Consultant flags issues at Great Falls dams

An exhaustive 69-page checklist created by The Essex Partnership looks at information provided by NorthWestern regarding its projections for the purchase of the dams pointing out concerns, potential remedies and flagging problems with the potential to incur costs greater than $500,000. The analysis is based entirely on information provided to the PSC by NWE. Essex specifically notes that any concerns are rooted in insufficient information in the docket, not on-site analysis by Essex engineers. The checklist divides analysis of the facilities into four categories: Civil, electrical, ...
mechanical, regulatory compliance and environment. Under each category, the consultants examine more detailed areas.

In looking at Black Eagle Dam, Essex found significant potential cost in the dam itself, the spillway and two other areas of the structure. It also questioned Black Eagle’s power rating and reliability. The checklist noted that the dam’s “windings,” rotating wire coils that are part of the generator, and the generator’s rotor are aged and could need rewinding. The report indicates that based on information available, a catastrophic failure could occur if rotor components are not replaced. Concerning Black Eagle’s 1927 turbine, Essex engineers state that there’s “insufficient data to confirm the adequacy of the proposed budget and schedule for the turbine overhauls.”

Essex also found that NWE may have underestimated the cost of complying with environmental regulations and possible costs associated with its proximity to the former Anaconda Copper Mining Co. refinery and smelter, which is an EPA Superfund site.

The consultants also questioned costs for the dam, power rating, transformers, turbines, windings and environmental compliance for Cochrane Dam. At Morony Dam, Essex questioned the cost projections on the spillway, powerhouse intake, power rating, windings, rotor and turbines. The engineers also found possible under budgeting for environmental compliance. The consultants found upgrades to remote monitoring and control capability at Morony, scheduled for 2013, were not performed. Figures for upkeep of Rainbow Dam’s spillways were questioned, Essex said, as were the projections to maintain power ratings and environmental compliance. Not surprisingly, Essex rated as “unlikely” the potential for significant cost in the electrical and mechanical categories for Rainbow. A new 60-megawatt single-turbine powerhouse went online there only last July. Costs for maintaining Ryan Dam’s intake and spillway structures, windings and power ratings, were deemed short. Consultants also determined that one of Ryan’s old transformers showed a high level of decomposition and needs additional investigation, with possible replacement of a generator step-up transformer required. And, even though turbine-generator upgrades at Ryan are scheduled for 2019 and 2022, there’s “insufficient data to confirm the adequacy of the proposed budget and schedule” to keep the turbines in top condition, Essex said. The firm also indicated possible under budgeting to maintain environmental compliance.

(Don’t know why this is pretty amazing, maybe it’s because the dam is 468 feet high! Great arch dam photo. Hoover rarely spills.)

AmericanRivers: Pretty crazy to see this water release over Morrow Point Dam in CO. Could be another 31 yrs before it happens again

coyotegulch.wordpress.com, June 16, 2014

(A dam is a dam is a dam!)

NC Senate Considers Coal Ash As Regulators Find More Leaks

By Ben Bradford, June 16, 2014, wfae.org

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
The state has cited Duke for 11 leaks at the Riverbend, Allen, Marshall, Cliffside, and Buck plants. Bridget Munger, spokeswoman for the state Division of Dam Safety, says they range in size and significance. “We are finding an assortment in different places and of different amounts,” says Munger. “In some cases it’s a little bit of seepage, in some cases it might be that a pipe is showing signs of deterioration but there’s no leakage yet, and in other places we’re finding more substantial leaks.”

In all cases, regulators found them in systems of pipes designed to filter overflow water from the pond into nearby rivers or lakes. One at the Cliffside plant in Cleveland County is leaking over a thousand gallons a day. The state’s citation describes a makeshift system of sandbags and PVC pipes collecting the spilling water.

Regulators are not concerned about contamination, since the leaking water is intended to exit the pond, anyway. The larger concern is that dams are made out of earth, and the pipes run through them. Leakage could eventually compromise those walls. Munger says regulators caught the problems in time, after requiring Duke to install video cameras in the pipes, after a broken pipe caused the coal ash spill at Dan River in February. “We are lucky in that we requested these videos at all plants, and so now we are seeing potential problems before they become a serious issue,” says Munger.

Duke has 30 days to file plans to fix the pipes.

**Senate discusses coal ash**

The North Carolina Senate is considering how to close coal ash ponds around the state. The Senate proposal adds deadlines to a plan Governor Pat McCrory offered in April, but also dilutes some environmental protections. It would sort the ponds into three categories—high, medium, and low-risk, and require closure within 5, 10, and 15 years respectively. The state Department of Environment and Natural Resources had supported the governor’s plan, but Secretary John Skvarla endorsed the new legislation with a few caveats. “I think that some of the timelines, especially the short ones, the 30 and 60 day ones might be a little bit tight, but they’re fairly minor relative to the grand scheme of things,” Skvarla told senators. “I’m sure we can work out some of those details.”

