



# Some Dam – Hydro News Stuff

and Other

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6/05/2009

Quote of Note: “The most important thing to do if you find yourself in a hole is to stop digging” - - Warren Buffett

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

Ron’s wine pick of the week: Kenwood Sauvignon Blanc 2007

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

## Other Stuff:

(The absurd becomes more absurd. And, how did hydro get mixed up in this nonsense? Imagine, because Federal hydro was subsidized – hydro is not renewable. The Feds will not be too involved in future hydro so why should hydro be penalized? How in the world did hydro get mentioned in the same sentence with nuclear? Something IS out of whack – it’s Congress!)

### **With Billions at Stake, Trying to Expand the Meaning of ‘Renewable Energy’**

By FELICITY BARRINGER, NY Times, May 24, 2009

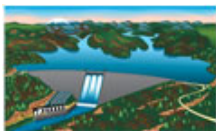
The definition of renewable energy seems clear cut: The sun continues to shine, so solar energy is renewable. The wind continues to blow, so wind turbines churn out renewable power. But industries are now pushing to have a growing number of other technologies categorized as renewable — or at least as environmentally advantageous. They include nuclear power plants and the burning of garbage and even the waste from coal mines. The lure of the renewable label is understandable. Federal tax breaks for renewable energy have been reauthorized, and quotas for renewable energy production have been set in 28 states, accompanied by extensive new grants, loans and other economic advantages. And legislation is moving through both houses of Congress to establish national quotas for renewable energy sources, including the climate bill passed by the House Energy and Commerce Committee on Thursday. With billions of dollars at stake, legislators have been besieged by lobbyists eager to share in the wealth. “They’ve been queuing up outside staff offices, everyone with all their ideas as to what should be included,” said Bill Wicker, the spokesman for the Democratic majority on the Senate energy committee, which is considering a national quota.

In some states, the definition of “renewable” or “alternative” has already expanded. In Pennsylvania, waste coal and methane from coal mines receive the same treatment as solar panels and wind turbines. In Nevada, old tires can count as a renewable fuel, provided microwaves are used to break down their chemical structure. About half of the 28 states with renewable mandates include electricity generated by burning garbage (the District of Columbia also has a quota for renewable energy). In Florida, the nuclear power industry is lobbying to be included but has not yet succeeded. Government incentives for renewable energy were intended to give an economic boost to technologies like wind and solar power that were not yet economically competitive with coal and natural gas, which together provide more than two-thirds of the country’s electricity. The benefits that go with the designation include renewable energy credits, which

promise to be a valuable commodity if a national renewable energy standard becomes law and utilities with high levels of renewable sources can sell credits to those with less. If a source of electricity already widely used by some utilities — hydropower or nuclear power, for example — is deemed renewable, it allows utilities to meet the new renewable-energy requirements while doing little to add wind or solar power to the electrical grid. House Republicans tried unsuccessfully last week to have nuclear energy included under the climate bill passed by the House committee.

Environmental groups like the Union of Concerned Scientists, Environment America and the Natural Resources Defense Council say they are frustrated by the increasing elasticity of the word “renewable” in legislators’ hands. “Usually this is a very political process, and not driven in any way, shape or form by any strict scientific or ecological definition of renewables,” said Nathanael Greene of the N.R.D.C. But some of the industries that have claimed the renewable mantle argue that they deserve it. “A banana is renewable — you can grow them forever,” said Bob Eisenbud, a vice president for government affairs at Waste Management, which receives about 10 percent of its annual revenues of \$13.3 billion from waste and landfill energy generation. “A banana that goes into garbage and gets burned,” he added, is “a renewable resource and producing renewable energy.” But environmentalists argue that one of the goals of renewable energy is to cut back on the heat-trapping gases emitted from burning most things, whether fossil fuels or bananas. When there is no fire, there are no emissions. The waste-to-energy technology described by Mr. Eisenbud was not included in the original draft of the climate legislation that received House committee approval, but it was contained in the version that moved out of the committee, thanks to language inserted by Representative Baron P. Hill, Democrat of Indiana. A new \$227 million waste-to-energy plant was already planned in northern Indiana, outside his district. On the Senate side, an effort to get the benefits of the renewable designation for advanced coal-burning technologies failed, however.

Senator Jeff Bingaman, Democrat of New Mexico and chairman of the Senate energy committee, said that if too many new technologies beyond core renewable sources like wind and solar were to be included, “the whole purpose of the renewable electricity standard is defeated.” The goal, he said, is “to encourage the development of some of these newer technologies and bring the price down.” He added, “If you throw in everything else” and call it renewable, “then your numbers get way out of whack.” Leon Lowery, a Democratic staff member for the committee, said that both environmentalists and industry had tinkered with the common-sense understanding of renewable sources to make definitions fit policy goals. “If you try to assign a sort of conceptual definition, you find yourself in strange places,” Mr. Lowery said. “Anyone would acknowledge that hydropower is renewable, but do we want to give credits to the Grand Coulee Dam?” To do so, he added, would give hydropower — which already benefits from rich federal subsidies that make it some of the cheapest energy available — the same status as solar or wind technologies. Among states that have already adopted quotas for renewable energy, the standards vary from Wisconsin’s, which requires that 10 percent of all power come from renewable sources by 2015, to those of Oregon and Minnesota, which call for 25 percent from renewable sources by 2025. California is raising its mandate to 33 percent by 2020, though its utilities have already indicated that the existing quota — 20 percent by 2010 — will be difficult to meet. In some states, quotas for renewable energy are paired with mandates for advanced technologies that are not necessarily renewable. For example, Ohio, which currently receives nearly two-thirds of its electricity from burning coal, requires that 25 percent of the state’s electricity must come from renewable or advanced technologies by 2025, but of that, half must come from core renewable sources, and some of the remainder can come from burning chemically treated coal. Graham Mathews, a lobbyist representing Covanta Energy, another waste-to-energy company, said the political horse-trading on renewable energy legislation was typical of all energy measures. “Energy policy is balkanized by region, and that dictates the debate. The politics become incredibly complicated,” he said. “Stepping back and looking at it,” Mr. Mathews added, “it sometimes doesn’t make a lot of sense.”



## Dams

(What is this all about? Agencies should operate with the understanding that “the public has a right to know”)

### **AV objects to secrecy of sludge dam safety study**

appvoices.org, May 27, 2009

Appalachian Voices has filed a Freedom of Information Act request objecting to the secrecy over a new federal study focused on the safety of 15 high-risk sludge dams. The study, by the federal Office of Surface Mine and Reclamation Enforcement, will be the first to combine elements of dam volume and downstream populations in a risk assessment. Although the engineering work is complete, release of the study is being held up so that coal companies and the state of West Virginia can review it, OSMRE said. "Given the current state of emergency and severe flooding in West Virginia, we believe that this information has a direct bearing on vital issues of public safety," Appalachian Voices said in a letter to OSMRE. "We think that the government should not, indeed cannot in good conscience, wait for the document to be prepared in such a way as to satisfy stakeholders, but rather, that engineering data and draft conclusions must be released to the public immediately." Until recently, no federal office had taken a systematic approach to studying the safety of these earthen dams. A previous FOIA request to the OSMRE this spring by Appalachian Voices revealed that since the late 1990s, the government has studied the safety of only a handful of "randomly selected" sludge dams. Those selected were among the smallest and newest in the region.

## Corps of Engineers gives Ford Dam warning label

The Army Corps of Engineers placed the 90-year-old dam in the second-highest category as a safety risk after inspectors voiced concerns that water might be seeping under the dam between Minneapolis and St. Paul.

By DAVID SHAFFER, Star Tribune, May 28, 2009



An aging concrete dam on the Mississippi River in the Twin Cities has been classified as "unsafe or potentially unsafe" after an engineering team raised a concern about whether water is seeping under its foundation, the U.S. Army Corps of Engineers said Wednesday. The concern arose during a national safety review of more than 600 corps-owned dams to help identify high-risk dams needing repairs. Engineers in the corps' St. Paul office said an inspection team found no evidence that Lock & Dam No. 1, also known as the Ford Dam, has a seepage problem -- which could cause the dam to fail -- but uncertainty led to the dam being placed in the "urgent" category. "This particular dam being 90-some years old has a very old design that we don't use anymore," said Michael Bart, engineering chief and dam safety officer for the corps' St. Paul district. He said engineers hope to answer seepage questions by examining soil data collected

during the dam's last rehabilitation, completed in 1981. "They just ask some questions," Bart said of the corps teams, which are brought in from other districts. "If we don't have analysis to back that up, that's what puts it in that category."

The corps placed the dam in Category 2, with the potential to fail, the second-highest risk category on the corps' 5-level safety scale. Failure of the dam could halt navigation on the upper river and, under some conditions, flood the riverside areas of Hidden Falls Park in St. Paul and Minnehaha Park in Minneapolis, just downstream from the dam. No homes are at risk. Even if a seepage hazard is confirmed, the risk to the public is low, Bart added. "It is not a life-safety risk, it is economic," he said of the possibility of dam failure. "... We would not be able to navigate upstream of the dam." The highest-risk dams are classified as Category 1, Urgent and Compelling, meaning that its risk of failure is extremely high or near certain. No corps dams have been given this rating in Minnesota. Seepage is common with dams and needs to be controlled to prevent the structure from being compromised. If Lock & Dam No. 1 turns out to have a seepage problem, the corps would study what work needs to be done, Bart said. If it doesn't have a problem, the classification would be changed to a lower-risk category, he added. The corps also is studying whether seepage occurs at the powerhouse on the east side of the dam. David Rydeen, dam safety program manager for the St. Paul district, said officials didn't notify the cities of St. Paul and Minneapolis, which own the parkland downstream of the dam, about the safety rating. Two other dams in the state are rated in the same "Urgent" category -- Lock & Dam No. 3 near Red Wing, which is scheduled for a \$70 million renovation, and Orwell Dam on the Otter Tail River near Breckenridge, where the corps is replacing wells that reduce groundwater pressure affecting the discharge channel, according to corps engineers. Bart said navigation dams such as Lock & Dam No. 1, because they back up less water than flood-control dams, typically do not cause serious flooding if they fail. He added that it is relatively easy to lower the pool behind a lock and dam if a concern would arise about the structure. "Generally speaking, it is not a wave of water that is going to come out of these structures," he said. The emergency plan for Lock & Dam No. 1, issued in 1988, but still considered valid, says failure of the dam under normal pool conditions would cause the river

below the dam to suddenly rise nearly 9 feet, posing a danger to people in boats and along the shore. The flow would not be a hazard farther downstream, the plan says. Under overcast sky Tuesday, Nate Herzog of Richfield stood on the sandy bank of Hidden Falls Park, casting into the slow-moving water. His friend Andrew Ruona stood nearby. Neither was particularly concerned about the dam's safety rating. "I guess if I were down here at the moment it broke, that would not be good," said Herzog, as he baited his hook with a leech.

## Corp of Engineers: Orwell Dam unsafe

Fergus Falls Journal, May 28, 2009

The Orwell Dam on the Otter Tail River, MN has received a new classification as "unsafe or potentially unsafe." The dam was one of three Minnesota dams to receive the classification as the U.S. Army Corps of Engineers is reviewing its 600 dams nationwide to find those in need of repairs. The other two are the Lock & Dam No. 1 on the Mississippi River in the Twin Cities and the Lock & Dam No. 3 near Red Wing. **The classification was due to relief wells at the Orwell Dam not working as efficiently as they have in the past, said Dave Rydeen, dam safety program coordinator in the Army Corps' St. Paul office.** The office is currently in the process of replacing the wells with federal stimulus funding, he said. **The problem has little risk to the public due to no one living in the immediate area downstream from the dam, Rydeen said.** The problem is not a new one for the Orwell Dam as a result of the high pressure from the water in the dam, he said. It began in the 1970s when a high pool of water caused boils to be created in the water, Rydeen said. The boils are where pressure is built up and the water starts to move materials. To solve the problem of the boils, the Army Corps installed relief wells in 1980. The wells were working, but they can get clogged and aren't working as efficiently, he said. **The problem in the wells won't cause the dam to fail and Rydeen didn't expect it to cause catastrophic problems.** The Orwell Dam was built from 1951 to 1953.



## Giant "Dam Home Depot" Banner Flies Over Atlanta During Company's Annual Shareholder Meeting

(Excerpt) [YubaNet.com](http://YubaNet.com)

ATLANTA, GA, May 28, 2009 - Early this morning the nonprofit environmental organization International Rivers flew a giant "Dam Home Depot" banner over the company's annual shareholder meeting in Atlanta. Protesters also unfurled a banner and raised questions inside the shareholder's meeting, asking Home Depot executives to account for their role in supporting the destruction of Patagonia.

(Originally built as a flood control project, this has turned into the model for river walks everywhere. Awhhh, those margaritas!)

## San Antonio doubles up the River Walk

By Kitty Bean Yancey, USA TODAY



San Antonio's popular River Walk is taking a huge stride Saturday. **The new 2-mile paved stretch, wending away from the city center and passing the San Antonio Museum of Art and the restored Pearl Brewery, will double River Walk in size.** Strollers and bikers can enjoy outdoor art and park-like landscaping or take a cruise via a new lock-and-dam system. River Walk, a tourist magnet for margarita-sipping in outdoor cafes and chowing down in restaurants dishing up Tex-Mex, is going to keep growing. **Nine more miles in the \$279 million project are due by 2014.**





(Another benefit of dams)  
**Bird bath... Mother thrush uses herself as dam to protect nest from overflowing drainpipe**

By Daily Mail Reporter, UK, 28th May 2009

## 200 More Brazilian Dams Could Fail

International Rivers. 05/30/2009



In the wake of the **Algodões I Dam tragedy**, a specialist who works for Brazil's National Water Agency has estimated that **200 other dams could be in danger of failing**. In an article in the Folha de São Paulo newspaper today, Rogério Menescal, who has mapped 7,000 large and small dams in Brazil for the government is quoted as saying that at least 200 of these are not being maintained, and urgently need repair. Menescal cited the recent failure of a series of small dams upstream from the city of Altamira, in Pará state, which caused serious flooding in the city. The basic problem, they say, is that Brazil has no law regulating dam safety.

There have been several damaging dam failures in recent years - perhaps the best-known was the failure of the São Francisco mine waste Dam in Miraf, Minas Gerais, which resulted in spillage of 2 billion liters of toxic water affecting seven cities. Menescal's finding was confirmed by the president of **Brazil's Committee on Dams**, Edilberto Maurer, who said "The projects, construction, and maintenance of dams in Brazil follow different standards. The combination of these factors leads to a lack of security".



## Hydro

**(American Rivers issues policy statement on hydropower. I almost like but not quite!)**

### Hydropower Dams in an Era of Global Warming

Full Statement here:

<http://www.americanrivers.org/our-work/restoring-rivers/dams/background/hydropower-dams-in-an-era-of.html>

(The saga continues. This thing will go on in the courts for some time unless this judge rules in favor of ALCOA, a doubtful outcome.)

### NC judge blocks agency's water permit to Alcoa

By EMERY P. DALESIO - AP Business Writer, May 27, 2009, The SunNews.com

RALEIGH, N.C. -- An administrative judge on Wednesday temporarily stopped Alcoa Inc.'s route to the new federal license it needs to generate and sell electricity from dams along the Yadkin River for up to 50 years.

Administrative Law Judge Joe Webster ruled for Stanly County, site of a now-closed Alcoa aluminum smelting plant, saying the county demonstrated it was likely to prove that the state Division of Water Quality did not consider all environmental data it could have before the agency issued a crucial certification earlier this month. The agency "put on very narrow blinders on what they could and could not do," said Yadkin River environmental advocate Dean Naujoks, who supported Stanly County's effort to block the Alcoa relicensing. Webster said he issued the temporary freeze to allow time for a full hearing on Stanly County's claims. The judge's ruling can be appealed to Superior Court.

