Some Dam – Hydro News and Other Stuff

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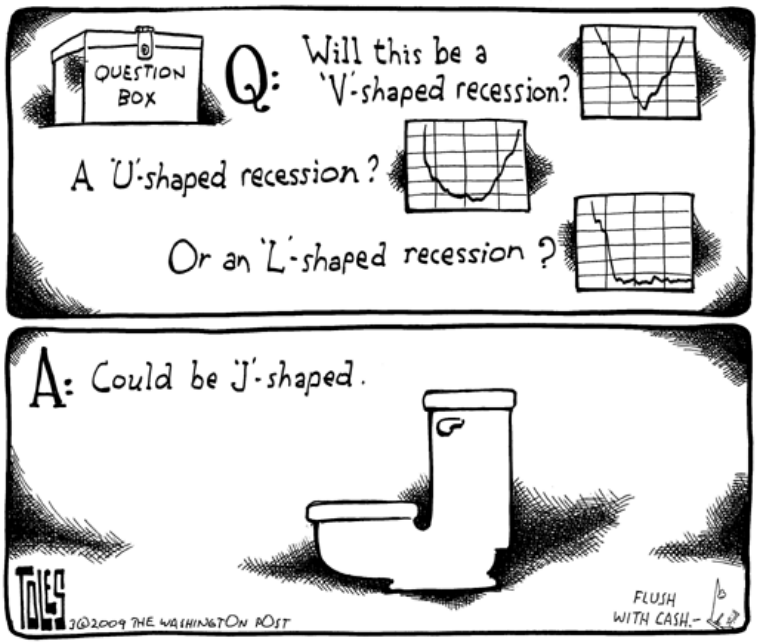
3/06/2009

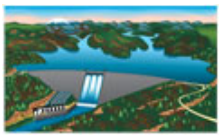
Quote of Note: "The intermediate stage between socialism and capitalism is alcoholism." - - Norman Brenner

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

Ron's wine pick of the week: **2 Brothers Big Tattoo Red 2006, Chile**

Other Stuff:



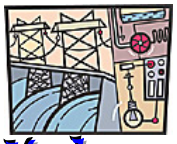


Dams

Percy Priest Dam is classified high-risk

By Christina E. Sanchez • THE TENNESSEAN • February 27, 2009

Concerns about the limestone that lies under Nashville's J. Percy Priest Dam have led U.S. Army engineers to assign it a spot within the second-highest level of risk. There's no need for those downstream in Nashville, Ashland City or Clarksville to head for higher ground, because the Corps of Engineers says there's no imminent danger of the dam failing. But the results of the agency's recent survey of its 600 U.S. dams will lead to studies in the coming months to determine what work is needed to prevent potential failures, as well as determine the impact of a flood if the dam were to break. "There are no problems that we are aware of, as we were with Center Hill Dam and Wolf Creek," said Michael Zoccola, chief of civil design for the Nashville branch of the Corps of Engineers. "There have been no changes to the dam over its existence, but there are potential for problems to develop." Center Hill and Wolf Creek dams well upstream from Nashville are undergoing multimillion-dollar repairs to plug leaks that threaten the integrity of the structures and caused fears of catastrophic failures that would flood Nashville and other downstream communities. No such leaks have been found at Percy Priest. The problem with all three dams is their limestone foundations, which are subject to erosion. Percy Priest was built in the 1960s on the Stones River in eastern Davidson County, creating a 42-mile-long reservoir that also reaches into Rutherford and Wilson counties. At full summer depth, its 130 billion gallons of water cover 14,200 acres. Design standards of today weren't in place when the dam was built, which creates the potential for the underlying limestone to erode and lead to seepage, Zoccola said.



Hydro

NHA applauds Secretary Chu's comments on pumped storage

Washington, DC (February 24, 2009) – The following is a statement from National Hydropower Association executive director Linda Church Ciocci on comments by Energy Secretary Steven Chu at the Center for American Progress Clean Energy Project's Building the New Economy event in Washington, D.C., yesterday: "The National Hydropower Association welcomes Secretary Chu's comments about the integral role pumped-storage technology must play in our national plan to expand our clean-energy resources and integrate variable renewable-energy resources into the transmission grid. "As the Secretary points out, the country has only limited resources for storing energy today, with most of it coming from the 20,355 MW of existing pumped-storage capacity. With thousands of megawatts of new wind and solar technologies planned for the near-future, expanding this storage capacity will be a high priority.

"Through our new pumped storage council, NHA is working on strategies that will help speed development of this critical capability. We are reaching out to all sectors of the energy industry, to the Administration, and to Congress to expand understanding of this technology and create sound policies that will serve all Americans. "One of our primary goals is to craft incentives that attract investors and encourage rapid development of new pumped storage projects. Right now, the federal government has no program to spur expansion of pumped storage capacity. NHA is advocating for investment tax credits or other similar measures that can incentivize pumped storage development immediately. "Secretary Chu is correct that we,

as a nation, need to 'invest heavily in pumped-storage,' especially as the country begins setting renewable-energy production goals. Pumped storage is a proven technology that is available today, so we must put it to work for us, even as we pursue research into the development of additional energy storage technologies. “We urge the Secretary and other officials to establish policies that encourage aggressive investment in pumped storage projects. Not only will these investments serve our energy and environmental goals, but they will also bolster our economy by creating jobs throughout the country. "The National Hydropower Association is committed to working with Secretary Chu and all others who are working to leverage the potential of pumped storage technologies for a more reliable and cleaner energy future."

FERC announces Spearfish deadline

By Brandon Bennett, Black Hills Pioneer, February 24, 2009

SPEARFISH, SD -” The Federal Energy Regulatory Commission announced that it is accepting motions to intervene and protests relative to the licensing of the city-owned hydroelectric plant on the south outskirts of town. The filings are part of the traditional licensing process and are due April 3, 2009. “There had been some comments due Feb. 13 on the scoping document, and other than the visit from FERC officials some time ago, most comments are now going through the agency and not the city of Spearfish,” said Public Works Director Cheryl Johnson, who heads the city's effort to license the facility. Spearfish wants to license the hydroelectric plant so that power may be sold to Black Hills Power and Light. The city paid $250,000 for the plant in 2004. They had hoped to avoid having to license the plant, but FERC asserted its authority and required it.

This latest notice is just part of the long process of licensing the plant. The commission's rules of practice and procedures require all who want to intervene to file documents with all persons on the official service list for the project. And if a person wants to file a comment about a certain agency on the project, documents must be filed with that particular agency as well. Interested parties can file motions to intervene or protests electronically at www.ferc.gov under the “e-filing' link. The agency will also accept traditional mail and interested parties can file with Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission 888 First Street NE, Washington, DC 20426. All filings must bear in capital letters the title “PROTEST” or “MOTION TO INTERVENE, NOTICE OF INTENT TO FILE COMPETING APPLICATION, or COMPETING APPLICATION. The filing must also include the name of the applicant and the project number of the application to which the filing responds and the name, address and telephone number of the person protesting or intervening and the filer must comply with other rules and regulations as set out by FERC. Anyone can submit a protest or a motion to intervene in accordance with the requirements of the rules of practice and procedures. The application has been accepted for filing, but is not ready for environmental analysis at this time. The entire hydroelectric system consists of a 130-foot-long, four foot high dam holding back a.32-acre reservoir, a gatehouse with intake grates, a 4.5 mile-long concrete tunnel, two, 1,200 foot long stave pipes, surge towers, penstocks and a powerhouse containing two 2,000 Westinghouse generators. The complex was built in 1910.

(Well, I guess everyone doesn’t agree with the new Secretary of Energy on the need for Pumped Storage)

Environmental groups oppose hydroelectric plant in Sparta

by Joe Moszczynski/The Star-Ledger, February 24, 2009

At least two environmental groups have come out against plans for a proposed $2 billion underground hydroelectric plant that could be built in Sparta. "The energy created by this project is not considered renewable energy because it is not sustainable -- it actually takes more energy to pump the water up at night than will be reaped when released in the daytime," said Jeff Tittel, director of the New Jersey Sierra Club. "The only thing green about this project is the money that will be made by the developers," he said. Riverbank Power of Ontario, Canada, reached an agreement last month to start geological and water tests at the 552-acre Limecrest Quarry, which was founded more than 100 years ago by Thomas Edison.

According to the deal, Sparta would receive $5 million annually or $500 million over the course of the 100-year lease. If built, the plant would create power during the day -- when demand is at its peak and most expensive -- by feeding water down a 2,000-foot cavern to feed electricity-producing turbines. During low-demand periods at night, the process is reversed and cheaper power is used to pump the water back up in a

closed-loop, or recycling, system, according to Riverbank. It would generate 1,000 Megawatts or enough electricity for 300,000 homes as long as the plant is running. The power would be sold to a regional grid. The Riverbank Sparta Energy Center would also create an estimated 1,000 construction jobs over the course of the four-year construction and about 50 to 75 full-time positions when it opens in 2015, officials have said. Gene Mulvihill, a prominent Sussex County developer who owns Limecrest Quarry Developers, and Sparta Mayor Brian Brady have said the project makes economic sense, creates green power and could be a boon for the township. In addition to the Sierra Club, the project is also being opposed in neighboring Andover Township by the township's environmental commission, which has voiced its opposition to the project to the Federal Energy Regulatory Commission. During a presentation to the Andover Township governing body on Monday night, commission chairwoman Lois deVries said the project would reduce the water table in the region during the four-year construction and would affect the temperature of the water in the pristine Paulinskill River. DeVries also claimed that Riverbank Power has never built a power plant and the firm is solely an investment company financed by venture capitalists. BlackRock Inc. is the primary investor in Riverbank Power and is 49 percent owned by Bank of America, she said. "Do we really want to be the guinea pigs in someone else's financial experiment?" she said.

Senate bill could pass Crown Hydro Project

THE BILL IS IN THE EARLY STAGES, BUT IT WOULD FOREGO THE DECISION MADE BY THE MINNEAPOLIS PARK AND RECREATION BOARD.

BY Josh Katzenstein, 02/24/2009, Minnesota Daily

Minnesota Senators introduced a bill Thursday that, if passed, would allow construction of two hydroelectric turbines near St. Anthony Falls despite the Minneapolis Park and Recreation Board's previous decision to reject the project. The Crown Hydro project would be built 42 feet under the west bank of the Mississippi River and could generate enough energy for at least 2,000 homes if it receives a lease from the MPRB. Crown Hydro received approval from the Federal Energy Regulatory Commission in 1999, but the MPRB voted against further examination of the project 5-4 in December 2007. However, if passed, the new bill would amend the current law that requires a favorable vote from the MPRB for the project to go forward. The bill proposes that municipal consent could be skipped if a qualified hydroelectric project has proper federal approval. The board members who opposed the project voted it down because they worried it would compromise the beauty and history of the St. Anthony Falls area. Senator Julie Rosen, R-Fairmont and a co-author of the bill, said she supports building the plant because it seems to be a perfect fit for the direction renewable energy in the state is heading.

Rosen said she helped compose the bill as the lead Republican for energy in the Senate but said the controversial bill might not have a chance to be passed. The bill is moving slowly and has no House of Representatives sponsor. "I had higher expectations," she said. "I am not sure if the chair of the energy committee is even going to give it a hearing." Crown Hydro spokeswoman Nikki Carlson said the project would cost an estimated $20 million but requires no state or federal funding. Carlson said the project received a $5 million grant from Xcel Energy and has two donators, Bil Hawks and Tom Griffin, who have given $15 million for the project. Crown Hydro would give the MPRB $300,000 a year in compliance with a Minnesota statute. MPRB Commissioner Scott Vreeland said he thinks the bill is a bad idea. Vreeland said he voted against the project because it would diminish the beauty of St. Anthony Falls permanently. But fellow MPRB Commissioner Carol Kummer had different ideas about the project. "My initial knowledge of this was positive, and I never heard or saw anything in subsequent years that changed my mind," Kummer said. Kummer said the project saw opposition from residents on the river and former Vice President Walter Mondale, who worried about diminishing the beauty of the falls. Mondale sent a letter to the MPRB the day of the vote, Kummer said, which was "full of misinformation" that it would destroy St. Anthony Falls. But Vreeland said they tried to determine the quality of the proposal and they brought in Attorney Mark Condon, who had no prior involvement in the case. Vreeland said Condon noted 16 reasons for the MPRB not to sign the contract, adding that any one of the reasons should be a deal-breaker. "If they don't negotiate with us, who's making the decision about my land as a Minneapolis citizen?" Vreeland said. Vreeland also said the bill is written specifically for this project and believes a possible reason for the Senate to pass the bill is to create jobs for Minnesotans. "They are working on the political pressure rather than public acceptance," Vreeland said. While the University of Minnesota does not officially endorse the Crown Hydro project, Associate Director for Applied Research at the St. Anthony Falls Laboratory Jeff Marr said the University thinks hydroelectric power is a good thing. Marr said his lab has been contacted by the state to determine the hydroelectric potential of the falls. He said the site is accessible to the public and could offer the University another way to teach about hydroelectricity. "It could be a great place to teach about hydro power," Marr said.

(Hydro fees going through the roof)

EID joins opposition to higher federal fees at hydroelectric power facilities

Published on Feb 24, 2009 - By: El Dorado Irrigation District, YubaNet.com

Placerville, Calif. Feb. 23, 2009 - The El Dorado Irrigation District (District) Board of Directors today voted to join a coalition to challenge greatly increased federal land fees for hydroelectric power systems licensed by the Federal Energy Regulatory Commission (FERC). "Last year, we paid the federal government $166,391 to operate our Project 184 hydro-power system on Forest Service lands," said John Fraser, EID Board Vice President. "FERC says it's raising that amount to $282,306 this year. That's a 70-percent increase. And in 2010, the fee will be $352,883, more than 100 percent above the 2008 fee." "In these difficult economic times, and especially when the administration in Washington, DC, is focusing on economic recovery, I fail to see any justification for such a huge jump in fees. It's even more troubling because, in the past, FERC rejected the same type of index it plans to use to calculate the new fees." Frazier was referring to FERC's recent adoption of the U.S. Forest Service's approach to charges for the use of national forest lands. In short, the Forest Service incorporates the value of agricultural land in a given county to determine what it will charge per acre for projects located on national forests. FERC adopted the Forest Service method wholesale, without an independent review-or public comment-to determine whether the charges are reasonable, as required by law.

"FERC rejected the use of an agricultural index to calculate land values before," said Tom Cumpston, the District's general counsel, "and we believe they should again. Our facilities are located mostly in alpine environments and canyons on Eldorado National Forest. Agriculture there is simply not practical, and so we are being charged based on land values that don't exist where we operate." "We also object to the assumption in the Forest Service method that all of the Project 184 lands are devoted entirely to power production and therefore are not available for other uses," Cumpston emphasized. "That is not the case. Recreation opportunities abound on the lakes and in the rivers that also support our power production. Furthermore, FERC and the Forest Service require us to spend millions of dollars during the life of our 40-year license on recreation projects such as the Caples Lake Boat Launch, the reconstruction of Forest Service campgrounds at Silver Lake and Caples Lake, improvements to the Caples Lake Dam and Pyramid Creek trailheads, constructing a new crossing for the Pacific Crest Trail, and more. “The Board vote to oppose the fees came in closed session during the February 23 Board meeting. The unanimous decision authorized the District's general manager to join a coalition of hydroelectric licensees in Washington State, Oregon, Idaho, and California. The coalition will be represented by the law firm of Van Ness Feldman of Washington, DC and Seattle, WA. "We expect others to join the coalition in the next few days," Cumpston said. "All coalition members will share the costs of legal actions to contest the short-cut measures that FERC took to set its new and, in our view, highly unreasonable fees."