Duke Energy expressed concerns about the aggressiveness of the timeline, while environmental groups quickly panned the legislation, pointing out it no longer requires removal of ash away from drinking water supplies—even at four ponds where Duke has proposed it. Instead, Duke could either remove the ash or convert the ponds into landfills. The Senate committee meets again today and will likely vote on the plan.

**(That’s a big dam gate!)**

**Dam gates bound for California to cause delays on I-5 Wednesday**

By News Staff, June 17, 2014, kval.com

Cottage Grove, Ore. - Massive gates bound for Folsom Dam near Sacramento will cause delays on Interstate 5 south Cottage Grove and north of Sutherlin on Wednesday night. Between 10:45 p.m. and midnight, northbound traffic may be delayed up to 45 minutes.
Southbound traffic will be delayed approximately 30 minutes. The gate measures 43 feet in length, about 23 feet in width and 14 1/2 feet in height. The overall length of the truck and trailer hauling the gate is 142 feet. The truck, trailer and gate combined weigh more than 234,000 lbs. The Oregon DOT is coordinating with Oregon-based carrier Gresham Transfer to safely transport the gates to California. The gates were manufactured by Oregon Iron Works at their facility in Vancouver, Wash.

About the slowdown
"Rolling slowdowns" will be used in both directions on I-5. Motorists entering the freeway between Sutherlin (Exit 136) and Cottage Grove (Exit 174) should watch for flaggers at each interchange on-ramp. The slowdowns are necessary because the dam gate will be passing through a construction zone south of Cottage Grove in which the travel lanes are restricted to 19 feet in width, ODOT said. Northbound traffic will be held while the gate is driven south at speeds of 20-30 mph through the 7-mile work zone. This will be the fourth of 10 dam gates that pass through Oregon. The first three were hauled down I-5 in May, before lane and width restrictions were implemented south of Cottage Grove. The other gates will be transported later this summer.

TVA making improvements to East TN dams
WBIR Staff, WBIR, June 18, 2014, wbir.com

(WBIR) TVA is working on several projects to help make some of East Tennessee's dams stronger for years to come.

Crews are inserting new anchors, or massive bolts, into the Cherokee and Douglas dams. The massive bolts will be drilled through the dam into the rock below. The project is expected to be finished in December. TVA officials say dam upgrades are necessary from time to time as disaster predictions change and knowledge about dam safety improves. "The reason we do this is because requirements for the analysis, the seismic input, the height of the floods change over time, precipitation, changes as our knowledge becomes larger. So we're making the dams stronger for future generations," said John Kammeyer, TVA vice president of civil projects. Crews also are working to replace temporary barriers meant to add height to four East Tennessee dams, including Cherokee. Those projects will lead to some adjustments at TVA recreation areas and parking lots. Signs in those areas will alert visitors to the changes.

(Guess no water would be a problem!)

Dam causes problems with McKenzie residents
By Jordan Hall, wbbjtv.com, Jun 20, 2014

McKenzie, Tenn. -- A local lake vanishes within two weeks after gushing water from heavy rains caused a dam to burst. Residents stood at the edge of the lake in shock at the site. "You know, this is the fishing spot in McKenzie for children and adults," Teri King said, a McKenzie resident. King and her family have enjoyed Carroll Lake for more than 30 years, and said the sight is
upsetting. “Everybody in McKenzie that's associated with Carroll Lake is devastated. This is probably worse than any storm that's come through here," King said.

A lake that took years to fill up has emptied in less than 2 weeks, after storms early this month forced too much water to push through the levy and damage the dam's gates. "The thing was built in the 1940s, so they'll have to take measurements on the gates and figure out how to rebuild the new gates and then a crane to replace them," Alan Peterson said, West TN Regional Manager of Tennessee Wildlife Resource Agency. McKenzie residents said whether people fish in the area, it was a great place to come for all sorts of recreational activities, and now community members have to take those activities elsewhere. Peterson said although it will take years to get the lake back in order, there will be improvements. "Hopefully we can take advantage of this problem to do some work on the lake bottom and make the fishing even better once we reopen it," Peterson said. King said in the meantime, residents will be at a loss. "This was the place to have outside activities, because the lake was pretty. It's gonna be missed until it's back up and running again for sure," said King. TWRA says for now, residents will be asked to fish at the Thousand Acre Lake in Carroll County.

Hydro:
(Small, but does a lot of work.)

OURAY COUNTY Hydropower online at Ridgway dam
Submitted by Ouray County Pl, 06/14/2014 - ouraynews.com, By Bill Tiedje

Ridgway dam is now one of only three percent of dams in the U.S. that produce clean, renewable energy using hydropower. The dam's generation facility, operated by Tri-County Water Conservancy District, began regularly producing electricity for the region this spring.