"The decision to grant a stay represents another unnecessary delay in the relicensing of the Yadkin Project," subsidiary Alcoa Power Generating Inc. said in a statement. The case is one of a series of bureaucratic dogfights that will end either with Alcoa receiving its operating license or the state getting a shot at controlling the dams and the river's water. Alcoa needs the Division of Water Quality certificate, which attests that the company can operate the dams while protecting nearly 40 miles of the river and its reservoirs, as part of the Federal Energy Regulatory Commission relicensing. The division issued the certification earlier this month with conditions that included Alcoa posting a \$240 million guarantee that the struggling aluminum producer will follow through with environmental improvements. The agency said the money was needed to upgrade its electric-generating turbines to improve dissolved oxygen levels in the discharged water. The company said it was already planning to do that. Gov. Beverly Perdue has moved to block the Alcoa permit in both the state administrative law and federal relicensing processes. Alcoa built the dams to power an aluminum plant that once employed nearly 1,000 workers, but now collects more than \$40 million a year by selling electricity generated by a public resource, Perdue's administration said.

(Is this what hydro is supposed to be – Rinky Dink Hydro? 100 turbines for 14.5 MW?)  
(Excerpts)

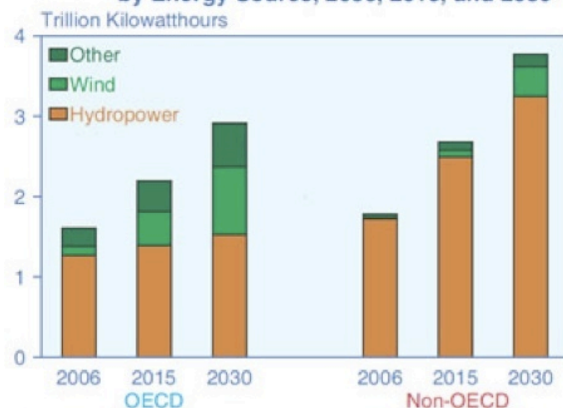
### Lock and Dam 7 eyed for hydro power

By RYAN STOTTS / Lacrosse Tribune, 5/31/09

The waves of the Mississippi River may be the energy wave of the area's future. Hydropower — the technology of using water to produce energy — is such a hot issue, two companies are vying for the right to use Lock and Dam No. 7 at Dresbach, Minn., to harness the power of the river. Gundersen Lutheran Medical Center submitted an application for a preliminary permit in March to construct a turbine system using the dam's defunct auxiliary lock. Massachusetts-based Free Flow Power Corp. applied in February for a more ambitious hydropower proposal. The Federal Energy Regulatory Commission accepted that application May 14. -----.

FFP estimates its 100-turbine system would cost about \$30 million and generate up to 14.5 megawatts of power, said Jason Hines, vice president of project development. "It's environmentally very benign," Hines said. "There will be some structures added to house the turbines, but it will be done in such a way so that there will be little disruption to the existing structure." FFP has applications for preliminary permits accepted for similar projects at Lock and Dam Nos. 3, 4, 6, 9 and 10, Hines said. Gundersen Lutheran officials see their seven-turbine, 5- megawatt project as a natural extension of their Envision initiative, said Jerry Arndt, senior vice president of business services. -----.

Figure 7. World Renewable Electricity Generation by Energy Source, 2006, 2015, and 2030



Sources: 2006: Energy Information Administration (EIA), *International Energy Annual 2006* (June-December 2008), web site [www.eia.doe.gov/iea](http://www.eia.doe.gov/iea). Projections: EIA, *World Energy Projections Plus* (2009).

### Hydroelectric Projected as Leading Source of Renewable Energy

May 29, 2009, EnvironmentalLeader.com

Much of the growth in world use of renewables toward generating electricity is expected to come from hydroelectric projects, according to the U.S. Energy Information Administration. This is especially true in developing nations that are not part of the Organization for Economic Cooperation and Development (OECD). In OECD nations, wind is expected to account for a good chunk of renewable electricity generation by 2030, according to [International Energy Outlook 2009](#).

...e of Dams Program: <http://npdn.stanford.edu>

## Agency disagrees with finding that hydroelectric facility wouldn't be economically viable

By GENE GHIOTTO, The Press-Enterprise, May 28, 2009

The Elsinore Valley Municipal Water District disagreed with a Riverside County grand jury finding that a proposed hydroelectric facility is not economically viable, saying the consultant reports that the panel relied upon for its report do not "flatly conclude" it will not work. The grand jury recommended that the board of directors accept the results in three reports that indicate the Lake Elsinore Advanced Pumped Storage project, especially the pumped storage portion of the project, is not viable. **In response, the district said in mid-May that it would not accept findings that are based on reports that "reach a number of conclusions predicated on specific factual circumstances."** "The district cannot implement (the recommendation) because it does not acknowledge the limitations on the consultant reports," the response states.

**The LEAPS project includes a pumped storage plant and 30 miles of proposed transmission lines that would link the power grids of Riverside and San Diego counties.** Financial studies released last year by the district said the \$1.3 billion project would not be profitable or, with federal incentives, could turn a small profit. The reports do indicate that a growth in the use of wind, the sun and the tide to generate electricity could improve the economic outlook for the LEAPS project. One report dated April 12, 2007, said its financial assessment of the project was based on "economic studies covering the quantified benefits." The report indicated that placing value on other less-quantifiable benefits, such as improvements to the environment and water quality, "should demonstrate a viable project." The grand jury also called on the district to make available to ratepayers an itemized accounting of the estimated \$4 million already spend on the project. In response, the district said the financial records of the project are available to the public and may be inspected upon request.

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(No friends in the White House for hydro)

(Excerpt)

### Obama seeks funding cuts for wave, tidal energy research

By LES BLUMENTHAL, McClatchy Newspapers, May 31, 2009

**"The Obama administration has proposed a 25 percent cut in the research and development budget for one of the most promising renewable energy sources in the Northwest - wave and tidal power. At the same time the White House sought an 82 percent increase in solar power research funding, a 36 percent increase in wind power funding and a 14 percent increase in geothermal funding, it sought to cut wave and tidal research funding from \$40 million to \$30 million."**

<http://www.kansascity.com/444/story/1225564.html>



## Water

### San Diego's water problem not new

**Ninety percent of the water people need is hundreds of miles away. How did we get into this fix?**

By Doug Curlee, San Diego News Network, May 27, 2009

Southern California has always had a problem with water- a problem getting the water from where it was to where the people that needed it lived. **In San Diego, they solved the problem by building a dam, and building six miles of aqueduct to get it to the Mission Valley area. This happened in 1769.** The problem is exactly the same today as it was then — getting the water to the people who need it. Of course, the problem is compounded by the fact there are several million people who need the water, and that the water is now in very short supply. The bigger problem, though, is the fact that fully 90 percent of the water people need is not six miles away, but hundreds of miles away — in Northern California and in the Colorado River. How did we get into this fix?



### **We are not alone**

Back in the 1850's, the people who were trying to build a city in Los Angeles realized the need for water for their rapidly growing region. Over the years, it became apparent that wells and dams just weren't going to do the job. There were not enough rivers and streams to dam, and not enough underground water. Los Angeles took steps to correct its problem at the very beginning of the 20th century by gaining the rights to the water in the Owens Valley in eastern California. The city fathers in L.A. did this by using what many people called underhanded, if not illegal, ways of gaining control of the Owens River. The aqueduct and tunnel project took some 23 years to finally build, and it left what had been a green, fertile valley instead a dry dustbowl. (Full disclosure: my maternal grandfather was one of the many Owens valley residents who worked to build that water deliver system. He was also one of a gang of angry Owens Valley residents who often went back at night and blew up what had been built — but that's another story for another time.)

### **San Diego is drying up, so...**

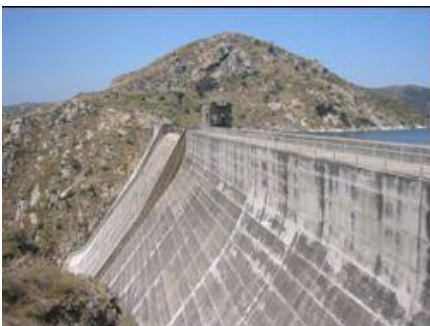
Although many people in San Diego realized the beautiful area had the potential to grow into a very desirable place to live, those same people knew there would eventually be too many people for the available dams, wells and pipelines to support. Still, it was not until World War II, and the population explosion brought about by the military and defense industry growth, that those forward-looking people began taking concrete steps to insure a supply of water. The first major supply of imported water came to San Diego in 1947. It was water from the new Colorado River aqueduct- all 112,000 acre feet of it, used to fill the brand-new San Vicente dam north of Lakeside. It was a start, but only a start. The San Diego County Water Authority had been established in 1944 for the express purpose of administering that water system. But that 112,000 acre feet of water would not begin to supply the exploding demand for water- a demand that went along with the explosion of people moving here from all over the nation, and the world. The word was out about San Diego and nothing would ever be the same.



### **A lot of water...a long way away**

It was beginning to look as though there simply would not be enough water for San Diego to become anything like the major city its postwar leaders thought it could be, when the state legislature in Sacramento awoke from a long political slumber and realized there had to be a way to get water from the north of the state, which had more water than it knew what to do with, into the reservoirs and faucets of southern California, which had more thirsty people and farms than it knew what to do with. It took fully 14 years from the first study to the signing into law of the Burns Porter Act. Written by a Fresno senator and a Compton assemblyman, it authorized the

construction of the California state water project. It didn't all happen at once, and some of it is still being built this very day, but the project brought northern California water through the Sacramento-San Joaquin delta into a series of canals, tunnels, and monster-sized pumping stations to southern California.



### **A very fragile system**

With that water coming to San Diego, the County Water Authority, which in 1946 had become the largest single member of the Metropolitan Water District of Southern California, would start looking at ways to increase our ability to store that water by organizing its 24 member agencies into one cohesive body that would work out ways to move water around the county to areas of greatest need. But there was a time bomb ticking in the very heart of the state water project- the very delta that made the system possible began to slowly fall apart. The delta is a 1,600-square-mile area comprised of dikes and levees, many of which are 150 years old. The constant tidal action in the delta, coupled

with heavy flooding that occurs almost every spring, has a good portion of the delta on the verge of collapse. In 1982, state water experts thought they had the fix for the delta — a canal that would have carried Northern California water around the east side of the delta, and feed it into the state water project at Tracy, in the west side of the San Joaquin Valley. A bitter electoral campaign followed and voters ended up rejecting the so-called "Peripheral Canal," after stories in the *San Francisco Chronicle* led the anti-canal forces to the ballot box win.



### Blame it on the “Zonies”

The fragile condition of the delta is not the only thing that made San Diego's water agencies start scrambling to come up with more sources of water for southern California's ever-increasing thirst. For decades, California had been living high on the hog with an extra 1.5 million acre feet of water per year- water that actually belonged to Arizona. Arizona had no way to take that water, so southern California got it by default. That changed in 1985, when water first began to flow from the Colorado River to the massive Central Arizona Project- a system of canals and pumps that moved the water from Parker Dam at Parker, Arizona to Phoenix and eventually Tucson. Now, the various water agencies in Southern California are scrambling again to find enough water sources to continue life more or less as we know it now. That may not be possible- there simply is not enough water available to do that. So, where do we go from here? There are a lot of possibilities – some valid, some not. That story next time.



## Environment

(Long and tortuous stuff. The only science anyone likes in this case is the science that justifies their thinking. Lubchenco favored dam removal when with the State so she's made her mind up. It's going to be a decision from higher authority.)

### Obama officials come to NW to learn salmon issues

By JEFF BARNARD | AP Environmental Writer • Published May 26, 2009, The Olympian

GRANTS PASS, Ore. – Two top members of President Obama's environmental team are in the Northwest this week, listening but pointedly not speaking about the tense conflict between salmon and hydroelectric dams in the Columbia Basin. NOAA chief Jane Lubchenco and White House Council on Environmental Quality chairwoman Nancy Sutley attended closed-doors sessions in Portland on Tuesday with scientists, government officials and Indian tribes, and were scheduled on Wednesday to tour one of the lower Snake River dams in Eastern Washington that conservationists and some Indian tribes want removed to restore endangered salmon. "The purpose of this trip here is to listen and learn," Lubchenco spokesman Justin Kenney said from North Carolina. Afterward, Sutley issued a written statement saying the session helped them better understand the science behind the Bush administration's 2008 plan for balancing salmon against dams, known as a biological opinion, which a federal judge is considering accepting or rejecting under the Endangered Species Act. "We share the court's concern for a final outcome that respects the law, the science and the salmon," the statement read. "It's only by recovering these protected salmon that once again fishermen, tribal and non-tribal alike, and all of us concerned about the environment will be able to properly enjoy the Northwest's bounty."

Sport and commercial fishermen were shut out of the meetings, and some paraded their boats on trailers around the Portland hotel where the meetings were held. Steve Fick, a commercial fisherman and fish processor from Astoria, said he has been frustrated by 30 years of public policy where the link between dams and declining salmon runs was treated like the link between cigarettes and lung cancer. "I think we need to have biological solutions instead of political denial," he said from Portland. Lubchenco and Sutley came with specific questions to help the Obama administration establish its position on the long-running litigation over how to run the hydroelectric dams on the Columbia and Snake rivers that are the region's energy backbone. Sent out to parties to the talks last week, the administration's questions closely mirror those raised by U.S. District Judge James Redden in a letter this month to lawyers for all sides as he moves closer to a decision on whether the Bush administration's 2008 plan for balancing salmon against dams - known as a biological opinion - violates the Endangered Species Act. Considerations include:

- Is the standard for success embraced by the Bush administration appropriate?
- Does the plan adequately take into account changes to rivers and the ocean expected under global warming?
- Are habitat improvements in tributaries and estuaries - the backbone of the plan - enough to overcome the damage caused by the dams?
- What other steps could be taken to make dam operations less harmful to salmon.
- Are government agencies doing enough to overcome problems caused by fishing and hatcheries?
- What steps should be taken if this plan fails?

That last question confronts the prospect of breaching four dams on the lower Snake River in Eastern Washington, which provide barge access to farms and mills in Idaho, as well as enough electricity to power Seattle, but is blamed for sending Snake River salmon populations into a tailspin. President George W. Bush had stood at Ice Harbor Dam and declared none would be breached on his watch, drawing cheers from farmers, barge operators and industrial users of cheap hydroelectric power. The biological opinion that followed dropped earlier consideration of dam breaching, and focused on habitat improvements over changes in dam operations to save salmon from extinction. Oregon Gov. Ted Kulongoski, the only Northwest governor still signed on to a lawsuit challenging the 2008 biological opinion, welcomed the Obama administration's decision to take a new look at the science. "We believe that a re-look at the science that underpins the 2008 biological opinion is exactly the right thing to do, because it goes to the heart of Oregon's concerns about the viability and defensibility of this biological opinion," said Mike Carrier, Kulongoski's natural resources adviser. Idaho Lt. Gov. Brad Little warned the administration that pulling the 2008 biological opinion "will send a strong message that the Beltway knows best and strike a major blow to any subsequent calls for collaboration," according to his prepared text. Columbia Basin treaty tribes - all but one of which has embraced the biological opinion in return for salmon restoration funding - focused their comments on broader salmon issues, said Columbia River Inter-Tribal Fish Commission spokesman Charles Hudson. Hudson said they wanted to establish a "sound working relationship" with the Obama administration.

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## Scientists use tags to track Columbia River salmon

THE ASSOCIATED PRESS, May 27, 2009, The Seattle Post-Intelligencer

RICHLAND, Wash. -- Scientists are using acoustic tags to better understand how juvenile salmon and steelhead travel from John Day Dam on the Columbia River to the Pacific Ocean. Researchers from the Pacific Northwest National Laboratory in Richland and the U.S. Army Corps of Engineers' Portland District are tagging about 240 fish each day over the next several weeks to study why some young fish survive the ocean journey and others perish. The tagged fish will emit high-pitched beeps that can be picked up by underwater sensors as they approach and pass the dam near Rufus, Ore., the Tri-City Herald reported. "It tells you how fast (the fish) is moving and which route it is taking," said Geoff McMichael, the PNNL's program manager. The corps uses the acoustic tagging system as a primary tool to assess juvenile salmon survival in the Columbia River. Researchers said the tags, which are smaller than pencil erasers and inserted into the belly of juvenile salmon, will help improve salmon passage at the dam. "It allows us to select the best operation of the dam," balancing demands of fish, power and recreation, said Brad Eppard, a corps fisheries biologist.