Mass. eyes capitalizing on hydropower

NECN.com, 28 February 2009

(Peter Howe, NECN) - Massachusetts officials have some big new plans to expand renewable energy, and at least one is going back to the future: hydropower. In a new study, officials estimate there could be 54 dams around the state that are suitable for small-scale hydroelectric generation. One dam included on a state list of what officials consider the 20 most promising state-owned sites for small hydropower development is the Cochrane Dam between Needham and Dover, Mass. Officials calculate that a generator at that dam could produce enough power for about 200 average sized homes over the course of a year. Not a huge amount, but the idea of the list is that 200 homes here and 200 homes there, before long it adds up to an appreciable amount of renewable energy. State environmental secretary Ian Bowles was directed by legislators to evaluate green energy potential on state land. "What could we erect in terms of solar wind hydropower on state owned facilities, and the results are remarkable," Bowles said. "A lot of opportunities." Currently, Massachusetts government facilities produce electricity equal to 8,400 homes yearly demand. The study found that, potentially, state land could power nearly 400,000 homes.

- By far the major opportunity is wind turbines -- 379,600 homes
- Followed by solar at 5,800 homes
- For hydro, officials see enough small generators for 3,200 homes

"They have to meet some strict environmental criteria," Bowles said. Like ladders for fish to swim upstream and other wildlife protection. "It's not like 'sure no problem'," Kate Bowditch said. "By the same token, I don't think we should write it off out of hand." Environmentalist Kate Bowditch is with the Charles River Watershed Association. "There's just a lot of research that would need to be done," Bowditch said. But her group is open to discussing the net environmental benefits. "New England was built on hydropower," Bowditch said. "There are 20 dams on the Charles River. So it makes sense to think about whether we have opportunities like this in Massachusetts."

(Here's a good story about hydro. It's a shame that the environmental movement has such power so as to continue to make it a chore each day to fulfill the full potential of the most efficient and plentiful renewable)

Hydroelectric Plant Cranks Out the Power

By ART LIMANN Staff Writer, March 1, 2009, The Wheeling Intelligencer / Wheeling News-Register

One of the most important components of every-day life in New Martinsville really isn't visible to most people. The New Martinsville Hydroelectric Plant, located at the east end of the Hannibal Locks and Dam, has been producing clean energy since 1988 via its twin bulb turbine generators. In addition, the process of producing electricity allows for regular cleaning of the Ohio River at the same time. According to Plant Manager Chuck Storma, who has worked at the plant since it started operation, "People really have no idea just how big this plant is. Most of it is not visible from above ground." The plant design uses the natural flow of the Ohio River to turn the turbine generators. It is referred to as a "run of the river" plant. "We're completely dependent of the flow of the river," he said. The turbine generators are capable of producing 36 megawatts of electric which is sold to the Monogahela Power Company for distribution on the nation's electric grid. The amount of electricity it can produce is enough to serve seven towns the size of New Martinsville.

Storma explained the power producing units are like a seven-story light bulb turned on its side which allows the water to flow straight. Each has a giant three-bladed propeller rotating around the neck with turbine generators attached to the propeller. They are 21 feet below the surface of the water. At the time they were built, they were among the largest in the world. The generating capacity not only depends on how far the water falls but also how much water there is. "Low-head" plants such as New Martinsville, compensate for lack of height by moving more water. Instead of using a vertical turbine, such as Hoover Dam, the local bulb turbine generators lie horizontally. A computer maintains the exact speed of each propeller by opening and closing wicket gates built into the structure of each bulb turbine. The wicket gates control the water flow similar to the shutter iris of a camera. The vanes of the wicket gates adjust the water's flow past the propellers, compensating for changes in the river's natural current. In addition the computer controls hydraulic systems that set the pitch of the propeller blades to get the maximum amount of energy out of the water. According to Storma, during its 20 years of operation the New Martinsville plant has averaged operating at about 80 percent of its capacity. The units have only been shut down for regular maintenance one at a time. The city of New Martinsville totally operates and maintains the facility. Storma works with four operators and two maintenance employees on his staff. In addition to its generating function, the power plant also serves as river cleaner, periodically collecting debris from behind dam. According to Storma, screens on the north side of the dam are designed to prevent debris from entering the hydro turbines and also act as a filter. Trash, logs, tires, aerosol cans and other material are cleaned from the river where these items accumulate behind the dam. A large trashrack rake includes an 80-foot telescopic boom which extends to the river bottom to loosen submerged debris. It then lifts the debris from the river, and it is placed into containers to be hauled away. In the past, some items were recycled, however, this was discontinued because it was not cost affective. The system runs four hours a day every day. Hydropower is generated at only about 3 percent of the nation's 80,000 dams. It is, however, the nation's leading renewable resource.

Utility agrees to buy hydropower facility

The Associated Press, February 28th, The Anchorage Daily News

KODIAK -- Officials from Kodiak Electric Association have signed off on the final agreement to purchase the Terror Lake hydroelectric facility. The agreement ends the Four Dam Pool and provides KEA the opportunity to meet its goal of 95 percent non-fossil fuel reliance. KEA Director Stosh Anderson said the purchase makes it possible for the organization to pursue more alternative energy projects and for customers to enjoy more stable power rates. KEA Chief Executive Darren Scott says that, combined with the ongoing wind energy project, the power

company is nearing its goal of 95 percent renewable energy and that the purchase of the hydro-power facility provides flexibility for future endeavors.

(A view from a hydro owner. Imagine, you have to start the relicensing process 9 years ahead of time. Hydro carries this heavy burden because Congress just keeps its head in the sand and does the bidding of the anti-hydro world.)

Commentary: Relicensing our dams

By Dan Pope, Merced Irrigation District, Mar. 02, 2009

Many in Merced County know the Merced Irrigation District owns and operates the Merced River Hydroelectric Project, which include Lakes McClure and McSwain, the dams and hydroelectric powerhouses associated with them. This license and its conditions are overseen by the Federal Energy Regulatory Commission, or FERC. MID was issued the original license in 1964, which permitted MID to develop the project to generate hydroelectric power. The license expires in 2014. FERC typically issues new licenses for a period of 30 to 50 years and the overall relicensing process follows an established, highly regimented schedule of 5 to 5½ years once it begins. Since this is an intense and complex process, most FERC license holders begin planning and preparing several years in advance.

The MID began its planning efforts in earnest in 2005 and filed its notice of intent and preliminary application document with the FERC in November 2008. We are now in the process of developing study plans that are designed to identify the effect of the project on resources and assist in developing possible mitigation for effects of the project. A total of 23 separate study plans have been proposed in the MID's filing with the FERC and it is probable more may be added. So, the question may be asked why is this important to our region? Hydropower, which is generated at New Exchequer Dam, is the nation's leading source of green, renewable energy. Hydropower produces 98 percent of the nation's renewable energy production. For us, this means limited dependence on foreign energy sources. In addition, hydro projects provide public benefits including recreation areas, such as lakes and campgrounds, fish and wildlife enhancements, water supply, river flood control and irrigation. Located downstream of Yosemite National Park, Lake McClure and Lake McSwain offer camping, fishing and boating activities for families. Both lakes were built to serve as reservoirs for the New Exchequer Dam. With 80 miles of shoreline at Lake McClure and more than seven miles of fishing area at Lake McSwain, they provide family fun for all ages.

The licensing process has changed considerably since 1964. FERC now requires significant consideration be given to energy conservation, water quality and supply, the protection of the environment and economic considerations, all of which have local public benefits. During this process the use of the resources affected by a project is reassessed. Equal consideration is given to both power and nonpower uses. MID, FERC, state and federal regulatory agencies, nongovernmental agencies and other interested participants play an important role in the process. Participation by all of these parties allows the public interest to be served. It assures the license addresses impacts to fish and wildlife resources, recreation and water quality as determined by the FERC. MID will be diligent during the process to protect its interests as well as balance the needs of the environment. Protecting the environment and participating in water and energy efficiency initiatives is of paramount importance to the future of MID, the region and you. As we move forward with the relicensing effort, it is vital the community understands how it affects our region and how it affects the lives of our citizens. As longtime stewards of this valuable resource, MID has been serving the public's interest for 90 years. We take these resources and responsibilities seriously. A Web site of the relicensing activities may be found at www.merced-relicensing.com. Dan Pope is the new general manager of the Merced Irrigation District.

Water

SOUTHERN GOVERNORS WAGE WATER WAR OVER RIGHTS TO LAKE LANIER

February 25, 2009, FOX NEWS, By Jonathan Serrie

ATLANTA — A trio of Southern governors are fighting a water war to determine who has rights to the resources in Georgia's Lake Lanier, a man-made reservoir that provides drinking water to the nearly 4 million residents of the metro Atlanta area — and the city's getting thirsty.

Atlanta's population growth may have slowed with the economy, but its water use and a lingering drought have intensified legal battles that have been raging for the past two decades between Florida, Alabama and Georgia. At issue is who controls the water in Lake Lanier — Congress or the U.S. Army Corps of Engineers. The 38,000-acre reservoir in north Georgia sups the state's capital but feeds the Chattahoochee River, which flows into river systems in Florida and Alabama. Those rivers in turn support wildlife farther downstream, including mussels and sturgeon, and provide water for power plants and other industries. Lanier has faced terrible water shortages, a privation that Florida and Alabama blame on Atlanta's thirst, but Georgia's governor has defended the state's use of resources. "We have treated this resource very responsibly from a consumption standpoint, from a conservation standpoint, from a utilization standpoint," said Republican Gov. Sonny Perdue.

Georgia has been trying to limit the amount of water it sends downstream to Florida to combat a record-setting drought, but was rebuffed in January by the U.S. Supreme Court, which let stand a lower court ruling that the state must consult Congress before changing any of the details of its water-sharing plan. The waters of the Chattahoochee flow directly from the Lake Lanier's Buford Dam, which is managed by the Army Corps of Engineers. The Corps, itself an interested party, argued separately to the Supreme Court that it has authority over providing drinking water to Atlanta. The dispute has rankled leaders in all three states, and the Republican governors of Florida and Alabama insist Georgia already uses too much water and needs to conserve more. "This is about people that are going to be laid off," said Alabama Gov. Bob Riley in a 2007 interview. "This is about protecting jobs. This is about sharing pain." Alabama's governor declined a more recent interview request on advice from legal counsel, as the dispute heads back to a federal court in Jacksonville, Fla., where a judge is expected to rule on the matter this spring. Gov. Perdue said he's ready to negotiate with his counterparts in establishing a new agreement, but hasn't yet had much success. "I remain committed to try to negotiate with our fellow states in a shared agreement," Gov. Perdue said. "But it takes more than one to negotiate."

(Some day I guess CA will finally figure out that you're not gonna conserve your way out of this. The population is growing too fast. It's 38 million heading towards 50 million.)

Schwarzenegger declares California drought state of emergency

By Mike Zapler, Mercury News, 02/27/2009

SACRAMENTO — Citing a third consecutive year of drought conditions, Gov. Arnold Schwarzenegger Friday declared a state of emergency and called on urban residents to cut their water usage by 20 percent. The announcement could intensify talks in the Capitol about upgrading the state's water infrastructure — a contentious debate that has pitted environmentalists who favor conservation against proponents of building new dams to boost supplies. Negotiations in the Legislature have stalled repeatedly in recent years over the issue of dams. The governor's proclamation directs state agencies to expedite water transfers to needy areas, take measures to ensure water supplies to farmers and streamline environmental regulations for projects, such as desalination and water recycling plants, that could help alleviate the drought. The governor said drought conditions are causing enormous financial harm to the state's agriculture industry and businesses. Losses to California farmers could approach $3 billion this year, he said. In an interview with the Mercury News on Friday, Schwarzenegger said the water crisis is "self-inflicted, it's not mother nature's fault" and said he hopes to convince opponents of new dams and reservoirs that "the emergency presents an opportunity," including creating jobs. He also said the Sacramento-San Joaquin River Delta, which supplies water to much of the state, must be repaired. "We have a water system built for 18 million people. We now have 38 million people," the governor said.

Despite heavy rainfall this month, state water officials say there is only a 15 percent chance that California will replenish its diminished water supply caused by the past few years of below average rain and snowfall. Storage levels in the state's reservoir system are at historic lows, they say. Schwarzenegger in June declared that California had reached a state of drought. Friday's announcement ramps up the sense of urgency even more, and could cause water districts around California to take more aggressive steps to clamp down on water use. The Santa Clara Valley Water District board is expected to consider recommending mandatory reductions of 10 to 20 percent for customers, which include more than a dozen towns and cities, including San Jose. An earlier voluntary drive to cut water usage by 10 percent fell short, achieving only a 7 percent reduction. Mandatory conservation could be encouraged with water rates that

would spike once a home reaches a certain amount of usage, or with fines for watering lawns during daylight hours. "Our board was already considering calling for mandatory conservation, and the governor's proclamation will give them another reason to move ahead with it," said Susan Siravo, a spokeswoman for the district. The governor could impose mandatory water rationing by executive fiat — and on Friday he held out that possibility in the future — but for now has chosen to allow local water districts to pursue their own conservation efforts. Jim Metropulos, a senior advocate for Sierra Club California, did not dispute that the state is indeed in the midst of a drought. But he urged Schwarzenegger not to use that as ammunition to renew his case for additional dams, saying the governor instead should launch a statewide water conservation campaign. Dams would take years to build and face numerous court challenges, Metropulos said. "It's not going to help us now, tomorrow or five years from now," he said. But Schwarzenegger, along with Republican lawmakers and Democratic U.S. Sen. Dianne Feinstein, have called for additional dams to be included in a multibillion dollar water infrastructure bond. Conservation alone, they say, won't solve the problem.

Environment

(Wow, these guys have an appetite. How can you hate such an innocent face?)

Sea lions threatening Columbia River fish to be culled beginning this week

Los Angeles Times, March 2, 2009

California sea lions that are eating threatened or endangered fish in the Columbia River will be trapped and either relocated or killed beginning this week. National Oceanic and Atmospheric Administration Fisheries, the federal agency responsible for managing marine mammals, has given authority to wildlife managers from Washington, Oregon and Idaho to remove sea lions that have been documented feeding on chinook and steelhead. The mammals have figured out that fish are easy prey at Bonneville Dam, where chinook and steelhead gather as they attempt to navigate fish ladders on the way to upriver spawning areas. According to the U.S. Army Corp of Engineers, 4,243 salmon and steelhead were eaten by sea lions last year in the area immediately below the dam. This is the highest number consumed to date.

Although California sea lions are protected by federal law, there is concern that they are threatening fish populations before they get the opportunity to spawn. “As wildlife managers, we have a responsibility to do what we can to protect vulnerable fish runs,” said Guy Norman, southwest regional manager for the Washington Department of Fish and Wildlife. "California sea lions -- some weighing more than 1,000 pounds -- can literally eat their weight in salmon and steelhead in a couple of months below Bonneville Dam.” The Humane Society of the United States is against the culling of sea lions, countering that fishermen and dams on the Columbia and Snake rivers kill more fish than the sea lions do and that cutting back salmon catch allowances could easily make up for the amount of fish eaten by the mammals.

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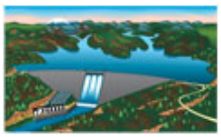
3/12/2009

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

"Good wine is a necessity of life." - -Thomas Jefferson
Ron's wine pick of the week: **Colosi Rosso 2006**



Dams

5 of 9 dams on Fox River rated urgent

WLUK FOX 11, Green Bay, WI, 03 Mar 2009, 4:16 PM CST

A new report by the U.S. Army Corps of Engineers shows that five of the nine dams on the lower Fox River are rated "urgent" - the second worst rating possible - on a safety action scale. The dams receiving urgent ratings are the Upper Appleton, Cedars, Little Chute, Rapide Croche and De Pere dams. All got that rating due to concerns with cracking at the gate anchorages, raising the risk for gate failure. That said - the cracks have been monitored for more than 20 years and are not showing signs of rapidly getting worse. Another dam, Little Kaukauna, was rated as marginally safe. The screening process for the three remaining dams - Menasha, Lower Appleton and Kaukauna - has not been completed but they are also expected to rate as marginal. The Detroit district of the Corps is seeking money for repairs.

