USDA will spend up to $103 million to repair dams
Dams are located in 19 states; program targeted to communities making improvements following disasters.

USDA is investing up to $103 million in post-disaster recovery and the rehabilitation of aging dams in 19 states. "The Emergency Watershed Protection program is vital to communities repairing damage and making improvements to reduce future damage from natural disasters," said Agriculture Secretary Tom Vilsack. "Since 2009, USDA has invested more than $647 million to help local governments restore watersheds and protect communities from the aftermath of devastating natural disasters like Hurricanes Irene and Sandy."
and fires and flooding in the Southwestern United States." Assistant Natural Resources Conservation Service Chief Kirk Hanlin announced the funding March 31 at an event in Mother Neff State Park outside Temple, Texas. In 2015, excessive rains overwhelmed the drainage systems of many communities and threatened, damaged or destroyed culverts, bridges and roads. NRCS will invest more than $21 million to help Texas communities remove debris and stabilize streambanks to better protect drainage canals, utilities and roads from future damage.

Overall, NRCS will invest $93 million in Emergency Watershed Protection (EWP) Program assistance to help state and local governments carry out much needed recovery projects to address damage caused by floods, hurricanes, wildfires and other natural disasters. About $59 million will be used in recovery projects in some of the hardest hit areas in Texas, Mississippi and Utah. About $34 million will assist projects in Alabama, Alaska, Arkansas, Colorado, Florida, Indiana, Kansas, Kentucky, Minnesota, Missouri, Ohio, South Carolina, South Dakota, Tennessee, Washington, and Wyoming. A summary of projects by state is available. An additional $10.4 million in Watershed Rehabilitation Program funding is available to help communities rehabilitate aging dams that protect lives, property and infrastructure like drinking water in rural communities downstream. Of this, $4.8 million will be used in Texas to complete the design and construction of four watershed rehabilitation projects in Ellis and Williamson counties, and $3.7 million will be used in Utah for the construction of a dam project within the cities of Lehi and Highland. About $500,000 will be used to assess up to 25 aging dams nationwide this year. Related story: Farm bill investment funds dam projects USDA watershed projects provide an estimated $2.2 billion in benefits annually to local communities nationwide. Since 1948, USDA has helped local governments construct nearly 12,000 dams in 47 states and Puerto Rico to help prevent flooding and erosion damage, provide recreation opportunities, improve water supplies for drinking and irrigation, and create habitat for wildlife.

(Wonder if they'll build a dam this time.)

**Hope Mills Starts Work On New Dam**

By REBECCA MARTINEZ • 4/1/16, wunc.org

Hope Mills, NC began work on a new dam this week. It's been 13 years since the original earthen dam washed out, taking Hope Mills Lake with it. Mayor Jackie Warner called Thursday's groundbreaking "very exciting." "It's been a determined and sort of an impatient wait just to get to where we are today because everybody wanted water sooner." Under past leadership, the town hired inexperienced contractors to build a replacement dam in 2008, and it failed just two years later. Hope Mills won $9.4 million in a settlement. Warner says the town commission carefully vetted Schnabel Engineering and ASI Constructors before hiring them for a new dam project. "This time we tried to do a better job." We got a contract in place. We've been diligent in our work and tried to get answers to all of our questions before we ever broke ground. So, I'm comfortable that you know we've got all the things in place that this will not only be a new dam, but a dam that will last." The new $8.9 million dollar dam should be in place by next spring.

(Nature's dam builders. They're at it again.)

**A big dam problem**

Apr 2, 2016, by Adam Hoogenakker, messagemedia.co

Copy obtained from the National Performance of Dams Program: [http://npdp.stanford.edu](http://npdp.stanford.edu)
More than a dozen citizens representing several townships attended the March 22 Aitkin County Board of Commissioners meeting to start a dialogue with the county on solving ditch drainage issues. Effects from the 2012 flood have caused culverts to collapse and sand and silt to pile up, explained Brent Amundson, chairperson of McGregor Township.

