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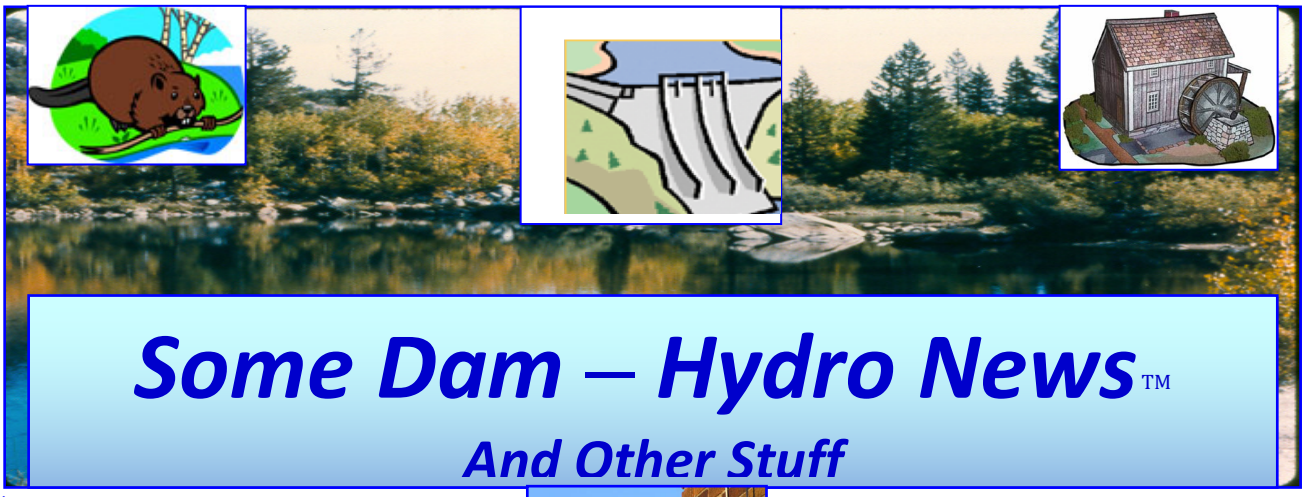


Some Dam – Hydro News™

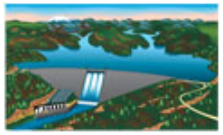
And Other Stuff

i

Quote of Note: *"Politics is supposed to be the second oldest profession. I have come to realize that it bears a very close resemblance to the first." –Ronald Reagan*

Some Dam - Hydro News → Newsletter Archive for Current and Back Issues and Search:
(Hold down Ctrl key when clicking on this link) http://npdp.stanford.edu/ . After clicking on link, scroll down ***under Partners/Newsletters on left, click one of the links (Current issue or View Back Issues).***

"Good wine is a necessity of life." - -Thomas Jefferson
Ron's wine pick of the week: **2017 Masseria Altemura Italy (Other Regional Reds) "Sasseo"**
"No nation was ever drunk when wine was cheap." - - Thomas Jefferson



Dams:

(Replacing the old with a new.)

Upper Deckers Creek dam begins to fill with water

By Theresa Marthey, STAFF WRITER, May 12, 2020, wvnews.com

ARTHURDALE, W.VA— After waiting for much longer than the expected 18-month construction period, the Upper Deckers Creek Dam No. 1 gates were closed on May 6, and water began to fill the reservoir. "As of today, we have officially closed the gates, and began to fill the Deckers Creek Watershed Protection," the Public Service District No. 1 announced on its Facebook page. "We hope this news is as exciting to our customers as it is for us! We hope this is the final step in solving the discrepancies of the past." The dam now provides a guaranteed source of water for PSD No. 1 customers.