(I must admit that it took some educaton to understand the Corps' rating system and its purpose. It's too bad more owners don't do the same as the Corps. As we used to say at the FERC – "Today's maintenance problems could be tomorrow's dam safety problems." Also, it would be nice sometimes if reporters would let technical people edit their copy, then piezometers wouldn't become pipes.)

Pipestem Dam given lower safety rating

Keith Norman, The Jamestown Sun - 03/05/2009

The Pipestem Dam received the lowest safety rating of the four North Dakota dams owned by the U.S. Army Corps of Engineers in the newly released Dam Safety Action Classification. A press release dated March 2 defined the DSAC rating system and listed Pipestem Dam at a level 3 while Garrison, Bowman Haley and

Snake Creek, the three other dams in North Dakota owned by the Corps of Engineers, received level 4 ratings. "The DSAC ratings are a description of relative risk," said Paul Johnston, public affairs officer for the Omaha District of the Corps of Engineers. "They go from a five, which is no risk, to a one that means it needs immediate attention." Johnston said a 3 rating indicates there is no immediate risk but the situation warrants extra monitoring. "We've been monitoring there for some time," he said. "The conditions aren't new, but the rating system is." Bob Martin, manager of the Pipestem Dam and Jamestown Reservoir, agrees.

"We will continue with several different monitors that measure ground water pressure and ground water drainage," he said. "As the water rises monitoring will be performed more frequently." Martin said monitoring at Pipestem involves wells of various depths placed around the dam. "There are 45 pipes drilled down into the soil above and below the dam to monitor the pressure," he said. "We've been monitoring these since the dam was built 30 years ago but they added additional monitors after 1997. The high water during the spring of 1997 also caused other problems. "We had some seepage around the right abutment in 1997," Martin said. "We pumped water from that area downstream and in 1998 put in a collector system." Martin likened the collector system to placing drain tile around a home. It allows the water to be pumped from the area keeping the soil more dry and stable. Both Martin and Johnston said the DSAC rating will draw attention to Pipestem Dam when it comes to funding. "The ranks the corps gives the dams make sure that the necessary resources are directed at the dams that need it," Johnston said.

Ecology resumes inspections of unpermitted dams

March 6, 2009, Clark Blog.org

OLYMPIA, WA – The Washington Department of Ecology (Ecology) is beginning a second round of dam inspections with letters being delivered statewide to owners of dams and reservoirs built without Ecology permits. "We are continuing our efforts to inspect dams that may be at risk of failure and pose a hazard to downstream homeowners," said Doug Johnson, Ecology's dam safety supervisor. Ecology will be sending letters to the owners of 141 structures built without pre-approved plans and construction inspections that may be "significant hazard" dams. These dams, identified in available aerial photos, appear large enough to hold at least 10 acre-feet of water (3.25 million gallons) and are located upstream from one or two homes. The letters ask for more information on the dams before Ecology engineers inspect the structures on the ground. In December, Ecology completed inspections of 95 possible "high hazard" dams, built without permits upstream from three or more homes. These also were initially identified in publicly available aerial photos and 11 of them were found to be in need of immediate repairs. Preliminary repairs have been completed on five of these dams (three in Yakima County) to protect public safety, four will have construction under way soon on spillways and the owners of two dams are cooperating with Ecology on plans to prevent the structures from failing.

Unpermitted dams and reservoirs that will be inspected through this summer include frost control ponds used in farming, recreational ponds, dairy waste lagoons and sewage lagoons. Legislators and county commissioners across the state have been notified of Ecology's efforts to inspect and permit these dams. County emergency management agencies and legislators will be copied on Notices of Correction sent to owners of significant hazard dams needing immediate repairs. Ecology's inspection and permitting program is designed to prevent the kind of catastrophic dam failure that has occurred in other states such as the March 14, 2006, collapse of the Kaloko dam on Kauai, Hawaii, which killed seven people. The 141 significant hazard dams included in the current round of inspections are located in 32 counties. Counties with the highest numbers of these unpermitted dams include: Yakima (20); Grant (15); Franklin (8); Skagit (8); Clark (6); Pierce (6); and Whatcom (6). To stay in compliance with the Legislature's hiring freeze, Ecology will complete inspections of the significant hazard dams without additional personnel or contracting for inspection services. Inspections of unpermitted dams have dramatically increased the workload of Ecology's Dam Safety Office. As structures are added to Ecology's inventory of more than 1,000 dams, Gov. Chris Gregoire has asked the 2009 Legislature to add two dam inspectors to Ecology's Water Resources Program to be paid for with existing permit and inspection fees.

(Good luck!)

Utility district moves toward raising the height of dams

Central Valley Business Times, SACRAMENTO, March 9, 2009

The East Bay Municipal Utility District (EBMUD) has applied to the U.S. Fish and Wildlife Service for a 30-year Safe Harbor Agreement permit covering 28,000-acres in parts of San Joaquin, Amador and Calaveras counties for three federally threatened species: Valley elderberry longhorn beetle, California red-legged frog, and California tiger salamander. If granted, it would be the largest such agreement in the nation. The

EBMUD application centers on two large dams and their reservoirs, Camanche and Pardee, and the lands surrounding them for roughly a mile out from the reservoirs, plus lands adjacent to the Mokelumne River for a half-mile below Camanche Dam. EBMUD has proposed that the agreement provide authorized incidental 'take" of the three federally listed species and any future activities associated with raising the heights of the dams.

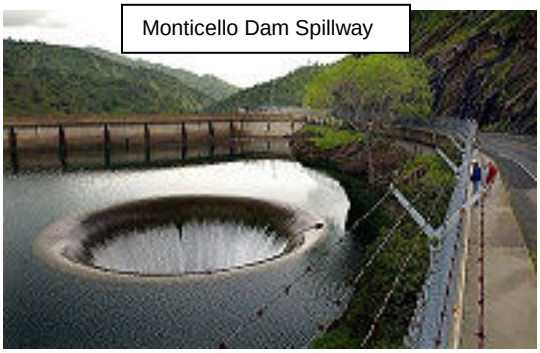
A spokesman for the utility district says there are no firm plans to enlarge the reservoirs any time in the near future. Current and recent land use practices on the property include management for water supply, flood control, grazing, aquaculture, hydroelectric power, wastewater treatment, facility maintenance, residential use, and recreation. Under a Safe Harbor Agreement, participating landowners voluntarily undertake management activities on their property to enhance, restore, or maintain habitat benefiting species listed under the Endangered Species Act. SHAs encourage private and other non-federal property owners to implement conservation efforts for protected species by assuring that the owners will not be subjected to increased property use restrictions as a result of their efforts to attract and help listed species on their property. EBMUD proposes to create, restore, manage, and maintain suitable breeding and dispersal habitat for the three federally listed species on the property. It is intended to result in an increase in species populations throughout the property, resulting in a net conservation benefit for the three federally listed species.

The property has known occurrences of the valley elderberry longhorn beetle and the California tiger salamander. Although California red-legged frogs have not been found on the property, it has extensive suitable breeding habitat, and the frogs are known on adjacent privately owned property. The Fish and Wildlife Service will accept comments through April 8. Comments should be addressed to the Service's Rick Kuyper, Sacramento Fish and Wildlife Office, 2800 Cottage Way, W-2605, Sacramento, CA 95825. Written comments may also be sent by fax to (916) 414-6713. Notice of the application is available at http://www.fws.gov/sacramento/. (The direct link to the Federal Register notice is http://edocket.access.gpo.gov/2009/pdf/E9-4944.pdf). A map of the proposed permit area and other documents are available for review during normal business hours by contacting Mr. Kuyper at (916) 414-6600. All comments received during the comment period will be considered and a final decision will not be made until after the end of the 30-day comment period. EBMUD is a major Bay Area utility, delivering water from the Mokelumne River to Alameda and Contra Costa counties.

(Strange things on the internet – in case you don't know what that thingy is?)

Spillway (thing)

everything2.com



A spillway is an alternate path water can take around a dam when the water level gets too high (after heavy rains or flooding, for example). This prevents uncontrolled overflow over the top of the dam and potentially dangerous pressures from building up behind the dam that may be in excess of the dam's structural design capacity. A typical spillway takes the shape of a waterslide with a curb in front of it. The height of the curb determines the height the water needs to reach before it overflows into the spillway. Sometimes they'll have features built in to help direct and control the flow of water. The most dramatic type of spillway is called the morning glory spillway. Rather than being a waterslide type of design, a morning glory spillway looks like an enormous funnel. The top of the funnel flares out, normally above the waterline, on the reservoir side of the dam and empties out at the bottom of the other side of the dam. When the water level is normal, the top of the funnel is above the waterline and nothing falls in. When the water level gets high enough to cover the top of the funnel, however, water surges into the funnel at an enormous rate. It looks for all the world like someone is draining an enormous bathtub, and the flow of water into the funnel resembles the morning glory flower it's named after. The largest morning glory spillway in the world is in the Monticello hydroelectric dam in California. Pictures are available by searching the internet for Monticello spillway, just look for the enormous hole in the water. I wouldn't recommend swimming near it.

In the 2/27/09 Newsletter there was an article with this headline:

Owner Of Dangerous Dam Ignores AG's Order

Dilapidated Taunton Dam Remains Public Safety Hazard

February 18, 2009, The BostonChannel.com

One of the readers of the Newsletter was kind enough to send this follow up on the article. The so-called "dangerous" dam in Massachusetts (see photo) turns out to be not as dangerous. The news photo was of a temporary cofferdam that was constructed just upstream of the actual dam – something mentioned but never too clear. The dam in question is just out of view in the photo, and is an old embankment dam with a timber crib spillway. The state ordered that the impoundment be drawn down, and the homeowners around the lake paid to have the cofferdam installed to maintain their "beautiful water vistas". Below is a photo showing both the cofferdam and the downstream dam. (It almost looks like you can wade across the pond.)

Hydro

(Detailed article on Hydrokinetic Energy – by Union of Concerned Scientists)

How Hydrokinetic Energy Works

http://www.ucsusa.org/clean_energy/technology_and_impacts/energy_technologies/how-hydrokinetic-energy-works.html

Verdant Power seeks approval

Tidaltoday.com, 3/4/09

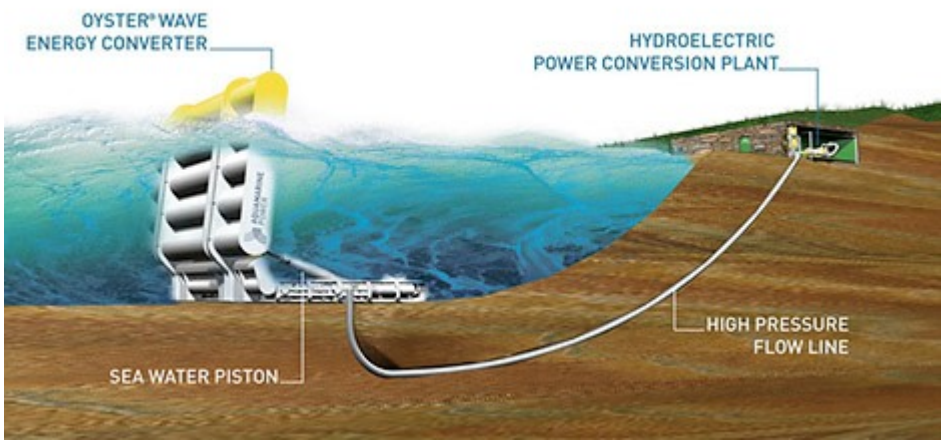
Verdant Power is seeking government approval to expand the installation to 30 turbines in the waterway's East Channel, lying between Roosevelt Island and Queens. Verdant's draft license application, filed this fall with the Federal Energy Resource Commission (FERC), proposes installing an additional 100 units in the West Channel's UN security zone that is closed off to boat traffic, reported citylimits.org. This latter installation will require a separate license. A full expansion of the project, which would entail installing nearly 300 turbines, has the potential to generate 10 megawatts of average annual power. The company's six-turbine prototype was created to gather data for its FERC license application.

As per the information available, unlike a conventional hydropower project, which requires a 30-year license from FERC, Verdant's turbines can be more easily removed if anything goes wrong. This has encouraged FERC to create a brand new pilot license, which is what Verdant will be applying for between March and April, according to their FERC filings. The company is asking for a 10-year license, although such pilot licenses are typically five years in duration. Initiated in 2002, Verdant's Roosevelt Island Tidal Energy (RITE) Project is being operated in New York City's East River. According to Verdant, in three phases, the RITE Project will test, demonstrate and deliver commercial electricity from Verdant Power's Free Flow Kinetic Hydropower System (tidal). The project is progressing from an initial demonstration array of six turbines to a full field of turbines that could generate up to 10 MW, enough to power nearly 8,000 New York homes.

(Another gizmo, for sure - couldn't they pick a better name?)

OysterWave Turns Pounding Waves Into Power

Mar 9, 09, ubergizmo.com



Hydroelectricity is one green method of getting free energy although there is still plenty of work and research left to be done in this department before something viable for the masses can be developed. We're on the right track though with the OysterWave that is a joint-research project between Queen's University in Belfast and Aquamarine Power Limited, coming up with the Oscillating Wave Surge Converter that is placed offshore within depths of 10 to 12 meters. When waves move it around, the device's double acting pistons will push seawater ashore via high pressure flow lines which are subsequently converted to power thanks to the use of proven hydroelectric generators. It will be interesting to see a successful prototype launch happening later this summer off the coast of Orkney influence power generation for the future.

Around the mountains: Obama plan could nudge hydroelectric planning

By ALLEN BEST, Summit Daily News, 3/6/09

GUNNISON — President Obama last week talked about efforts to pass cap-and-trade legislation yet this year, in effect imposing a tax on the burning of fossil fuels. If that happens, the electricity produced by burning coal will become somewhat more expensive, and the electricity gained from renewable sources will look that much less expensive. In anticipation of such a shifting landscape for prices, local water and energy officials in the Gunnison Basin are investigating whether a 200-foot-high earth dam on the Taylor River built to hold back spring runoff for irrigation purposes later in the season can be retrofitted to generate electricity. "It seems like a waste of a resource not to tap into hydropower there," said Mike Wells, chief executive of the Gunnison County Electric Association. The Crested Butte News suggests $30,000 in local and state funds are being collected for the feasibility study.

For all its falling water and now its wind farms and solar panels, Colorado still gets the majority of its electricity from burning coal, about 70 percent, and most of the rest from burning natural gas. Utah is even higher, with 85 percent of electricity coming from coal, while Wyoming is at 97 percent. Well before the alarm about global warming Aspen in the 1990s began looking at ways to prune its purchases of coal-fired electricity. It subsequently paid for installation of a hydroelectric unit in the Ruedi Dam, located about 25 miles from Aspen. Aspen city officials have also investigated the potential to install a hydroelectric component in the dam that creates Ridgway Reservoir, between Telluride and Montrose. However, the payback on that investment looks less attractive, according to Phil Overeynder, the director of public works.