A larger, reoccurring issue is with beavers and the dams they build in the culverts and ditches quickly became the main topic of conversation. John Welle, county engineer, told the standing-room only crowd that the county is reactionary when it comes to the ditches. He also said there’s a tolerance level for folks in the county, whether they want standing water in the ditches or not. Ultimately, it boils down to the county having limited resources, added Welle. “Communication is key. We need to be made aware” of problems, Welle added. “It’s not a total waste of time to remove a dam. It’s necessary, but when you don’t couple it with some long-range plan to eliminate the beaver then it’s only a short-term solution.” The subject of trapping was discussed, but Welle worried about out-of-county trappers asking for bounty on beaver that may have come from outside Aitkin County. Roy Hietalaiti, chairperson of Salo Township, said Salo made its own beaver policy, designating people to trap in certain areas. He said it’s worked well so far.

Many of the concerned citizens were from Commissioner Brian Napstad’s district. Napstad said he would volunteer to be on a committee, suggested by Welle, to further research how the county can move forward with the beaver dam and beaver issue. Ramona Hooper, McGregor Township, thanked Napstad for getting the topic on the agenda and the board for listening.

(It’s not over until it’s over. Everyone doesn’t agree.)

**Old Hickory quarry too dangerous to debate**

*tennessean.com, 4/4/16*

There has been a lot of discussion about the proposed quarry in Old Hickory and its potential effect on the lock and dam in Hendersonville. What I have not heard has been any discussion of the guaranteed devastation that will occur upstream. If the dam were to break and Old Hickory Lake were lost, even temporarily, what will happen to the economies surrounding it … and for how long? According to the Corps of Engineers, Old Hickory Lake is 97 miles long, covers over 22,000 acres and stretches along 440 miles of shoreline. Think of all the devastation. The marinas, restaurants, businesses on the water, the docks and boats destroyed, retail sales of lake-related merchandise. All gone. How long would it take to rebuild the dam? Refill the lake? Restock the fish? The economic devastation could be far worse from a property value loss than the 2010 flood. If your home floods and you have flood insurance, you file a claim to recoup your loss. If your home doesn't flood, but because the lake disappeared, your home is now worth 30 percent to 40 percent less. You can’t call a contractor and fix that. The local tax revenues would plummet for years to come. What about the barge traffic, specifically all the barges of coal that go upstream to the power plant? Electric rates would go up. Why are we even having this conversation? Losing this vital lock and dam is not worth taking any risk. Larry Lyons, Hendersonville

(Looks like the Feds are gonna fork over some money.)

**FEMA Brings In Engineers to Assess South Carolina Dams**

*theconstructionindex.com, 4/6/16*

Copy obtained from the National Performance of Dams Program: [http://npdp.stanford.edu](http://npdp.stanford.edu)
The Federal Emergency Management Agency (FEMA) has appointed Dewberry to assess dozens of South Carolina dams damaged during the October 2015 floods.

The South Carolina Department of Health & Environmental Control (DHEC) reported 36 dam failures following the October 2015 storms that caused 500-year to 1,000-year floods. After the waters subsided, DHEC and the U.S. Army Corps of Engineers (USACE) inspected an additional 650 dams across the state and issued more than 240 maintenance notices. Dewberry will help FEMA, the state of South Carolina, community members, and dam owners incorporate resilience, mitigation, and recovery practices during dam repair and reconstruction.

The firm will coordinate geographic and geologic pre-inspections and records collection to identify risks associated with dam foundations, main structures, and primary and emergency spillways. It will reconstruct rainfall radar to determine the storm severity at each site and compare each dam's performance to South Carolina spillway design criteria. Field members will collect information such as dam size, pre- and post-event conditions, operation and maintenance programs, and upstream and downstream watershed conditions. It will be used to identify issues such as inundation areas future breach potential. Dewberry will recommend feasible and cost-effective mitigation and recovery strategies based on the information gathered.