Electricity created from the hydropower project will be sold to Tri-State Generation and Transmission Association (TSGTA), delivering power to homes in Ouray County as well as to other Western Slope communities, including Delta and Montrose. The city of Aspen will also purchase a significant portion of the electricity through the Municipal Energy Agency of Nebraska (MEAN). "We're producing local power, and it is going to generate local consumers," Mike Berry, general manager of TCWCD, said.

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
Dam failure called county’s top threat
June 15, 2014, by Gary Budzak - civitasmedia.com

Dam failure is considered Delaware County’s biggest potential disaster, according to the Emergency Management Agency’s latest mitigation plan. “There are 39 earthen dams and reservoirs located within the county that could result in significant losses if they were to fail or become inundated,” states the Delaware County Multi-Hazard Mitigation Plan. The plan ranks a number of potential threats to the 175,000 residents of the county, based on probability of occurrence and impact. In descending order after dam failure is flood, tornado, severe winter, pandemic, severe summer, utility failure, drought, terrorism, hazardous materials and civil disturbance.

For each hazard, the plan has a mitigation strategy on how to “reduce the probability of damages or losses of existing assets, people, critical facilities-infrastructure and publicly owned facilities.” Among the actions for dam failure are updating warning systems and instituting a public awareness program. “It’s not so much a response plan, as it is a reference plan,” said Sean Miller, director Delaware County Office of Homeland Security and Emergency Management. “It would not be something that we would not necessarily look at in a disaster. It’s a guide or a rough road map for how we should reduce or eliminate the threats posed by hazards before they happen,” he said. Every five years, the mitigation plan has to be approved by the Federal Emergency Management Agency. Delaware County’s latest plan was extensively overhauled over the past two years, he said. A political subdivision must adopt the plan in order to be covered by it for a five-year period, something Delaware City Council did in April. “The big takeaway for any county and local political subdivisions adopting such a plan for the public would be that the entities are taking a serious look at the threats and hazards that could theoretically happen,” Miller said. “I’ve been happy to have the input from the local political subdivision.

Dam fails at Blue Mounds State Park
Jun 15, 2014, by Josh Chilson, Producer - ksfy.com

The water levels at Blue Mounds Lake in southwest Minnesota are dropping after a dam on the lake failed after the park received 7 in. of rain. Blue Mounds State Park Manager Chris Ingebretsen says a dyke on Blue Mounds Creek gave way Saturday night, leading to a dam becoming overwhelmed. Though the dam held, the river carved a channel to the side of it and broke through. Water began flowing freely out of Blue Mounds Lake. Ingebretsen says the water levels on the lake will fall significantly due to the breach. The swimming beach at the park is closed until further notice. The campgrounds on the park will remain open, however. A timeline on when the dam will be repaired has not been set yet.

Hydro project breaks ground at Allison Creek site
CVEA tunneling through to bring run of river project online

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
Contractor Harris Sand & Gravel began earthwork on the new Allison Creek hydroelectric project that Copper Valley Electric Association hopes will be online by 2016. Copper Valley Electric Association, CVEA, Alaska, says ground work is underway for the long-planned Allison Creek Hydroelectric project. According to Sharon Crisp, CVEA spokeswoman, the association plans to hold an open house at the site for co-op members on July 29. The project has been in the planning stages for several years and is designed to extend the amount of time CVEA can generate electricity from non-fossil fuel sources. At its annual membership meeting in April, CVEA said that once the project is online, it will increase hydroelectricity generation by the cooperative to 64 percent, up from its current 50 percent and will displace 725,000 gallons of fuel annually.

The Valdez Star asked CVEA what the final costs will be for electricity for co-op members and for details of how the project is financed. The questions were answered by Jaime Matthews, the manager for administration and finance for CVEA. Questions are printed in bold, with written responses in regular type.

Foremost, what is the current projected cost to members for a kwh of electricity from the Allison Creek hydro project? One kWh for Allison Creek is 13.75 cents for the expected 15,057,000 kWh's out of the project. This replaces one kWh of diesel fuel at 24.7 cents per kWh. At the 2014 annual meeting the slideshow states that the total cost of the project is $49 million. A total of $22 million is being paid for by grant funding, with $27 million to be financed. It then lists $35 million in debt. Does this number reflect the $27 million plus the cost of financing? $35 million is the borrowing capacity for this project. We only plan to borrow $27 million.

Is the $35 million debt already encumbered?

Access to the Allison Creek hydro project includes a tunnel, which adds $9 million to the cost. No, this is our borrowing capacity.

How is it financed?
CVEA has the construction financing approved through NRUCFC, our Cooperative Bank that holds 100 percent of CVEA's debt. Can you elaborate on this, such as possible ways to reduce the cost of financing? With $22 million in grant funding, this is 45 percent of the project costs. It is unlikely CVEA will get additional grant funds. We are presently monitoring interest rates.

(That's one ugly hole in the ground. Covering it with water may be a good thing! Lots of opposition.)