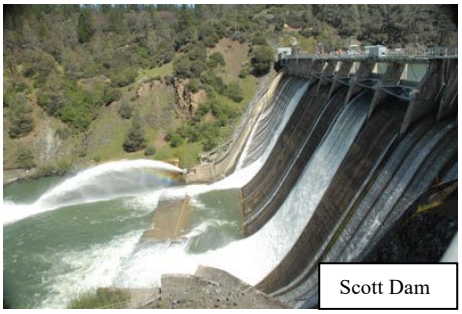
In the past, PSD No. 1 was able to pull water from the Upper Deckers Creek Dam, but it was not a sure thing with the Soil Conversation District being able to cut off the supply at any time. While there will be organic material in the water as vegetation that grew during the construction period dies off, PSD No. 1 Plant Manager Danny Layton believes the water treatment plant should be able to handle getting rid of the organic material in the water. The Upper Deckers Creek Dam No. 1 rehabilitation began in August 2017 with a groundbreaking. Contractors had to deal weather problems that hindered the project, which was planned to be completed in 18 months, but took approximately two-and-a-half years. That was followed by additional delays when several layers of the rolled, compacted concrete had to be removed and laid a second time. PSD No. 1 had to use Impoundment No. 6 off W.Va. 92 for its water source during the rehabilitation project. In order to treat the water, additional chemicals were required, adding to operational costs.

When the county experienced a drought in August, the water in Impoundment No. 6 dropped to approximately one foot, causing water to be foul-smelling and discolored. PSD No. 1 then began looking for alternative sources of water for its customers. Some of the customers on Kingwood Pike began receiving water from Clinton District. PSD No. 1 approached Kingwood Water Works about hooking into its water supply on Dogtown Road to provide water for those customers, as well. The permanent connection with the Kingwood Water Works was approved at a KWW board meeting during their last meeting. The additional expense of treating the water led PSD No. 1 to ask for an emergency rate increase, and the West Virginia Public Service Commission, approving an interim hike. They asked for a permanent water rate increase; the PSC staff approved an increase to a $56.67 minimum bill. The increase became effective immediately and until the treatment plant is using water from the dam. Step 2 rates would then take effect with a decrease to $51.93.

(Another crusade for dam removal.)

FRIENDS OF THE EEL RIVER APPLAUD THAT TODAY'S FILING ADVOCATES REMOVING SCOTT DAM BUT THEY HAVE 'RESERVATIONS' ABOUT PROPOSAL AS A WHOLE

May 13, 2020, by Kym Kemp, kymkemp.com


Scott Dam

Press release from Friends of the Eel River:
Today, a coalition of five Eel and Russian River parties filed a Feasibility Study Report with the Federal Energy Regulatory Commission (FERC). [See here: http://kymkemp.com/2020/05/13/today-coalition-files-plan-for-eel-rivers-potter-valley-project-which-includes-removing-scott-dam/] The report outlines a proposal to take over PG&E's Potter Valley Project, including Scott and Cape Horn Dams on the upper Eel River. Most notably, the plan proposes to remove Scott Dam, which has blocked fish passage to and from the upper Eel completely for nearly a century. Friends of the Eel River has been fighting for decades to remove Scott Dam so Eel River salmon and steelhead can return to the hundreds of stream miles of prime headwaters habitat above the dam. Today's filing vindicates our understanding that removal of Scott Dam is both necessary to allow fisheries recovery, and an economic inevitability. Nonetheless, Friends of the Eel River must reserve judgment on the plan proposed in today's filing. FOER's Executive Director, Alicia Hamann said, "We applaud the Two Basin Partnership for recognizing that Scott Dam must come down, but too many questions remain unresolved in the plan filed today."

"Nobody wants to pay to keep Scott Dam," Hamann noted. "But will PG&E be held accountable for the damage its dams and reservoirs have done to the Eel River over the last century? If PG&E doesn't pay its fair share to take out its Eel River dams, who will? The plan suggests a potentially

enormous price tag. Getting part way to dam removal won't do any good for Eel River salmon and steelhead." As well, it's not clear who will be represented in the proposed Regional Entity. Nor is it revealed who would pay for parts of the proposed plan that wouldn't come under FERC jurisdiction. Critically, this would include a pipeline proposed to pump water uphill from the Lake Mendocino Reservoir to the Potter Valley Irrigation District.

"While the Eel River's salmon and steelhead have paid a devastating price, going from a million fish a year to the brink of extinction, Potter Valley has had the benefits of nearly free water for the last century," said FOER's Conservation Director, Scott Greacen. "Those who benefit from water diverted from the Eel River in the future will have to cover the associated costs." Despite these concerns, today's filing does make it very likely Scott Dam will be removed, and Cape Horn Dam removed or modified to the extent necessary to insure passage for salmon, steelhead, lamprey, and other native fish. This is because, if the plan proposed in today's filing were to fail, PG&E and the Potter Valley Project will go directly to FERC's Decommissioning Process.