(What a mess.)

Engineering work OK’d for Brazos dam fix that could cost millions
By J.B. SMITH, wacotrib.com, 4/5/16

The cost of fixing and preventing chronic logjams at the Lake Brazos low-water dam remains uncalculated, but just hiring an engineer for the job is costing the city more than $610,000. The Waco City Council awarded the engineering contract Tuesday to Freese and Nichols Inc., the firm that designed the dam that opened in 2007 on the Brazos River south of La Salle Avenue. Since it opened, the fixed-weir dam has become clogged several times with logs and brush that have to be removed by crane, boat and sometimes helicopter. The city spent $250,000 in the last budget year to clean the dam, only to see fall floods bring another large logjam that may not be cleared until next winter. Meanwhile, the dam’s function of holding the Brazos back at a constant level in downtown Waco is compromised by submerged debris that is not removed during those cleanups, city officials said.

A 2013 survey of the dam area found that 9,000 cubic yards of debris had piled up underwater, extending 150 feet back, reducing hydraulic efficiency and causing water levels to rise upstream, according to city documents. The first phase of Freese and Nichols’ work, costing $230,537, will lay out a plan for removing the debris. The second phase, costing $377,000, will devise a permanent solution to somehow divert debris from clogging the dam area. The cost of both projects is undetermined, but engineering contracts are typically about 10 percent of a project’s cost. Deputy City Manager Wiley Stem III acknowledged that the dam work could cost several million dollars. Stem said the firm is considering a new bypass gate on one side of the dam that
could be opened to allow brush through. Stem said the city considered a bypass gate as an option when it built the $19 million dam but decided against it, partly because the gates of the former Lake Brazos Dam were so troublesome. Stem said the U.S. Army Corps of Engineers worked with the city and tested the plans for the dam, so the final design seemed adequate. The existing dam does have a valve that allows water to be drained, and Stem said the city will have to drain the lake to be able to clean out the logjam that has accumulated. He said the city would try to schedule that cleaning for winter months to avoid interrupting riverside events, such as football games at McLane Stadium.

US Army Corps of Engineers Discusses Lewisville Dam Repairs

Congressman Michael C. Burgess and the Fort Worth Army Corps of Engineers held a press conference Wednesday to discuss the progress of the repairs on the Lewisville Dam slide. (Published Wednesday, April 6, 2016)

Congressman Michael C. Burgess and the Fort Worth Army Corps of Engineers held a press conference Wednesday to discuss the progress of the repairs on the Lewisville Dam slide.

The embankment slide is on the water side of the dam and measures 161 feet long

- Investigative D/FW Airport Police Staffing 'Insufficient' Based on Threats
- On Wednesday, the corps let the media on top of the dam to see their crews working to dig out the damage.
- The repairs will likely take through the end of the summer, but the big thing leaders are stressing is that there is no threat of a dam failure.
- USACE Discusses Lewisville Dam Repairs

Authorities discussed the progress of repairs to a Lake Lewisville dam Wednesday morning. (Published Wednesday, April 6, 2016)

Even if more rain comes, they say the dam can handle it.

"All of these things are preventative measures. The dam is not currently in failure," said Project Manager Stacy Gray. "It's performing exactly as it's been performing for the last 60 years."

- Texas Teen Killed by Takata Exploding Air Bag: Honda

The corps told NBC 5 they will be out at the dam daily to make sure everything keeps working. That's something they'll do slide or no slide, they said. Crews are also working on similar repairs at Grapevine Lake and there, too, stress that it is completely under control.

(Just like the title.)