Eagle Mountain hydroelectric plant plan gets license
Ian James, The Desert Sun, June 20, 2014, desertsun.com

A controversial plan to build a hydroelectric plant in the open pits of an old iron mine was granted a license on Thursday by federal regulators. The decision to permit the project at the abandoned Eagle Mountain mine prompted strong criticism from residents who say building two large reservoirs in the desert would severely deplete the water supply and harm the wildlife in adjacent Joshua Tree National Park.
The decision by the Federal Energy Regulatory Commission was a significant step in years of efforts by Santa Monica-based Eagle Crest Energy Company to win government approvals and financial support for the project. Significant hurdles remain, however, for a project that would cost more than $1.5 billion and that has drawn criticism from other federal agencies as well as environmental groups.

"This is a very important milestone that gives us a lot of momentum, and there are individuals with the utilities that are very excited about this project," said Steve Lowe, president of Eagle Crest Energy. "The issuance of the license is the culmination of a very long environmental review, which includes many, many mitigation measures to ensure that the environment is protected as we go forward with the project." The proposed Eagle Mountain Pumped Storage Project would involve pumping water from a lower reservoir to a higher reservoir during times when electricity from nearby solar plants and wind farms exceeds demands, and letting the water run downhill to generate power during other times when electricity is needed. In order to fill the reservoirs, an estimated 28,000 acre-feet would be pumped from the aquifer in the Chuckwalla Valley over a period of four years. That's about 9 billion gallons, or enough to supply water for a year to more than 40,000 homes with typical levels of water use. Lowe said that factoring in evaporation over 50 years, about 100,000 acre-feet of water would be needed. "It's less than 1 percent of what is estimated to be in the aquifer right now," Lowe told The Desert Sun in a telephone interview. "It's actually quite reasonable and responsible for what we're achieving in reduction of greenhouse gases." A transmission line would need to run through Bureau of Land Management property, and that agency has yet to grant a permit. The U.S. Department of the Interior has raised concerns, requesting in a 2012 letter that federal and state agencies reconsider permitting the proposed project. The letter said that the National Park Service identified "serious omissions and deficiencies," and pointed out that groundwater levels have already been dropping in the area. "We're reviewing the license and we have significant concerns," Andrea Compton, the acting superintendent of Joshua Tree National Park, said Thursday in response to the commission's decision. Some residents who live near the old mine called the decision to issue a license an outrage. "This is a death knell to the Chuckwalla Valley. They will use up all of our water," said Donna Charpied, an organic jojoba farmer who during more than two decades helped rally opposition to a plan to turn the mine site into a landfill. That landfill plan suffered a final defeat last year, when the Sanitation Districts of Los Angeles County decided to scrap long-running negotiations to buy the site 50 miles east of Indio. Charpied said she thinks the proposed hydroelectric plant would be "just as damaging" as the landfill plan. "Both projects have long tentacles of destruction," she said, adding that she fears pumping large quantities of water into the abandoned mine would lead to toxic leakage and foul the aquifer. "They blasted for 50 years. It is so highly fractured that water's going to go through there like a sieve." Lowe said the pits would be effectively lined with tailings and other materials. He said it will be safe.

The company also agreed to additional measures to monitor and safeguard water supplies, Lowe said. Among them, he said, the company has pledged to pay any additional pumping costs or dig new wells if necessary for any residents whose wells are affected by declines in water levels. Charpied, who lives about 2 miles from the mine site, accused the company of being deceitful. "It's just despicable that they're doing this to our community." She disputed the claim that only 1 percent of the available groundwater would be pumped from the desert aquifer. "These studies are designed to give them what they want, and FERC, which is the Darth Vader of all regulatory agencies, just goes along with it. And we are in the worst drought in history. We are in emergency stages, and they're going to build this boondoggle," Charpied said. "There will be lawsuits against this, I guarantee it." Organizations opposing the plan include the Center for Biological Diversity and the National Parks Conservation Association. "We are shocked to see FERC permit this
terrible project, which will doom the local ancient aquifer in the Chuckwalla Valley and permanently change the desert landscape in Joshua Tree National Park,” said Ileene Anderson, a senior scientist with the Center for Biological Diversity. Critics say building large reservoirs in the desert near the national park would throw its natural ecosystems off kilter, giving a boost to invasive plants as well as animals such as ravens, which pose a threat to desert tortoises by eating their young. “This is a frighteningly bad idea,” said David Lamfrom, California desert senior program manager for the National Parks Conservation Association. “There has been a really loud outcry against this project because people are really concerned that this project will inherently contain many of the same threats as were posed in the Eagle Mountain landfill, which so many people fought for so long to eventually defeat.” Mark Butler, who recently retired as superintendent of Joshua Tree National Park, agreed that introducing reservoirs would open up the area to water birds and other species that don't naturally live in this area of the desert, posing threats to animals such as desert tortoises. "It's a misguided project,” Butler said, adding that he questions the plan to rely on pumping groundwater.