After its latest bankruptcy filing, PG&E terminated its application to FERC for a new license for the Potter Valley Project. This foreclosed any possibility the utility could keep the project. The Two Basin Partnership was the only entity to respond to FERC's subsequent invitation to take up PG&E's abandoned license renewal. While the FERC Decommissioning Process would likely be protracted, and its outcome uncertain, it's likely FERC would order PG&E to remove Scott Dam. With such an order in hand, PG&E would likely be allowed by the California Public Utilities Commission to recover the costs of dam removal from its ratepayers, who have benefited from operation of the project over the last century.

Thus, Friends of the Eel River must consider the plan outlined today not as the only hope of Eel River dam removal, but as one possible path to that goal. The question is whether it offers Eel River fisheries a better, faster and more equitable resolution than FERC's Decommissioning process would. FOER's Greacen emphasized, "Removing Scott Dam, ensuring Eel River salmon and steelhead can return to their upper Eel River habitat, is our core mission at Friends of the Eel River. We will bird-dog this and every other process necessary to get Scott Dam removed and our fisheries restored. One way or another, Scott Dam is coming down."

(The other benefits of dams.)

Economic crash makes dams more critical

By Todd Myers, Guest Contributor | May 2020, tricitiesbusinessnews.com

We are learning many painful lessons during the coronavirus shutdown. A key lesson that if a policy isn't economically sustainable, it isn't environmentally sustainable. This is a particularly important lesson to remember when considering how to promote recovery of salmon and steelhead populations on the Snake River. Earlier this year, the federal agencies finished the environmental impact statement (EIS) for the Columbia and Snake rivers, focusing on what to do with the four dams on the Lower Snake River. Their research concluded that when balancing the environmental and economic factors, leaving the dams in place while improving fish passage is the best strategy. Just a couple months after the EIS was released, that conclusion is proving to be even more sound.

Estimates of the cost to destroy the dams vary, but even those who advocate removal admit it will cost $1 billion. Estimates from the Army Corps of Engineers are higher. Add to that the annual cost of replacing the electrical generation that would be lost if the dams are destroyed. That could amount to another $1 billion a year for ratepayers. Even the Northwest Energy Coalition, which favors destroying the dams, admits electricity costs will go up significantly. Those are just the direct costs. The cost to the regional economy would also be significant. The dams were originally

constructed to facilitate shipment of goods down the Snake. The loss of that transportation would impact farmers who would have to shift to more expensive modes of transportation. The draft EIS estimates destroying the dams could increase transportation costs by up to 33 percent on average. The economic costs, however, are only part of the equation. The EIS found there would be increased environmental damage.

Removing the dams would increase CO2 emissions by about 10 percent across the Northwest because the hydro power would have to be replaced in part by natural gas generation. The dams produce electricity in the morning and at dinner time when it is needed to meet the highest levels of demand. Solar, by comparison, generates electricity in the middle of the day, but not when demand is highest in the evening. Wind generates most of its electricity at night and in the very early morning, when demand is low. Simply replacing the electricity from the dams with wind or solar is not possible.

Those who support destroying the dams argue it is necessary to help salmon recovery and provide additional forage for the Southern Resident Killer Orca Whales in Puget Sound. Dam removal, however, is an extremely poor way to achieve that goal. First, as the economic downturn is reminding us, money is precious and should be put where it can make the most difference. Spending billions on just one project would put all our eggs into one salmon-recovery basket. The total state budget for salmon recovery in Puget Sound and along the Washington coast is about $50 million a year. The cost to remove the dams would be as much as 20 years of salmon recovery in the state. The additional cost to replace the electricity is on top of that. Arguing we can just find more money to do both is either oblivious or irresponsible. Second, although recovery is slow on the Snake River, the population of Chinook salmon is increasing.