Ask a Dam Question

Borel Canal

By Rick Brown / USACE, April 6, 2016, kernvalleysun.com

What will happen to the Borel Canal once USACE acquires the easement through the Auxiliary Dam?
First off, it’s important to understand that the disposition of the Borel Canal is a separate action from acquiring the easement. Supplemental Environmental Assessment #4 addresses only the easement acquisition and only the section of the Borel Canal immediately upstream, through and immediately downstream of our ongoing dam safety modification project. All other portions of the canal, upstream and downstream, are not on Corps property or our project area and, therefore, we have no authority to determine what is done with those portions of the canal. If agreement is reached with Southern California Edison and the Corps proceeds with the Borel easement acquisition without constructing a replacement tunnel as detailed in SEA #4, it would permanently cut off water supply to the Borel Hydroelectric Project. SCE would then be responsible for determining any actions (including potential decommissioning) related to the canal and power station. SCE could also negotiate for another agency to take the lead in the decommissioning process.

Regardless of who takes that lead, other agencies would then partner together to ensure a smooth and appropriate process. For example, the California Public Utility Commission would be responsible for approving any change in power plant status to ensure local ratepayers and private landowners are not unfairly affected. The Federal Energy Regulatory Commission, which permits hydropower production at Borel, would require that actions related to decommissioning be taken in a timely manner and that the canal not be left to create a safety hazard. Finally, the US Forest Service and Bureau of Land Management, who own much of the land underneath the canal, would provide input into the final state of the canal. As you can see, between USACE, FERC, CPUC, USFS, and BLM, there are several federal and state agencies working together with SCE and the public to put together the best environmental and economic plan for the fate of the Borel Canal, and regardless of the final decision, the public will have a chance to review the proposed action and provide comment. We want to answer your questions! If you’re curious about the process or have specific questions for us, please email us at Isabella@usace.army.mil. We will try to answer your questions on a regular basis in our “Ask a Dam Question” segment.

(State and Federal Officials Push to Remove Klamath River Dams)

Four dams on the Klamath River would be demolished under a proposal announced by the Obama administration. Four hydroelectric dams on the Klamath River would be demolished under an agreement announced by the Obama administration and state officials on Wednesday. Environmentalists say that the dams, located along the Oregon and California border, block passage of salmon and degrade water quality. The plan, which still requires approval from the Federal Energy Regulatory Commission, could result in the largest river restoration in U.S. history. We’ll discuss how this proposal could impact the Klamath Basin, Native American tribes, the fishing industry and farmers.

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
Hydro:

(Hydro is forever changing hands.)

Talen completes sale of Holtwood, Poconos hydro power plants for $860M

By TIM MEKEEL | Staff Writer, 4/1/16, lancasteronline.com

Talen Energy on Friday completed the sale of the Holtwood and Lake Wallenpaupack hydroelectric plants to Brookfield Renewable Energy Partners for $860 million. The transaction completes the asset divestitures within the PJM Interconnection energy market that were required by the Federal Energy Regulatory Commission in December 2014 as conditions for approving the formation of Talen. Holtwood is in southwestern Lancaster County, on the Susquehanna River. Lake Wallenpaupack is in northeast Pennsylvania, in Pike and Wayne counties. Plans to sell them were disclosed in October. Allentown-based Talen was formed June 1 out of power plants spun off by PPL and Riverstone Holdings.

(History. Dams and hydro are a part of the country's history.)

Many dams built, planned along Tippecanoe River

April 3, 2016, newsbug.info

Harnessing the Tippecanoe River, IN for industrial use began about 1833 in White County when a Norwegian settler constructed a dam near what would become Mount Walleston – called Norway today – according to the “History of White County.” Hans E. Hiorth purchased a large tract of land on a hill and constructed the dam across the river to help operate his sawmill. Ten years later, he leased all the water power of the dam to William Sill of Monticello. Sill erected a grist mill which ran for many years.

(Watch for rising waters.)