For several years, Eagle Crest Energy has been talking with utilities about the possibility of selling them power from the proposed plant. “They’ve been waiting until we reached this milestone to begin more formal conversations,” Lowe said. The hydroelectric plant would be built on about 3,000 acres. The iron mine is owned by Kaiser Ventures, and last year its shareholders voted to liquidate the company's assets. "Now that FERC has issued a license, which just happened today, Kaiser is going to be evaluating its options with that new information," said Kay Hazen, who represents the company locally. Henry J. Kaiser started mining iron ore at Eagle Mountain in the late 1940s and, in its heyday in the 1950s-1970s, the site was a thriving business, supporting a community of thousands of workers and their families. Plans for the 4,654-acre landfill, touted as the largest in California, began soon after the mine closed in 1982, sparking opposition and more than two decades of legal challenges from residents and environmental groups. The mine was originally part of Joshua Tree National Monument, the precursor of today's national park. Environmentalists have long campaigned to have the site returned to the park, citing a 1952 law that required the land to revert to public ownership if mining activity stopped for seven years. Charpied said she thinks the old mine ought to be turned into a national historic landmark.

Water:
(If it's water or power!)
Organization calls for moratorium on Hydropower production at Lake Texoma
Jun 13, 2014, By Meredith Yeomans, Reporter - kten.com

Denison — A local organization is launching a campaign to temporarily end Hydropower production at Lake Texoma. The organization Save Lake Texoma began earlier this year and has generated plenty of support. Now the group is focusing on putting a temporarily stop the lake's main user. The Southwestern Power Administration, or SWPA, owns two Hydropower generators at the Denison Dam. The generators use water from Lake Texoma to make electricity for hundreds of

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
thousands of homes. But because water levels are so low at the lake, the Army Corp of Engineers says the generators have hardly been used in the past two months. "The last day they generated two consecutive days was back in the first of March," BJ Parkey said. Parkey is the assistant lake manager for the Army Corp of Engineers Lake Texoma. SWPA announced last month it would continue to keep Hydropower generation low through the summer.

But the organization Save Lake Texoma is now calling for a moratorium at the lake for the foreseeable future "We want a moratorium. We want them to find alternate sources and if that involves looking at the states of Texas and Oklahoma to provide additional funding for them to find those alternate sources, that's what we want them to do," Willis said. Because of recent rain, the Parkey says water levels have risen about eight inches in the past eight days. Stephen Willis with Save Lake Texoma is concerned SWPA will see that as a sign it can begin using more water. "If we don't get another bit of rain this summer and they take it down another 9.5 feet the lake will be at 600 [feet]. That'll be disastrous for our lake economy," Willis said. But the Corp, which maintains the generators, says that's not likely to happen. "That being said if critical needs become available whether it be to prevent brownouts or blackouts or is economically advantageous to produce power in Lake Texoma, then they will," Parkey said. It's that possibility Willis wants to shore up. Save Lake Texoma plans to officially launch its campaign for a moratorium Friday, June 20 in Durant. The event will be held at the Holiday Inn "Magnolia Room", 613 University Place at 7pm.

(Gee, it's good to know what we already know!)

**Study of Nebraska nuclear flood risks narrowed**

*By Josh Funk, Associated Press, June 16, 2014, sfgate.com*

Omaha, Neb. (AP) — Regulators have told the utilities that own Nebraska's two nuclear power plants not to worry about some unlikely scenarios under which upstream dams might fail, even though the regulator had ordered the utilities to study the flood risks facing the plants. The Omaha and Nebraska Public Power Districts are re-examining flood threats at their nuclear plants that sit on the Missouri River as part of an industrywide review of unlikely safety threats after the 2011 meltdowns at the Fukushima Dai-ichi plant in Japan.

The Nuclear Regulatory Commission told the utilities this month that they didn't need to consider two of the five dam failure scenarios experts developed. NRC officials didn't immediately respond Monday to questions about the decision. Officials have been concerned about the potential for flooding at the two nuclear power plants since the historic flooding along the Missouri River in 2011. OPPD's Fort Calhoun nuclear power plant sits on the banks of the river about 20 miles north of Omaha, and was surrounded by water during the flooding three years ago. NPPD's Cooper nuclear station sits on the river's banks near Brownville, in southeast Nebraska. It was also threatened by the 2011 flood, but the plant sits on more elevated land and is roughly 100 miles downstream from Fort Calhoun, so the water was less of a threat. In addition, an internal NRC report that was made public in 2012 estimated that the failure of an upriver dam could cause flooding that is 46 feet higher than Fort Calhoun is prepared to handle in a worst-case scenario. Adding to the concerns about Fort Calhoun is the fact that regulators forced the plant to remain offline from April 2011 until last December while they addressed several regulatory violations and made sure the flood damage was repaired. OPPD had to deal with a small electrical fire in June 2011, address structural concerns and retrain workers to respond aggressively to safety concerns.
Mike Ryan, a spokesman for the environmental group Clean Nebraska, said he's worried that the study will downplay the risks posed by the upstream dams on the Missouri River. But he said he's not sure if the utilities could ever adequately prepare for such a scenario. "With the utilities being in charge of the studies, I'm afraid they're going to paint the most optimistic picture possible," Ryan said. Neither the OPPD nor the NPPD responded to questions about the flood study that were submitted to spokesmen for the agencies earlier Monday. In the past, both utilities have stressed that they have plans in place to protect the nuclear plants from severe flooding. And the utilities and regulators say it is extremely unlikely that a dam will fail. Independent expert David Lochbaum, of the nonprofit group the Union of Concerned Scientists, said it appears regulators decided the flooding scenarios were similar enough that the utilities don't need to prepare for all of them. Regulators have given other nuclear plant operators in Tennessee and South Carolina similar guidance as they evaluate flooding hazards. Lochbaum said he's glad utilities are looking at the possibility of dam failures and not strictly relying on the dam remaining intact to protect nuclear plants. "The protection measures taken against some flooding measures also provide protection against the dismissed scenarios," said Lochbaum, who oversees the nonprofit's Nuclear Safety Project.