Last year, after data showed gulls eating fish after they passed through the dam, officials hung long wires to keep the gulls away. This year, researchers are evaluating temporary weir systems designed to direct fish away from dam turbines and get them through the dam safely. The corps is considering whether to place permanent weirs at the dam, and researchers are studying whether increasing water flow over two-day periods affects how many fish survive the trip down river. The tag embedded in each fish emits a distinct code, allowing researchers to track individual fish. About 200 detectors placed along the river pick up "pings" from the tags as the salmon approach the dam. Another set of detectors near the dam pinpoint where each fish is swimming. Each transmitter has a battery that lasts 25 to 40 days. Fish that survive the journey to the ocean take about two weeks from John Day Dam. Up to 97 percent make it through the dam, but only 75 percent to 85 percent reach the ocean. Researchers are able to monitor a salmon's movements on a computer as the fish finds its way through a weir, a spillway, the powerhouse or the turbine bypass. McMichael said the acoustic system detects 99 percent of tagged fish up to 300 yards. The lab developed the system for the corps in 2001. PNNL will also tag and release fall Chinook salmon at the dam later this summer.

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<sup>i</sup>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



6/12/2009

*Quote of Note:* “I never give them hell. I just tell the truth and they think it's hell.” - - Harry S. Truman

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

*Ron's wine pick of the week:* Novelty Hill Syrah 2005

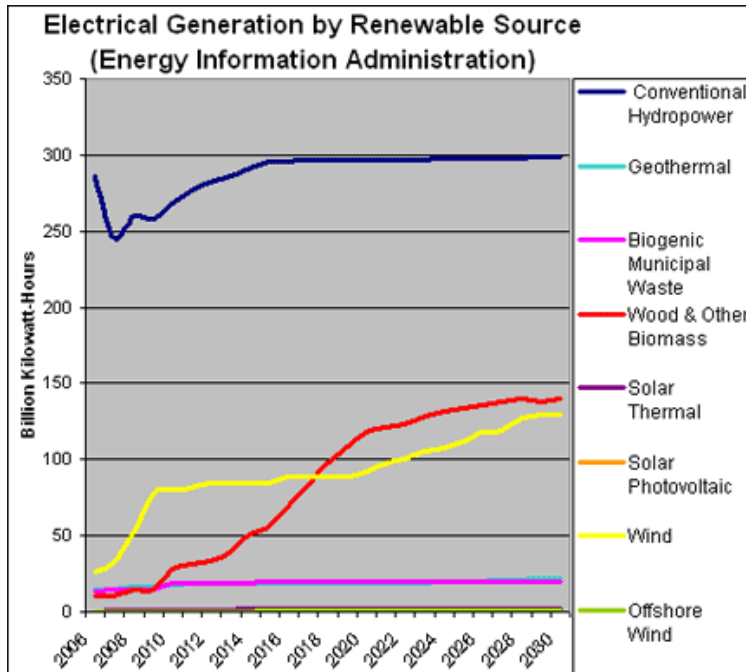
**“No nation was ever drunk when wine was cheap.” - - Thomas Jefferson**

## Other Stuff

(And, now a dose of reality. It would be nice if we could face up to the inevitable, but we won't. Note: Contrary to the wind advocates' projections, wind and other non-hydro renewables will NOT get to the 800 billion kWh they predict and hydro even though flat will still be the most plentiful renewable in the year 2030. So, why are they trying to shut down hydro?)

### Report Dims The Lights For Solar

NPR.org, 6/09/09

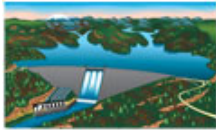
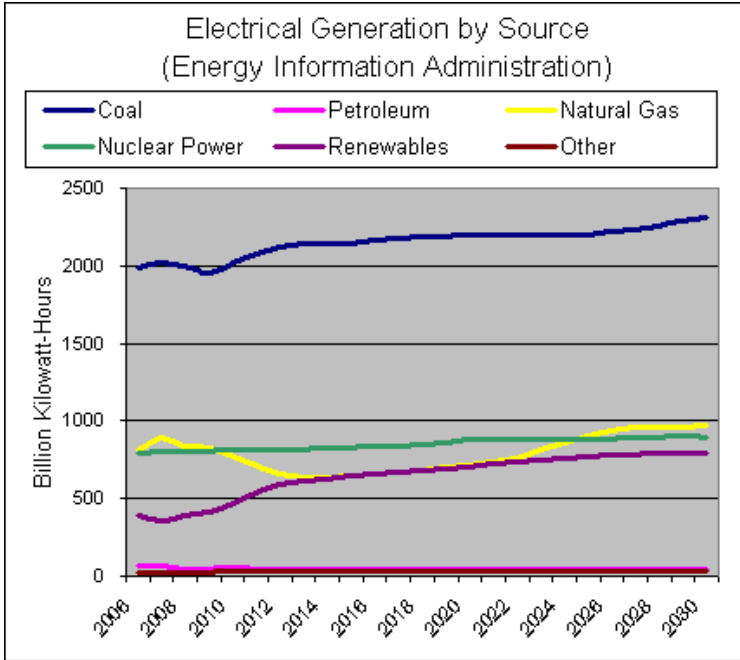


Alan Cordova writes:

This spring, the Department of Energy updated the Annual Energy Outlook, which forecasts the prices and volumes of the energy we generate and consume, to reflect the provisions in the American Reinvestment and Recovery Act. Over the next two decades, the outlook projects that two renewable sources, wind and biomass, will generate four and 13 times as much energy, respectively, as they currently do. By 2030, according to the estimate, they will account for 44 percent of all renewable energy (hydropower will still be king at 48 percent). For all the buzz surrounding solar power -- soon after taking office, President Obama made a visit to Denver-based Namaste Solar's field of photovoltaic generators -- it is not

predicted to make much of an impact. Note: the outlook does not include solar power systems not connected to an electrical grid, such as a rooftop installation in a remote mountain home. The DOE says those will never account for more than 16 percent of domestic energy consumption.

After the jump, what's winning big? In a word, coal. Check out the vertical axes on the two charts -- there's a tenfold difference between the tick marks.



## Dams

### Engineers continue to check dam, monitor abutment's soundness

Jun 01 2009, Auburn-Reporter.com



Testing at Howard Hanson Dam continues as residents of the Green River Valley await word from the U.S. Army Corps of Engineers, Seattle District, what flood risk reduction storage capacity the dam might have during the upcoming winter flood season. Engineers at the district ask residents to be patient as they go through rigorous testing of the right abutment that manifested symptoms of seepage problems following the January flood. The Corps recently raised the pool behind the dam to a level of 1,157 feet above sea level, and engineers monitored instrumentation to observe the right abutment's behavior.

All readings and indications were normal, and the technical team has moved forward to raise the reservoir to the normal summertime capacity of 1,167 feet. Throughout the refill process thus far the right abutment has behaved as engineers' term it, "within historical data ranges."

"That means that so far the dam is behaving similar to how we've known it to behave at this level of storage in the past," said Dam Safety Program Manager Rob Romocki. "But, it doesn't mean we're out of the woods or that there is no problem. Seepage in the right abutment remains a significant issue of concern and level of risk is still elevated. This is a process, and we won't have a basis for a storage capacity decision until all the information has been collected and analyzed." Planning for potential interim measures continues, most specifically a low permeability barrier within the right abutment to reduce seepage. In conjunction with this work, an Environmental Assessment went out May 22 regarding the work being considered to be done on Howard Hanson Dam's right abutment. It is available for comment until June 8 and may be found online at the district's Web site here:

[www.nws.usace.army.mil/PublicMenu/Doc\\_list.cfm?sitename=HHD&pagename=Pool\\_Restriction](http://www.nws.usace.army.mil/PublicMenu/Doc_list.cfm?sitename=HHD&pagename=Pool_Restriction).



Meanwhile, operators and engineers at the dam have been monitoring the dam around the clock for weeks and will continue to do so to ensure safety. "While the dam does not present an immediate danger of failing, there is an increased risk to the downstream communities for higher flood levels until such time that the seepage issues with the right abutment have been resolved," said Col. Anthony O. Wright, Seattle District Commander. "We appreciate the continued patience of the downstream residents and will continue to keep their leaders and first responders informed as better understanding of the risk comes to light." Wright was referring to the Corps' efforts of working closely with King County and the downstream cities of Auburn, Kent, Renton and Tukwila to prepare for the fall/winter flood season with the increased risk of higher-than-standard flows from the dam. "We are fully aware that this is a change of environment for everyone in the Green River Valley," Wright said. "But, it's important to the Corps that the public we serve be safe. Since January 2009, that safety has been challenged with the right abutment concerns at Howard Hanson Dam."

(Another milestone for a dam.

Don't you wish that people would stop saying that the life of a dam is 50 years! Did you know that the average age of the more than 83,000 dams in the country is 49.8 years, which means there are a whole lot of dams older than 50?

The Table Rock Dam has a maximum height above the river bed of 252 feet, is 6,423 feet in length, and has 10 Spillway Crest Gates. Table Rock Lake has a surface area of approximately 43,100 acres and 745 miles of shoreline.)

### **Ceremony June 14 to mark Table Rock Dam's 50 years**

June 3, 2009, News-Leader.com, Springfield, MO



The 50th anniversary of Table Rock Dam and its powerplant will be held at 2:15 p.m. on Sunday, June 14 at the dam overlook. The National Guard Band from Springfield will begin the event. Dignitaries and people who were involved with the dam's construction will be on hand. It was at 2:45 p.m. on June 14, 1959, when a ceremonial switch was thrown for the dam's power facility shortly after it began operations. Following the ceremony, activities will move to the Dewey Short Visitors Center where a film on the development of Table Rock Dam will be shown in the

auditorium. There also will be entertainment on the lakeside patio by the Missouri Boatrie Bluegrass Band from Branson West. The dam originally was built as a flood control measure. In 1941, Congress approved a series of dams on the White River to prevent devastating damage to thousands of acres of cotton, corn and other crops downstream.

### **33rd Anniversary of Teton Dam Disaster**

kmvt.com, Idaho, 06/05/09



Today marks the 33rd anniversary of one of the biggest disasters in recent Idaho history; just before noon on June 5th 1976, Teton Dam in eastern Idaho ruptured, sending 80 (b) billion gallons of water rushing down the Teton River. The six mile wide wall of water destroyed everything in its path; swallowing more than two thousand homes and scrubbing topsoil off about 100 thousand acres of farmland. Eleven people died as a result of the flooding, and tens of thousands of animals drowned. The earth filled dam was less than a year old when several leaks

developed, leading to a catastrophic failure of the structure two days later.

### **Dams draw more attention but aren't practical on Red**

On a recent windy spring afternoon, Mapleton Mayor Mark Anderson visited the Maple River Dam for the first time. "It made a difference for us this year," he said of the dam 10 miles northeast of Enderlin.

By: Jon Knutson, The Forum, June 07 2009, grandForksHerald.com

ENDERLIN, N.D. – On a recent windy spring afternoon, Mapleton Mayor Mark Anderson visited the Maple River Dam for the first time. "It made a difference for us this year," he said of the dam 10 miles northeast of Enderlin. The \$29.75 million dam, finished two years ago, was put to a huge test this spring. By all accounts, the dam – which holds up to 60,000 acre-feet of water, or one foot of water spread over 60,000 acres – helped to reduce downstream flooding at Mapleton and elsewhere. You'll probably be hearing more about

dams in coming months. Massive Red River Valley flooding this spring sparked greater interest in – and could generate more public funding for – building new dams.

#### **One measure of how more dams could help:**

Building dams that hold the equivalent of 400,000 acres of 1-foot-deep water – or roughly the capacity of seven Maple River Dams – would reduce 100-year flood elevations in Fargo-Moorhead by 1.6 feet, according to a study by the U.S. Army Corps of Engineers. The study also found that 200,000 acre-feet of storage would reduce the metro area's 100-year flood elevations by 1.1 feet. But no one expects a lot of new dams to be built. Environmental concerns work against their construction. So does the Red River Valley's topography, which limits where and the number of dams that can be built. Though dams have value, "they're just one tool in our tool kit," said Bruce Albright, administrator of the Barnesville, Minn.-based Buffalo-Red River Watershed District, one of 10 major watersheds in the Red River basin. Other components of the flood-control fight could include more ring dikes and less building in flood-prone areas. Another option – proposed in the University of North Dakota's Energy and Environmental Research Center's "Waffle Plan" – is storing spring runoff temporarily in existing depressions, including fields, until major flood crests pass.

#### **Dams on the Red?**

Dams can be built to control flooding, create recreation areas, generate hydroelectric power or supply water for irrigation or to cities, or a combination of those uses. This region has many smallish dams, typically built for recreation, but relatively few large ones designed to control flooding, said Jeff Volk, president of West Fargo's Moore Engineering. There are flood-control dams on some of the creeks and rivers that flow into the Red River, and more ultimately could be built in suitable locations, Volk said. But it's not practical to build dams on the Red itself, he said. That reflects the flatness of the land in the heart of the Red River Valley. The land adjacent to the Red lacks the terrain into which a blocking structure could be built. Storing water behind any such dam also would pose extreme difficulties. "I've heard people say, 'Dig a hole.' But you just couldn't dig one large enough to make a meaningful difference," Albright said. Other obstacles to building new dams include environmental concerns and objections from landowners. People who lose property to accommodate a new dam receive "fair market value" for it, Albright said. Still, landowners often have practical or sentimental attachment, or both, to their property and are reluctant to sell it. That was the case with farmers who had to give up land to build the Maple River Dam, said Rodger Olson, chairman of the Maple River Water District, one of four districts that joined to build the project. "There were strong feelings," Olson said.

#### **'Adverse effects'**

Dams can have many adverse effects, including the loss or decline of many native species of plants and wildlife, particularly fish, according to the U.S. Geological Survey Web site. Genevieve Thompson, executive director of Audubon Dakota, which has a Fargo office, said alternatives to building new dams should be considered carefully. Audubon Dakota's mission is to conserve and restore natural ecosystems focusing on birds, other wildlife and their habitats. Whatever else happens, new dams won't pop up quickly, at least judging by the history of the Maple River Dam. Its roots date to 1950, when Congress authorized the U.S. Army Corps of Engineers to study flooding in the Maple/Sheyenne/Red River basins in eastern North Dakota. In 1986, the corps added the Maple River Dam to a flood-control plan, and eight years later the county water board applied to the corps for permission to build the dam. Opposition to the dam kept construction from beginning until 2004. "It was a long process," Volk said. "But the results this spring alone made it all worthwhile."

## **Dam rules may be altered**

### **Department mulls revised guidelines for maintenance**

By NICK REISMAN, June 8, 2009, PostStar.com, Glens Falls, NY

FORT ANN - The state Department of Environmental Conservation is revising its proposed dam maintenance regulations in response to concerns from property owners about being able to meet the new requirements. The guidelines were proposed following the 2005 failure of the Hadlock Pond dam in Fort Ann. The department will be accepting public comments on the revisions until June 19. The DEC has been attempting to revise the regulations since the dam's failure and has gone through a variety of incarnations. The requirements would apply to 5,000 dams around the state and include provisions for record keeping, inspection and maintenance plans, and scheduled inspections for a professional engineer working for the owner.

"Last year we received important input from dam owners concerned about the cost and length of time required to comply with the proposed regulations, and from others looking for more assurance that the dam

safety program will help protect their communities," DEC Commissioner Alexander "Pete" Grannis said in a statement. "The revised proposal addresses those concerns. Our staff worked hard to find ways to provide flexibility to owners based on the specifics of their dam's condition in ways that do not compromise safety." The pond's water level was brought back to normal last year after an extensive refill and testing of the rebuilt dam. Fort Ann Town Supervisor Gayle Hall said local officials plan to study the new regulations to see if they will affect the Hadlock dam. "We just got notice of the revised proposal," Hall said. "We will be looking at them to see how they affect us or if they even do."

As for the pond itself in 2009, Hall said the water level is steady. "It's filled, and they (residents) should have a wonderful summer," Hall said. Lake Hadlock Association President Alex DiLallo said Thursday he had yet to read the revised proposal. But he was concerned by the slow pace of the ongoing lawsuit between residents and the Fort Ann town government and construction companies that built and designed the failed dam. The July 2005 dam collapse, which drained the manmade pond and damaged nearby homes. More than 100 residents filed suit against the town; the dam's builder; the dam's designer, HTE Northeast; and the company charged with testing the dam, Atlantic Testing Laboratories Limited. "The regulations that are being instituted or put in place are a good thing, and we're just fortunate that the people downstream weren't hurt," DiLallo said. "But it's very unfortunate that in this point in time that we're sitting here in 2009 that these people haven't been taken care of relative to the lawsuit." Paul Wein, the lawyer representing about 90 of the "upstream" property owners, said last week the case remains on appeal in Appellate Court after town attorneys unsuccessfully attempted to remove many of the residents from the suit. A ruling on that appeal is expected in July, he said.