Three rescued from Androscoggin River in Lisbon

Three teens rescued from Androscoggin River

wcsh6.com, 4/2/16

LISBON, Maine (NEWS CENTER) -- Three people were rescued from the Androscoggin River after being stranded on a rock due to rapidly rising water. Lisbon Falls Fire Department says the three people were fishing near Worumbo Falls, an area that is highly susceptible to rapidly rising water because of the nearby hydro dam. When the water started to rise, the three people were unable to return to shore and climbed onto a high rock.
When it became clear that they were not going to be able to return without help, they called rescue officials. The fire department says they initially tried to rescue the three, but had to turn back when the rough waves became too much for the rescue team. The fire department had to ask the hydro dam to open the flood gates so the water could start to recede. The stranded fishermen were then rescued and released with no injuries except "wet feet" according to officials. Fire officials say the fishermen were very lucky and were in imminent danger when officials arrived. Rescue crews had two rescue boats stationed farther down the river in case someone fell in. There are several signs posted in the area, warning people not to enter the river because of the risk of rising water.

(Looks like the last hurrah.)

Oregon, California, federal agencies will seek removal of Klamath dams
By Jonathan Cooper, The Associated Press. APRIL 5, 2016, registerguard.com

SACRAMENTO — Oregon, California, the federal government and others have agreed to go forward with a plan to remove four hydroelectric dams in the Pacific Northwest without approval from a reluctant Congress, a spokesman for dam owner PacifiCorp said Monday. The dam removal is part of an announcement planned Wednesday in Klamath, Calif., by the governors of both states and U.S. Interior Secretary Sally Jewell.

Tearing down the dams would be a major victory for tribes that have fought for years to restore the river for salmon they rely on for subsistence and ceremony. The move also could breathe new life into a struggling effort to allocate more water for farmers and ranchers in the drought-stricken Klamath basin. Under the deal, a nonprofit corporation recently formed in California would take ownership of the hydroelectric dams and assume liability for any damage that stems from their removal, said Bob Gravely, a spokesman for Portland-based PacifiCorp. The plan, which aims to remove the dams in 2020, still needs approval from the Federal Energy Regulatory Commission. Going through FERC avoids the need for congressional approval for dam removal, which was required in earlier Klamath plans but met opposition from Republican lawmakers concerned about setting a precedent.

A water settlement agreement expired at the end of 2015 when Congress failed to approve the dam removal. Going around Congress on dams could make it more politically palatable for lawmakers to back other elements of the water agreements. Dams thwart salmon migration, degrade water quality, alter water flows and contribute to fish diseases and algae bloom problems. Three tribes depend on the fish for subsistence and ceremonial needs, and a fourth hopes fish will return once the dams are removed. PacifiCorp has supported a dam-removal agreement because it offers the utility liability protections and caps the costs to its customers.

(It took a while but they're getting there.)

Lake Delhi Dam Getting Closer to Completion
By Dave Franzman KCRG-TV9 | Apr 05, 2016, kcrg.com

FILE - This Aug. 21, 2009 file photo shows Iron Gate Dam spanning the Klamath River near Hornbrook, Calif. Oregon, California, the federal government and others have agreed to go forward with a plan to remove four hydroelectric dams along the Klamath River without approval from Congress. The U.S. Department of the Interior said Monday, April 4, 2016, that the deal will be announced Wednesday.(AP Photo/Jeff Barnard, file)
DELAWARE COUNTY, Iowa (KCRG-TV9)- Nearly six years after a disastrous dam break, the work at Lake Delhi in Delaware County is coming closer to completion. Refilling the man-made recreational lake could start sometime in late May or early June.

Torrential rains undermined an earthen dam at Lake Delhi back in July of 2010 creating a 30-foot wide hole that drained the lake in hours. The first rebuilding steps started in 2014. Now, after years of struggling and setbacks, including the collapse of a temporary dam last summer, Lake Delhi supporters say they’re finally in the home stretch.

Evidence of that was a parade of cement trucks that backed up to the new spillway in a steady stream all day Monday. At least 60 poured new concrete onto the final large pad structure of the rebuilt dam. Steve Leonard, president of the Combined Lake District, said “our goal is to be complete by mid-May to the end of June at the very latest weather permitting.” So that’s not far away.” After the final concrete is poured, workers still have to fill in the areas excavated for construction and then carefully remove the temporary “coffer” dam that diverted water and allowed construction.