Despite a cyclical downturn in the last few years, the average number of Chinook passing Lower Granite Dam over the last 10 years was the highest of the last five decades. According to the Washington State Recreation and Conservation Office, Fall Chinook on the Snake are already above the recovery target. That is not the case in Puget Sound, where Chinook populations are declining. Of the 22 populations of Chinook in Puget Sound, none are meeting the recovery goal. None. What's more, the Washington State Department of Fish and Wildlife says Puget Sound Chinook are the most important source of forage for the Southern Resident orca. The Snake, by way of comparison, is barely in the top 10.

Putting our limited resources to use where they are most needed and will do the most good should be obvious. Some people, however, want to wish these important tradeoffs away. I asked Deborah Giles, an orca researcher at the University of Washington who favors destroying the dams, where we would get the money. She responded that she believes in the "old saying, from each according to their ability, to each according to their need." The quotation comes from Karl Marx. The fact that she would cite one of the founders of communism is strange. The belief that we can just find more money somewhere is foolish. The federal agencies are now going through public comments and will provide responses in the near future. Let's hope they stick to the science and economics that guided their original good decision. Preserving the dams provides the resources to keep our economy strong and provides the funding to help salmon and steelhead recover across our region. *Todd Myers is environmental director for the Washington Policy Center.*

(Regulation by a judge. They gotcha comin' and goin'. There's more than one way to skin a cat.)

For the first time, Washington will regulate Columbia-Snake River dams if they violate federal pollution rules

By Samantha Wohlfeil, May 15, 2020, inlander.com

Eight dams along the Snake and Columbia rivers could face penalties for violating the Clean Water Act for the first time, after they had to apply for discharge permits that allow state guidance to be binding. Environmental groups lauded Washington state for issuing conditions under the Clean Water Act for the first time last week that will ensure pollution is reduced from eight dams along the lower Snake and Columbia rivers.

In addition to sometimes increasing the temperature of the rivers to levels that can be dangerous for fish, these dams have had numerous oil spills over the years from the lubricants used in turbines and other moving parts. But prior to last week, the federally owned and operated dams were not subject to oversight by state leaders, and faced no fines or penalties for breaking federal clean water regulations, explains Lauren Goldberg, legal and program director for Columbia Riverkeeper. "For decades the federal dam operators have violated federal laws designed to protect clean water and salmon, and now that's changing, that era is over," Goldberg says. "This is a historic moment for the Columbia River basin for salmon, for orcas and for power."

A somewhat complicated history of water regulations has allowed the federal dam operators to escape the same scrutiny as more local owners have had up to this point. While Washington's Department of Ecology has long had oversight and issued permits for publicly and privately owned dams in the state, it deferred to the Environmental Protection Agency to oversee permits for dams owned by tribes or the federal government. When a tribal or federal dam needs a National Pollutant Discharge Elimination System (NPDES) permit to dump possible pollutants into a water body, it's up to the EPA to oversee that permitting work. But for a variety of reasons, the eight dams in question haven't applied for those permits until now. Importantly, the permits have to incorporate clean water requirements from Washington state, which filed what's known as "section 401" guidance on May 7 to accept the permits with additional conditions. As part of its conditional approval, the state also wants to see the dams create plans for reducing PCBs (polychlorinated biphenyls), reduce other pollutants and ensure less harmful lubricants are used in the machinery.

Essentially, this represents the first time that Washington state will be able to enforce things like limits on temperature and pollutants in the river system, Goldberg says. Without the permits, there was no real avenue for enforcement or policing mechanism before now, she says. "A lot of people don't realize because it's so turbulent below the dams, they chronically leak oil and sometimes have massive leaks of over 1,000 gallons of oil," Goldberg says. "And the federal government has never paid any penalty for that." The permits and a sort of pollution "budget" known as a "total maximum daily load," or TMDL, are requirements that Columbia Riverkeeper has been fighting for decades to put on the dams. After years of legal action in the courts, Riverkeeper is hopeful the dams will finally be held to federal standards that everyone else has to follow.