Area dams may be used for hydropower

By Michael Morton/Daily News staff, The MetroWest Daily News, Mar 08, 2009

A recent report on green energy identifies 20 state-owned dams that could be converted to produce hydroelectric power, including sites in MetroWest, Greater Milford, Waltham and Newton. The report,

prepared by the Executive Office of Energy and Environmental Affairs in conjunction with the state's Green Jobs Act, says developing the 20 dams could provide enough electricity annually for more than 1,500 homes. The list of sites includes the Assabet River's Tyler Dam in Marlborough, the Blackstone River's namesake dam in Blackstone and Rice City Pond Dam in Uxbridge, the Charles River's Metropolitan Circular Dam and Lower Falls Dam in Newton and Moody Street Dam in Waltham. There are no plans yet to develop the dams, and it's not clear what benefit, if any, host towns would receive. It's also not clear how the generated electricity would be handled. "I think it's really too soon to broach those questions," said Lisa Capone, spokeswoman for the energy and environmental affairs office. "It's meant to be a starting point for discussions." Still, Capone called hydropower a "very reliable workhorse" for renewable energy if projects meet environmental standards for issues like fish passage, watershed impact, healthy water flows and water quality. "In the instances where hydropower can generate with a low impact on its environment, we hope to encourage its development," she said. Of the 20 dams, only one, the Northern Canal-Great Wall in Lowell, is used to generate hydropower, albeit in a way the state says could be expanded.

Among local dams, Tyler and Rice City Pond have never been used for hydropower. Staff at the state Department of Conservation and Recreation could not immediately find information on the history of the other five local sites. Capone said the Green Communities Act signed by Gov. Deval Patrick in July includes financial incentives for the development of hydropower. The Massachusetts Renewable Energy Trust, based in Westborough, also awards grants for such projects to developers, businesses and homeowners.

Hydropower project proposed for S. Idaho

IdahoStatesman.com - The Associated Press, 03/05/09

TWIN FALLS, Idaho — A hydropower developer wants to build a 1,100-megawatt project in south-central Idaho. Symbiotics LLC has filed a request with the U.S. Federal Energy Regulatory Commission for a permit to study building the project several miles west of Salmon Falls Creek Reservoir near Rogerson. The commission is taking public comments on the proposed Corral Creek South Pumped Storage Project. Symbiotics, a multi-state company that has offices in Rigby and Boise, wants to build two reservoirs storing 20,000 acre-feet of water behind two 200-foot-tall earthen dams. The project would include a nearly one-mile shaft with 10 turbines buried underneath the site. Justin Barker, a spokesman with Symbiotics, said the system would be "like a giant battery," running water between the two reservoirs. The water pump would itself need to be powered, possibly by wind or solar power. Barker said the project could cost up to $1 billion. The three-year study, he said, could cost as much as $15 million.

The project includes 1,400 acres belonging to the Bureau of Land Management, and faces some challenges. The Idaho Department of Fish and Game has maps that show sage-grouse breeding sites that could be affected. Sage grouse are being considered for federal protection under the Endangered Species Act. Finding water to fill the reservoirs could also be difficult. Salmon Falls Reservoir has been low for much of the last decade. "That's one of the biggest issues, is whether we can negotiate with the water-rights holders within the region," Barker said. Also, a 185-wind farm is planned for the hills west of the proposed hydro project. However, the two power-producing facilities could end up complementing each other if they are built.

Consumers Energy Completes Turbine Upgrade at Hardy Dam, Making More Renewable Power to Serve Customers

OXBOW, Mich., March 9 /PRNewswire/ -- Consumers Energy today announced it has completed installation of a new water turbine on Unit 3 of its Hardy Dam on the Muskegon River, resulting in a 600-kilowatt upgrade of renewable energy available from the unit. The new turbine has the added benefit of improving dissolved oxygen levels in the plant's outflow, enhancing the fisheries habitat downstream from the Hardy Dam. The new turbine draws in air as the force of the water spins it, and that increases the amount of dissolved oxygen in the outflow water. Consumers Energy replaced the original 1930 water turbine at Hardy

Dam in Unit 3 and also re-wound the generator. The new turbine is capable of producing 11,400 kilowatts of electricity, up from 10,800 kilowatts previously. The upgrade enables Hardy to generate a total of 33,000 kilowatts. The original turbine is on public display at the Operators Village Park next to the roadway crossing Hardy Dam.

"Renewable hydro power remains one of Michigan's most important homegrown energy sources to serve the needs of customers," said Bill Schoenlein, Consumers Energy's manager of hydro generation. "We've demonstrated that here at Hardy by investing in a new turbine that produces more energy from the same water flow while also benefiting fish by improving oxygen content in the water downstream of the plant." The new turbine installation project began in May 2008. The total cost of the project was about $5 million. As part of its Balanced Energy Initiative announced in 2007, Consumers Energy is working to double the amount of renewable power that it supplies to customers from about 5 percent today to 10 percent by 2015. The 10 percent level also is part of the state's 2008 energy law. The utility is studying potential upgrades at its other hydro units as part of its overall plan to reach the ten percent renewable level. Hardy Dam is the largest energy producer in the 13-plant Consumers Energy hydro fleet. It generates an average of 95 million kilowatt-hours of electricity each year, enough to meet the annual power needs of about 12,200 residential customers. At the same time, its 4,000-acre Hardy Pond reservoir serves as a premier recreation destination for thousands of visitors and area residents each year. Consumers Energy's 13 hydroelectric dams have the capacity to generate 132 megawatts of renewable electricity at facilities on the Au Sable, Manistee, Muskegon, Grand and Kalamazoo rivers. The reservoirs created by the dams provide recreational opportunities. Nearly 12,000 acres of Consumers Energy land adjacent to the dams and the reservoirs are open to the public. Consumers Energy, the principal subsidiary of CMS Energy, provides natural gas and electricity to nearly 6.5 million of Michigan's 10 million residents in all 68 Lower Peninsula counties.

Water

State must solve water supply issues

Mar. 07, 2009, By Dan Walters / The Sacramento Bee

Nine days ago, Gov. Arnold Schwarzenegger declared a statewide "drought emergency," citing a third winter of subnormal precipitation and the precariously low levels of major reservoirs. "Even with the recent rainfall, California faces its third consecutive year of drought and we must prepare for the worst -- a fourth, fifth or even sixth year of drought," Schwarzenegger said. It's more or less been raining ever since he uttered those words, either an ironic quirk of nature or a testament to the governor's persuasive powers. The late winter rains may be a welcome, albeit partial, relief from the looming water crisis, but as Schwarzenegger also said on Feb. 27: "This is a crisis, just as severe as an earthquake or raging wildfire, and we must treat it with the same urgency by upgrading California's water infrastructure to ensure a clean and reliable water supply for our growing state." As Schwarzenegger issued his declaration, the Legislature's perpetual political struggle over water policy resumed. And the often-heavy rains are themselves evidence that the state has been irresponsibly neglecting its water infrastructure.

When the skies opened, the Sacramento River that flows just 10 blocks from the state Capitol and is the state's most important source of water began rising. The Sacramento didn't get anywhere near flood stage, but it rose high enough that the flood bypass channel that protects the capital was opened. Even so, as much as 50,000 cubic feet a second surged past the city. Let's put that in perspective. A least 500,000 acre-feet of water flowed past Sacramento in the first week after Schwarzenegger's drought declaration, half the capacity of Folsom Lake. But the most interesting aspect of that flow is that it didn't come from Folsom or the other two major dams on the Sacramento River system, Shasta and Oroville. The operators of all three dams shut outflows to a trickle, rightly seeing the storms as an opportunity to replenish their seriously depleted reservoirs. All three quickly jumped from about one-third full to over half-full. Virtually all of that water gushing down the Sacramento River to San Francisco Bay and the sea was storm runoff from below those dams, a clue that we need more ability to capture winter rains and hold the water for drier periods. In other words, we need to build the off-stream reservoir north of Sacramento that the state has long proposed, but that environmental groups have shortsightedly opposed. What happened in early March was a harbinger

of what lies ahead for California if the theories about global warming prove true. We will get more of our precipitation in the form of rain and less in the form of snow, which means we will need more water storage capacity as the natural reservoir of the Sierra snowpack shrinks. It's ironic that the folks who raise alarms about global warming are the same folks who oppose our preparing for its consequences.

Environment

Cal-Am Puts Steelhead and Ratepayers at Risk With Decision to Leave Worthless San Clemente Dam in Place

xasauantoday.wordpress.com, 3/4/09

San Clemente Dam is almost completely filled in with silt and is worthless for water storage - or any other purpose. It is also structurally unsafe and at risk of failure during earthquakes or high flows. This morning (when this picture was taken) the dam was spilling about 1,000 cubic feet per second. On March 10, 1995, the dam survived a 16,000cfs flow that overtopped it completely.

Before the San Clemente Dam was built, the Carmel River had one of the healthiest steelhead populations in Central California. Unlike many coastal streams, where waterfalls block fish passage within a few miles of the ocean, steelhead could swim up the Carmel River for nearly 30 miles, gaining access to numerous higher altitude creeks with reliable year round flow. The San Clemente Dam ended all that. Built in 1921, the San Clemente Dam brought the Monterey Peninsula the water it needed for golf courses, canneries and a wave of growth - but it cut the steelhead off from nearly all the river's good fish habitat and spawning grounds. As water demand grew and storage capacity was lost to sedimentation, the Los Padres Dam was built further upstream. Although it too has lost most of its original storage capacity, it is the dam now used to supply the Monterey Peninsula with water. Removing the San Clemente dam would give steelhead access to many more miles of high quality creek and river than are available today, even though the Los Padres Dam would still exclude most fish from the river's highest reaches.

Today, a long, steep fish ladder allows some fish to make it past the San Clemente Dam, but it's still too tough a journey for the majority of fish. Since 1921, most steelhead have had to spawn as best they can directly below the dam. Not surprisingly, the Carmel River steelhead population has taken a beating. From spawning runs of 12,000 fish or better, the population declined to the point where steelhead were nearly wiped out entirely by the droughts of the 1970s and 80s (access to high altitude tributaries with reliable year round flow is even more critical during times of drought). Trapped below the dam, large numbers of the remaining fish died as the lower reaches of the river ran dry. If not for the heroic efforts of the Carmel River Steelhead Association and others (who rescued fish from drying pools, set up hatchery operations, etc.) the Carmel River steelhead would likely have been lost forever. Today, with a few hundred fish returning to the river each winter, the population is still far from secure. And with the dam completely useless for water storage - and a menace to downstream residents - getting rid of it seems like a pretty good idea. An innovative plan to reroute the river around the trapped sediment (eliminating the problems associated with sending huge pulses of silt downstream) has been worked out over the past few years, funding sources have been identified, grant money has been lined up, and — this week the dam's owner, the California-American Water Co. suddenly announced that they want to drop this plan. Their new plan is to simply shore up the San Clemente Dam by building what amounts to a whole new dam against its downstream face. This

announcement has left most veterans of the Carmel River water debates scratching their heads. First, it seems pretty unlikely that the permitting agencies will allow Cal-Am to entomb their worthless dam in place. This means that all Cal-Am is likely to achieve is a few years of delay (while more steelhead die), followed by an order to remove the dam - by which time the current funding sources will have disappeared, leaving Cal-Am's ratepayers to pick up the entire dam removal bill. We're only too well aware that Cal-Am doesn't care what happens to their ratepayers. The question is what they expect to gain for themselves through this delay. If you've got an idea, let us know.

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Some Dam – Hydro News and Other Stuff

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3/20/2009

Quote of Note: "We could certainly slow the aging process down if it had to work its way through Congress." -- Will Rogers

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

Ron's wine pick of the week: **Cline Syrah 2007**

(This works for me)

Other Stuff:

(Headline – see follow-up re settlement below)

EXCLUSIVE: Infighting trips up energy plans

Edward Felker, The Washington Times, March 12, 2009

Bureaucratic infighting is holding up one of the Obama administration's top goals in renewable energy - the construction of wind turbines off the Atlantic and Pacific coasts that would generate clean electricity and create "green" jobs. At the center of the fight are two obscure but powerful federal agencies, each of which claims the ability to approve new wave and tidal energy projects along the outer continental shelf. The Federal Energy Regulatory Commission (FERC) and the Minerals Management Service (MMS) each says it has the sole authority to issue permits and licenses, and neither is willing to budge. The result: Thousands of megawatts of wind-produced energy, considered a top priority by President Obama, are blocked. Industry insiders say the standoff has the unintended consequence of stopping an Interior Department proposal to

open offshore energy projects, including wind turbines. Although Interior Secretary Ken Salazar has pledged to finalize the rules this year, it is anybody's guess whether or when the administration or Congress will be able to force a resolution. "It's already holding up the rule," said Laurie Jodziewicz, manager of siting policy at the American Wind Energy Association, the trade group for wind energy producers. "Until there's clarity, companies are not going to be very excited about moving forward with their offshore projects," said Michael Olsen, a former Interior Department official now with the law firm Bracewell & Giuliani, which represents a potential developer of offshore projects. The tiff is causing ripples on Capitol Hill. On Wednesday, five lawmakers led by Sen. Thomas R. Carper, Delaware Democrat, wrote to Mr. Salazar to urge him to resolve the issue and expedite offshore development regulations.

In the meantime, Sean O'Neill, president of the Ocean Renewable Energy Coalition - which represents companies hoping to tap tide, wave and underwater current energy - said the delay is hurting the investment climate for all kinds of offshore energy projects. "It has a very chilling effect. We need regulatory certainty, and right now, we have terrible uncertainty," he said. Mr. Salazar insists there is huge potential off the coasts for renewable energy production, particularly off the Atlantic coast. "The scientists tell me that when you look at the wind energy potential off the Atlantic, it may be greater than we have onshore," Mr. Salazar told the Associated Press. "But what we don't have in place at this point is the rules to move forward with energy offshore." The solution could come in energy legislation expected later this month from the Senate Energy and Natural Resources Committee and the House Energy and Commerce Committee. Energy and Natural Resources Chairman Jeff Bingaman, New Mexico Democrat, "never likes to see turf battles between agencies," his spokesman Bill Wicker said. The fight has been brewing since passage of the 2005 Energy Policy Act. FERC is an independent hydropower licensing agency that handles nonfederal electricity-generating dams. MMS, which is part of the Interior Department, manages energy leases and royalties on publicly owned lands, both onshore and offshore. Although the law gave MMS authority over all offshore hydropower licensing, FERC has asserted, in effect, that the Federal Power Act trumps the 2005 law. It says "hydrokinetic" offshore projects that seek to capture wave, tidal and underwater current energy are technically in the same class as hydropower dams, which it oversees. MMS, it says, is limited to managing the leasing of the underwater land rights. Efforts by the Interior Department and FERC to come to a resolution last year failed, and the dispute has gone so far that both agencies are writing competing regulations for prospective offshore projects. The nonpartisan Congressional Research Service (CRS) says a lack of clarity will stymie the marketplace for private investment in offshore energy, even as Mr. Obama hopes to ramp up renewable energy and reduce carbon dioxide emissions. "The uncertainty over lead regulatory status on the OCS is an important issue that may discourage investors in this developing industry," the CRS said in a report last fall about the dispute.

(But, it looks like they have settled differences – a good thing we hope? I wonder if the hydro industry will be allowed input to the MOU!)