(Title sounds like a country and western song.)

Micro-hydropower: Going with the flow
Wallowa farmers are already using micro hydrology.
By Jennifer Hobbs, For the Chieftain, April 5, 2016, wallowa.com

Increasing numbers of Wallowa County, OR landowners are looking into the potential of micro-hydropower. There is a lot of water coming out of the mountains; being able to harvest that energy in a low-impact way offers a real benefit to the community in terms of landowner bottom line, county resilience and sustainable natural resource utilization,” said Kyle Petrocine, renewable energy coordinator at Wallowa Resources. Even small sources of flowing water — ditches, pipelines and municipal delivery systems — can work for micro-hydropower if they have sufficient flow and head. Flow is a measure of how much water comes through the intake, while head refers to the vertical distance between the water intake and the turbine. In a micro-hydropower system, water spins turbines attached to generators to produce less than 100 kilowatts of energy. The projects are low-impact, maximize the use of local water for renewable energy, and can substantially offset electricity costs. Irrigation systems are one good point of entry into micro-hydropower because the water is free of fish. Channeling irrigation water through hydroelectric generators makes double use of it, and mountainous terrain means there are many candidates for project sites thanks to gravity flow. “It is great to use a renewable resource in a non‐consumptive way,” said Wallowa farmer Vern Spaur, who installed a hydroelectric generator in conjunction with his irrigation system three years ago and is now putting in a second micro-hydro project. Feasibility studies are underway on four local irrigation systems and several individual project sites throughout the county, while a handful of projects have reached the design and engineering phase.
The irrigation system feasibility studies are being run by Wallowa Resources as part of the Irrigation Modernization Campaign, which aims to achieve optimal irrigation efficiency through partnerships. Increased efficiency means meeting the needs of the farmer with less water loss, while also leaving more water in stream. Additional aims of the project include agricultural resilience, rural economic development and environmental enhancement. Spearheaded by Farmer’s Conservation Alliance (FCA) in collaboration with Energy Trust of Oregon (ETO), and partnered by Wallowa Resources Community Solutions Inc. (WRCSI), support for the project has continued to expand with the addition of the Natural Resource Conservation Service, Nez Perce Tribes, Anderson Perry and Associates, and Black Rock Consulting.

(A previous Newsletter said - why not. Now, it looks like they’re getting serious.)

VT appoints task force on dam purchase
By DAVE GRAM, Associated Press, April 5, 2016, burlingtonfreepress.com

MONTPELIER, VT - The chairman of a new working group looking into Vermont’s buying a series of dams on the Connecticut and Deerfield rivers says owning the dams could enable the state to keep energy prices low and stable, and they could be used as an economic development tool. "There’s a huge opportunity — maybe — but there also are some risks," Administration Secretary Justin Johnson told the Senate Finance and Government Operations committees during a hearing Tuesday. The comments came hours after Gov. Peter Shumlin, House Speaker Shap Smith and Senate President Pro Tem John Campbell — all Democrats — announced Johnson would chair a seven-member “working group” to look at the possible purchase of the 13 dams.

Possible benefits include helping to keep power prices low and luring new businesses to the state, Johnson said. He said the volatility in power prices is a risk: If they dip too low, owning the dams could be a losing proposition. The costs of repairs and upgrades that might be needed in the future also are a concern, he said. Johnson’s comments follow the announcement in March by the energy giant TransCanada that it is looking to sell power generating stations in the Northeast to raise money to buy a natural gas company based in Texas. Vermont bid on the dams in 2005 when they were being sold after former owner USGen New England went bankrupt, but was outbid by TransCanada, which got them for $505 million. Supporters of the state’s buying them long have eyed them as a possible key to supporting Vermont’s efforts to keep the energy it uses low-carbon and economical. In a statement announcing the working group, Shumlin said Vermont “missed an opportunity” when the state failed to buy the dams in 2005. “There is clearly an opportunity now to look at it again, and we have assembled some of the best and brightest minds in finance and energy to explore the opportunity,” he said.