That pollution budget "TMDL" is a separate process, but it's happening at the same time, and it's all connected explains Melissa Gildersleeve, the watershed unit supervisor for Ecology. It won't say what needs to happen. It's more of a temperature diet, and here's what's happening, and the things that are influencing that," Gildersleeve says of the TMDL. "Then what will happen is we'll all start to work on, 'How do we start getting that contribution down, so the water body can be closer to meeting the temperature it needs to meet?'" Ecology's Water Quality Program Manager Vincent McGowan confirms that this is a historic moment in that it's helping better define the relationship between the state, EPA, and the Army Corps of Engineers that operates the dams,

which were built before the Clean Water Act even existed. "Prior to this opportunity and these permits, these dams have essentially not been subject to Clean Water Act requirements that many other dams are and have been," McGowan says. "Now they will be. That's quite significant."

(This doesn't happen often!)

A federal judge dismisses the lawsuit that could remove Rodman Dam

May 12, 2020. wcjb.com

A federal judge will not reconsider an appeal of an earlier decision to dismiss a lawsuit designed to remove the dam and restore the Ocklawaha River, FL.

(The battle over water temperature has begun.)

Letters: Warm waters

May 14, 2020, tdn.com

Snake River dams cause the river to be warmer in summer, as studies by the Environmental Agency, the Army Corps of Engineers and others have shown. Extended periods of warm river temperatures have and will continue to push salmon beyond their ability to reproduce and survive. Models show climate change will add to river temperature increases. Kurt Miller of Northwest River Partners, which lobbies for power utilities, ports, agriculture and other industries profiting from business as usual on the Columbia River, has no justification to assert "science that pretty strongly disputes that," that dams cause river temperature increases. Miller would confuse the fish supporting attributes of free flowing rivers to those with run of the river dams with no basis in fact. Free flowing rivers do not have miles of reservoirs with slow clear water as do the dam reservoirs on the Snake River. Northwest River Partners and supporters would have us face the crises of salmon and southern resident orca extinction by doing nothing. For them salmon extinction on the Columbia River would be problem solved. *Diane Dick*, *Longview, WA.*

(A hot topic. I hate Tailings Dams.)

What Is The Future Of Tailings Dams?

13 May 2020, by Louise Smyth, engineerlive.com

Safer tailings storage facilities (TSFs) – or tailings dams – can be achieved when mine owners, contractors and engineering consultants work closely together, according to SRK Consulting's senior geotechnical engineer Linda Spies. Speaking after a recent Southern African Institute of Mining and Metallurgy (SAIMM) conference focusing on tailings dams, Spies says that mining executives today required more assurance that their tailings dams are safe, with controls becoming much stricter. Greater transparency was also being demanded by other stakeholders such as investors and communities.

Learning From The Past

"After several hundred lives were lost in two well-publicised tailings dam failures in Brazil in 2015 and 2019, awareness of tailings dam risks has been raised within the mining industry and in the public eye globally," she states. "These latest failures were especially significant insofar as senior management at the mining companies were for the first time being implicated directly with charges of manslaughter and environmental damage." Spies notes that while conferences on this topic usually involve mostly tailings dam practitioners and academics, this event had strong

representation from owners and contractors, who are responsible for tailings dam construction, and consultants, who design TSFs and monitor their construction. "This meant that the discussion was more holistic and valuable, enriched with insights from these various perspectives," she explains. "This is vital in promoting innovation, safety and environmental and social responsibility in the design, operation and closure of tailings dams."

Best Practise Showcase & Application

Although the tone of the event was serious in light of recent failures, there was also an optimism flowing from the showcasing of best practice in the field and how this was being successfully applied. In her own case study presentation on a lined tailings dam at a South African platinum mine, Spies highlighted the complexities introduced by the liner requirement – and how good drainage design and quality assurance were an important part of the solution.

Upstream Tailings Dams

Among the key issues discussed at the conference was whether upstream tailings dams should be allowed – as this was one of the commonalities in the recent Brazilian failures. High-level input was given in a panel discussion by senior leaders from a mining company, a law firm and an insurance firm, including technical opinions from tailings industry expert and specialist geotechnical engineer Adriaan Meintjes, a partner and corporate consultant from SRK. According to SRK principal hydrogeologist and numerical modeler Sheila Imrie, who also presented at the event, tailings is rightly receiving considerable attention from a combined engineering and scientific perspective and will continue to do so in the future.