## Hydro

(Hydro tidbits)

Worldwide, hydropower plants produce about 24 percent (or is it 17 %) of the world's electricity and supply more than 1 billion people with power. The world's hydropower plants output a combined total of 675,000 megawatts, the energy equivalent of 3.6 billion barrels of oil, according to the National Renewable Energy Laboratory. There are more than 2,300 hydropower plants operating in the United States, making hydropower the country's largest renewable energy source.

(Excerpts)

### **SMALL TOWN WANTS TO SAVE ITS HYDROPOWER.**

by Bruce Mulliken, Green Energy News, June 2, 2009

The town of Dillsboro, in western North Carolina, has an unusual problem. Where many communities would like to see old hydroelectric plants in their towns disappear, Dillsboro would like to keep its small power plant. Duke Energy, the owner of the Dillsboro Dam on the Tuckasegee River, would like to remove the dam and powerhouse. But, in the eyes of supporters in the town as well as the Jackson County, North Carolina government, not only has the 310 foot dam been part of local history since 1913 when it was built, the facility could also be a continuing source of renewable power. Further, the Dillsboro dam also provides an additional scenic attraction to the already scenic river and is a backdrop to a bed-and-breakfast hotel next door. (Generally speaking, there has been a backlash against hydro for years by environmentalists for the damage hydroelectric projects might do to local ecosystems and the permanent flooding of property, but small facilities like Dillsboro (the dam is only 12 feet tall) fall into a different league compared with large hydroelectric projects that can flood large areas behind them. Dillsboro is more mini-hydro than mega-hydro.) Dillsboro's capacity is 225 kilowatts and is the smallest of 31 hydro projects in Duke's portfolio. Apparently though with upgrades, power output could be doubled. The reservoir behind Dillsboro covers 13.9 acres.

Duke Energy has the go-ahead from the Federal Energy Regulatory Commission (FERC) to remove the dam. The state has given the thumbs up as well, including \$400,000 in assistance to help Duke remove the facility and restore the river. Removing the dam would create a 10-mile stretch of unimpeded river. Fish could move freely up and down the river as could canoe and kayak paddlers. Jackson County has been

using legal roadblocks to keep demolition equipment at bay, but legal options seem to be running out for supporters of the Dillsboro dam. For its part, Duke Energy doesn't seem to be the bad guy in the room. The decision to remove Dillsboro dam is just business. They say removal of the dam will help its other hydro projects in the Little Tennessee Basin of North Carolina. Dillsboro contributes little to Duke's grid. Though it's a profitable operation, Duke probably also considers it obsolete asset that needs to be retired. Retired would mean removal. -----.

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(OK already, so let's build some pumped storage instead of talking about the subject. Do the Governors know how many pumped storage projects are under study? Do they know that there are around a dozen projects under study in their states with a proposed capacity totaling about 11.7 million kW? Why do we need a BPA study?)

### **Northwest governors support "pumped storage" hydropower**

by Matthew Preusch, The Oregonian, June 02, 2009

Four Northwest governors have sent a letter to Energy Secretary Steven Chu voicing their support for studying "pumped storage" hydropower sites in the region. These wouldn't be dams built on rivers, but rather storage ponds that hold diverted water that could be sent downhill through turbines when extra energy is needed. The idea is to identify large new power sources that can balance the region's increasing dependence on wind power, which can't power microwaves and toasters when wind tower blades aren't spinning. "Consequently, there is broad technical and policy consensus across the Western United States to develop increased system flexibility, energy storage, and balancing reserves to manage the rapid expansion of wind generation and other intermittent renewable resources," said the May 28 letter signed by the governors of Oregon, Idaho, Montana and Washington. The letter asks Chu to approve the Bonneville Power Administration's request for more funding to study possible pumped storage projects. "Well-designed pumped storage, powered by renewable energy and sensitive to environmental considerations, has potential to support integrating renewable energy into our energy grid," Gov. Ted Kulongoski said in a statement accompanying the letter.

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### **FERC, Washington Sign MOU for Hydrokinetic Energy Projects**

FERC News Release, June 4, 2009

The Federal Energy Regulatory Commission (FERC) and the State of Washington have signed a Memorandum of Understanding (MOU) to coordinate their review of renewable energy projects in Washington state waters that use emerging hydrokinetic technologies. The MOU ensures that FERC and Washington will undertake their regulatory efforts in an environmentally sensitive manner that recognizes economic and cultural factors. "This MOU will help reduce some of the regulatory barriers to providing consumers with access to this new form of renewable energy," FERC Chairman Jon Wellinghoff said. "Today's MOU follows up on one we signed with Oregon last year that has enhanced the development of these renewable resources." FERC Commissioner Philip Moeller agreed. "I am delighted that my home state of Washington has joined Oregon in agreeing to a memorandum of understanding with this Commission on the development of new hydrokinetic technologies," he said. "This decision will help promote another form of clean and renewable energy in the state. The next crucial step is to place some of these projects in the water so that any effects on the marine ecosystem can be thoroughly analyzed. It's time for action on renewable energy technologies." Under the MOU, officials at FERC and in Washington agree to the following with respect to hydrokinetic energy projects:

- They will notify each other when one becomes aware of a potential applicant for a preliminary permit, pilot project license or license;
- When considering a license application, they will agree upon a schedule for processing as early as possible. The schedule will include milestones, and FERC and Washington will encourage other federal agencies and stakeholders to comply with the schedules;
- They will coordinate the environmental reviews of any proposed projects in Washington state waters. FERC and Washington also will consult with stakeholders, including project developers, on the design of studies and environmental matters; and
- If Washington prepares a comprehensive plan on the siting of hydrokinetic projects, FERC will take this plan into consideration when issuing a license for any hydrokinetic project.



(Is it my imagination or has this world developed a handout mentality? Everybody is on the dole. I guess the hydro folks might as well get in line too like the gimmee mentality of the wind and solar crowd.)

## Getting by with a little help from the feds

Timesunion.com, June 7, 2009

WATERVLIET, NY -- The City of Watervliet is looking for help from the federal stimulus package in its plan for a hydroelectric project some 90 miles west of the city. Watervliet Mayor Michael Manning said last week that the city hopes to have the hydroelectric plant on the Mohawk River running by 2012. **But how it would be paid for, its exact cost, and even what would be done with the five megawatts it would produce still are being discussed.** The city last year received permission to study such a project as a way to raise money. Watervliet has operated a power station on its drinking water reservoir, located in Guilderland, since 1982. "So we already had the expertise. We're thinking outside the box to try to generate revenue," Manning said. The hydroelectric plant would be built into an existing dam on the Mohawk near Rome, which impounds Lake Delta. The projected cost for construction is \$12 million, but that could change depending on the final scope of the project and interest rates that the city receives on bonds. **Manning said the federal stimulus package includes money that would allow Watervliet to apply for zero-interest bonds for the project, and the city has until Aug. 9 to apply.** "Right now we're looking at strategy," Manning said. "Do we apply to have the whole thing funded zero percent through the stimulus, or do we only apply for half because we might have a better chance of getting approved?" He said that even if only half the funding was financed with stimulus money, the city still would save a significant amount of cash. **The city has estimated that the hydroelectric project could raise \$2 million a year for the city's general fund. The current annual budget is about \$9.5 million.** Watervliet also must come up with an arrangement to lease the land needed for the project, which is now owned by the New York State Canal Corp.

## Federal decision clears way for work on Snoqualmie Falls hydropower plant

ValeyRecord.com, Jun 05 2009

Puget Sound Energy will be able to move forward with major renovation at its 111-year-old Snoqualmie Falls hydroelectric power plant. Federal regulators issued PSE a key amendment to the utility's operating license for project on Monday, June 1, company officials said in a news release. Construction work will ramp up in September, and is expected to last, in stages, through 2014. Under the 40-year operating license PSE received five years ago from the Federal Energy Regulatory Commission, and the license amendment the commission issued Monday, the utility will be making substantial upgrades to the historic plant's power-generating infrastructure. PSE also will be making major enhancements to the recreational facilities it provides to Snoqualmie Falls' 2 million annual visitors. "Snoqualmie Falls is a scenic and cultural treasure that's also been giving our region clean, renewable, carbon-free energy for more than a century," said Paul Wiegand, vice president of Power Generation for PSE. "With our amended license, we're in a position to carry forward the project's legacy well into the 21st century," he added.



**Water**

## US tells Calif. to cut water use to save fish

By Peter Henderson, Reuters.com, Jun 4, 2009

SAN FRANCISCO, June 4 (Reuters) - Californians' thirst for water has pushed salmon and other fish to the brink of extinction, a federal agency ruled on Thursday as it directed officials to cut water supplies to cities and farms to save several species. California's rivers used to brim with trout, salmon, sturgeon and more, but the federal, state and local governments built a monumental system of dams and pipelines in the most populous state that turned a desert into productive farmland and left some rivers dry. **The state faces a water crisis and a third year of drought.** Add climate change and a growing population to the mix, and the fate of some salmon runs looks untenable without change, the National Marine Fisheries Service said in a report ordered as part of a long-running court battle over the salmon. **It called for a 5 percent to 7 percent cut**

in water diversions for cities and agriculture from key state and federal water suppliers. Water conservation, recycling and groundwater use could offset the cuts, the report said, but water agencies described a tougher situation. That reflects a larger argument about whether the state can conserve its way out of crisis or should build more dams and canals to capture the last trickles that bypass the system. "It is becoming increasingly more difficult to operate our projects," U.S. Bureau of Reclamation regional director Don Glaser, the top federal water planner in the area, said after the report was released. State and federal water projects this year have slashed deliveries to 40 percent of most requests, due to fish issues and drought, and agricultural losses are seen near \$1 billion.

#### 'DIFFICULT TASK'

The salmon ruling follows a similar one that protects a fish known as the Delta Smelt that lives in the Sacramento Delta, which is fed by major rivers. Some 370,000 acre feet of water were left in rivers to help the smelt in 2009, according to a group of state municipalities called the State Water Contractors. That's similar to what the salmon ruling is expected to affect. "It's a difficult task to make sure a species doesn't go extinct, and sometimes that is at some societal cost," said Maria Rea, the main author of the report. Pumping restrictions are focused in spring and fall, so the current agricultural year will not be affected, Rea said. But Gov. Arnold Schwarzenegger said the decision put fish above people and the economy. "The piling on of one federal court decision after another in a species-by-species approach is killing our economy and undermining the integrity of the Endangered Species Act," he said in a statement. The fisheries agency plan is to keep more water behind big dams during the year to ensure a supply of cold water in which salmon spawn, restrict some pumping, and find ways for fish to get to historical spawning grounds upriver from dams. That could range from fish ladders to catching fish and trucking them up and around a dam. The National Resources Defense Council, an environmental advocacy group, said the ruling was a step in the right direction, that water cutbacks were manageable, and that the state would have to make them with or without the fish. "We can reduce our reliance on the Delta now, invest in alternative water supplies we are going to need in the future anyway and save this ecosystem and the 150-year-old salmon fishery, or we can wait a few years... in which case it might be too late," NRDC attorney Kate Poole said.

(So, what's his point? Does he want CA to ignore the need for more water supplies or die?)

### The Number of New Dams Built in California in the Past 50 (or 40 or 30 or 20) Years is not Zero

Dr. Peter Gleick, President, Pacific Institute, SFGate.com, June5, 2009

Californians love (or hate) to fight about water in part because there are no easy solutions left, just hard decisions about priorities, money, and philosophy. Amid all of the different pieces of the debate, a number of misleading statements, misinformation, hyperbole, and just plain errors of fact keep resurfacing. Progress in solving our water problems will be hindered if these errors of fact are not corrected, or even worse, are repeated in the press over and over and come to be believed by the public or our policy makers. Every so often, I will address one of these in my posts to this Water Numbers blog, like today's. **Water Number: Not Zero. Some water pundits would like to argue that NO new water storage has been built in California in the past few decades. This is just wrong, wrong, wrong. The next time you hear someone make this argument, correct him or her.**

For example, just a couple of weeks ago, in an NPR piece on the California drought, former Congressman Tony Coelho (and a farmer in the Central Valley) responded to the statement that California's population has gone from 15 to 30 million in the past 50 years by adding: "And we haven't added one bit of water, storage, conveyance, dams - anything." Even worse, the Governor himself has repeated this falsehood. On July 23, 2007 he said "But right now, the water system is extremely vulnerable. For one thing, we haven't built anything, like I said, in 30 years." The very next day, he said, "For one thing, we haven't built a reservoir for the last 30 years." In December 2008, State Assemblyman Ted Gaines said, "We haven't added a new water storage facility in decades." Wrong, wrong, and wrong. Data on California dams are readily available on the internet, so people should stop repeating this falsehood.



Diamond Valley Dam

Over the past 50 years (since 1959), California has added a whopping 21 million acre-feet of storage, including some of the largest reservoirs in the State. Over the past 40 years (since 1969), we have added over 8,600,000 AF of storage (including massive New Melones Dam). Since 1979, we have added over 1,600,000 acre-feet (including New Spicer Meadows Dam and Warm Springs Dam). Since 1989, we have added over a million acre-feet (including

**Diamond Valley and Los Vaqueros)** And these numbers don't include new groundwater storage systems or the vast "reservoirs" of saved water we've created through conservation and efficiency programs. Are we adding new traditional storage more and more slowly? Yes. We've built on all the good dam sites (and some would argue, some not-so-good sites) and the economic, environmental, and political cost of finding and building on new ones has grown. I'm not going to debate the value of adding even more here and now: I'm on the record about this, arguing that other options are cheaper, faster, and less environmentally disruptive. Let's save our arguing for the real disagreements. There are enough of them so that we don't need to argue about the facts.



## Environment

(What's this guy know? He's just a scientist!)

(See other inaccuracies in article: "Salmon Salvation" at: <http://www.hcn.org/issues/41.9/salmon-simplification?src=rc>)

### **Salmon simplification**

Letter to the Editor - From the May 18, 2009, High Country News by Gregory K. Delwiche

The article, "Salmon Salvation" offers a simple answer to a complex problem (HCN, 5/11/09). "Many scientists," it says (without naming any), think taking out the four Lower Snake River dams will simply bring back salmon. That's like saying many people voted for John McCain: perhaps true, but blind to the big picture. Scientists realize 150 years of European-American development has had many effects on Northwest salmon. If the Snake River dams were the overriding negative factor, why are more than a dozen other West Coast salmon stocks – some on undammed rivers – listed under the Endangered Species Act? The reason is that many factors harm salmon – dams, yes, but also habitat destruction, pollution, indiscriminate fishing, predation and genetic dilution from hatcheries. Even in the Columbia system, nine of 13 listed salmon do not return to the Snake River and are unaffected by dams there. The article also suggests wind power could replace energy from dams. That's impossible, because wind doesn't blow all the time. Wind has grown quickly in the Northwest because hydroelectric dams provide ideal backup energy that can ramp up quickly when wind stops blowing, and vice versa. Groups who want dams removed acknowledge that replacement energy would come from burning more fossil fuel, releasing greenhouse gases that cause their own harm to salmon through global warming. Protecting and recovering salmon involves many actions across the landscape and, unfortunately, there's no silver bullet. Even those choices, such as dam removal, that look like silver bullets have hard tradeoffs more accurately portrayed as environment versus environment than fish versus dams. **Depicting dam breaching as an easy fix does readers, and salmon, a disservice.**

*Sincerely, Gregory K. Delwiche, Vice President, Environment, Fish and Wildlife, Bonneville Power Administration*

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### **Birmingham Loves Its Sturgeon**

Courthousenews.com, June 4, 2009



WASHINGTON (CN) - After a long series of court battles directed by former Secretary of the Interior Dirk Kempthorne, and nine years after the fish was listed as endangered, the U.S. Fish and Wildlife Service has designated 300 miles of the Alabama and Cahaba Rivers in Alabama as critical habitat for the Alabama sturgeon. **Only two of the fish have been captured since** then, however, and opponents of listing critical habitat have argued that such a small population of fish is not viable and that **altering water flows from U.S. Army Corp of Engineers' hydroelectric dams on the Alabama River will not help the fish and will have negative economic consequences.** To be included

in a critical habitat designation under the Endangered Species Act, the area occupied by the species at the time it was listed must have the features essential to the conservation of the species and require special management consideration or protection.