Joining Johnson on the working group will be state Treasurer Beth Pearce; former Public Service Board chairman and current director of the Vermont Law School Institute for Energy and the Environment Michael Dworkin; Liz Gamache, director of Efficiency Vermont and mayor of St. Albans; Linda McGinnis, former lead economist and senior
manager for the World Bank; Tom Dunn, president and CEO of the Vermont Electric Power Co.; and former state Sen. Vince Illuzzi, a Republican and strong backer of the 2005 purchase attempt. Johnson also later told the Senate committees he hopes the working group can wrap up its work and produce recommendations to lawmakers in about three weeks. That would give lawmakers some time to respond before the end of their 2016 session, which is expected in early to mid-May, he said.

(This is a beauty.)

Bale Grist Mill needs millers, volunteers
FOR THE Register 4/6/16

Bale Grist Mill is looking for millers and volunteers to lead interpretive tours for the public. Bale Grist Mill is an 1846 water-powered mill that still grinds grain on the original stones. It is open weekends for tours of the building and milling demonstrations as well as two mornings a week for scheduled school tours. Qualified recruits can attend a spring training program with an orientation on April 23 from 9 a.m. to noon. There are various levels of commitment, from volunteer, miller apprentice and up to a fully trained miller with a regular schedule.

The opportunities are for those interested in old-time machinery, 19th century craftsmanship, local rural history and meeting and talking with people from all over the world who visit the mill. Millers get to step back in time and work in an 1850s mill and run the 36 1/2-foot-diameter waterwheel that powers the original stones and produces what some say is the best tasting flour and meal in the county. A miller apprentice must be eager to learn the history of the mill and its importance to rural Napa Valley. A knack for mechanical operations is most helpful in learning how to grind grain into flour and maintain the mill machinery in good working order.

There are many opportunities to volunteer on weekends when the mill is open to the public, on weekdays when school children tour the mill, and on the special event days such as Old Mill Days, Harvest Dinner, Pioneer Christmas, Winter Dinner and the new annual Pancake Breakfast. If interested, contact Jeanne Marioni at Jeanne.marioni@parks.ca.gov or call 538-1647 to reserve a place in the class as space is limited. Napa Valley State Parks Association is sponsoring early morning snacks and a lunch at the mill after the class.

Utility District Cited in Arc Flash Explosion at Hydroelectric Dam
L&I cited the utility district for five serious violations and for each assessed the maximum penalty of $7,000.

Apr 08, 2016, ohsonline.com

The Washington Department of Labor & Industries (L&I) has fined Grant County Public Utility District #2 $35,000 for five serious safety violations after investigating an explosion at its Priest Rapids Dam on the Columbia River in Beverly, Wash. Six workers were hospitalized with serious electrical burns after the explosion last October, according to the agency's news release. The

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workers were troubleshooting a mechanical problem with a generator and "did not know that a circuit had been re-energized when they closed a breaker, which caused the high-voltage electrical arc flash explosion," L&I reported, adding that its investigation found that the arc flash could have been prevented if the employer had ensured safety locks and safeguards were used to prevent the breaker from being closed when other parts of the circuit were energized.

L&I cited the utility district for five serious violations and for each assessed the maximum penalty of $7,000. The investigation found that:

- The district did not ensure the use of lockout/tagout devices to prevent inadvertently closing a breaker that could cause an arc flash.
- Employees were not briefed on the circuit conditions that affected them and exposed them to the risk of burns and electrocution.
- Employees were unaware the lockout/tagout devices had been removed from the circuit.
- One worker was not wearing fire-resistant clothing while working on the hydroelectric equipment.
- The district did not provide any records to show it complied with the state regulation on protecting workers from injury due to hazardous energy.

The utility district has 15 days to appeal the citation. Penalty money paid as a result of an L&I citation is placed in the workers' compensation supplemental pension fund, helping workers and families of workers who have died on the job.