(Oh, oh.)

**Dam High Flows About More Than Fish**

By Laurel Morales, June 17, 2014, fronterasdesk.org

The federal government just released 10 times the normal flow of the Green River from Flaming Gorge Dam to help an endangered fish and to boost hydropower downstream at Glen Canyon Dam on the Arizona-Utah border. Environmentalists said they're happy for the fish, but Lake Powell isn't the best place to store water. A recent study showed as much as 300,000 acre feet of water stored in the reservoir is lost to ground seepage.

The Glen Canyon Institute's Eric Balken said Lake Mead near Las Vegas would save more water. "By filling Lake Mead first we could save a huge amount of water and we could help restore the ecosystem in Glen Canyon and Grand Canyon below," Balken said. The Glen Canyon Institute would like to decommission that dam and to restore the natural environment in Glen Canyon. Dam operators are concerned the decline of Lake Powell due to drought and climate change could jeopardize hydropower generation. Glen Canyon Dam supplies electricity to more than 5 million people in the Southwest.

**Environment:**

*(Another benefit of hydro!)*

**Flora and fauna hike on the solstice at PPL's Lake Wallenpaupack**

Jun. 15, 2014, neagle.com

Lake Region, PA - Is there a better way to celebrate the start of summer than with a guided nature walk? Come explore the summer wildflowers and critters on Saturday, June 21, at 10 a.m., along the Wallenpaupack Creek Trail with naturalists Jane Frye and Rob Holt. The event is at the PPL Wallenpaupack Environmental Learning Center. We'll see what's blooming, like thistle, crown vetch, bouncing bet and raspberry brambles. Rob will help us scout and identify wildlife like chipmunks, great blue herons and other creatures that cross, or have crossed, our path. Registration is not required. For more information, contact PPL at (570) 253-7001 or email pplpreserves@pplweb.com.

The Wallenpaupack Environmental Learning Center is part of PPL's Wallenpaupack hydroelectric project, built in 1926 near Hawley. The learning center is off Route 6 just east of the intersection of Routes 590 and 6 and next to Wallenpaupack Area High School. The hydroelectric plant provides...
clean, renewable energy in times of high electricity demand. The learning center offers programs and workshops to teachers, students and the public on the environment, conservation and the lake. At their environmental preserves, PPL works to protect the land, care for endangered species and habitats, and provide public recreational facilities for people to learn about and enjoy nature’s beauty. For more information about PPL’s environmental preserves, visit www.pplpreserves.com. To view PPL Preserves' calendar of events, please visit www.pplpreserves.com and select Events at the bottom of the page.

(You could have bet a paycheck on this one! 17 years!)

**Latest federal plan for Columbia salmon challenged**
By Jeff Barnard, Associated Press | June 17, 2014 | chron.com

Grants Pass, Ore. (AP) — Conservation groups and salmon advocates have challenged the Obama administration’s latest plan for making Columbia Basin dams safe for salmon. The challenge was filed Tuesday in U.S. District Court in Portland against the National Oceanic and Atmospheric Administration’s Fisheries Service, which oversees salmon protection, and the U.S. Army Corps of Engineers and U.S. Bureau of Reclamation, which operate the dams. It was the seventh challenge since the lawsuit was originally filed in 2001. Joseph Bogaard of Save Our Wild Salmon said the plan is "virtually indistinguishable" from the one overturned by a federal court three years ago. A federal judge rejected that plan because it relied too heavily on habitat-restoration plans that were not specific. Bogaard said efforts to develop a better plan through collaboration, rather than litigation, were rebuffed. NOAA Fisheries said in a statement that the agency has made "clear and demonstrable progress in rebuilding salmon and steelhead runs throughout the Columbia Basin," and it expects progress to continue. "We are not surprised, but we are disappointed at the prospect of yet another cycle of litigation, which only distracts from implementing projects on the ground," spokeswoman Connie Barkley said in an email. "We will continue to work collaboratively with our many regional partners to ensure the protection and restoration of these important fish and their habitats now and well into the future, and we encourage all to join in that effort."