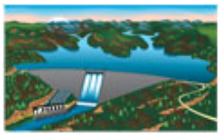
March 17, 2009

Interior and FERC Announce Agreement on Offshore Renewable Energy Development

WASHINGTON, DC – In a joint statement issued today Secretary of the Interior (DOI), Ken Salazar and Acting Chairman of the Federal Energy Regulatory Commission (FERC) Jon Wellinghoff announced that the two agencies have confirmed their intent to work together to facilitate the permitting of renewable energy in offshore waters. "Our renewable energy is too important for bureaucratic turf battles to slow down our progress. I am proud that we have reached an agreement with the Federal Energy Regulatory Commission regarding our respective roles in approving offshore renewable energy projects. This agreement will help sweep aside red tape so that our country can capture the great power of wave, tidal, wind and solar power off our coasts," Secretary Salazar said. "FERC is pleased to be working with the Department of the Interior and Secretary Salazar on a procedure that will help get renewable energy projects off the drawing board and onto the Outer Continental Shelf," Acting FERC Chairman Jon Wellinghoff said. Below is the joint Statement between DOI and FERC signed by Secretary Salazar and Acting Chairman Wellinghoff: **JOINT STATEMENT BY THE SECRETARY OF THE INTERIOR AND THE ACTING CHAIRMAN OF THE FEDERAL ENERGY REGULATORY COMMISSION ON THE DEVELOPMENT OF RENEWABLE ENERGY RESOURCES ON THE OUTER CONTINENTAL SHELF** *The United States has significant renewable energy resources in offshore waters, including wind energy, solar energy, and wave and ocean current energy.*

Under the Outer Continental Shelf Lands Act, the Secretary of the Interior, acting through the Minerals Management Service, has the authority to grant leases, easements, and rights-of-way on the outer

continental shelf for the development of oil and gas resources. The Energy Policy Act of 2005 amended the Outer Continental Shelf Lands Act to provide the Interior Department with parallel permitting authority with regard to the production, transportation, or transmission of energy from additional sources of energy on the outer continental shelf, including renewable energy sources. The Interior Department's responsibility for the permitting and development of renewable energy resources on the outer continental shelf is broad. In particular, the Department of the Interior has permitting and development authority over wind power projects that use offshore resources beyond state waters. Interior's authority does not diminish existing responsibilities that other agencies have with regard to the outer continental shelf. In that regard, under the Federal Power Act, the Federal Energy Regulatory Commission has the statutory responsibility to oversee the development of hydropower resources in navigable waters of the United States. "Hydrokinetic" power potentially can be developed offshore through new technologies that seek to convert wave, tidal and ocean current energy to electricity. FERC will have the primary responsibility to manage the licensing of such projects in offshore waters pursuant to the Federal Power Act, using procedures developed for hydropower licenses, and with the active involvement of relevant federal land and resource agencies, including the Department of the Interior. We have requested our staffs to prepare a short Memorandum of Understanding that sets forth these principles, and which describes the process by which permits and licenses related to renewable energy resources in offshore waters will be developed.
/s/
Secretary of the Interior
Acting Chairman of the Federal Energy Regulatory Commission



Dams

(Show us the D*^* money! Politics gets ugly when the money is flowing.)

Councilman: Show us the dam money

TWEAN News Channel of Albany, 03/13/2009, By: Kim Lengle

GLENS FALLS, N.Y. -- "We are making a major effort to communicate our needs to the governor," said Glens Falls Mayor Jack Diamond. Needs that include major infrastructure projects like dam repair, mandated by the DEC, to the tune of $28 million. "That's unaffordable," said Diamond. Mayor Diamond is hoping the city can get some federal stimulus money but so far, they're not on the list. "If we are to levy those costs on the taxpayers, residents will be paying a minimum of $250 per year increase," said Diamond

Butler dam holds back 123 million gallons of water. It's a class C dam, which means there's a high potential for loss of life if the dam fails. Its repairs are almost finished, but that's been done on borrowed money. "I've been talking to Mayor Diamond about the dam project and whether or not we're going to be able to get them funded and that's something I'm looking forward to working on in April," said congressional hopeful Scott Murphy. But City Councilman Jim Brock doesn't buy it. And he's challenging Murphy to stand up to the claims in his ad. "He said he can do it Washington, show us the dam money," said Brock. And Brock, the only Republican on the city council says it's not about partisan politics. "It's about, the governor doesn't know Glens Falls, he doesn't know much about us. What I'm saying is the only way to get the governor to pay attention to us is if we say we won't vote for him, vote for Scott Murphy unless they give us the money for the dams," said Brock. So while Governor Paterson takes his time to figure out who's getting a handout, Mayor Diamond says he'll be persistent. "We're just going to keep up beating the doors and turning every stone every over and make our argument till they throw us out," said Diamond.

(Stimulus = dam security - This may be a good idea, but not sure what it's stimulating?)

Sheriff gets federal money to protect dams in eastern Whatcom Co.

PETER JENSEN - THE BELLINGHAM HERALD, Mar. 14, 2009

The Department of Homeland Security has awarded the Whatcom County Sheriff's Office more than a half-million dollars to purchase equipment to protect hydroelectric dams in the eastern part of the county. The federal agency has identified three sites in the Newhalem, Diablo and Ross Lake area that are considered targets for a terrorist attack, Sheriff Bill Elfo said. To help protect those sites, the agency will give the Sheriff's Office about $580,000 to purchase high-tech radios, night vision goggles and a communications

vehicle that will be able to link to satellites so deputies and other agencies can communicate in case of an attack, Elfo said. Radio coverage in the eastern part of the county is spotty at best and non-existent at worse, so the radios and communications vehicle will be an improvement, Elfo said.

"We have a lot of demands put on us by the federal government," Elfo said. "We're having a mandate funded, for a change." The Sheriff's Office is requesting the Whatcom County Council approve the purchases at its next meeting, Tuesday, March 17. If approved, the Sheriff's Office hopes to have the equipment by the end of this year, Elfo said. Elfo declined to identify what those three sites are because Homeland Security has determined that information is classified. But Seattle City Light and Puget Sound Energy operate five hydroelectric dams on Baker and Ross lakes and the Skagit River, and the federal government has taken more steps to protect dams since the Sept. 11 terrorist attacks, said Mike Eagan, a spokesman for Seattle City Light. Eagan said Seattle City Light operates the Ross Lake Dam, the Diablo Dam and the Gorge Dam, which produce about 17 percent of the utility's hydroelectric generating capacity. The energy produced there is sent to Seattle and its surrounding suburbs, Eagan said. Puget Sound Energy operates the Upper and Lower Baker Lake dams, which produce less than 1 percent of the total megawatts the utility has at its disposal, spokesman Andy Wappler said. "The whole area of security has been of greater concern since 9/11," Eagan said. "We have a heightened awareness of the vulnerability of our grid system."

Dam problem increases flood risk in S. King County

03/16/2009, Associated Press, kgw.com, The Seattle Times

King County, WA - The Corps of Engineers gives the King County Flood Control Board a briefing Monday on what's wrong with the Howard Hanson Dam. A 6-foot deep depression was found in January in an abutment at the earth and rock flood control dam on the Green River. The corps has restricted the reservoir as a precaution until crews dig into the dam this summer to check for leaks and weakness. The Seattle Times reports that increases the risk of flooding in the Green River Valley in Auburn, Kent, Tukwila and Renton, if there is another heavy rain storm. The dam was built in 1961 to control Green River flooding.

Hydro

NY urged not to buy Quebec hydropower

Albany bureau • March 10, 2009, stargazette.com

Environmentalists and Native-American leaders from Quebec met with Gov. David Paterson and other state leaders Tuesday in an attempt to discourage New York from buying hydropower from a Canadian firm because of potential damage to Native-American lands. "We don't want New York to buy the energy because of the impact it would have on our community," said Chief Georges-Gregoire, who represents a group of about 4,000 indigenous people in northeastern Quebec known as the Uashaunnuat.
The state Power Authority is talking to Hydro Quebec, the largest generator of electricity in that province, about the potential purchase of power. Officials from the state and the province have been talking for years about making a deal to sell power back and forth, since Quebec needs the most power in the winter while New York's peaks in the summer. The most recent discussions have become enmeshed in a controversy over whether Hydro Quebec can build four dams along the Romaine River in the northeast part of the province, which includes vast tracts that have been ceded to the Uashaunnuat. It flows about 180 miles from

near Quebec's border with Labrador to the St. Lawrence River. The people who live in the area, as well as environmentalists, oppose the plan. They cite the destruction of the river as a major reason. Annie Wilson, energy committee chairwoman of the Sierra Club, said the state would be better off emphasizing conservation and other sources of renewable energy to meet its needs rather than looking to import hydropower.

Power Authority spokeswoman Christine Prichard said state officials have been meeting with Hydro Quebec representatives, but that the talks have been "very preliminary." "However great our need for cleaner energy, it can never be so great that it violated the rights of indigenous peoples," said the Sierra Club's Aaron Mair. The authority has been close to making deals to buy Hydro Quebec energy before. A deal appeared imminent in 1994 until then-Power Authority President David Freedman cancelled the $5 billion, 20-year tentative deal, saying it was too expensive and that New York didn't need the power and that there were "unresolved environmental issues" in Canada. A Hydro Quebec spokesman didn't immediately return a call for comment.

(The U.S. has over 80,000 dams and only 3 % are developed with hydropower. There are thousands of miles of canals and pipelines, of which a small number are developed, and the list goes on. So, how come the UK is developing this stuff and we're not doing enough?)

Canals and rivers to lead micro-hydropower revolution

British Waterways announces plans to build 25 small-scale schemes which could power 40,000 homes

Adam Vaughan, guardian.co.uk, 11 March 2009

Britain's canals and rivers have already been heralded as a low-carbon way to tranport Tesco groceries, a test-bed for hydrogen boats and a opportunity to build more wind turbines. Now they're being billed as a chance for micro hydropower to flourish under new plans unveiled today by British Waterways, which maintains 2,200 miles of the country's canals and rivers. In partnership with The Small Hydro Company, British Waterways said it intended to build 25 small-scale hydro-electric schemes with a capacity of 40MW, enough to power 40,000 homes. While far smaller in capacity than offshore wind farms switched on in 2008, the hydro initiative hopes to raise £120m in private capital over the next three years, create 150 construction jobs and reduce CO2 emissions by 110,000 tonnes annually. Underwater turbines will be installed next to existing weirs and will not affect the navigation of canals and rivers. Larger waterways such as the Trent and Severn rivers will be used for the first hydro power projects, with many of the installations likely to be located in the East Midlands and Yorkshire. It is hoped the first of the 25 hydro installations will be generating renewable electricity by 2010. "Britain's waterways were the arteries of our economy, providing transport and power," said the environment secretary, Hilary Benn. "This scheme shows how with ingenuity and innovation they can once again deliver real economic, social, and environmental benefits, especially in tackling and adapting to climate change." Last year British Waterways also announced plans to build wind turbines with 100MW of generating capacity, and more recently it said it wanted unused land by canals and rivers to be turned into allotments.

(What will they think of next? Now, this has got to be the cleanest energy ever – I hope you get the subtle pun)

Hydropower from Old Washing Machines

March 12th, 2009 by Lee Bruno, ecoworld.com

OK. It's New Zealand, not Australia. But this company called EcoInnovation still reminds you a little bit of Road Warrior. Founder and chief engineer Michael Lawley has built his "renewable energy store" on the ingenious redeployment of everyday household appliances. Among other things, the company recycles SmartDrive motors from salvaged washing machines to generate hydropower. Of course, you need to be near a river or stream. Yes, micro-hydro turbines that can tap into the movement of medium flowing streams and turn a turbine that can deliver most of the electrical requirements of a small home. Lawley says the company has been able to recycle the motors from salvaged domestic washing machines – aka Whirlpool. The company claims it's already made 1,000 successful installations of its micro-hydro device as well as wind and solar power systems. EcoInnovation also prides itself

on using recycled materials and renewable energy to manufacture renewable energy products. But if you are, Lawley promises great results. He says his own home and company have been "power-bill free" for 11 years. It's about time to put Kiwi innovation to work for U.S. homes bordering streams and rivers.

Micro hydropower systems have also gained greater attention recently in other parts of the world like Canada, India and Norway. Researchers at Dalhousie University in Halifax, Nova Scotia, Canada published a paper in the journal Energy Sources last year. The paper pointed out that 85 percent of Nepalese people live in remote areas with limited access to energy sources, such as wood and other biomass products. The researchers found that micro hydropower has great applicability as a sustainable energy technology, especially in consideration of the socioeconomic conditions of the country. In fact, the paper outlined the benefits of micro hydro operations in remote areas offering one of the most feasible options for energy development. It is demonstrated that micro-hydropower can bring energy services to the rural areas of the country as well as social changes through decentralization and community participation. The researchers reported in their finding that micro-hydro projects fulfill the technological, environmental, economic, and social sustainability criteria. And just last week, Norway's minister of Petroleum and Energy Terje Riis-Johansen commented on micro hydropower stations as offering a way to boost the country's electrical capacity to 18 TWh of new power. He said the country hopes that 100 applications can be processed each year. Last year, 42 power stations with a total production of 0.5 TWh received concessions.

(The price of hydro just got more expensive in Wenatchee)

FERC issues new license for 1,300 MW hydro project

Power Engineering

16 March 2009 — Federal regulators issued a license for the 1,300 MW Rocky Reach Hydroelectric Project in Washington State. The license outlines mandates that will cost the Chelan County Public Utility District around $425 million over the next 43 years, including continuing a habitat conservation plan for salmon and steelhead trout and maintaining existing parks on the Rocky Reach reservoir. Chelan County PUD began relicensing efforts in 1999, seven years before the license was to expire. The PUD initially applied for a 50-year license. Since 2006, Chelan County PUD had been operating the dam with annual licenses from the Federal Energy Regulatory Commission.

(Well, now the County and State have a new wrinkle. You gotta wonder how this will set with all the other hydro owners, particularly Duke Energy with its large hydro development on the Catawba-Wateree River. Why just Stanly County? The legislation seems to affect the whole state. The 10 million gallons per day is only a little over 15 cfs which means it could affect the smallest hydro projects too.)

SEE ALCOA REBUTTAL BELOW

Commission in favor of Senate Bills

By Jim Lisk, Editor, The Stanly News & Press

Sunday, March 15, 2009 — Late Friday afternoon, the Stanly County Board of Commissioners issued a statement saying they are aware of two new bills introduced in the General Assembly, Senate Bill 568 and Senate Bill 569. Sponsored by state Sen. Stan Bingham (R-Davidson) and co-sponsored by state Sen. Fletcher L. Hartsell, Jr. (R-Cabarrus), state Sen. William Purcell (D-Scotland) and state Sen. Daniel Clodfelter (D-Mecklenburg), the commissioners say the bills will provide substantial benefit to Stanly and Davidson counties, if enacted. Senate Bill 568, which would establish a Stanly/Davidson Water Resource Privilege Tax, states: "A county may levy an annual privilege license tax on a business that withdraws from local water resources at least 10 million gallons of water a day. The determination of the amount of water withdrawn by a business is based on withdrawals in the fiscal year preceding the year for which the tax is imposed." Senate Bill 569, which would create a Stanly/Davidson Limited Privilege Tax, states: "A county may levy an annual privilege license tax on a business that operates a facility that uses hydropower to produce electricity."

In light of this proposed legislation, the Stanly County Board of Commissioners has released the following public statement: "We thank Senator Bingham and his co-sponsors, Senators Clodfelter, Hartsell and Purcell, for introducing these two bills. "We also thank Gov. Bev Perdue for her recent public statement that she is concerned about the federal relicensing proceeding for the Yadkin Hydroelectric Project, which includes four reservoirs, power plant sites and dams along the Yadkin River in Stanly, Davidson, Montgomery and Rowan counties in the Central Piedmont of North Carolina. "The legislation does not

impose any taxes. The bills only provide Davidson and Stanly counties the authority to vote on such a tax should it ever be required. If ever enacted, the revenues generated by the tax, would benefit North Carolina by providing relief from the economic burdens in two main areas:

1) Job loss – The funds would help alleviate the economic distress that arose when Alcoa closed its smelter in Stanly and stopped employing nearly 1,000 workers as it had promised to do when it received its first 50-year federal license for the Project in 1958. Alcoa chose to move these jobs to Iceland or other foreign countries and has no announced intention of bringing them back to Stanly or any other part of North Carolina.