Environment
(And, a lot of money.)

Feds: Habitat, Dams, Hatcheries Keys to Saving Maine Salmon
By Patrick Whittle, associated press, PORTLAND, Maine — Apr 1, 2016, abcnews.go.com

Maine's endangered salmon will need restored habitats, removal of dams, aggressive hatchery programs and other conservations actions if its population is to rebound, according to a federal government plan to save the fading and iconic fish. The U.S. Fish and Wildlife Service has released a recovery plan for the Gulf of Maine salmon, listed as endangered in 2000, that is intended as a roadmap to sustainability for a fish whose populations have plummeted since the 1800s. Recovery will take time and patience — the plan estimates 75 years and $350 million, which would have to come from some combination of federal, state and private money. The wildlife service estimates 100,000 adult salmon returned to the Penobscot River each year in the 19th century, and less than 750 of the fish returned to spawn in Maine rivers last year. Maine's salmon face numerous threats, and one of the biggest is the continued presence of dams that prevent them from spawning, said Dan Kircheis, a fisheries biologist with the National Marine Fisheries Service. He said there are 400 dams in the state in areas that affect salmon. "We have to be strategic about which will have the most conservation impact," he said. "That's making modification to dams, taking out dams."

Copy obtained from the National Performance of Dams Program: http://npdp.stanford.edu
The fish shares a unique place in Maine's history as the subject of the "Presidential Salmon Tradition," in which the first salmon caught in the state was sent to president every year. The tradition lasted for eight decades, ending in 1992. The state closed the Penobscot to salmon fishing later that decade in a move that once seemed unthinkable, but was considered necessary to preserve the species. Dwayne Shaw, executive director of the Downeast Salmon Federation, said the report should illustrate to state officials that salmon conservation needs to be a priority. He said his organization's hatcheries, which raise salmon, will play a role. "We know recovery is possible," Shaw said. "The species is resilient, because that species hasn't gone extinct."

The report states that the salmon also face threats such as climate change, competition for food with other species and inadequate regulation of water quality. It also states that commercial fishing off of Greenland remains a threat to the species that must be addressed. The National Oceanic and Atmospheric Administration released a report earlier this year that identified working with Greenland to reduce fishing pressure as a key to help save the salmon. Most of America's last wild Atlantic salmon spawn off of Greenland. The fish and wildlife service and NOAA, which is also involved in the recovery effort, are taking public comments on the plan through May 31.

**Other Stuff:**
(Great website.)

**DOERS Do Our Country Good**
https://www.chevron.com/doers/usa/

(Cuts down the water skiing accidents. Another benefit of hydro.)

**These bizarre floating solar panels are solving 3 critical problems**
By Rebecca Harrington, 4/2/16, techinsider.io

These bizarre-looking floating solar panels are the solution to quite a few little-known energy problems. They can keep the water from evaporating, they can save fertile land for agriculture, and they can be more efficient since the water cools them.

On hydropower dams or reservoirs, it's especially important that the water doesn't evaporate so that we can use it for electricity and irrigation. This makes these locations particularly attractive for floating solar panels. Mark Bennett, the owner of Sheeplands Farm in the UK, built floating solar panels on a three-acre reservoir that irrigates his farm. "Why should we waste perfectly good grade one and grade two listed land when we have dead space on the water of the reservoir?" he asks in a YouTube video. "Why should we waste that land?" And he says it only took a crew a week to build the solar array. It's also easier to wash the panels, since you can just use the water they're floating on to rinse them off with a brush. Similar projects are popping up all over the world. Construction began in January on a 13.7 Megawatt floating solar system on the Yamakura Dam in Japan. That's enough to power almost 5,000 homes. Brazil announced earlier this month that it will float thousands of solar panels on the Balbina Dam deep in the Amazon. That array will likely power about 500,000 homes, Fusion reports. These solar panels look a little unconventional, but they're really a nifty innovation.

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