the dam at Friant, instead of the Tuolumne River and the dam at Hetch Hetchy. The Tuolumne, a tributary of the San Joaquin, is "the keystone" to bringing back California's salmon fishery, according to Dale Mitchell, a former state Department of Fish and Game biologist and regional manager. "If we want to make salmon in the [San Joaquin River] basin, one really big step would be to take out Hetch Hetchy -- or at least condition the amount of water it can divert in critical times," Mitchell says. "It would produce many more salmon than the Friant tributary restoration can accomplish, and much faster and cheaper."

Mitchell, who worked 40 years for the department, says that increased flows on the Tuolumne from February to July "would be a huge benefit for salmon." But, with O'Shaughnessy Dam in place -- its cold Sierra water covering Hetch Hetchy, the smaller twin to Yosemite Valley -- the Tuolumne's flows are inadequate and its water too warm to protect juvenile salmon. Many people -- including me -- have said that the dam at Hetch Hetchy should come down. But we've been tilting at a dam protected by powerful politicians such as U.S. Sen. Dianne Feinstein, Bay Area residents who get their drinking water from the reservoir and 1913 federal legislation known as the Raker Act. The Raker Act -- which allowed the the city of San Francisco to dip a straw into a national park for its water -- is generally thought to provide an invincible legal shield for the dam. But federal courts have vigilantly stood behind endangered salmon, too.

River by river, old dams contributing to the salmon demise are going down. Two years ago, a 47-foot tall dam on Oregon's Sandy River was dynamited, and its water flowed unrestrained from Mount Hood to the Columbia River for the first time in 94 years. Over the past 10 years, 430 dams have come down, according to American Rivers, a nonprofit based in Washington, D.C., that advocates for dam removal. There are plans to demolish four aging dams on the upper Klamath River, and the fate of four old, salmon-killing dams on the lower Snake River now is being decided. The problem with all dams is that they age and become expensive to maintain. The problem with some dams is that they create environmental problems unforeseen or shrugged off at the time of construction. Hetch Hetchy Valley restoration advocates have shown that the dam has outlived its usefulness. Water could be stored at a lower reservoir such as Don Pedro or even moved via canal to the mammoth New Melones Reservoir on the Stanislaus River. But the facts haven't prevailed in the Hetch Hetchy debate. Not with San Franciscans fiercely protective of their federally created water source. Now, there's a new player in the picture. It's the salmon, fewer in numbers, but mightier than ever in the courts. The salmon are felling dams and restoring rivers all over the West. Could the dam on the Tuolumne at Hetch Hetchy be among them?

(Don’t ask me, I don’t know what a Kuow is either!)

Snake River Sockeye Salmon Swim Back from the Brink

08/20/2009, Kuow News, Puget Sound Public Radio

The most endangered run of Pacific salmon is beating the odds this summer. You can't get any closer to extinction than Snake River sockeye salmon did last decade. This is the run that gave us "Lonesome Larry," so named because he was the one and only sockeye to complete the migration in 1992. Correspondent Tom Banse reports Lonesome Larry's descendents are coming back this year, by the hundreds. Snake River sockeye are currently performing an incredible feat of migration. They swim upriver for 900 miles. Their route to the spawning grounds in central Idaho crosses eight hydropower dams. The fish climb to an elevation of about 6,500 feet at their destination, Redfish Lake. Idaho Fish and Game's Dan Baker waits there beside a fish trap. Baker: "They're just over a month from spawning, so they're really getting that

reddish color to 'em, the bright red color." These salmon are so precious, Baker and his colleagues trap every single returnee. They hold the sockeye in protective custody at a hatchery until it's time to spawn next month. Baker: "Most of these fish so far have been four–year–old fish. They're running about 3.5 pounds." Word of the bumper run of rare fish is getting around. The daily emptying of a trap on the upper Salmon River draws a crowd.

Vacationer Anthony Wingett of Sandhollow, Idaho, says it's great to see progress in fixing the damage he says humans caused by building dams downriver. Wingett: "We are very lucky that they came back. I mean [the lake's] called Redfish here for a reason, not just because there is a couple trout in there. It's because it used to be the color of red. You don't see that anymore up here." Sportsfisherman Chancey Buttars of Preston, Idaho, hopes the years when just a handful of sockeye returned are over. But: Buttars: "They are far away from where they used to be. I don't know if they'll ever get back there, but they're trying. Now they've got hundreds coming back. So hopefully in ten years there's thousands." Threatened chinook salmon are also coming back in numbers not seen since the dams on the lower Snake River were completed in 1975. Baker: "Everything sort of lined up the last two years to really get these good returns. It's helped all the salmon." Idaho Fish and Game's Dan Baker explains his agency has greatly ramped up hatchery production of endangered sockeye. Bonneville Power is paying the bills along with other projects. Baker: "They've made modifications to the dams to help passage of smolts going downriver. We've had some good water years. That always helps. You can't beat a good flush of water out to the ocean." These fish also benefited from a federal judge's order for higher flows and more water spilled over the tops of dams to improve survival. And they must have found plentiful food in the ocean. Baker: "Then again as the adults are coming back, we've had good migration conditions and a little bit cooler water."