2) Environmental damages – Alcoa Power Generating has acknowledged previously that cleaning up Badin Lake, a reservoir in the Project, will cost at least $25 million alone. The company has yet to say if, when and how it would clean up damages associated with its operations at the Project. The funds would help fund the necessary cleanup and provide better water if we are left holding the bag. Our taxpayers do not need to get stuck with this huge cleanup bill.

"The potential revenues would help protect our North Carolina citizens for years to come from potential future expenses connected to the Project. Our fervent hope is that the license for the Yadkin Project will be awarded to a State Trust for the benefit of all people of North Carolina. "However, these two bills also provide the state with a backup 'Plan B' if the Federal Energy Regulatory Commission (FERC) does not side with the countless number of office holders and North Carolina citizens in their strong opposition to APGI receiving a new license to own and use the waters of the Yadkin River to support 450 new jobs in Iceland or in other foreign countries. "We remain firmly committed in our belief that the State Trust Concept is the best long-term option of improving the environmental and economic benefits for Stanly County and the state, as it would go beyond what APGI promises in its relicensing application to correct contamination at the former smelter site and use power generated by the Project for the good of North Carolina consumers, rather than sold out of state at profit for the sole advantage of a multinational monopoly such as APGI, which is what currently exists. "We appreciate the efforts of all elected officials and environmental leaders on behalf of the Yadkin Hydroelectric Project during these last few years regarding its licensing. Their actions reflect a solid understanding of the needs of our state and local communities, as well as the value of protecting both the economic prosperity in our state and the public health of our North Carolina citizens."

(Here's the ALCOA rebuttal: http://yadkinproject.blogspot.com/2009/03/proposed-hydro-tax-at-odds-with-ncs.html

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(Here's a cause for the hydro industry – how about pitching in and buying a new plaque? Afterall, this is hydro's history!)

Historical marker at Appleton hydroelectric site goes missing

State plaque notes city's claim to first commercial plant

By Steve Wideman • Post-Crescent staff writer • March 16, 2009

APPLETON, WI — Back in 1882, a building along the Fox River smaller than some sturgeon spearing shanties made world history. The world's first commercial hydroelectric central station powered four factories, two homes and a blast furnace in an iron manufacturing plant. "It was within months of the New York City steam system (now Con Edison Steam Operations) providing service to Manhattan," said Linda Muldoon, a member of the city's Historic Preservation Commission. Recently, the city realized a state historical marker recognizing the Appleton power plant's significance is missing from its perch atop a pole near a 1932 replica of the original plant. The original building was destroyed by fire, Muldoon said. "We have no idea when it was taken," Muldoon said. Someone removed the 2- by 3-foot metal sign from its pole about 10 feet west of the Lawe Street bridge over the Fox River. "We have pictures showing it was there, but now it's not," Muldoon said. "We are wondering if anyone has seen the sign." Rick Bernstein, field services supervisor for the State Historical Society, said the marker was part of a program called "History on a Stick."

"It's not unusual for the markers to go missing," Bernstein said. "The program started over 50 years ago and we now have more than 500 markers out there." The plaque has been missing for nearly a decade, said parks and recreation spokes-man Marty Will, who took photographs of the plaque shortly after coming to work here in 1999. "It was in place in December of 2000 and (went) missing shortly after that," Will said. He said police were notified, but no report issued because of the lag time between the point it was last seen and when it went missing.

(Looks like they want to go back to hydro's roots using an old-fashioned water wheel. Can you imagine a water wheel 75 feet tall (7 ½ stories high! Hey, it will be more efficient than a thermal plant.)

County To Explore Generation Of Power At Nolichucky Dam

3/17/09, GreenvilleSun.com, NC

This photo, taken in late February, shows water toppling over the spillway at Nolichucky Dam, which impounds Crockett Lake. The photo was taken from the bridge on the Asheville Highway. The Greene County Commission voted Monday to enter into an agreement with a national energy company to explore the possibility of generating power with a water wheel at the dam. The dam is owned by the Tennessee Valley Authority. If built, the 75-foot water wheel would be the world's tallest, County Mayor Alan Broyles said.

Water

(CA water and a lesson in astronomy and meteorology)
Excerpts

John Lindsey: Rainy season shaping up as another disappointment

SanLuisObispo.com, Mar. 14, 2009, John Lindsey

Our local countryside has turned an emerald green and the promise of a new beginning is everywhere. It also seems that we have entered into a spring weather pattern, with strong northwesterly winds and plenty of upwelling occurring along the coastline, producing much colder seawater temperatures. The ocean along our immediate coastline is ranging from a chilly 50 to 52 degrees, which are classic springtime water temperatures. If we don't get any significant rain soon, this will be another year of below-normal rainfall. The rain gauge at Diablo Canyon nuclear power plant has recorded about 8.2 inches of rain so far this year, which is less than half of what we would normally receive. Chris Arndt's rain gauge at SLOweather.com (a private forecaster) has recorded about 14.2 inches of rain, or about 70 percent of normal. On the positive side, the Sierra snowpack is estimated to be about 88 percent of normal, so there is a good potential for near-normal hydroelectric power generation. The 2008 spring was the driest on record for California, and this spring could also be dry because of the combined effects of La Niña and the negative phase of the phenomenon known as the Pacific Decadal Oscillation, or PDO. The negative phase of the PDO, combined with a La Niña condition, yields below-normal seawater temperatures in the eastern Pacific. If you recall from earlier columns, below-normal seawater temperatures usually produce drier years.

It's interesting to note that January 2008 was wet, but the rest of the 2008 rain season was fairly dry. The 2009 rain season is shaping up almost the same way, but with a wet February. The first day of spring will occur this Friday at 4:44 a.m. Because the calendar year is not is exactly 365 days, the first day of spring in the Northern Hemisphere ranges between March 20 and 21. One of the more interesting urban legends is the one about easily balancing eggs on their ends during the equinox because of the equal length of the day and night. With enough patience and practice, you can balance eggs on their ends at any time of the year just as easily as during the first day of spring. Earth is on a 23½-degree tilt as it rotates around the sun. This is the reason we have seasons. As Earth orbits around the sun during this time of the year, the Northern Hemisphere becomes more tilted towards the sun, while the Southern Hemisphere tilts away. When the sun is directly over the equator, it's called the vernal equinox. Equinox comes from the Latin phrase for "equal nights." Sunrise and sunset are about 12 hours apart everywhere on Earth on this date, but the sunrise and

sunset times at the PG&E Diablo Canyon weather forecast are not exactly 12 hours apart, as one might suspect. That's because Earth's atmosphere refracts or "bends" light coming from the sun, so we see the sun a couple of minutes before it actually rises over the horizon and a couple of minutes after the sun sets. As we prepare to move into spring, I want to take the opportunity to respond to a number of e-mails I received last week after my column on solar energy. I invite any of you with interest in clean energy and the environment to visit PG&E's "Next100" blog at www.next100.com. From your e-mails, it is clear that Central Coast residents are concerned about protecting the environment. That's why I think you'll find "Next100" interesting, given that it provides an in-depth look at the intersection of clean energy and the environment. It's designed to encourage an open dialogue on the trends that will most affect the energy industry and our customers over the next 100 years — PG&E's second century in operation. ----------.
John Lindsey is a Pacific Gas and Electric Co. meteorologist at Diablo Canyon nuclear power plant

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Environment

Gov. Otter urges salmon advocates to acknowledge progress, show open mind

By Rocky Barker - idahostatesman.com, 03/10/09

Gov. Butch Otter said before he's ready to start talks with salmon advocates who want dams breached, he wants them to acknowledge all the money that's been spent, the water sacrificed and all the gains made. Salmon advocates have long urged regional leaders to put dam breaching on the table as an option and U.S. District Judge James Redden urged similar consideration in court Friday. But Otter, who has led the state into a collaborative plan with the federal government, Washington, Montana and all of the Columbia tribes except Idaho's Nez Perce, turned the tables. "There ought to be some recognition by them of what we've done and they have to show they're willing to make some effort to restore these salmon runs with the dams in place," Otter said. Otter said he was disappointed Redden didn't give the collaborative parties more credit for their successful efforts to develop a plan with an additional $1 billion of programs.
Idaho Department of Fish and Game biologists predicted near record returns of salmon and steelhead this spring, the result of colder conditions in the Pacific that keep warm water predators south and increase food sources. Otter and other regional officials with the Northwest Power and Conservation Council also attributed the improved runs to billions of dollars spent since the 1980s to improve salmon habitat and improve dam passage. "After nearly 25 years we are seeing signs we are making progress on fish recovery," said Bill Booth chairman of the council from Coeur d'Alene. Idaho predicts 106,000 hatchery-raised spring-summer chinook will return past Lower Granite Dam on the Snake River this year compared to 52,000 in 2008. It predicts 23,000 wild spring-summer chinook will return compared with 16,000 in 2008. In 1995 fewer than 1,200 spring-summer Chinook salmon crossed Lower Granite, the last of eight dams between the Pacific and Idaho. "This is the year to buy your fishing license and salmon tag and go salmon fishing in Idaho," said Paul Kline, an Idaho Department of Fish and Game fisheries biologist. Salmon advocates do recognize the value of the habitat projects in places like Idaho's Pahsimeroi and Lemhi valleys, said Greg Stahl, who works on salmon programs for Idaho Rivers United. "But Idaho has more intact habitat than anywhere in the region," Stahl said. "The problem is getting the fish to the habitat."

(What is this – media terrorism? The whole world is not really watching because there happens to be a more pressing matter – the economy! The State will be hard pressed to deny the water quality certificate, but they can make its conditions so onerous so as to make ALCOA think about walking away.)

N.C. Division of Water Quality, The World is Watching Your Decision

CarolinaNewswire.com, 03-13-2009

YADKIN COUNTY, N.C. -- Attention, members of the N.C. Division of Water Quality and the Department of Environmental and Natural Resources (DENR): Your decision of whether Alcoa will receive a 401 Water Quality Certification to operate four dams on the Yadkin River (a/k/a the Yadkin Hydroelectric Project) is being watched and waited around the state, the nation and even the world, not just in Stanly County. Statewide, coverage of this issue has appeared in all the leading newspapers, including The Charlotte

Observer, The Winston-Salem Journal and The News & Observer in Raleigh. TV stations ranging from News 14 in Charlotte to WFMY in Greensboro and WNCT in Greenville have carried news of the controversy over whether Alcoa, if it gets the certification, really will improve the water quality and clean up its pollution at Badin Lake, one of the reservoirs that make up the Yadkin Hydroelectric Project, despite not saying how or even if it will do so.

The coverage has since extended well beyond the borders of North Carolina. Trade publications such as MetalBulletin (www.MetalBulletin.com) and United Kingdom-based International Water Power and Dam Construction (www.waterpowermagazine.com/story.asp?sectioncode=130&storyCode=2051933) have included news about the broad-based opposition to Alcoa's apparent lack of concern in addressing contamination problems associated with its operations in the Project. And press releases from our group, the N.C. Water Rights Committee, have received international distribution, appearing in Web sites in Austria and Romania, among other locations.

There is viral video on it too. The Yadkin Riverkeeper has posted on YouTube a video on "Badin Lake Pollution" as well as his Web site, www.yadkinriverkeeper.org. The latter site also includes an "Alcoa Worldwide Pollution" Google Map that allows anyone to see location and information on individual sites where Alcoa has faced fines or protests for its activities, with contributions and updates from other Riverkeeper organizations. In short, everywhere there is attention about this decision. Therefore, the implications from the final decision will be worldwide in scope. That's definitely a tall order. The DWQ's mission is to preserve, protect and enhance North Carolina's water and groundwater resources through quality monitoring programs, efficient permitting, responsible management, fair and effective enforcement and excellence in public service. It is our hope that DWQ leaders will keep these words in mind when they make their final decision on the Project and Alcoa's commitment to water quality regarding it. The whole world is watching, and the decision will reveal just how committed the Division is to holding private monopolies to the high standards it has in its mission statement. www.ncwaterrights.org.

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[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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3/27/2009

Quote of Note: "You can't get rich in politics unless you're a crook." - -Harry S

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

Ron's wine pick of the week: **Penfolds Koonunga Hill Shiraz/Cabernet 2006**

Other Stuff:

(Excerpt)

THE WHITE HOUSE, Office of the Press Secretary
FOR IMMEDIATE RELEASE, March 19, 2009

President Obama Announces More Key Administration Posts

WASHINGTON, D.C. – Today, President Barack Obama announced that Jon Wellinghoff, currently serving as Acting Chairman of the Federal Energy Regulatory Commission (FERC), will be designated as Chairman. ----------.

(Excerpts)

U.S. Clean Energy Patents Reach Record High

March 20, 2009, cleantech.com

The United States granted a record 928 patents for clean energy technologies in 2008, according to the Clean Energy Patent Growth Index. ----------. Broken down by sector, fuel cells dominated other renewable energy technologies in 2008, with 530 patents, an increase over 2007. Patents in wind, hydroelectric, tidal and geothermal were also up year on year in 2008, with hydroelectric and tidal patents reaching all-time highs. Solar patents, on the other hand, were down year on year, although the number issued in Q4/08 was substantially higher than those issued in the first three quarters.
----------.

(This from the British Wind Energy Association)

How efficient are wind turbines?

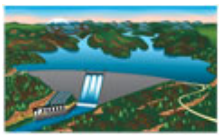
The theoretical maximum energy which a wind turbine can extract from the wind blowing across it is just under 60%, known as the Betz limit. However the meaning of efficiency is a redundant concept to apply to wind energy, where the fuel is free. The primary concern is not the efficiency for its own sake, but to improve productivity in order to bring the price of wind energy down.

How much of the time do wind turbines produce electricity?

A modern wind turbine produces electricity 70-85% of the time, but it generates different outputs dependent on wind speed. Over the course of a year, it will generate about 30% of the theoretical maximum output. This is known as its load factor. The load factor of conventional power stations is on average 50%.

(**Hydro has no Betz limit!** This from Wisconsin Valley Improvement Company web site: http://new.wvic.com/index.php?option=com_content&task=view&id=7&Itemid=44)

- Hydropower is the most efficient way to generate electricity. Modern hydro turbines can convert as much as 90% of the available energy into electricity. The best fossil fuel plants are only about 50% efficient. [1]
- In the U.S., hydropower is produced for an average of 0.85 cents per kilowatt-hour (kWh). This is about 50% the cost of nuclear, 40% the cost of fossil fuel, and 25% the cost of using natural gas.



Dams

(This is at least worth a smile, especially the comment. Oh those Brits!)

Return of the beaver 'could cut water bills', scientists say

By Daily Mail Reporter, 18th March 2009

Reintroducing beavers to the British countryside could have environmental benefits, scientists sav

Bringing beavers back to the countryside could cut water bills for hard-pressed households, scientists have said. The creatures help keep rivers free of pollution, thereby saving costs for water companies and possibly having a knock-on effect on bills, it is claimed. Beavers were hunted to extinction in the 16th century for their fur and meat, but naturalists want to reintroduce them to the wild. A £2million pilot scheme will begin in Scotland this summer. The plans have angered landowners, who say that the animals will wreak havoc in the countryside, threatening farms, fisheries and woodlands. But yesterday, a study for Natural England by independent scientists said that the benefits would outweigh 'minor' damage to woods, rivers or crops. Report author Professor John Gurnell, a wildlife biologist at Queen Mary College, London, said: 'They can boost water quality, they can alleviate the effects of flooding, they can raise river levels during drought.' Landowners oppose the plan to reintroduce the species and believe the animals will wreak havoc with farms and woodlands. Beavers dam rivers and divert streams to create ponds by using their large teeth to fell trees. The report said these ponds are far richer in wildlife than normal rivers and create havens where fish, frogs, insects and birds thrive.