"The continued application of the latest technologies by the industry's top experts is critical," says Imrie. "Industry must also ensure that sufficiently detailed research, monitoring and numerical modelling informs the future design and current management of tailings dams." She presented a paper on '3D Seepage Modelling in Tailings Storage Facility Analysis and Design for Low Permeability Lined Basins' with SRK colleague civil engineer Wesley Rouncivell. A key to the safe operation of tailings dams in the future involves comprehensive, rigorous monitoring on a regular and real-time basis. In another SRK presentation, GIS specialist Ansu Louw and civil engineer Riaan van der Colf gave their insights on a 'GIS-enabled, web-based TSF monitoring solution' by SRK to enhance monitoring of tailings facilities.

(Not much of a dam. They count it as dam removal. Why does it cost so much to remove a pile of rocks?)

Peterson Pond dam removal moving forward with new grant

Anastasia E. Lennon / The Patriot Ledger, May 15, 2020, patriotledger.com

NORWELL, Mass. — A plan to remove the Peterson Pond dam that has been in the works for nearly two decades is nearing fruition after the North and South Rivers Watershed Association received a $20,000 grant from the Massachusetts Environmental Trust. The dam sits in the Third Herring Brook, which marks the boundary between Norwell and Hanover, and flows through the Hanover Mall property. It is the final of three colonial-era dams to be removed in an effort to welcome the native herring back to its fragmented habitat. "We don't like to count our dam removals until they happen," said Samantha Woods, executive director of NSWRA. "We're still waiting on a grant needed to fund the construction portion." The NSWRA hopes to have the final grant from the federal government by the end of the summer and remove the dam during the fall or winter, before apartment buildings are erected near the brook. The removal process should take about six weeks, Wood said. More than $100,000 has already been put into the project, and Woods expects when the dam is finally removed, it will have taken $350,000 to $400,000 between planning, permitting, engineering and physical removal.

This latest grant was funded completely by Massachusetts residents who purchased specialty license plates through the environmental trust. According to Trust Program Director, Kim Tilas, the Trust provided more than $471,512 in grants to 18 organizations last year through the program. "Trust plates, including our signature Whale Plate, are the only specialty plates that exclusively fund environmental initiatives," Tilas said. "When you purchase a specialty plate for $100 from the Registry of Motor Vehicles, the $40 specialty plate fee goes directly to the Trust to fund water-focused environmental programs." As a result of their efforts with previous dam removals, NSRWA has also seen the return of native brook trout, which Woods says is "exciting" and reflective of the resiliency of nature. ″(The removal) will enable river herring, a species whose populations have been in serious decline and are part of the base of the ocean food chain, to spawn in their historic spawning areas," said Woods. "They will start to expand their habitat as soon as you allow them to." Ultimately, the group would like to restore full access for the river herring all the way into Jacobs Pond in Norwell, which would be accomplished by installing a fish ladder under Route 12. "As people are home now observing nature more in its glory, we're seeing around the world diminished pollution and the return of better water quality," she said. "I think we can really bring nature back and enjoy it more than we think we can with some thoughtful projects."

(Something is better than nothing.)

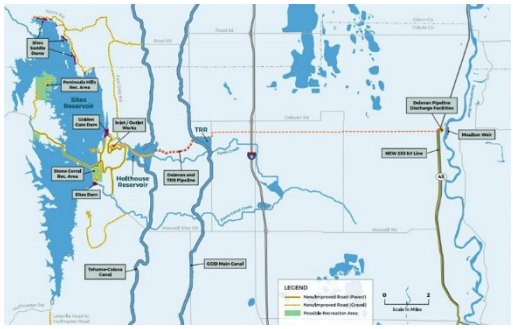
Smaller Sites makes it more likely | Editorial

By EDITORIAL BOARD | May 15, 2020, chicoer.com

The decision to reduce the size of the planned Sites Reservoir might appear to be a setback, but it's really a step forward. It makes it that much more likely the project will happen. Yes, we've been saying that for years. Many people have been saying that, ever since the project was first conceived back in the 1950s. That was when environmental concerns stopped being afterthoughts, as they had been when the federal Central Valley Project was built. California was well into the planning stages for the State Water Project as well. It became clear more water would have to be stored, not just for cities and farms, but for salmon, steelhead and the delta ecosystem.