Baker says we're still a long ways from being out of the woods with these endangered salmon. Those are almost the exact same words used by Bill Sedivy, the director of the environmental group, Idaho Rivers United. Sedivy: "We're hopeful that it's an indicator that we're not going to lose this just incredible species, this incredible marvel of nature forever." But to achieve what he calls harvestable, self–sustaining levels, Sedivy argues Snake River dams have to go. Sedivy: "We're still close to the brink. We haven't gone far enough yet. The lower Snake River is still too far removed from being a natural river." Dam removal remains hugely controversial, as it has for more than a decade. The Bonneville Power Administration points to this year's banner returns as evidence that modifications at the dams — short of breaching — are moving things in the right direction. All sides are waiting in suspense to hear how the Obama Administration will weigh in on Columbia and Snake River dam operations and water flows. Court filings expected next month may provide some clarity on that. I'm Tom Banse near Stanley, Idaho.

(Too many people are short-sighted. Here's the classic case – without the dams the flow would drop to 1,000 cfs (not enough for the salmon), but with the dams the flow will be maintained to allow spawning. Mmmm, why do people in the NW all too often hate dams? How come people are fishing for an endangered species?????)

Low river levels leave salmon high and dry

Ralph Schwartz | Skagit Valley Herald, August 21, 2009

It's been a good year for salmon in the Skagit River. Enough chinook salmon, a federally listed "threatened" species, have returned to allow anglers to go after them for the first time in 16 years. The smaller but still sought-after pink salmon are returning in droves. But last winter's below-average snowfall combined with a lack of rain and lots of heat this summer may conspire to shrink future salmon runs, biologists say. The river is flowing at less than 8,000 cubic feet per second, roughly 80 percent of normal. Flows lower than what's being measured now are only seen on average once every five years, according to the U.S. Geological Survey Web site. Less water means less living space for salmon to spawn and grow. "When things dry up, (the salmon) don't have a place to live. It's that straightforward," Washington Department of Fish and Wildlife biologist Brett Barkdull said.

With the year's run of chinook all but done, pink salmon are coming in numbers not seen in decades. Biologists say the return of pinks to the Skagit could be as high as 1.2 million. Pinks and chinooks spawn in

the Skagit or in its tributaries, searching for the best available spot to lay their groups of eggs, called redds. With less water in the river and with some streams drying up, the options for adequate spawning grounds are becoming more limited. The habitat shortage is more pronounced in the lower Skagit basin in tributaries that rely on rainfall. The disadvantage for the fish that return to the lower tributaries is compounded because those fish generally return later in the run, when streams will be even smaller. The driest month for the Skagit, on average, is September. "At this point, if we don't get above-average rainfall, those (lower tributaries) are places that fish won't get into to spawn," Barkdull said. The Climate Prediction Center, the long-range forecasting cousin of the National Weather Service, expects an average amount of rainfall in the Pacific Northwest over the next month. Looking ahead three months, a developing El Niño system in the Pacific Ocean is favoring drier-than-average weather. It's not just the spawning grounds that are in jeopardy. Some salmon on the endangered species list don't have enough room in rivers and streams to thrive during the first few years of their lives, Barkdull said. Cutthroat trout, which are actually salmon, can linger in the river for up to five years before heading out to sea, Barkdull said. Coho and steelhead, two salmon species listed under the Endangered Species Act, also rely on having enough wiggle room and food in the Skagit tributaries for a year or more before heading for salt water.

Barkdull noted that the salmon-bearing Red Cabin, Jones and Alder creeks, to name a few, are already small and getting smaller. "That doesn't provide real good rearing habitat," he said. "As flows drop dramatically, you end up with much smaller pools. They have to have an area in which to live." Officials from utilities that operate dams in the Skagit basin said safeguards are in place to keep the flows high during extremely dry years. Seattle City Light, which has three dams above Newhalem, is required to release between 2,500 and 3,500 cfs during and after spawning season. Without the enhanced flow from above the Seattle City Light dams, and assuming no change in the weather over the next several weeks, natural flow rates would fall to about 1,000 cfs, Seattle City Light fisheries biologist Dave Pflug said. "We're in a sense augmenting the flows," Pflug said. The utility is responsible for keeping a majority of the pink salmon redds underwater this winter and spring, Pflug said. "There could be half a million pink redds in the river soon. We need to make sure all of those redds stay underwater, even in the dry weather expected in September and early October," Pflug said. He said the utility has been able to conserve enough water this summer to maintain required flow levels this winter and spring. Puget Sound Energy, which maintains a reservoir behind the Baker dams, is required to hold back 41,000 acre-feet of water that would be released to help spawning salmon "if things really got dire," PSE spokesman Roger Thompson said. PSE officials don't recall fisheries agencies ever requiring the utility to release the water held in emergency storage, Thompson said. Since most of the salmon have yet to arrive in the Skagit, there's no way to know yet how future generations will be affected. Next spring, scientists will count coho and chinook smolts that swim downstream past the railroad bridge at Burlington. Smolts are young salmon that have developed to live in saltwater. If the smolt counts in 2010 are low, Barkdull said, "we will predict and undoubtedly get reduced returns in 2011."

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