COMMENT:

So beaver construction for beaver purposes is good, human construction for human purpose is bad? - Peter North, Sutton, Surrey

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(Too many dams, too little money, except if you're a mismanaged bank)

La Crosse Co. Dam to Get Federal Help

by Ron Seely, Wisconsin State Journal, 3/18/09

Despite dozens of dams throughout southern Wisconsin being battered and weakened by last year's flooding; only one dam in the state qualifies for stimulus money being distributed through the National Resource Conservation Service. That leaves county officials such as Phil Hahn, who oversees Vernon County's dams, scrounging for money to repair dams damaged during last year's floods and hoping that short-term fixes will get the structures through the coming spring flooding season. "It's terribly frustrating," said Hahn of not being able to get his hands on any of the $145 million available nationwide through the NRCS small watershed flood control program. Meg Galloway, chief of the dam and floodplain section at the

state Department of Natural Resources, said Wisconsin did not fare well under the NRCS criteria.

The one dam that may qualify for NRCS stimulus money is in La Crosse County, Galloway said. She added that more money may be available in coming months if the state Legislature approves $3 million that Gov. Jim Doyle has proposed using to fund the long-empty state dam repair and maintenance fund. As for dams damaged by last year's flooding, Galloway said some have been repaired. When repair was not possible because of a lack of money, the ponds they hold back have been drawn down in case of more high water this spring. That's what Vernon County did in several spots, Hahn said. "We are going into the flooding situation this season in as good a situation as we can be," Galloway said.

(I don't think this is new – it's just that the media finally caught up to the news)

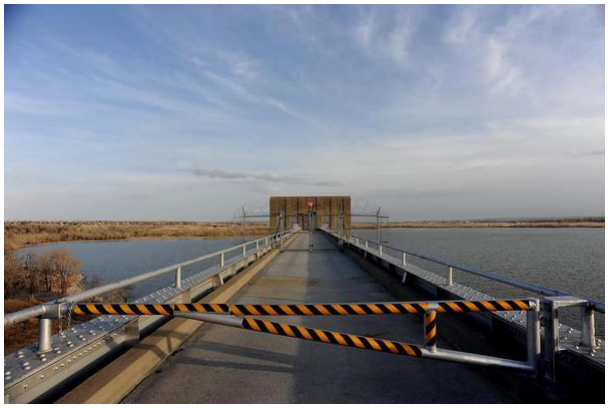
New safety plan implemented at corps dams

Mar 18 2009, Associated Press, APNewsNow, KXNet.com

PIERRE, S.D. (AP) Officials say a new safety plan has been implemented at U.S. Army Corps of Engineers dams nationwide. The plan uses the Dam Safety Action Classification system to rate the more than 600 corps-owned or operated dams. The system has five classes, with those rated in the top echelon having the highest priority for action. The Oahe Dam near Pierre has a rating in the middle because of stability concerns with part of the downstream slope. Corps spokesman Paul Johnston says the concern is not new and that the dam is safe. Oahe Project Manager John Bartel says officials are working to deal with the downslope concerns. The Big Bend Dam south of Pierre also has a DSAC III rating. The Fort Randall and Gavins Point dams, also on the Missouri River, will be screened later this year.

Failure of dams can be the most costly and catastrophic

By David Olinger, The Denver Post, 03/20/2009



Among all the nation's infrastructure elements, the costs of failure run highest at its levees and dams. The American Society of Civil Engineers rates both as poor. It gave levees a D-minus and dams a D in its 2009 report card — and noted that little money from the economic stimulus bill is devoted to dam or levee repairs. Nationally, it reported, more than 1,800 dams are classified as deficient and "high-hazard" — likely to kill people downstream if they fail. In the past six years, two dams have been added to this list for every one repaired. Colorado has minimized the risk of catastrophic failures with a highly regarded dam-inspection program. One consequence: In a state with a growing population and recurring water shortages, the safety program has restricted the storage capacity of 169 dams, including 21 high-hazard dams. There is one federal dam in Colorado whose adequacy is debated — and whose failure would be catastrophic. It's the reservoir in Cherry Creek State Park.

Fourteen years ago, a study for the U.S. Army Corps of Engineers led to this startling conclusion: The "probable maximum precipitation" event in the Cherry Creek basin could put a 2-foot wall of water over the dam. A subsequent study for the state envisioned a smaller maximum potential rainstorm — and concluded the dam would hold the runoff. "Depending on the figure you choose, the spillway is adequate or inadequate," said Mark Haynes, the chief of Colorado's dam-safety program. "We do not have any problems with the hydrological adequacy." The Corps of Engineers study defined the maximum storm as dumping 17 inches of rain in nine hours after other storms had partially filled the Cherry Creek reservoir — in short, much worse than any storm in Denver's recorded history. In 1972, a storm approaching that magnitude did stall several hundred miles to the northeast, near Rapid City, S.D. The runoff broke the dam in a city park, causing a flash flood that drowned more than 200 people. The probable maximum storm "is a once-in-forever type of event. Worldwide, there have been dams that have seen that event," said John Palensky, the Cherry Creek dam-safety study manager at the Corps. "We have to live in that world where you look at the improbable." Palensky said the Cherry Creek dam is structurally sound, and he would not worry about living downstream. But the capacity question, combined with extraordinary population growth below the dam since

the 1940s, led the Corps to consider safety options, from raising the dam or enlarging its spillway to storing more water upstream. As of the 1990s, the Corps estimated more than 120,000 people and $30 billion worth of property were below this dam. Interstate 225 passes directly adjacent to the dam; southeast Denver and Aurora lie downstream. Under the Corps' rules, dams must be large enough to hold 100 percent of the water from a probable maximum precipitation event, and in that event, "there is a potential that the Cherry Creek dam could overtop," Palensky said. In a Corps region that covers parts of six states; other federal dams are in worse condition. Yet the Cherry Creek dam, "out of all of our dams, is our highest dam-safety priority," he said. The downstream population "puts it as the No. 1 on our priority list."

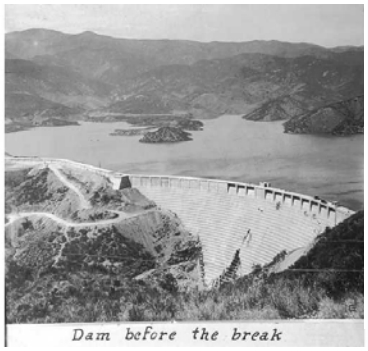
(Dam safety history)

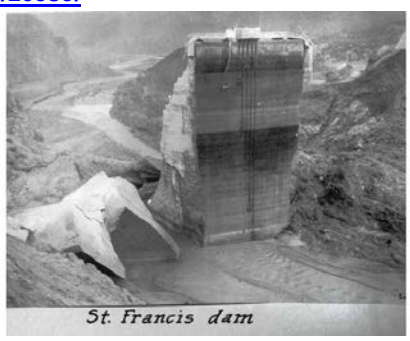
St. Francis Dam disaster: Mulholland's tragic mistake

The Signal recounts the historic collapse of dam in 1928

By Shannon Master, For The Signal-Santa Clara Valley, March 22, 2009

Below is the link to the full article:
http://www.the-signal.com/news/article/10939/





Before and after failure March 12, 1928

Hydro

(Someone has to say what is always left unsaid - The misperception mentioned has been cleverly fostered by the anti-hydro lobby which has great influence in Congress. I always dream about a turbine at every dam – all 80,000+ of them!)

March 18, 2009

Hydropower Roundtable: New Growth for an Old Industry

by Stephen Lacey, Staff Writer, Las Vegas, United States [RenewableEnergyWorld.com]

The recent federal stimulus package is touted as the key to building new clean energy industries in the U.S.; but it's also helping the oldest and most established industry -- hydropower -- redefine itself and continue to lead the penetration of renewable electricity throughout the country. Hydropower makes up roughly 75 percent of renewable energy capacity in the U.S. But a lack of strong growth in recent decades has created a general misperception about how much the industry can expand. As a result, fast-growing industries like wind and solar get all the attention, while the hydro industry can appear to be a bit washed up. That's not even close to the truth, say industry representatives. Last week, a group of hydropower experts sat down with RenewableEnergyWorld.com for a roundtable discussion at the Renewable Energy World conference to talk about the future of the industry in the U.S. and internationally.

The panel included: Linda Church-Ciocci, executive director of the National Hydropower Association (NHA); Marla Barnes, chief editor at Hydro Review Magazine; and Julie Smith Galvin, director of communications for Brookfield Renewable Power. Like every other clean energy technology, hydro has received a significant boost by the stimulus package — a move that could help the industry realize the addition of 23,000 MW of new capacity in the U.S. over the next 15 years. The development of new marine energy technologies, expansion of existing hydro facilities and the creation of electrical generation facilities on non-powered dams offer a new range of options for developers. "There has been a real resurgence of hydropower in the United States. It's a very exciting time...I have worked for this industry for 20 years now and I have never seen the growth that's occurring within this industry or the opportunity for tremendous growth within the industry," said NHA's Church-Ciocci. Now that developers are able to take the Investment Tax Credit (ITC) or a 30-percent cash payment from the Treasury in lieu of the Production Tax Credit, companies can get a faster infusion of capital. This could especially help companies develop new wave, tidal and in-stream hydrokinetic technologies that are much more expensive to install and test. The stimulus package also opens up loan guarantees to the industry and explicitly targets incremental hydro, which will allow developers to add to existing capacity. In addition, Secretary of Energy Steven Chu recently called for 20,000 MW of new pumped storage capacity, which could mean a new ITC will be created for that sector of the industry. "Now with so much incentive for renewables, there is indeed a re-birth in that arena," said Marla Barnes, chief editor of Hydro Review Magazine. The boom is not just happening in the U.S. South America and Asia are leading the way with new development. China could see around 250 GW of capacity by 2013. However, because those projects are much bigger than projects in the U.S., they are often considered environmentally or socially hazardous. Not all of them host power facilities. Most of them are for water supply and management. But with China adding electricity demand each year that is equal to France's total peak demand, proponents say that electrical generation units will be an important part of the picture. "The world commission on dams report...said that the dams that performed the best, when they performed all the analysis, were ones with hydropower [facilities] on them," said Ciocci. NHA and other organizations are trying to take that message to the U.S. as well. Only three percent of dams in the U.S. currently generate electricity. That means that over 77,000 dams are theoretically available for hydropower development. The expansion of these dams could mean thousands of MW of new capacity. "People are shocked that there is still so much hydropower there, and we're finally getting the recognition and the incentives that we need to add some more, so it's a great time," said Brookfield's Smith-Galvin. To watch the entire roundtable discussion, see the video below.
http://www.renewableenergyworld.com/rea/news/article/2009/03/hydropower-new-growth-for-an-old-industry

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(These people are advocating tearing down the Snake River Dams and thereby eliminating over 1000 MW of hydropower (See page 5 of Report) and advocating their junk energy. Here we have the most subsidized renewable that wouldn't be built otherwise - the most undependable power out there. Furthermore, it's useless without backup power and transmission which they always want someone else to pay for. Click on the "report" and read their stuff.)

Power in numbers: Green energy could fuel the Northwest

LA Times, March 18, 2009, by Kim Murphy

OK, everybody thinks clean energy is a good idea. But with electricity demand rising, new technology expensive and ever-increasing challenges to existing renewables like hydropower, can we afford it? Yes. Dirty coal plants can be mothballed while providing more electricity for homes, businesses and public transport by asking consumers to pay less than a penny more per kilowatt hour, says a new report from the Northwest Energy Coalition. The key is energy efficiency. The group suggests that the region can save enough energy to meet 60% of the region's new power needs, and still cut greenhouse gas emissions by 80% by 2050. The prescription includes tax incentives for recycling waste heat from industrial on-site electrical generation, better top-to-bottom efficiencies, and development of 7-10,000 megawatts of new wind, solar, geothermal, biomass and other alternative energy by 2050. It won't cost that much more than building 25,000 new megawatts of capacity in new coal or gas, the report suggests. To get there will take a federal mandate to the Bonneville Power Administration, which operates the Northwest hydropower system, to set an annual floor of 340 average megawatts of new energy efficiency and 270 megawatts of new renewable energy. New state renewable energy standards must be in place, and coal plants must be phased out. "Energy efficiency is the lowest cost and most environmentally responsible resource that's available," said Stan Price, director of the Northwest Energy Efficiency Council, an industry group that of course will benefit from all those weatherization contracts -- as will the regional economy, the report sponsors say, from all the jobs and products needed to get to energy nirvana.

(Is there no end to these pie-in-the-sky dreamers of the impossible? Imagine, we're going to shut down the cleanest, most efficient renewable for what – wind and solar. We'll be going backwards in efficiency, not forward as they claim. How can you make up for something that is over 90 % efficient?)

Will smart grid makes hydro dams obsolete?

Submitted by Rocky Barker, 03/18/2009, voices.idahostatesman.com

The need to reduce greenhouse gases by 80 percent by 2050, as proposed by the Intergovernmental Panel on Climate Change seems so daunting in a world still dominated by fossil fuels and based on cheap power. How can we get from here to there without having major economic impacts, you know, like the ones we are suffering through now? If alternative energy advocates like the Northwest Energy Coalition are in the ball park it will come from more efficient use of the energy we need. No one questions that energy efficiency is today the cheapest new power source. Simple measures like incentives to turn off our air conditioners briefly when demand peaks or making buildings need less heat are the baby steps we can take now and really make a difference in our own bills. Wind power and solar power also offer long term potential, especially when we are forced to pay for carbon emissions. But the real breakthrough will be when we have high efficiency freezers, air conditioners, heat pumps washers dryers and electric cars all tied into a smart grid with computer chips. Northwest Energy Coalition expert Steve Weiss explained at a press conference to release the Bright Future report how a "smart grid" will work. When the wind blows and the utility has more power than it can handle it automatically turns on thousands of water heaters that heat their water a few degrees. Refrigerators and air conditioners run a few degrees colder. Electric cars get charged faster. Then when the wind stops the system is reversed. The water heaters are turned off until the water is slightly cooler. The refrigerator doesn't come on as quickly. The air conditioners is shut off briefly and cycled through an entire system so no one hardly notices.

The people with those battery-powered cars might get paid to actually have the power in their car batteries tapped when needed. For folks with a second car it might help with the payments or maintenance while having power to share with the region. Right now baseload power plants like Idaho Power's Hells Canyon dams are critical to meeting the need when the wind doesn't blow or the sun doesn't shine. But Weiss envisions a time in the next 50 years when even cheap hydroelectric power is obsolete. "We believe that the shaping capacity of the dams will be no long necessary," he said. For a culture built on the cheap power from the Columbia and Snake's hydroelectric power that's a tough pill to swallow. But the key to meeting the 2050 carbon goals will be tapping the best power sources we have now as we transform our energy infrastructure. Then our future as our past will depend our ability and tolerance to innovate.

(I'd be careful if I was Scott's Mill Hydropower – a bolt of lightening could be sent to smite them. Who filed first gets the permit – no one can influence the FERC.)

Liberty U., hydropower company vie for permit to study feasibility of using James River dam

Liberty University and a hydropower company are competing for a federal permit to study the feasibility of using a dam on the James River to produce electricity.