The Sites Valley was well located for the task, close to the Tehama-Colusa and Glenn Colusa canals. They could be used to transport water from the Sacramento River. And their inlets could capture the flow from most of the creeks between Lake Oroville and Shasta Lake when they were running high. That's 10,000 square miles of watershed that's not dammed and really can't be. But Sites was a dam — well, a series of dams — and the same environmental concerns that gave birth to the idea of it, also gave birth to an opposition to dams in general. Even though Sites would be off-stream it was still a dam. And that was enough to prevent public money from going to the project.

So the water wars intensified, with increased competition for a static water supply as the San Joaquin Valley shifted from row crops to orchards that require water every year, drought or not. But in 2014, voters passed Proposition 1, a $7.5 billion water bond. Many north staters thought they were voting to build Sites Reservoir, but that's not what the bond language said. After a long and convoluted process, $816 million was approved for Sites. That is just for "public benefits," in this case, primarily for environmental needs. With the new $3 billion price tag for Sites, that gives the state access to more than a quarter of the water the reservoir could deliver for those uses.



Reducing the reservoir from 1.8 million acre-feet to 1.5 million acre-feet will cut the amount of water that could be delivered in an average year to about a quarter-million acre-feet. That's still a lot of water, and it's water we don't have now.

Reading info you might find interesting

https://www.damsafety.org/NDSAD

https://www.damsafety.org/sites/default/files/ASDSO-LivingWithDams-Know%20Your%20Risk-NO%201_ASDSO-WEB.pdf

https://www.damsafety.org/sites/default/files/ASDSO-LivingWithDams-ExtremeRainfallEvents-NO%202-WEB_0.pdf

https://damsafety-prod.s3.amazonaws.com/s3fs-public/files/Cost%20of%20Rehab%20Report-2019%20Update.pdf

https://damsafety-prod.s3.amazonaws.com/s3fs-public/files/All%20-%20Dam%20Owner%20Fact%20Sheets%202019.pdf

https://damsafety-prod.s3.amazonaws.com/s3fs-public/files/FINAL%20-%202020%20Update%20State%20Laws%20and%20Regulations%20Summary.pdf

https://issuu.com/asdso/docs/spencer_report_combined_final

(Gotta save that drinking water.)

Federal contract awarded to repair northern New Mexico dam

May 15, 2020, sfchronicle.com

ALBUQUERQUE, N.M. (AP) — The U.S. Bureau of Reclamation has awarded a contract to a Virginia-based company to repair a dam along the Rio Chama in northern New Mexico. The agency announced Friday that the two-phased contract with CARPI USA Inc. is worth up to $16.7 million.

A study determined that El Vado Dam needed to be repaired to reduce seepage and erosion. Repairs will include the installation of a liner on the upstream face of the dam. A separate contract will be awarded later for replacement of the spillway. The first phase will involve designs and specifications for the project. The second phase will include grouting, repair and prep work prior to installing the liner. Officials say the second phase is subject to the availability of funds. Water stored at El Vado is used by the Middle Rio Grande Conservancy District to meet the needs of the several pueblos in central New Mexico. The irrigation district will be responsible for 15% of the repair costs. Water operations will continue as usual this year as the Bureau of Reclamation moves toward construction in the latter half of 2021. The first phase of construction is expected to last about a year.

(Low head dam-there's danger ahead!)

Mahoning River's hidden hazards

Poor signage, lack of portage adds to problems

BY RENEE FOX, Reporter, tribtoday.com, MAY 17, 2020

WARREN, Ohio — The sound of rushing water and the smooth cascade of water flowing over the old Warren Water Works Dam between Perkins and Packard parks along the Mahoning River may appear tranquil, but the low-head dam hides a secret. The water flowing off the "mini waterfall" creates recirculating currents of water, trapping people or objects that go over the dam in a turbulent cycle, pushing them up, and then under, the water. "It's a dangerous trap," said Chuck Miller, a 12-year kayaker of the Mahoning River and the founder of the Mahoning River Paddling Restoration Group. A log stuck in the recirculating current of a low-head dam was still circulating a month after Miller first saw it, eroded down to a stump, he said.