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# Some Dam – Hydro News Stuff

and Other

i



6/19/2009

Quote of Note: "...it does not require a majority to prevail, but rather an irate, tireless minority keen to set brush fires in people's minds..." -- Samuel Adams

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

Ron's wine pick of the week: Sobon Estate Old Vines Zinfandel 2007

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

## Other Stuff

(Lots of regulatory experience and a restaurateur. I wonder if I should send him my restaurant list!)

**THE WHITE HOUSE**, Office of the Press Secretary, For Immediate Release, June 10, 2009  
**President Obama Announces More Key Administration Posts**

WASHINGTON, DC – Today, President Barack Obama announced his intent to nominate the following individuals for key administration posts: -----

### **John R. Norris, Nominee for Commissioner, Federal Energy Regulatory Commission**

John R. Norris is currently serving as Chief of Staff for Secretary Tom Vilsack at the U.S. Department of Agriculture. Prior to joining the USDA, Norris served as Chairman of the Iowa Utilities Board (IUB) from 2005 to 2009. As a member of the National Association of Regulatory Utility Commissioners (NARUC) he worked on the Electricity Committee and was Co-Chair of the 2009 National Electricity Delivery Forum. He served as a Board Member, Secretary and President of the Organization of Midwest Independent System Operator (MISO) States as well as Chairman of the MISO Demand Response Working Group. He also was a member of the FERC/NARUC Demand Response Collaborative. Norris was on the Board of Directors of the National Regulatory Research Institute, a member of the Board of Trustees of the Iowa Power Fund and served on the Advisory Councils of the Iowa Energy Center, the Financial Research Institute for the University of Missouri College of Business and the Center for Global and Regional Environmental Research at the University of Iowa. In 1999 and 2000 he was Chairman of the Iowa Electric Restructuring Task Force while serving as Chief of Staff for then Iowa Governor Tom Vilsack. Norris also worked for U.S. Representative Leonard Boswell (IA-3rd) as Boswell's Chief of Staff from 1997 to 1998. From 1989 to 2003 he owned and managed a restaurant in Greenfield, Iowa and he was State Director of the Iowa Farm Unity Coalition during the Farm Crisis of the 1980's. Norris graduated with distinction from the College of Law at the University of Iowa in 1995 and received his undergraduate degree in 1981 from Simpson College in Indianola, Iowa.

(If ANYONE thinks that the wind power advocates are friends of hydropower – think again. The wind energy advocates are anti-hydro and make no mistake about that. The time has come for the hydro community to sever all ties to the wind advocates because they are not honest about

their relationship with the hydro industry. And, by the way, how will we create all those claimed jobs when we're buying wind equipment from Spain. And, if anyone thinks that China has all of a sudden become interested in clean energy because they are developing wind energy – think again. China wants to sell their equipment in the U.S.)

## **As Wind Power Grows, a Push to Tear Down Dams**

By KATE GALBRAITH, NY Times, June 11, 2009

WASCO, Ore. — For decades, most of the nation's renewable power has come from dams, which supplied cheap electricity without requiring fossil fuels. But the federal agencies running the dams often compiled woeful track records on other environmental issues. Now, with the focus in Washington on clean power, some dam agencies are starting to go green, embracing wind power and energy conservation. The most aggressive is the Bonneville Power Administration, whose power lines carry much of the electricity in the Pacific Northwest. The agency also provides a third of the region's power supply, drawn mostly from generators inside big dams. The amount of wind power on the Bonneville transmission system quadrupled in the last three years and is expected to double again in another two. The turbines are making an electricity system with low carbon emissions even greener — already, in Seattle, more than 90 percent of the power comes from renewable sources. Yet the shift of emphasis at the dam agencies is proving far from simple. It could end up pitting one environmental goal against another, a tension that is emerging in renewable-power projects across the country.

Environmental groups contend that the Bonneville Power Administration's shift to wind turbines buttresses their case for tearing down dams in the agency's territory; particularly four along the lower Snake River in Washington State that helped decimate one of North America's great runs of wild salmon. Bonneville wants to keep all the dams, arguing that they not only provide cheap power but they also make an ideal complement to large-scale installation of wind power. When the wind slows and power production drops, the agency argues, it can compensate quickly by telling the Army Corps of Engineers and the Bureau of Reclamation, which operate the dams, to release more water from reservoirs to turn the huge generators. When the wind picks up, dam operations can be slowed. The dams help alleviate a need for natural-gas-fired power plants, which are used in other regions as a backup power source when the wind stops blowing, but which release carbon dioxide that contributes to global warming. By balancing wind power with hydropower, the Bonneville Power Administration says it believes it can limit the use of natural gas and coal plants across the West, even as the region's demand for electricity rises. Around the country, dams provide 6 percent of electricity generation — double the amount from other renewable sources like wind, solar power and biomass — and much of that is concentrated in the West.

The influx of wind on Bonneville's system has come as a result of renewable power goals set by governments in the Western states, which aim to reduce their output of greenhouse gases. Bonneville says that when the wind is blowing most strongly, 18 percent of the power in its control area now comes from wind, and that number may rise to 30 percent next year. (Not all of that is consumed in the Pacific Northwest; some is sold to California.) The rise in wind power means that the dam agency has emerged as a national test case for how to integrate large amounts of intermittent wind power into a regional electric grid. "I've described this as a grand experiment," said Stephen J. Wright, the administrator of the 72-year-old Bonneville Power Administration. The agency stresses the challenge it faces, making sure the lights stay on despite the ups and downs of the wind. Many new wind farms lie along the gusty Columbia River corridor, and their concentration means that changes in the wind can bring sudden dips and spikes in the power they generate. "We can have periods that go from full, maximum wind output to zero across an hour," Mr. Wright said. Because of its erratic nature, wind power — and the need for dams or other backup systems — have become intertwined with the fate of salmon, perhaps the biggest environmental controversy in the Pacific Northwest. For decades, environmentalists, fishermen and some local politicians, who want to save the endangered salmon, have fought Bonneville and the Army Corps of Engineers, which want to keep the lower Snake River dams. A federal judge overseeing the dispute has accused the federal agencies of not working hard enough to save the salmon and had raised the possibility of breaching those dams to aid the fish. Wild salmon ride the river in two directions. They spawn far upstream, and the young fish swim downriver to the Pacific Ocean. They spend several years there, feeding and growing quite large, before swimming back upstream to spawn and die. The large reservoirs created over the decades as the dams were built have slowed and complicated their journeys, and slashed survival rates. Fish ladders help on the way back upstream, but those salmon that get through in both directions end up traumatized and weakened, biologists say. When it comes to helping salmon, Bonneville has "been dragged kicking and screaming every inch of the way," said Bill Arthur, a Sierra Club representative in the Northwest. Mr. Arthur praised the agency's efforts to add wind power, but he argued that the four lower Snake River dams, which are far smaller than major dams like Grand Coulee, were not needed to back up wind power. Instead, he proposed putting wind

turbines in more places, to help balance power generation by ensuring that some are always in an area where the wind is blowing, or relying more on the Northwest's natural gas plants in combination with energy-saving measures. He also noted that if the dams came down, dismantling them could take six or more years, allowing plenty of time to plan the transition to new power sources. Elliot Mainzer, vice president for corporate strategy at the Bonneville Power Administration, said that tearing down the Snake River dams would "unequivocally" hurt the ability of the agency to assimilate wind power into its system, because of the dams' role in balancing up-and-down wind generation. Even as the salmon controversy plays out, the agency is seeking to build more power lines to speed wind-farm development in remote, windy areas. The economic stimulus package passed in February will help: it sharply increased the maximum amount that the agency can borrow from the United States Treasury to \$7.7 billion, from \$4.45 billion. (Another dam agency, the Western Area Power Administration, got a similar boost and also plans more transmission lines to aid wind and other renewables.) Bonneville says that the stimulus injection will enable it to build a \$246 million transmission project along the Columbia River, allowing developers to put up wind turbines in additional areas of eastern Oregon, and that more planned transmission lines will also help harness the wind.

All of that is good news for the area's farmers, some of whom welcome a new source of income. John Hildebrand, an animated 82-year-old wheat farmer, has allowed a Spanish developer, Iberdrola, to put wind turbines on his land in Wasco, not far from the Columbia River. Power from his turbines feeds into the Bonneville system. He and his brother Gordon sat in the front row when Franklin D. Roosevelt dedicated the Bonneville Dam in 1937; before the region even had public power — so they have seen the future of energy, twice. "All we had is sky out there," John Hildebrand said, looking out toward the tall structures twirling high above his rolling land. "Now I've got turbines."

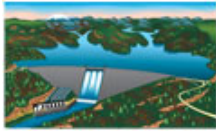
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## Government Study Warns of Climate Change Effects

By JOHN M. BRODER, June 16, 2009, NY Times

WASHINGTON — The impact of a changing climate is already being felt across the United States, like shifting migration patterns of butterflies in the West and heavier downpours in the Midwest and East, according to a government study to be released on Tuesday. Even if the nation takes significant steps to slow emissions of heat-trapping gases, the impact of global warming is expected to become more severe in coming years, the report says, affecting farms and forests, coastlines and floodplains, water and energy supplies, transportation and human health. The study was prepared by the United States Global Change Research Program, a joint scientific venture of 13 federal agencies and the White House. Under a 1990 law, the group is required to report every 10 years on natural and human-caused effects on the environment. The current study, which began in the George W. Bush administration, builds on the findings of the 2000 one. The study, overseen by the White House Office of Science and Technology Policy, will be posted at [www.globalchange.gov/usimpacts](http://www.globalchange.gov/usimpacts).

Some of the effects being seen today and cited in the report are familiar, like more powerful tropical storms and erosion of ocean coastlines caused by melting Arctic ice. The study also cites an increase in drought in the Southwest and more intense heat waves in the Northeast as a result of growing concentrations of carbon dioxide and other climate-altering gases in the atmosphere. Reduced mountain snowpack means earlier melt-offs and reduced stream volumes across the West and Northwest, affecting residential and agricultural water supplies, habitats for spawning fish and reduced hydroelectric power generation, the study found. But the speed and severity of these effects in the future are expressed with less certainty in the report and will depend to some extent on how quickly the United States and other nations move to reduce emissions. "What we would want to have people take away is that climate change is happening now, and it's actually beginning to affect our lives," said Thomas R. Karl, director of the National Climatic Data Center at the National Oceanic and Atmospheric Administration and a principal author of the report. "It's not just happening in the Arctic regions, but it's beginning to show up in our own backyards." Dr. Karl said that unless the country acted soon to reduce emissions and to adapt to inevitable effects of a changing climate, the costs would be severe. "Our destiny is really in our hands," he said. "The size of those impacts is significantly smaller with appropriate controls." Dr. Karl said the section of the 188-page report dealing with human-health effects generated the most discussion and uncertainty among the agencies. The study said rising average temperatures would cause more heat-related illnesses and deaths, along with some reduction in deaths from extreme cold. The study also showed that higher temperatures combined with air pollution would cause a higher incidence of asthma and other respiratory ailments. Michael C. MacCracken, a leader of the 2000 study and a principal outside reviewer of the current one, said in an e-mail message that the new report was a useful overview of the state of current climate science in the United States, but "there is not much that is new."



## **Dams**

(Why didn't they factor this subject into the decision to tear down the dams?)

### **Leaders Seek More Input on River Dams**

UpNorthLive.com, June 09, 2009

TRAVERSE CITY, MI -- Grand Traverse County and Traverse City leaders are looking for public input to determine what's next for the Boardman River dams. The Boardman River Dams implementation team will hold a public meeting Tuesday, June 9th from 6pm to 8pm in the County Committee Room at the Grand Traverse County Governmental Center on Boardman Avenue in Traverse City. Commissioners say the dams are no longer a value in generating hydro-power for the community and at this point they are just a liability. **The next step is figuring out the best way to remove them with the least impact on area citizens.**

### **Duke Energy to fight Dillsboro Dam condemnation**

BY JON OSTENDORFF • JUNE 10, 2009, Citizen-Times.com

SYLVA, NC — **Duke Energy will fight Jackson County's plan to take over ownership of the Dillsboro Dam as a way of saving the landmark structure from demolition, a company spokesman said Tuesday. "Duke is in for the duration to remove Dillsboro Dam in compliance with two federal orders,"** said Fred Alexander, the company's district manager for government and community relations. "This will preserve as much renewable hydro generation as much as possible in Jackson County." The county Board of Commissioners voted 4-1 Monday to reject mediated settlement with company to remove the dam.

**The county plans condemn the property and take it from the power company.** A park would be built near the dam. County Manager Ken Westmoreland said the next step is to send the company an official notice of its plan to condemn. He said the county plans to hire a special appraiser to determine the value of the dam. The county must pay Duke a fair-market value for the property. The move is the latest in a 5-year legal battle that has cost the county \$250,000. Duke wants to demolish the dam to mitigate environmental effects of its other hydroelectric projects. The company says removing the dam will mean more water for its other power plants. **The Federal Energy Regulatory Commission originally approved the dam demolition in July 2007 as part of the utility's re-licensing of its hydroelectric plants.** River rafting companies and some wildlife scientists have supported the plan because of the flow it would add to Tuckasegee River. **The county, along with nearby residents, says the dam, built in 1913, is a landmark and important to tourism.** Dillsboro residents on Tuesday applauded the move. "I think they made the correct move for the situation that Duke has put them in," said Susan Leveille, owner of Oaks Gallery. "It is very important to tourism." Mark Simpson, owner of Shirley's Boutique, agreed. **He said he would like to see the dam refurbished to produce green energy.** "I think it is of historical value to the area and a good landmark," he said.

### **Corps calls meeting on condition of Fox River dams**

Associated Press, June 13, 2009, chicagotribune.com

KAUKAUNA, Wis. - A public meeting is planned Wednesday evening at the Kaukauna Municipal Building in Kaukauna on the condition of the nine federal dams on the lower Fox River that runs from Lake Winnebago to Lake Michigan's Green Bay. The Detroit District of the U.S. Army Corps of Engineers rates five of the dams as in urgent need of attention and the other four as marginally safe. The urgent ratings went to the Upper Appleton, Cedars, Little Chute, Rapide (ra-PEED') Croche (CROSH) and De Pere dams because of cracking at the gate anchorages, raising a risk of gate failure. But the corps has monitored the cracks since the 1970s and hasn't seen signs of rapid progression. The marginally safe ratings went to the Little Kaukauna, Menasha, Lower Appleton and Kaukauna dams.

### **Oregon bill for Klamath dam removal makes big move**

John Driscoll/The Times-Standard, 06/13/2009





A bill to establish a fund to remove four Klamath River dams has cleared its biggest hurdles in the Oregon Legislature. The bill passed the Oregon House on Friday and is being sent back to the Senate with clarifying language. It is expected to pass and move on to Gov. Ted Kulongoski's desk by the end of June. The legislation would direct money from dam-owner PacifiCorp's ratepayers into an account, up to \$200 million. It would be used to fund the removal of the dams as envisioned in an agreement in principal between Oregon, California and the federal government. The agreement is subject to California authorizing \$250 million in bond funds for the effort. Kulongoski's natural resources policy director Mike Carrier said the governor is

pleased with the bill's progress. "This is the first step in a long relationship we've had with the U.S. Department of the Interior, California and PacifiCorp to resolve the controversy over the Klamath dams once and for all," Carrier said. Karuk Tribe Klamath Campaign Coordinator Craig Tucker said that the passage of the bill would give the movement to tear out the dam's significant momentum. "For us, it gives us certainty that there will be enough money there to pay for dam removal," Tucker said.

(Tough call, but the right call)

## Army Corps advises EPA to keep coal-ash hazards confidential

ASCE SMARTBRIEF | 06/15/2009

The Environmental Protection Agency has classified 44 coal-ash storage ponds as high hazards but will not release the information to the public. The Army Corps of Engineers has advised the EPA that disclosing the locations of the coal ash ponds could be a national security risk. The administrator of the Federal Emergency Management Agency will make the final decision about releasing information after the National Dam Safety Review Board conducts a review.