LYNCHBURG, Va. — Liberty University and a hydropower company are competing for a federal permit to study the feasibility of using a dam on the James River to produce electricity. Liberty Chancellor Jerry Falwell Jr. says the Lynchburg school wants to keep its energy options open. Both Liberty and Scott's Mill Hydropower LLC have applied for preliminary permits with the Federal Energy Regulatory Commission. The company is a subsidiary of Mayodan, N.C.-based Piedmont Hydropower LLC. Commission spokeswoman Celeste Miller says a preliminary permit gives the holder priority to study the feasibility of building a hydropower facility. But it doesn't authorize construction.

(Another distortion of the facts and a dishonest article. AWA fails to mention that all hydro development receives an in-depth review of environmental and other impacts pursuant to the FERC's licensing authority under the Federal Power Act which includes extensive authority vested in other Federal and State agencies. The licensing process includes the involvement of

Non-Governmental Organizations like AWA. There is no reason to exclude hydropower as a renewable in ESSB 5840 and in fact the legislation should have no limit on size.)

Washington Legislature Considers Hydropower in Renewable Energy Standards

Posted March 19, 2009, by Thomas O'Keefe, americanwhitewater.org

The Washington state legislature continues to discuss the role of hydropower in the state's renewable energy portfolio and the Senate recently passed ESSB 5840 which will roll back key provisions of the voter-approved initiative (I-937) that were designed to encourage new investment in renewable energy. Of particular concern to river advocates the legislation as passed would count all hydropower projects of 30 megawatts or less as renewable energy with no qualifications on the impacts these project may have on the environment or recreational resources. To provide some perspective, this would include projects comparable in size to those on the Elwha and White Salmon Rivers which are in the 10-20 MW range. For the past two decades American Whitewater has been an active participant in negotiations over the future of our region's dams. Some have been in place for over a century and need to be retired while others can be economically updated to more efficiently produce power with improved mitigation measures to address resource impacts. We are strongly opposed to any size-based criteria for counting hydropower as renewable that does not factor in any of the environmental impacts these projects often have. Another concern with the legislation is that it does nothing to move us forward in investing in new renewable energy by counting existing facilities that were developed decades ago. "We're in danger of making Washington the first state in the country to go backward on clean energy," said Joan Crooks, executive director of Washington Environmental Council. "Our community is united in support of continued state leadership in building a clean-energy future. We cannot sit by as that future is eroded." AW has testified on this issue before both House and Senate committees and we will continue our outreach and education efforts as the House takes up the Senate bill for consideration. We encourage members of the paddling community to reach out to members of the House (find your legislator) to express the following points:

- ESSB 5840 as passed by the Senate will significantly weaken Washington's renewable energy standards, making us the first state in the nation to do so.
- Hydropower of 30 MW or less should not count as renewable. Small hydropower can have high resource impacts relative to the amount of energy produced. No blanket incentives for hydropower should ignore the need for a realistic assessment of impacts these projects have.

If your representative is a member of the House Technology, Energy and Communications Committee your input would be especially helpful as the committee will be taking up the Senate version of the bill over the next week. Recent opinions published in the Seattle newspapers provide further perspective on the issue:
Protect Initiative 937's incentives for renewable power (Commentary by Jay Inslee)
http://seattletimes.nwsource.com/html/opinion/2008837346_opinb11inslee.html
Washington Century: Too Many Posers (Seattle PI Editorial Board)
http://www.seattlepi.com/opinion/403723_captraded.html

(For those who were involved in Susitna way back when, they can only regret the short-sightedness that prevented its construction. With the current environmental frenzy for junk energy like wind power and the fishery issues – good luck this time around too.)

Study touts benefits of Susitna hydroelectric project

By Rena Delbridge , March 22, 2009, Fairbanks Daily News-Miner

JUNEAU — A new study shows that despite a high construction price tag, a hydroelectric project at Susitna could generate reliable, environmentally friendly power for the Railbelt for as little as 14 cents per kilowatt-hour. After the project is paid off 50 years from a start date, electricity would cost about one cent per kilowatt hour, the report estimates. But it will likely take all six Railbelt utilities working together to fund such a massive project, said Steve Haagenson, statewide energy coordinator and executive director of the Alaska Energy Authority. Golden Valley Electric Association CEO Brian Newton said he was pleased with the Susitna study's findings. Fairbanks customers are paying 11 cents per kilowatt-hour now, about half the

price of electricity in summer 2008 when oil prices peaked. The study's highest kilowatt-hour cost, 22 cents, is as much as GVEA was charging when oil hit $140 per barrel, Newton noted. The potential to lock in rates between 13 and 22 cents per kilowatt-hour for the next 50 years and to enjoy one-cent power after that is exciting, he said. "We've always supported Susitna," Newton said. "It's time to dust it off and do it. The costs seem very high, but it's reasonable."

Originally proposed in the 1950s, the Susitna concept gained steam with application for a Federal Energy Regulatory Commission license in the early 1980s. Enthusiasm faded in the mid-80s as oil prices dropped to $9 per barrel, making hydro-generated electricity seem expensive and state leaders lost their appetite for the costly project as it constantly expanded in scale, Haagenson said. "If we would have built it at the time, it would be paid off," he said. "We'd have billions in the bank right now, and we'd be paying about one cent per kilowatt-hour. The second-best time is today." Legislators last year approved funding to dust off shelves of old studies on the Susitna dams and evaluate the project's feasibility. The 30-page report offered preliminary cost estimates and economic analysis for five alternatives, plus a review of how environmental and regulatory issues have changed. The five alternatives consider the development of one or multiple dams and reservoirs. "This is really a first step, but it looks like it's kind of positive," Haagenson said. He said Susitna could be even more positive if the Railbelt's six electric utilities form a joint corporation as proposed by Gov. Sarah Palin.

"No utility could even come close to start financing that plan, but together, we can," he said. "The governor's goal of 50 percent renewables by 2025 will be able to be realized in the Railbelt." Hydroelectric power generation would have few to no emissions, although the study does identify "substantial" environmental and regulatory issues centered on fish and natural resources. "It looks very positive," Haagenson said. "Ultimately, we have to kind of decide, as a state, if that's the path we want to go down." For some Interior lawmakers, the decision seems pretty clear — and has for decades. Rep. Mike Kelly, R-Fairbanks, has worked on Susitna for more than 30 years, first as CEO of GVEA and later as a legislator.
"Low oil prices, a few misguided environmentalists and just the size of the project and who was in leadership in the Legislature, all those things came together to stop it," Kelly said. "I, for one, believe it's a long-range project and we need to move that project to completion." Sen. Joe Thomas, D-Fairbanks, agreed. He and Kelly helped secure an appropriation for the study last year. "I've always been a big supporter of Susitna," he said. "I think we made a huge mistake in the '80s when it was abandoned." He predicted oil and natural gas prices will only increase, and said locking in today's favorable electric rates with a hydroelectric project makes sense.

Revisiting the Susitna project is part of a bigger strategy to bring Alaskans reliable, clean, low-cost power for years, Haagenson said. AEA signed a contract with consultant Black and Veatch last week for a Railbelt Integrated Resource Plan, which would take into account all energy options from hydroelectric and natural gas to smaller-scale renewables, like wind and tidal power. The study's findings are expected to help steer a course for a budding consortium of the Railbelt's six electric utilities — Golden Valley Electric Association in Fairbanks, Anchorage's Chugach Power and Light and Municipal Power and Light, Matanuska Electric Association, City of Seward and Homer Electric Association. Palin recently introduced a bill that would create a joint electric utility corporation, with some state bonding authority, from the six. She said rate-payers could save millions if the utilities pursue joint transmission and generation projects, and state funding for such projects could be contingent on cooperation. GVEA has expressed concern about the terms of a joint corporation as laid out by Palin, but Kelly said that's good. "They are wise to be moving carefully ahead on this," he said. "They're responsible when it's 60 below up there (Fairbanks) and the lights go out, to make sure their plan works. I understand their desire to make sure this fits them to a 'T'." He supports Palin's plan and said Susitna could be a deal-maker. "Susitna is one of the large projects which the Railbelt corporation will facilitate," he said. If the corporation forms and focuses on Susitna, Thomas said some expensive upgrades to aging generation infrastructure in the Railbelt likely could be avoided. But, he said, Palin will have to lead that charge. Natural gas developed with an in-state line could bridge Alaska's short and long-term needs, then generate revenue through exports. Meanwhile, Haagenson expected the Susitna study to be available on AEA's Web site, www.aidea.org/aea/index.html, early this week. Next, he said, the state will consider hiring a financial adviser to evaluate funding Susitna.

Water

(Every day you get up and think the world can't get any nuttier, but then it does)

Who owns Colorado's rainwater?

Environmentalists and others like to gather it in containers for use in drier times. But state law says it belongs to those who bought the rights to waterways.

By Nicholas Riccardi, March 18, 2009, LA Times

Reporting from Denver -- Every time it rains here, Kris Holstrom knowingly breaks the law. Holstrom's violation is the fancifully painted 55-gallon buckets underneath the gutters of her farmhouse on a mesa 15 miles from the resort town of Telluride. The barrels catch rain and snowmelt, which Holstrom uses to irrigate the small vegetable garden she and her husband maintain. But according to the state of Colorado, the rain that falls on Holstrom's property is not hers to keep. It should be allowed to fall to the ground and flow unimpeded into surrounding creeks and streams, the law states, to become the property of farmers, ranchers, developers and water agencies that have bought the rights to those waterways. What Holstrom does is called rainwater harvesting. It's a practice that dates back to the dawn of civilization, and is increasingly in vogue among environmentalists and others who pursue sustainable lifestyles. They collect varying amounts of water, depending on the rainfall and the vessels they collect it in. The only risk involved is losing it to evaporation. Or running afoul of Western states' water laws. Those laws, some of them more than a century old, have governed the development of the region since pioneer days. "If you try to collect rainwater, well, that water really belongs to someone else," said Doug Kemper, executive director of the Colorado Water Congress. "We get into a very detailed accounting on every little drop." Frank Jaeger of the Parker Water and Sanitation District, on the arid foothills south of Denver, sees water harvesting as an insidious attempt to take water from entities that have paid dearly for the resource. "Every drop of water that comes down keeps the ground wet and helps the flow of the river," Jaeger said. He scoffs at arguments that harvesters like Holstrom only take a few drops from rivers. "Everything always starts with one little bite at a time."

Increasingly, however, states are trying to make the practice more welcome. Bills in Colorado and Utah, two states that have limited harvesting over the years, would adjust their laws to allow it in certain scenarios, over the protest of people like Jaeger. Organic farmers and urban dreamers aren't the only people pushing to legalize water harvesting. Developer Harold Smethills wants to build more than 10,000 homes southwest of Denver that would be supplied by giant cisterns that capture the rain that falls on the 3,200-acre subdivision. He supports the change in Colorado law. "We believe there is something to rainwater harvesting," Smethills said. "We believe it makes economic sense." Collected rainwater is generally considered "gray water," or water that is not reliably pure enough to drink but can be used to water yards, flush toilets and power heaters. In some states, developers try to include a network of cisterns and catchment pools in every subdivision, but in others, those who catch the rain tend to do so covertly.

In Colorado, rights to bodies of water are held by entities who get preference based on the dates of their claims. Like many other Western states, Colorado has more claims than available water, and even those who hold rights dating back to the late 19th century sometimes find they do not get all of the water they should. "If I decide to [take rainwater] in 2009, somewhere, maybe 100 miles downstream, there's a water right that outdates me by 100 years" that's losing water, said Kevin Rein, assistant state engineer.
State Sen. Chris Romer found out about this facet of state water policy when he built his ecological dream house in Denver, entirely powered by solar energy. He wanted to install a system to catch rainwater, but the state said it couldn't be permitted. "It was stunning to me that this common-sense thing couldn't be done," said Romer, a Democrat. He sponsored a bill last year to allow water harvesting, but it did not pass. "Welcome to water politics in Colorado," Romer said. "You don't touch my gun, you don't touch my whiskey, and you don't touch my water." Romer and Republican state Rep. Marsha Looper introduced bills this year to allow harvesting in certain circumstances. Armed with a study that shows that 97% of rainwater that falls on the soil never makes it to streams, they propose to allow harvesting in 11 pilot projects in urban areas, and for rural users like Kris Holstrom whose wells are depleted by drought. In contrast to the high-stakes maneuvering in the capital, Holstrom looks upon the state's regulation of rainwater with exasperated amusement. Holstrom, director of sustainability for Telluride, and her husband, John, have lived on their farm since 1988. During the severe drought at the start of this decade, their well began drying up. Placing rain barrels under the gutters was the natural thing to do, said Holstrom, 51. "Rain out here comes occasionally, and can come really hard," she said. "To be able to store it for when you need it is really great." Holstrom had a vague awareness of state regulations. She decided to test it last summer when she was teaching a class on water harvesting. She called the state water department, which told her it was technically illegal, though it was unlikely that she would be cited. Holstrom is known in southwestern Colorado for a lifestyle and causes that many deem quixotic. The land she and her husband own holds a

yurt and tepees to house "interns" who help on their organic farm in the summers. It boasts a greenhouse, which even on a recent snowy day held an oasis of rosemary, artichokes, salad greens and a fig tree. She plucked a bit of greens from one plant and munched on it as goldfish swam in a small, algae-filled pond that helps heat the enclosure. "This has been my passion for a long time -- trying to live the best way I know how," she said.

Environment

(**PAC** – does that mean **P**eople **A**gainst **C**ommon-Sense?)

Public action committee works to save fish

By the Herald staff, Mar. 18, 2009, Tri-City Herald

A newly formed save the salmon federal public action committee that aims to restore the runs of endangered wild salmon and steelhead in the Pacific Northwest will promote its goals with candidates and office holders in the region who favor removing dams on the Snake River. The Snake River Salmon Society's founders from Idaho say their nonpartisan PAC will fill a gap in the pro-salmon debate by supplementing the work of "many good and effective pro-salmon nonprofit organizations in the region" that aren't legally allowed to make political contributions, said Steve Bruce, a Boise dentist. The new PAC will focus on the Snake River Basin -- prime habitat that includes Idaho's Salmon and Clearwater rivers, Oregon's Grande Ronde and Imnaha rivers, and Washington's Tucannon River. "Restoring wild salmon in the Snake River Basin will protect and create jobs for people from central Idaho to the Pacific Ocean, and from California to Alaska," said Tom Stuart of Boise, another PAC founder. The PAC will support candidates and office holders who:

- Recognize the current salmon and steelhead crisis and want to take stronger action now to restore endangered runs.
- Respect and support independent scientists and fishery managers in state, tribal and federal agencies.
- Are willing to consider removing four dams on the Lower Snake River that currently impede salmon recovery in the Snake River Basin.
- Will help bring together stakeholders in the region to find more effective salmon and steelhead solutions, especially in the Snake River, which is one of region's best opportunities for wild salmon recovery.

Stuart said candidates who support removal of the four Lower Snake dams would likely get the organization's support, but that supporting dam removal is not a prerequisite. If removal of the four dams isn't on the table, there's less incentive for federal agencies to implement other significant actions that rebuild wild runs. "We think our PAC can change this dynamic, and bring about more honesty and effectiveness," Stuart said in a news release.

Hastings wary of Snake River Salmon PAC

By the Herald staff .tricityherald.com, 3/20/09

Hastings said he supports the First Amendment rights of PACs, but believes citizens of the Northwest overwhelmingly oppose tearing out the dams. The society's founders say their federal political action committee aims to restore the runs of endangered wild salmon and steelhead in the Northwest. It plans to promote its goals by supporting candidates in the region who favor removing dams on the Snake River. "(This is) a major dam removal attack launched to persuade the new President and his Administration to reverse the 'no dam removal' policy established over the past eight years. It's time we again stand up and speak out against dam removal as an extreme action that won't help fish but will increase energy prices, hurt our economy and cost us jobs," Hastings said in a release.

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