The Corps of Engineers and Bureau of Reclamation had no immediate comment about the new legal challenge. The plan, required by the U.S. Endangered Species Act and known as a biological opinion, is the fifth filed by the government since Columbia Basin salmon went on the endangered species list in the 1990s. It balances the protection of endangered salmon against the operation of the hydroelectric dams, which provide much of the power used in the Northwest. It acknowledges that the dams imperil endangered salmon, but it offers actions to make up for the losses. Four previous plans have all been rejected by a federal judge. While the return of adult salmon to the Columbia has surged in recent years, the great majority were bred in hatcheries, and thus are not covered by the Endangered Species Act. Some runs of wild fish have continued to struggle. A decade ago, a federal judge ordered the government to increase the amount of water spilled over the dams, which increases the numbers of young fish that survive their migration to the ocean but reduces the amount of hydroelectric power the dams produce. The government has since resisted pressure from salmon advocates to increase spill even more, saying it wasn’t needed. "A 17-year scientific study demonstrates that spill is our most effective immediate measure to increase salmon survival across their life cycle," Liz Hamilton, executive director of the Northwest Sportfishing Industry Association, said in a statement. "The salmon are talking, and it's hard to fathom why (NOAA Fisheries), the science agency charged with restoring them, isn't listening."

(Cheap pork barrel for water and hydro!)  
**Bowman Dam bill clears Senate hurdle**  
**Committee approves bill reallocating water in Prineville Reservoir**  

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Copy obtained from the National Performance of Dams Program: [http://npdp.stanford.edu](http://npdp.stanford.edu)
Washington, DC — The Senate Energy and Natural Resources Committee approved a bill Wednesday that would authorize the release of unallocated water behind Bowman Dam and create a water management plan for dry years.

The Crooked River Collaborative Water Security Act would enable the release of 5,100 acre-feet of water into the Crooked River, which would allow the city of Prineville to use the extra water in the river to offset groundwater needed to supply an additional 500 homes in the city. Those homes are currently using shallow wells and septic systems. The bill, introduced by Sen. Jeff Merkley, D-Ore., and cosponsored by Sen. Ron Wyden, D-Ore., would also move a Wild and Scenic boundary line from the middle of the dam about a quarter of a mile down the river. This administrative change would open the 240-foot-high dam to hydropower development, which proponents say could bring 50 construction jobs to the area for two years. Stakeholders would also create a dry year management plan to help decide whether and how much additional water should be released at other times. This provision would authorize the Bureau of Reclamation, which controls the flow of water from the dam, to consult with the Confederated Tribes of Warm Springs and the state of Oregon and release as much of the roughly 80,000 unallocated acre-feet — about half the water in the reservoir — deemed necessary to promote healthy fish and fisheries downstream, where steelhead have been reintroduced.

The bill now heads to the Senate floor for an as-yet unscheduled passage vote.

"This legislation is all about providing water certainty and laying a foundation for economic growth in Prineville and across Central Oregon," said Merkley in a prepared statement. "The stakeholders have done great work in coming together around a common vision after years of division." Wyden said the bill is an example of Oregon managing Oregon’s business. "This bill uses an innovative approach, supported by the community of Prineville, local irrigators who will gain certainty for their livelihoods and conservation groups and the Warm Springs Tribes due to the benefits to fish and wildlife," Wyden said in a prepared statement. During Wednesday's hearing, Sen. Jim Risch, R-Idaho, offered an amendment to the bill that would have removed the allocation of additional water under the locally created management plan. "The difficulty I have with this is that the bill appropriates all the water in the river," he said. "What happens in Oregon, as far as I’m concerned, is Oregon’s business. The difficulty is that this is going to be used as a precedent." Wyden, a former chairman of the Energy and Natural Resources Committee, strongly opposed Risch's amendment. "(It) would really gut the balance struck by local stakeholders" and would mean Washington was dictating how to manage a local Oregon issue, he said.

Risch’s amendment was defeated in a voice vote. If the bill passes the Senate, it must be reconciled with the version passed unanimously by the House of Representatives in October. That bill, introduced by Rep. Greg Walden, R-Hood River, contains many of the same provisions as the Senate version, minus the authorization to release additional water beyond the 5,100 acre-feet. When he introduced the bill, Merkley said his office has been in continuous discussion with stakeholders over how to address their concerns. Conservationists worried that giving irrigators first-fill rights would harm fish in dry years, while flatwater fishermen worried that releasing too much water from behind the dam would hurt recreational activities on the reservoir. The Bureau of Reclamation estimates 575,000 visitors use the Prineville Reservoir and surrounding area each year, pumping $6.7 million into the region's economy.

**Other Stuff:**

(Another scary event that reminds us how vulnerable our power supply is!)