**Hydro**

(Excerpts)

## Holyoke chosen for computing center

By D.C. Denison, Boston Globe Staff / June 10, 2009

The Western Massachusetts city of Holyoke has been selected to host an ambitious, "green," high performance computing center, according to plans that will be disclosed tomorrow by the state and a consortium of universities and technology companies. The Holyoke high performance computing center, projected to cost approximately \$100 million, will be managed by a collaborative led by the Massachusetts Institute of Technology and the University of Massachusetts that will also include the EMC Corp., the data storage giant based in Hopkinton, and Cisco Systems Inc., which has a regional research center in Boxborough. Holyoke was chosen as the site for the center because of the availability of inexpensive, environmentally-friendly hydroelectric power from the nearby Connecticut River, according to members of the collaborative.

(Full article:

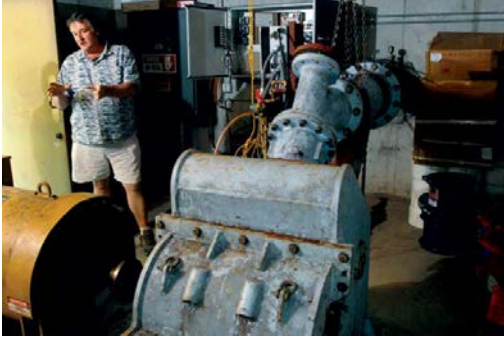
[http://www.boston.com/business/technology/articles/2009/06/10/holyoke\\_chosen\\_for\\_computing\\_center/?p1=Well\\_MostPop\\_Emailed5](http://www.boston.com/business/technology/articles/2009/06/10/holyoke_chosen_for_computing_center/?p1=Well_MostPop_Emailed5))

(Great hydro potential is probably a bit of an over-statement, but any hydro is good.)

## Whitefish's Hydropower Plant: A Mystery and an Opportunity

Flathead Beacon, By Myers Reece, 06-10-09

WHITEFISH, MT – Abandoned and lonely, this old hydroelectric plant has sat untouched for nearly two decades. Few records and even fewer people with knowledge of the plant can be found today. Right now it's a turbine of mystery, but it may soon buzz with electricity again. Jeff Arcel of Mother's Power Inc. wants to



bring back to life a hydropower plant located just north of Whitefish near the city's water treatment plant. It appears city officials are on board too. But of course, these things all come down to money and any effort to retool the plant must first be approved through the city's budgetary process, which is underway. The city council already gave initial approval to set aside \$535,000 in the water fund budget to replace the dilapidated system and cover contingency costs such as design and negotiations. The rest of the plant's infrastructure, estimated to be worth at least \$2 million, is in good shape. Arcel believes it's a golden opportunity for the city to capitalize on a valuable resource – the infrastructure is there and so are the proper permits. In addition, the city has hired a firm to sort out its water rights. "If we were doing this today, it would be a \$2.5 million project," Arcel said.

Arcel was commissioned by the city to research the plant and author a report. Along the way, he ran into a series of challenges and outright surprises. Such is the case when few people know anything about a project and only minimal records are available. "It's amazing that there's no paperwork anywhere," Arcel said. According to Arcel's research, in 1982 a group of engineers approached officials in Whitefish and a handful of other Montana towns with the idea of building hydroelectric plants in their communities as a source for renewable and locally produced energy. By 1984, the group, using the name Hydro Management Inc., had built three plants: one in Whitefish and two in the Philipsburg area. The Philipsburg facilities are still in operation. The city of Whitefish apparently entered into an agreement with Hydro Management and Pacific Power and Light, the county's electric utility company at the time. But no records exist regarding that agreement. The absence of records can be attributed to the fact Whitefish wasn't yet keeping digital files and Hydro Management filed for bankruptcy in 1989. Also, Pacific Power and Light withdrew from the Flathead market around that same time. Then a lightning storm in 1989 or 1990 caused the system to fall into disrepair and the facility has sat dormant since. Further complicating Arcel's efforts to obtain records is the 2006 death of W.H. Edelman, the lead engineer for Hydro Management.

If the city moves forward with reviving the plant, Arcel said it has the potential to power up to 200 homes per year. As important as it is in sheer volume of electricity, it would also help push Whitefish to the forefront of the municipal renewable energy movement in the state. Montana is the fifth highest hydropower producer in the nation, behind the three Pacific Coast states and New York, according to Arcel's report. Then, of course, there's the practical value for the city – the hydro plant will make money. The city racks up a substantial annual power bill, running facilities like the water treatment plant and keeping streetlights lit. Public Works Director John Wilson told councilors that the city could pay off a percentage of that bill with revenue from the hydro plant. Arcel believes the city stands to make \$75,000 to \$200,000 per year. Before it shut down, records indicate the city was making \$50,000 per year. Repairing the existing system could cost anywhere between \$16,000 and \$165,000, Arcel said. But it would still be outdated, even with improvements. Arcel makes the analogy of a crashed plane: "You could fix it and fly it out, but would you really want to fly it and for how long?" A new system would pay for itself in five to 10 years, he said. Water flow studies have already begun at the plant. Furthermore, a reconstructed turbine would require constant maintenance and attention, which was one of the main reasons it fell into disrepair in the first place. Or as Arcel's report states, the primary cause was "repeated breakdowns with no adequate technical or operational support." The new system, however, would incorporate sophisticated technology with remote diagnostics, thus allowing city staff to monitor the plant without actually having to be there at all times. "They'll have the ability have a digital presence," Arcel said. The city is looking into outside funding and grant options. Also, Flathead Electric Cooperative has indicated it would be interested in a power-purchase agreement. If given the final green light by city council, Arcel hopes to have the system running by next year. "The reality is Whitefish has great hydro potential," Arcel said.

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## Foes help sink Gorge hydro project

By Bob Downing, Beacon Journal staff writer, Jun 13, 2009, Ohio.com

A long and heated battle over adding hydroelectric facilities to a Cuyahoga River dam between Akron and Cuyahoga Falls appears over. The Fairlawn company that wanted to generate electricity in the Gorge Metro Park is dropping its preliminary federal permit for the project. Metro Hydroelectric Co. LLC released a two-

page letter late Friday in which it said it is surrendering its permit from the Federal Energy Regulatory Commission and terminating the project. That means that the \$4 million project first proposed six years ago by the company is dead, said Irving Sugarman, the attorney representing Metro Parks, Serving Summit County. The project would have produced enough electricity to power 2,000 homes but had come under heavy fire from municipalities, government agencies and environmental groups.

Park officials are "very pleased" that the company is ending its efforts to add hydroelectric facilities to the 57-foot-high Ohio Edison Co. dam, Sugarman said. The park district had refused permission for the company to go on park property and said it opposed the project. Park officials remain convinced that the project was "ill-advised and ill-conceived," Sugarman said. It is possible the company could again seek federal approval for the project but that appears unlikely, Sugarman said. The Ohio Environmental Protection Agency is pleased that the Cuyahoga River "won't be compromised" by the facility, said spokesman Steve Tuckerman. The agency intends to keep trying to bring the Cuyahoga River into full attainment of federal-state water standards, he said. His agency has suggested that the dam be removed because of its negative affect on water quality. "What a huge victory for the river," said Elaine Marsh of Bath Township, a spokeswoman for the Friends of the Crooked River, an Akron-based grass-roots eco-group devoted to the Cuyahoga River. "This has been a long, hard battle, a long ordeal, and we're ecstatic that it's finally at an end. We're doing a little dance here. We really are happy. That's great news. . . .And a tip of the hat to our heroes: Metro Parks and the EPA."

#### **Company blames park**

The company took a shot at the park district and the EPA for their strong opposition to its project. "As the management team of MHC, we are also local residents and it saddens us to see how a few opponents of the project denied the community this socially responsible opportunity. However, Metro Parks, Serving Summit County, has chosen to block our efforts, not even allowing us to conduct the environmental studies which would have demonstrated the benign nature of this project," company spokesman M. Clifford Phillips said in the letter. He questioned why the park district would oppose an environmentally friendly, nonpolluting energy source that would result in less coal being burned to produce electricity. "The opponents of this green-renewable project — the park along with the North East office of the EPA, and other single-priority interest groups, with their penchant for making derogatory statements about our company and its intentions — has put us in an untenable position," he said. The company has gotten warm welcomes in other states where it is pursuing hydroelectric projects, Phillips said. "Hence as a practical matter, we will turn our attention away from Ohio and focus on our mission to develop other hydro projects," he said.

#### **Lengthy dispute**

In 2006, the company sued the park district over blocking access to the Gorge. U.S. District Judge John Adams allowed the company limited access to the park for preliminary tests. The park district appealed. The U.S. 6th Circuit Court of Appeals overruled Adams and said the case should be returned to Akron for dismissal because there was no federal jurisdiction. Metro Hydroelectric has said it has a valid right to use the dam and the parkland because of easements granted in 1929 to Ohio Edison and later transferred to the company. That question was never resolved in court. The company was under a federal deadline to make progress or risk losing its preliminary permit for the Gorge project. Metro Hydroelectric wanted to funnel water over and down the Ohio Edison dam to power a turbine, which would have been housed in a new building about 400 feet downstream. That structure was to be built on park land on the Akron side of the river. The power generated, about 2.5 megawatts, was to be sold to FirstEnergy Corp. The project was attractive to FirstEnergy because it had halted any dam-removal efforts by the Ohio EPA.

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## **New Directions in Hydropower?**

International Rivers, 06/12/2009

A new report entitled, **Directions in Hydropower**, summarizes the World Bank's current approach to hydropower projects. The report says that the Bank will scale up its support for hydropower, and claims that it will respect the triple bottom line of social, environmental and economic sustainability in doing so. If we look at the World Bank's report and practice in more detail, the social and environmental bottom lines still mainly seem to be meant for public consumption. After a period of increased caution, the World Bank in 2003 began promoting and financing high-risk dam projects again. Since then, the Bank Group has approved \$3.7 billion in support for 67 hydropower projects. Annual approvals increased from zero in 1999 to approximately \$200 million in 2003 and more than \$1 billion in 2008. Recent projects include Bujagali in Uganda, Bumbuna in Sierra Leone, Felou in Senegal, Nam Theun 2 in Laos, and Rampur in India. The new report recognizes the impacts and risks of hydropower projects, including issues that the Bank has tried to

ignore for a long time, such as reservoir emissions and the unreliability of hydrological data under climate change. In its lending portfolio, the Bank has tried to stay out of serious trouble by supporting projects with relatively small reservoirs. It has also funded the rehabilitation of several existing projects, including in the DRC, Georgia, Macedonia, and Ukraine. Nam Theun 2 is the only new project that displaces a large number of people, and impacts many more in downstream communities. The Bank has additional projects for about \$2 billion in its pipeline, including dams in India, Vietnam, Rwanda, Ethiopia, Guinea, Brazil, Romania, Turkey, Georgia and Tajikistan. It also wants to support more pre-feasibility studies to promote the preparation of further projects.

## Hydropower should be considered a renewable energy source

**Rep. Cathy McMorris Rodgers is pushing for the designation in a national energy plan**

By the Editorial Board of the Walla Walla Union-Bulletin

This nation is wisely focused on clean, renewable energy alternatives to protect the environment and break our dependence on foreign oil. Unfortunately, hydropower -- one of the most obvious sources of renewable energy -- is too often ignored or derided by a few environmental zealots because of their disdain for the dams on the Snake and Columbia rivers. It is those dams that serve as the source of power generation. This is why Initiative 937, which mandates larger utilities in Washington State obtain 15 percent of their power from clean, renewable sources, does not consider hydropower a clean source of power. Efforts in the state Legislature to amend this obvious flaw in the voter-approved law have, to this point, been stymied. This state and nation need to infuse common sense into our energy policy. Water powers the Pacific Northwest and it does so with a comparatively minimal impact on the environment. U.S. Rep. Cathy McMorris Rodgers, R-Spokane, has taken up that cause. She has been pushing for hydropower to be considered renewable energy by Congress. This is important because it could force judges to consider the loss of hydropower and its negative impact on the Northwest when ruling on the government's effort to save salmon.

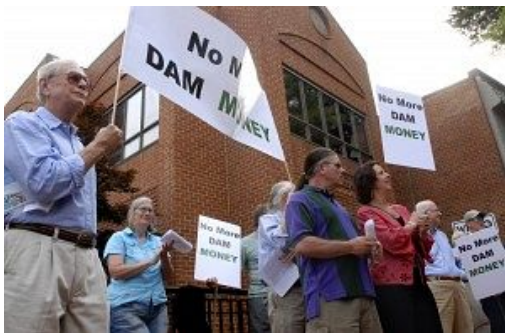
The electricity produced by the dams provides nearly 70 percent of Washington State's power. "Right now, hydropower represents 75 percent of our country's current renewable energy production," McMorris Rodgers said. "Hydropower currently produces 6 percent of our nation's electricity." While what McMorris Rodgers says is true, some are blind to the reality. The debate over salmon and dams has clouded reason. And in Washington, D.C., where the Pacific Northwest is too often looked at as an outpost in the wilderness, the benefits of hydropower are not always clear. Some of the Democrats who control the House and Senate are ambivalent on the issue. And those who have adopted the extreme stand of wanting to breach the dams oppose the effort. McMorris Rodgers and other supporters of classifying all forms of hydropower as renewable energy will have to battle to get the language adopted. It's a fight worth waging. Hydropower is good for the Pacific Northwest and the nation.



**Water**

## Water plan adversaries rally on mall

By RACHANA DIXIT, June 16, 2009, DailyProgress.com, Charlottesville, VA



but cost estimates have fluctuated widely. The report, released earlier this month, outlined how the Rivanna

Opponents of the area's long-term water supply plan waved signs displaying "no more dam money" on Monday, furthering their criticism of the plan and its included Ragged Mountain Dam project. "We've spent enough," said Betty Mooney, a member of Citizens for a Sustainable Water Plan, the main group raising questions about the plan. The group and its supporters held a rally on the Downtown Mall on Monday in response to a recent report released about the dam, the centerpiece of the regional plan. The water supply plan calls for a bigger dam at the Ragged Mountain Reservoir to increase water storage capacity from 464 million gallons to 2.19 billion,



Water & Sewer Authority could reduce costs for a new dam without compromising safety requirements, but it stopped short of releasing a new estimate for the project. The authority convened an independent review team of three engineers after the estimated cost to replace the Ragged Mountain Dam more than doubled from its original \$37 million. The project's costs initially skyrocketed because an engineering firm discovered fractured bedrock where the new dam's foundation would be built. Another estimate of the dam project pinned costs at \$56.6 million.

"We can't burn the ratepayers," Mooney said. Thomas L. Frederick, the authority's executive director, said the agency is continuing to pursue information on the costs of the dam as well as the feasibility of dredging the South Fork Rivanna Reservoir. Once they are done, then a decision could be made, he said. "We don't have the answers to either of them yet," Frederick said Monday. "These studies require multiple steps." Dredging advocates say that making that the centerpiece of the plan, instead of building the new dam, would cut millions from the plan's costs. Dede Smith, a member of Citizens for a Sustainable Water Plan, said the consultants' report contains misleading information and that there is no indication that there is a cheaper way to build the dam. "That is not what the report said," Smith said. The review panel also recommended that the RWSA plan for the dam project potentially to take until late 2012 or early 2013, but the original plan was to have it complete by 2011 and filled by that fall. State officials with the Department of Conservation and Recreation, which regulates dam safety, have said that it is likely that the Ragged Mountain Dam would be allowed to continue operating while the authority works to resolve its safety issues.



## Environment

### **Just add water: Temporary river gets its test**

By Christine Pratt, Wenatchee World staff writer, June 09, 2009



CHELAN FALLS, WA — A brand-new river sparkled to temporary life Monday as the Chelan County PUD's \$15.9 million project to restore year-round flow to the Chelan River Gorge got its first "water test." The project adds about 3 acres of new spawning habitat for steelhead and chinook at the river's lowest reach, near the dam powerhouse in Chelan Falls. Seasonal dam spill to maintain the level of Lake Chelan began early Monday, sending water flowing down the normally dry, 4-mile Chelan River channel at a slow 240 cubic feet per second. The water reached the new habitat work — some five hours after the spill began — and turned what had previously been only a drawing on paper

into reality. "It's one thing to look at the drawings, but when you see how the water actually flows around the boulders and wood structures and riffle, it's another story," said biologist Steve Hays, the PUD's fish and wildlife senior adviser. Water emerging from the Chelan River Gorge slowly pooled and then spilled into a carefully engineered river channel containing strategically placed boulders, log jams and rocks. The channel is lined with river gravel that fish seek for spawning. Additional spilling at volumes of as much as 3,000 cfs by Thursday will test a water-break system of contoured earth, boulders and logs placed upstream of the habitat channel. The structures are designed to limit the flow in the channel to a maximum of 500 cfs and direct the excess into an existing river channel that has always carried dam spill to the Columbia River. "The real joy will be to see how the fish react to it," Hays said,

The new habitat could see its first spawning action this fall, Hays said, but it may not reach its maximum appeal for the migrating fish for decades. PUD officials in October will plant cottonwoods and native shrubs along the now stark and rocky stream to protect its banks and provide shade that appeals to fish, Hays said. "In 10 to 15 years, you should notice a substantial difference in the bank," he said. "Come back in 50 years, and it'll be a wonderful thing." The PUD will stop spilling by early August, once mountain snowmelt eases and the level of Lake Chelan settles in at or below 1,100 feet above sea level, the maximum allowed by federal license. The new habitat will then remain dry until October, when work currently under way at the dam will create a permanent, year-round flow of 80 cfs in the Chelan River for the first time since the dam was built in the 1920s. Spawning seasons — mid-March to mid-May for steelhead and mid-October to mid-November for chinook — don't necessarily correspond to spill season, when river flows are higher. The PUD will supply the higher flows fish need for spawning by pumping water from the powerhouse tailrace to the

head of the new habitat channel. The Chelan River project is part of the PUD's new 50-year federal license, issued in 2006, to operate Lake Chelan Dam. The project was conceived about a decade ago. Work began in June 2008.

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## 2 groups challenge Duke Energy SC river permits

Associated Press, By MEG KINNARD, 06.10.09, forbes.com

COLUMBIA, S.C. -- Two environmental groups are seeking to challenge permits issued for dams on a river that flows in the Carolinas, saying Wednesday that South Carolina's health and environmental agency is not doing enough to protect the waterway from pollution. American Rivers and the Coastal Conservation League are taking issue with a water quality permit issued by the state Department of Health and Environmental Control for five dams on the 225-mile-long Catawba-Wateree River. The river, which is named Catawba in North Carolina and changes to Wateree when it hits the South Carolina border, provides drinking water to more than 1 million people and electricity to at least that many, according to Duke Energy Corp., a utility based in Charlotte, N.C. Duke operates a total of 11 hydroelectric dams on the river, five of which are in South Carolina. As part of its federal application to relicense all 11 facilities for the next 50 years, company spokesman Andy Thompson says Duke first needs to obtain water quality permits from regulators in both states.

The permitting process for the six dams in North Carolina has already been finalized, Thompson said. In May, South Carolina regulators issued permits for the five dams on the southern portion of the river; regulations the environmental groups say don't go far enough to protect the waterway. "DHEC hasn't provided the citizens of South Carolina with reasonable assurance that Duke's dams will provide necessary water flows for fish and wildlife," Gerrit Jobsis, regional director for American Rivers, said Wednesday. "South Carolina must be assured protection for the clean water and economic benefits that a healthy river provides." DHEC's board is set to consider the groups' request that the permits be reconsidered at a meeting Thursday in Columbia. If the board grants the request, it will hear arguments for and against the permit at its August meeting, agency spokesman Thom Berry said. If they're turned down, the opponents say they will appeal to the state's Administrative Law Court. Duke spokesman Thompson said the company respects the permitting process but is confident that it will be successful. "These groups certainly can have the opportunity to share their views, but we believe what we have here will result in making more water available for recreational uses, more so even than we have in the past," Thompson said. The groups also argue that the permit conflicts with an ongoing lawsuit regarding equitable use of the river. In 2007, South Carolina Attorney General Henry McMaster sued to stop North Carolina from draining the Catawba River basin. Under the permit, South Carolina is guaranteed about 25 percent of the water that flows from North Carolina. A special master appointed to hear the case has allowed several interveners - including Duke Energy and the city of Charlotte - to enter the case, a decision McMaster has contested. The U.S. Supreme Court has ruled that South Carolina may present arguments why those parties should stay out of the dispute over the watershed, but a date for those arguments has not been set.

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# Some Dam – Hydro News Stuff

and Other

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6/26/2009

Quote of Note: "We must not allow the clock and the calendar to blind us to the fact that each moment of life is a miracle and mystery." -- H.G. Wells

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

Ron's wine pick of the week: Trentadue Old Patch Red

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

## Other Stuff

(More hogwash! As mentioned in the last Newsletter, DOE doesn't agree with this estimate. And, if hydropower is cheaper, how come we don't see more development?)

### **Research: Support needed for wind power**

By PHILIP BRASHER • Des Moines Register • June 16, 2009

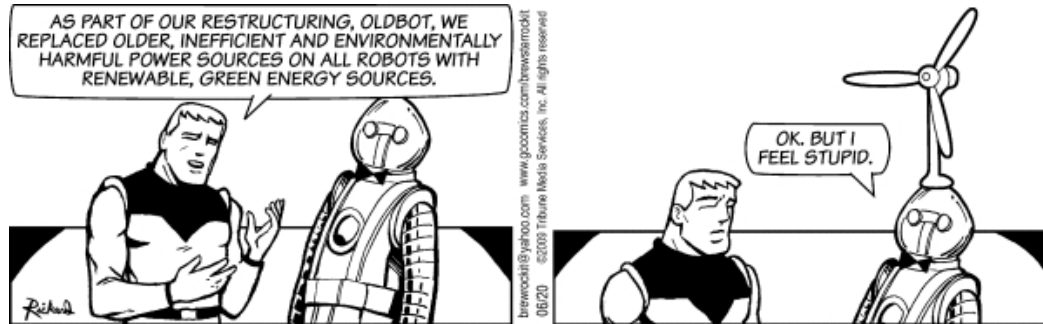
**Washington, D.C.** - Americans could get at least 10 percent of their power from wind and other renewable sources by 2020, but the industry will need better transmission and consistent government support, researchers say. By 2035, it's reasonable to estimate that 20 percent or more of the nation's electrical supply could be renewable, according to a study issued Monday by the National Academy of Sciences. Non-hydropower renewables accounted for 3.4 percent of U.S. electricity in 2008, up from 2.5 percent the year before, the study said. The study's conclusions echoed findings by earlier reports on the prospects for and barriers to renewable energy, including a study issued last year by the Energy Department on prospects for wind energy.

A major impediment to development of renewable energy, the studies agree, is the lack of transmission lines to carry power from the areas such as Iowa, where the wind power is available, to the urban centers where the electricity is needed. "We didn't want to say it's a slam dunk and all you have to do and put up a wind turbine," said Lawrence Papay, who chaired the panel of public and private researchers who conducted the latest study. The 316-page report said the renewable power industry will need "sustained, consistent, long-term policies," including tax credits, mandates and other incentives to compete with power generated from coal and natural gas. Land-based wind turbines are the most economical source of renewable electricity other than hydropower, the study said. Wind generation is likely to "grow rapidly" so long as existing policies continue into the future, the study said. Under one scenario studied by the researchers, the nation could reach the 20 percent goal for renewable power in 2035 if the wind industry adds 9.5 Gigawatts of capacity a year. Last year, 8.4 Gigawatts of additional wind capacity came on line. The report's release comes as Congress is debating plans to impose mandates on utilities to get an increasing amount of their power each year from renewables. The wind industry argues that the mandated levels are too low. Renewable targets in the Senate's energy bill would start at 3 percent in 2012, while a House bill would begin at 6 percent. Both bills would allow the annual targets to be lowered through energy efficiency measures. To maintain last

year's level of construction in the wind power industry, the mandate would have to start at 10 percent in 2012, the wind industry says.

## Brewster Rockit

BY TIM RICKARD



(Don't we all wish sometimes that we could get a consistent and right answer? Now this!)

Blog: Science

## Report Debunking UN's Global Warming Alarmism is Backed by 31,478 U.S. Scientists

Michael Andrews, DailyTech.com- June 19, 2009

**New report authored by two esteemed weather scientists challenges AGW theory**

The Nongovernmental International Panel on Climate Change (NIPCC) has issued a rebuttal to the United Nation's International Panel on Climate Change. The report challenges the theory that man somehow has played a major role in changing the global climate, and also challenges the need to adopt painful and costly measures to combat this perceived threat, such as giving up meat in our diets. Where many in the AGW community would have you believe that there is a consensus over global warming theory, the reports showcases the ongoing debate on the topic and support for alternative theories. Over 31,478 American scientists signed a petition in the appendix citing "there is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate.

"Unlike the UN's IPCC, which is chaired by Rajendra Pachauri, an Indian economist with no formal climatology training, the NIPCC is headed by two esteemed climatologists, each with a large body of work in the field. The first coauthor of the report is Dr. S. Fred Singer, a former director of the U.S. Weather Satellite Service, now part of the National Oceanographic and Atmospheric Administration (NOAA). Dr. Singer received a U.S. Department of Commerce Gold Medal Award for his outstanding work in the field. In the 1980s he continued to study the Earth's climate as the vice chairman of the National Advisory Committee for Oceans and Atmosphere (NACOA). He also taught as a professor at University of Virginia. Dr. Craig D. Idso also coauthored the report. Dr. Idso has a Ph.D in geography from Arizona State University. He has extensively studied the climate as a faculty researcher in the Office of Climatology at Arizona State University, and has published papers in the field of climatology. He also lectured on Meteorology at Arizona State University. His specialties include studying the growing season, the seasonal cycle of atmospheric CO<sub>2</sub>, world food supplies, coral reefs, and urban CO<sub>2</sub> concentrations. Among the conclusions reached by these esteemed researchers were that:

- Climate models suffer from numerous deficiencies and shortcomings that could alter even the very sign (plus or minus, warming or cooling) of earth's projected temperature response to rising atmospheric carbon dioxide (CO<sub>2</sub>) concentrations.
- The model-derived temperature sensitivity of the earth--especially for a doubling of the pre-industrial CO<sub>2</sub> level--is much too large, and feedbacks in the climate system reduce it to values that are an order of magnitude smaller than what the IPCC employs.
- Real-world observations do not support the IPCC's claim that current trends in climate and weather are "unprecedented" and, therefore, the result of anthropogenic greenhouse gases.
- The IPCC overlooks or downplays the many benefits to agriculture and forestry that will be accrued from the ongoing rise in the air's CO<sub>2</sub> content.



- There is no evidence that CO2-induced increases in air temperature will cause unprecedented plant and animal extinctions, either on land or in the world's oceans.
- There is no evidence that CO2-induced global warming is or will be responsible for increases in the incidence of human diseases or the number of lives lost to extreme thermal conditions.

The pair, along with the 31,478 scientists backing their assertions, is urging lawmakers worldwide to carefully consider the body of evidence against AGW theory and lack of evidence in support of AGW theory. Cutting carbon emissions by a mere 15 percent is estimated to cost \$1,600 per U.S. citizen yearly and leave the nation \$9.4 trillion poorer. Totally forgoing carbon emissions could be extrapolated to cost the average citizen over \$10,500 USD yearly. And Dr. Idso and Dr. Singer provide compelling evidence that this would be a pointless and foolhardy sacrifice as it would have virtually no affect on the climate.

## Federal regulators approve Avista's dam license

Associated Press, 06.18.09, Forbes.com

SPOKANE, Wash. -- Federal regulators have issued a new 50-year license to Avista Corp. for its five hydroelectric dams on the Spokane River. Avista applied for a new license for the dams in 2005. The Federal Energy Regulatory Commission approved the license on Thursday after the utility reached an agreement with conservation groups, tribes and state officials over land use and wildlife habitat efforts. The Spokane River dams sit in Spokane, Stevens and Lincoln counties in Washington, and in Idaho's Kootenai and Benewah counties. Together, they produce nearly 138 megawatts of power.

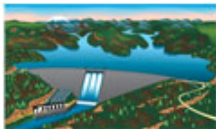
(Let's hope she remembers her roots. She is a former employee of PG&E and her background is as a geologist and engineer)

June 22, 2009

## NHA Lauds Confirmation of Zoi to DOE

The National Hydropower Association (NHA) today praised the confirmation of Catherine Zoi as the Department of Energy's (DOE) assistant secretary of energy efficiency and renewable energy. "NHA congratulates Ms. Zoi on her confirmation to this critical energy post," said Linda Church Ciocci, NHA executive director. In her new post, Zoi will play a key role in carrying out President Obama's goals to mitigate climate change, improve energy efficiency, and deploy renewable energy technologies.

"As America forges a new energy policy, conventional hydropower and new marine and instream hydrokinetic technologies will help advance the nation's economic, energy, and environmental goals," Ciocci added. Hydropower is America's oldest and largest source of clean, domestic, renewable energy and serves as an important tool for integrating variable renewable energy resources such as wind and solar power onto the nation's electric grid. "NHA stands ready to work with Assistant Secretary Zoi in building America's energy future," Ciocci said. The National Hydropower Association is a nonprofit national association dedicated exclusively to advancing the interests of the hydropower industry and the development of new waterpower technologies. It seeks to secure hydropower's place as a climate-friendly, renewable and reliable energy source that serves national environmental and energy policy objectives.



## Dams

(If you want to view some dams from around the world, including some of the better known U.S. dams, take a look at this site)

## Spectacular Dams Around the World

Published by R J Evans, June 21, 2009, Category: Engineering

The sight of a dam - some of the largest and most complex constructions that humanity has ever created - can be quite breath-taking. Take a look at some of the most spectacular of these structures.

<http://sciencera.com/technology/engineering/spectacular-dams-around-the-world/>

## Fox River dams urgently need repair

WULK-TV, Wednesday, 17 Jun 2009, Reporter: Becky DeVries

A number of dams on the Fox River are due for some repairs. The U.S. Army Corps of Engineers was in town Wednesday night, letting people know about its plans. The corps is responsible for nine dams on the Fox River and says all need help; five need urgent repair and four are deemed marginally safe. Some dams on the Fox River were built nearly 80 years ago, and the U.S. Army Corps of Engineers has been keeping a close eye on them. "We regulate those to maintain water levels at Lake Winnebago and also balance industry and the environmental needs," said Tina Kowitz, dam safety program manager for the U.S. Army Corps of Engineers.

Recently, the corps started using a new system to help rate the risk of dams, and gives each dam a safety score. "It's a rating of one to five, five being the lowest, one being the highest," said Bob Stanik, chief of the Fox River office for the U.S. Army Corps of Engineers. The Little Chute dam, is one of five dams in our area that's received a level two rating from the Army Corps of Engineers, and that means repairing it is a priority. "The reason these dams got that rating of two was because of cracking on the concrete piers that connect the dam gates and they had concern with that cracking," said Kowitz. If the cracks cause a piece of concrete to break, the gate it supports would lose its ability to open and close. The corps says its been monitoring the cracks since the 1970s. "They're not progressing rapidly," said Kowitz. "We do feel it is a maintenance issue that needs to be repaired but there's no imminent threat of failure of the dams." Though the cracks have not changed much in the last 30-some years and there's no threat of the dams breaking, the corps says now is the time to do the repairs. "Some of the conditions that we see we continually try to put into the budget, we just haven't been able to get funding for it. So when this national team came through and they happened to rate some of our dams at DSAC 2 (Dam Safety Action Classification), that helped push it up on the priority list, so the money that we've been trying to get anyhow, we are now gonna be getting to start these repairs," said Stanik. The corps says stimulus money should cover a fair amount of the repairs. Wednesday night, the public had a chance to learn about the repair plans. "If they've got stimulus money that provides jobs, that provides work, that provides a safer environment, let's get it done," said Tom Donnelly of Stockbridge. Work will likely begin on the dams this fall. The corps says repairs won't impact most people, if you're boating or fishing, the only change you should see is construction crews on the river.

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## Dam breaching wrong strategy

Letters to the Editor, June 18, 2009, The Spokesman-Review, Spokane, WA

It seems like during hard times, there's never enough money to go around. Already our neighbors are having trouble paying electricity bills, mortgages and health care. As a mother of four and a board member of Inland Power and Light, I know firsthand the challenges many are facing, because I'm facing them, too. Prices are rising, and our family is feeling the pinch. It's hard to balance day-to-day expenses with saving for my children's education or my retirement—but before I can set money aside for the future, I have to stretch dollars to cover bills today. Keeping electricity affordable is more important than ever, and the breaching of the dams on the Snake River will do nothing to achieve that goal and does not guarantee the recovery of salmon. Currently, a plan called the biological opinion is under consideration to run the Snake and Columbia in a way that balances environmental problems and affordability. Part of that plan keeps the Snake River dams in place, because it recognizes that they provide clean, affordable power and, based on the best science, promises to rebuild salmon runs. Please join me in supporting this plan. Our children's future is at stake.