**Sabotage at Nogales station puts focus on threats to grid**

June 13, 2014, azcentral.com

The FBI is investigating whether a makeshift bomb placed next to a 50,000-gallon diesel tank at an Arizona power station Wednesday has any connection to a suspicious incident this year at another substation owned by the same company. New details are emerging from the Nogales,
Ariz., attack, which caused minor damage and no injuries. Contrary to initial accounts, the bomb
did not explode. Nogales police Lt. Carlos Jimenez described it as a crude incendiary device that
could fit in a person’s hand. It was placed under the valve of the diesel tank and ignited, charred
the steel tank. "They were able to gain access to the facility illegally,” Jimenez said. "They had
some working knowledge of what that tank is or how it works." The attackers failed to understand
that diesel has a high flash point and is difficult to ignite. Police identified no suspects or
witnesses. They said there were no signs of vandalism common with domestic extremist groups
such as the Earth Liberation Front, or ELF. The FBI has designated the ELF as a domestic
terrorism group, which the bureau blames for arson attacks on homes, power facilities and other
symbols of urbanization. Nogales officials called the FBI, the U.S. Bureau of Alcohol, Tobacco,
Firearms and Explosives and the state Department of Public Safety for help. Those agencies
would not comment, citing the ongoing investigation. Police said they believe the saboteurs got
into the substation sometime between 4 p.m. Tuesday, when maintenance workers locked it and
left, and 8 a.m. Wednesday, when workers returned to monitor the plant. Had there been a
catastrophic explosion, as many as 30,000 customers could have lost power, Jimenez said.
The Valencia Generating Station is a small "peaking" facility, used only during the hottest hours of
summer or the coldest hours of winter, when electricity demand spikes. The adjacent substation,
however, is important for balancing the regional power supply. The plant is owned by UniSource
Energy Services, a subsidiary of UNS Energy, which is also the parent company of Tucson
Electric Power. Company spokesman Joe Salkowski said the four turbines at the 63-megawatt
plant were not running at the time of the incident. Electricity supplies were not affected by the
event or subsequent evacuation, he said. The plant has fewer than five workers on site, with two
more in nearby offices, he said.

Diesel used in emergencies
The turbines run primarily on natural gas, supplied to the site via a pipeline. However, three of the
turbines can run on diesel fuel in an emergency if natural-gas service is disrupted, and the diesel
fuel is stored in two 50,000-gallon tanks, one of which was damaged by the device. On Thursday,
law-enforcement officials said the FBI was looking at past suspicious incidents in the area, citing
one near Sahuarita, north of Nogales. In that incident, someone was reported to be trying to cut
power lines, law-enforcement officials said. On Feb. 9, target shooters near a substation in that
area were seen on security cameras, causing alarm. Police and the utility's security officers
traveled to the site to ask the shooters to move along, but they were gone when police arrived,
Salkowski said. "We don't believe and neither does law enforcement believe there was any
intended threat," he said. "We wanted to avoid any accidental damage to our facilities."
Arizona's counterterrorism fusion center sent no bulletins warning of a possible attack before
Wednesday, nor did it send any intelligence briefings about the attack afterward, Jimenez said.
But Arizona officials have been on increased alert to the risk to power facilities in recent months.
That's largely because of a sophisticated attack on a large plant south of San Jose in April 2013.
The Wall Street Journal publicized a detailed account of the assault in February describing how
saboteurs cut telephone lines into the plant. Then they "surgically knocked out 17 giant
transformers" by shooting at them with sniper rifles for 19 minutes, the Journal reported. It took 27
days to return the substation to normal, and the attack was described by Jon Wellinghoff, then-
chairman of the Federal Energy Regulatory Commission, as "the most significant incident of
domestic terrorism involving the grid that has ever occurred."

In March, Arizona Corporation Commission Chairman Bob Stump and Commissioner Bob Burns
sent a letter to Arizona utilities asking about security changes they were making in the wake of the
San Jose attack. "The incident in Nogales is a troubling development that highlights the pressing
need to focus our state and nation's attention and resources to increasing utility security at all
levels," Stump said Thursday. "Physical attacks against critical facilities will, I fear, become a
staple of domestic and foreign terrorist attacks over the coming years. The potential of shutting
down an entire city or even the entire Eastern Seaboard will be enticing to our enemies."
The Nogales incident was not isolated. In 2007, a worker driving into the Palo Verde Nuclear
Generating Station 50 miles west of Phoenix was stopped at a checkpoint leading to the reactors,
and security found a 5-inch pipe packed with firework explosives. The discovery sent the facility

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into a nearly seven-hour lockdown, confining almost 3,000 workers on site while security teams searched for additional explosives. None were found, and the worker was eventually released and allowed to return to the job when law enforcement determined that he had not placed the explosives in his truck. The FBI and the U.S. Department of Homeland Security set up an advisory program in 2000 for Arizona owners and operators of critical infrastructure, including power plants and substations. Under the Arizona Infragard program, the government shares information about emerging security threats and how to combat them.

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