*Kristina Bahr, Spokane Valley*



**Hydro**

(Interesting but! The article states: "[According to the U.S. Geological Survey, hydroelectricity accounted for 36% of the electricity production in 2007, which was a 29% increase since 2006.](#)" (Something wrong with these stats. I think the number is around 6%.) I like the old mill photo)

## Hydropower: Turning Back the Wheel



Technology evolves so quickly, but using water as a source of energy has been a part of our history for quite some time. Records date water wheels back 2,000 years ago when Greeks used them to make flour from wheat. So how did hydropower evolve and will it have a thriving future? The idea of turning water into electricity took off with the publication titled *Architecture Hydraulique*, which was written by Bernard Forest de Bélidor. This French military and hydraulic engineer paved the way for hydropower, because by the next century, water was used to power street lighting in certain states such as New York and Michigan. The world's first hydroelectric power plant was located in Appleton, Wisconsin in 1882, and in the following four years, almost 50 hydroelectric plants were constructed in the U.S. and Canada. Needless to say, water power was a booming alternative energy source.

The year 1940 was maybe the most prosperous time for hydropower, because it was generating 40% of the U.S.'s electricity. However, due to the building costs and lack of land available for development, the creation of new reservoirs was halted by the end of the 20th century.

So by 1989, hydropower was no longer at the top of its game. Not until the beginning of the 21st century did hydropower start producing more electricity. According to the U.S. Geological Survey, hydroelectricity accounted for 36% of the electricity production in 2007, which was a 29% increase since 2006. The technology of hydropower is still being improved for efficiency. The future holds many opportunities for hydroelectric development especially in oceans. Devices already exist to harness the power from tides, vortices, currents and ocean temperatures. These new strategies may even replace current hydropower structures. For example, due to the environmental drawbacks of tidal barrages, tidal lagoons might be an effective replacement. It will be interesting to see how hydropower continues to evolve and develop, because it's an effective renewable resource that has the potential to supply a large volume of electricity, which can help meet the U.S.'s increasing demand for energy.

## Hydroelectric Plant at Cannelton Locks and Dams Gets Go

by: Michael Chesney, Jun 16, 2009, TriStateHomePage.com

A \$400 million project gets the final piece in place along the Ohio River. Construction crews just got the go-ahead to soon begin adding a hydro-electric power plant to the locks and dams in Cannelton, Ind. Most of the locks and dams along the Ohio River, like the one at Cannelton or the one at Newburgh, are mainly for regulating water-flow. Now, the one in Cannelton will get a powerful upgrade. But, it's not necessarily an upgrade that will have a big impact on the surrounding area. American Municipal Power-Ohio has been working to make electricity at the Cannelton lock and dam for a long time. "The project we're developing is what's called a run-of-the-river hydro-electricity generating facility, which means that it was the water that's naturally flowing the dam," said Kent Carson, with AMP-Ohio. It will be the first of five run-of-the-river plants the AMP-Ohio plans to put at already existing locks and dams along the Ohio River. Carson said retro-fitting the current structure with a power plant is pretty green method of electricity production. It's a more than \$400 million endeavor requiring about 500 construction workers and around 10 permanent employees. It could pump out as much as 84 megawatts of electricity enough to power 84,000 homes for an hour. And, when you hear about a project like this, you might expect to hear next about everything it's going to mean for the area.

But, it's less so the case this time around. For example, AMP-Ohio serves six states. So, the power it'll make here likely won't stay here. "There are actually 79 of those communities in 4 states that will be getting this power," Carson said. And, Chris Kinnett with the Perry County Economic Development Corporation said all that money, all those jobs, also might not mean much either. "As far as any economic development impact, short-term for the community, I don't foresee it happening. I think there are some possibilities from an employment standpoint for the short-term possibly, but they're minimal gains," said Kinnett. He added the real benefit here from his perspective is that a company is choosing to take up the entrepreneurial spirit in the area even in these difficult economic times. AMP-Ohio is using an Evansville-based company for a large portion of the construction. Groundbreaking should happen sometime this summer. And, the new plant should be done in 2012.

(Interesting acronyms. These are typical property owners on licensed projects. Now that they have their place, let's limit everyone else. "I got here first!")

## **FOLKS vows involvement in Duke relicensing**

June 17, 2009, UpStateToday.com, NC

Friends of the Lake Keowee Society (FOLKS) says it is vitally concerned and will be deeply involved in the five-year relicensing process of the Keowee-Toxaway Project — the official name for the Lake Keowee/Jocassee Hydroelectric Project. Duke Energy will hold an open house workshop Thursday, from 4 p.m. to 8 p.m. to outline the relicensing process and answer questions. An earlier report that the relicensing was for the firm's nuclear facility was incorrect. This relicensing is for the firm's hydroelectric project. Duke Energy is planning to deliver its relicensing request to the Federal Energy Regulatory Commission (FERC) by 2014. "This workshop will be an opportunity for the public to become familiar with the relicensing process. We hope to have a large public turnout on June 18," said FOLKS President Bill Graham. Graham said the current Recreation Management Plan (RMP), which is still in the FERC approval process, will control improvements to the public access areas until 2016. The same is the case for the Shoreline Management Plan (SMP). "The relicensing is the last opportunity in many of our lifetimes to impact many of the aspects of how the lake system is managed," Graham said. Graham said FOLKS has several active concerns it hopes to see addressed as part of the relicensing process. Among them are:

- Minimizing commercialization of the public access service areas;
- Accelerating the passive development of the remaining non-leased public access areas to provide easy public access to developed swimming areas and thereby reducing the use of "unofficial recreation areas" that add to the pollution of Lake Keowee;
- Increased emphasis on boating safety;
- Active use of the Boat Carrying Capacity Study included in the Recreation Use and Needs Study (RUNS) and the development of a model to estimate future Boat Carrying Capacity; and
- The desirability of Duke Energy setting aside additional lands, probably without lake access, to provide additional recreational green space.

Graham said FOLKS also plans to ask Duke to review the 150 million gallons per day interbasin transfer to Greenville. "FOLKS has been an active stakeholder in the SMP, RUNS, and RMP and looks forward to being an active participant in this extremely important five-year endeavor," Graham said.

(This is not a good thing!)

## **Hydroelectric project taken over by bond company**

KAIT-TV, Jonesboro, AR, June 18, 2009, By Brandi Hodges

BATESVILLE, AR (KAIT) - After several years in operation the generation of power from nature in Independence County has hit a short circuit. The project has fallen into default on its bond payments, which spells bad news for the county. County Judge Bill Hicks told Region 8 news the county fell into default by several hundred thousand dollars last fall. He said the project wasn't generating as much power as they expected it to and in the case of a hydroelectric project, power means money.

"It's just power that's generated basically off the power of nature," said White River Hydroelectric Project Operations and Maintenance employee Thomas Belford. But sometimes nature isn't always cooperative. When water flows over the units, it generates power. The power is sold to the town of Clarksville, Arkansas. The amount of power generated hasn't been enough to make the payments. When they fell behind on their bond payments Hicks said the bond company, ACA Financial Guarantee Corporation, took over the project. While the county is still a partner in the project, the bond company has taken the lead. Hicks said last week the changeover was made from Transtech that had been working on the project to Alpena. "The ideal level is about anywhere from six inches to a foot coming over that dam and we can generate pretty good power at that point," said Belford. Employees of the White River Hydroelectric Project work to do what they can to keep the project running smoothly and producing as much power as possible. That includes cleaning the debris that flows down the river. In the past couple of months the power generated has greatly increased. That's thanks in part to a cap being put at unit three to lift the water up. "We have put a cap on there that raised the river three foot higher there and got our generation up to where it's a really generating what it's supposed to right now. Right at a 4.0," said Belford.

(The project has an installed capacity of 350 kW and produces about 1.1 million kWh annually)



## In St. Johnsbury, makeover for Arnold Falls dam

June 22, 2009, Boston.com

ST. JOHNSBURY, Vt.—A hydroelectric dam in St. Johnsbury is getting a makeover. Central Vermont Public Service Corp. officials say work started Monday on a \$1.3 million renovation of the 81-year-old Arnold Falls hydroelectric project, which is located on the Passumpsic River. The project involves erecting new concrete dams to fortify the dam, which produces **1.1 million kilowatts** of electricity annually -- enough to power 200 homes. CVPS spokesman Steve Costello says the work being performed by Bancroft Contracting Corp. of South Paris, Maine, is expected to complete the project this fall. It won't substantially reduce hydroelectric output during construction, but the renovation will boost the dam's power output once it's finished.



## Water

### East Bay dam expansion plan raises hackles in Sierra

By Mike Taugher, Contra Costa Times, 06/18/2009

JACKSON — Running through the shade of alders and towering valley oaks in the Sierra foothills, the Mokelumne River flows freely for miles before hitting a reservoir that has been a sore spot here for decades. The source of 90 percent of the water delivered in the East Bay's largest water district, the river upstream of Pardee reservoir is remote and picturesque. It is a popular place for leisurely floats and learning to kayak, with a few mild rapids, one moderate Class 3 run, and miles of remarkably pure water. Last year, federal land managers recommended classifying it as wild and scenic, the highest environmental protection possible for a river. But the East Bay's thirst is putting much of that at risk. The East Bay Municipal Utility District is considering raising the Pardee Dam, which would inundate some of the river and destroy riverside habitat. "We think people in the East Bay don't know where their water comes from," said Katherine Evatt, president of the Foothills Conservancy, an environmental group. "This is not a river people boat for the white-water thrill. They boat it because it's beautiful."

Although raising the dam is far from a done deal, the Oakland-based district's board of directors last week approved an agreement to move forward with investigating the dam-raising option in partnership with water agencies in Calaveras, Amador and San Joaquin counties. So far, EBMUD's would-be partners have not been as eager to move forward and have yet to act on the agreement. Separately, a draft environmental report on how the district will meet water needs into 2040 includes raising the dam in its preferred option, touting the hydroelectric power from the gravity fed system as a green, low-carbon footprint alternative. River advocates say raising a dam is anything but green. "For East Bay MUD, which serves water to some relatively sophisticated people, it's kind of a return to a '20s, '30s and '40s mentality," said Ron Stork, senior policy advocate for the environmental group Friends of the River. "You're going to take more water from a river that has nothing left to give." In the Sierra foothills, the plans also have reignited the embers of animosity that began in the 1920s when the district condemned land to build the reservoir and then bought some of the region's water rights in the 1950s for a price that, in retrospect, led to severe seller's remorse. And then there were the water district's attempts in recent years to keep kayakers out of the river immediately upstream of the reservoir. "People always said they didn't want us to have access to it because they wanted to flood it," said Chris Wright, the Foothills Conservancy's executive director. Now, Wright says, those fears are being realized. "We have this colonial power that comes in and extracts our resources and we don't have any voice in what they do to our river," said Wright.

The Oakland-based water district delivers the Sierra water to 1.3 million in Contra Costa and Alameda counties. Reliance on a single river and a dam built just before the Great Depression leaves the district vulnerable to droughts. Even though the district plans to complete its Freeport water project with Sacramento this year — at a cost of more than \$500 million — it says it needs more drought protection. "Freeport is very helpful, but it doesn't solve the problem for the next 20 years," said Alex Coate, EBMUD's director of water and natural resources. The district can offset growth by more efficient use of water and expanded recycling projects, but it still has two challenges: the district's board of directors wants to cut a worst-case scenario for water rationing from 25 percent to 10 percent, and its water supply is expected to decline during droughts as the demand for water grows in the foothills, where some water rights have priority

over the East Bay. As the district looked for ways to meet its water supply through 2040, expanding Pardee was an obvious option because, for years, EBMUD and water agencies in Calaveras, Amador and San Joaquin counties have been in talks to end disputes over the Mokelumne's water, Coate said. Those talks led to discussions of possibly raising Pardee and using it to store water for foothills water agencies and to fill aquifers in San Joaquin County. "We would like to use the regional project to get peace on the river," Coate said. Other options, like buying into a less controversial off stream reservoir expansion being considered by the Contra Costa Water District, would not settle those water disputes, he said. **To survive droughts in the next three decades, the district's favored alternative would study expanding Pardee and considering desalination plants with other Bay Area water districts.** Desalination, which is often considered a panacea, uses a lot of energy and creates a disposal problem for the concentrated brine wastewater. "We don't need both," Coate said. Desalination also would do nothing to address water rights disputes on the Mokelumne. But taking more water out of the Mokelumne could raise its own problems. The river is an important tributary to the Delta, which is in a severe environmental decline, at least partly due to water use. In its 644-page environmental study, EBMUD did not consider how raising Pardee Dam might affect flows into the Delta. Coate said that analysis would be done if a decision is made to replace the dam.

(Oops!)

## Consumers Energy says dam didn't flood B-93 Birthday Bash

Posted By: Phil Dawson Posted By: Chris Zoladz, 6/23/2009



IONIA, Mich. (WZZM-TV) - **Consumers Energy says their hydroelectric dam on the Grand River near Muir had nothing to do with the weekend flood downstream at the B-93 Birthday Bash in Ionia.** The utility says the Webber Dam doesn't hold back or release water, it just directs the Grand River over turbines to generate electricity. Experts say the Maple River that flows into the Grand between the dam and Ionia is a more likely explanation. The Maple River was full of rainwater after three rounds of storms Friday. "I noticed the Maple and Grand were both extremely high," recalls Rick Steele, who lives near the rivers in Muir. "I just had a hunch we were going to be in trouble down in Ionia with the Birthday Bash. **Over 1,000 cars are still marooned in the parking lot at the Ionia fairgrounds.** The city manager

says the river must recede before owners can claim their vehicles. He also says repair bills are between the car owners, their insurance companies and radio station B-93.

(It's getting serious. When farming communities have 40 + % unemployment it's time to set politics aside. When a minnow seems more important, it's time to say - people do matter!)

## Lawmakers block water reform

**Constituents' growing anger making it harder for politicians to hide**

FresnoBee.com, Jun. 21, 2009

The politicians are scrambling for political cover as California's water crisis gets more serious because of a third year of a drought and environmental restrictions on how much water can flow in the Golden State. **They don't want their constituents to know they've been ducking this issue for years so they periodically fire off news releases demanding action.** But they are the ones who have been standing in the way of getting anything done. **That dirty little secret is finally getting out to California residents, and many are becoming angry.** In Fresno last week, the water debate got rowdy and at one point there was the possibility of physical confrontations among some protesting the government's lack of action. All this makes fine political theater, but it's time to tone down the rhetoric if we are going to get a comprehensive water plan that meets all the needs of California.

Gov. Arnold Schwarzenegger and the Legislature have an opportunity to come together behind a plan that would create surface storage, expand underground storage through water banking and dramatically increase water availability through conservation efforts. **But getting this agreement would mean sitting down with the warring factions, chiefly environmentalists who oppose dams and farming interests who think dams are their salvation.** Both sides have overstated their cases, and that gives Schwarzenegger and Democratic leaders in the Legislature a lot of room to negotiate. **But it also will take the cooperation of the federal government.** The feds must help pay for new water projects and take another look at environmental laws

that restrict water flows. California's congressional Democrats, especially House Speaker Nancy Pelosi, cannot remain silent on this issue any longer. Water politics are complicated, but a solution can be found because everyone knows the issues, and what's at stake. The various sides have been making the same arguments for decades. They must be willing to compromise because stubbornness is the only thing standing in the way of a comprehensive water plan. We believe that even in a drought year there is adequate water available for farm, urban and environmental uses if we manage this crucial resource properly. That means having balance in our water policy and a willingness to find common ground. California's population has doubled since the last major water project was built in the state, and demand for water has gone up by an even greater factor. The political pressure for a water deal has been increasing because big water users in Southern California cities have become concerned. It was one thing when Los Angeles political interests could side with environmentalists against Valley farmers. But now L.A. residents are facing water rationing, and that's making their elected leaders nervous. The time couldn't be better for a comprehensive water plan. Let's step back from the finger-pointing and get this resolved for all Californians.

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