Low-head dams are man-made structures in rivers that pool upstream water for various reasons. Low-head dams normally produce vertical water surface drops of one to 15 feet, according to the Nature Conservancy website. Low-head dams alter natural habitat and impair how a stream behaves. Dozens of people are injured or killed each year from drowning at low-head dams, according to the Nature Conservancy. The dams dot the Mahoning River and the prevalence of the deceptive structures on the more northern section of the river keeps even experienced paddlers like Miller away. "We want to get people down the river in one piece. So we don't paddle up here often, because of all of the unknown. There is not adequate signage or a clear-cut portage. On the lower Mahoning, there is less hazard. Some of the dams were removed, and if not, there is decisive portage with clear signage," Miller said. A portage is a place to pull out of the water with a boat, a path around the obstruction and a place to relaunch in the river.

'DROWNING MACHINE'

In his nearly 33 years at the Warren Fire Department, Chief Ken Nussle recalls responding to calls at the dam five times, he said. Three people did not survive going over the dam, but in the two more recent cases, the people were pulled from the water alive. In May 2017, a teen girl on a fishing trip went into the river at Packard Park, went over the dam and was rescued in Perkins Park. "It was a pretty long way to float downstream and not suffer any injury. She was very lucky," Nussle said. The last person to go over the dam is in a coma. Lisa M. Zitello, 41, of Austintown, was pulled from the river May 3 when Jacob Fowler, 24, waded into the water on the west side of the river, flipped her onto her back and swam with her toward police officers on the east side of the river where Warren police officer Donald Shipman got in to pull her to the bank. Police officers gave her CPR until firefighters arrived and continued giving her aid until she was taken to the hospital.

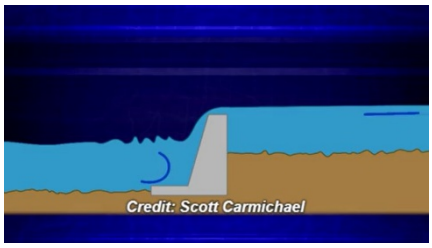
Nussle said it is "extremely dangerous" to rescue someone stuck in the cycling current, but luckily Zitello was sent out of the cycle in a way that allowed Fowler to get to her. Zitello had been in a kayak when she went over the dam. Nussle said installing a flotation device near the dam wouldn't be a good idea because untrained people using them may be pulled into the water and become a second victim. "Rescuing people stuck in the reverse current is very dangerous because rescuers become victims. And, if the victim is unconscious, they can't grab the device," Nussle said. "They call it a drowning machine for a reason."

REMOVAL

Once used as a power plant by the city of Warren at the beginning of the 20th century and perhaps once a part of a canal system, the dam no longer aids in industrial operations and disrupts fish ecosystems and damages aquatic diversity, according to the Ohio Department of Natural Resources. The hazards the dams pose limits the "recreational potential of a river" and have resulted in deaths and injuries throughout the state, according to ODNR. "Removal of dams, particularly those in highly populated areas, can greatly improve recreational opportunities and

increase safety," according to an ODNR fact sheet. Miller said it is a shame the river isn't passable.

"You have the beautiful park just upstream and a beautiful park downstream. People should be able to take advantage of that. It is a missed opportunity," Miller said. The dam could be removed as part of an effort between the cities on the Mahoning River, the Eastgate Regional Council of Governments and the state. There are nine dams along the Mahoning River targeted for removal, not just to increase the navigability of the river, but to also dredge out contaminants from when the dams were used to pool water for the area's steel mills. One of the dams in Girard is still being used to pool water for McDonald Steel. The removal effort is expected to lead to an increase in river usage, spur economic development and lead to a healthier river. About half of the $26 million in funding for the removal has been obtained and the dam in Lowellville is being removed now.



A flow study is being conducted to determine how the dam removal could affect the flow of the river. Warren Mayor Doug Franklin said he hopes to see the dam at Summit Street removed in 2022, but there could be delays in obtaining funding because of the COVID-19 pandemic. Warren is working with Eastgate, as are the other communities along the river, to obtain funding through the Ohio Environmental Protection Agency. "A lot of plans have been placed on hold because of the virus, but all of us mayors on the Mahoning River believe in the viability of the project, even if it is on pause for now. We still have funding to apply for, but we are doing that through Eastgate. They are the quarterback for us on this, and we are lucky to have them because when apply for funding in a collaborative effort, we have more luck," Franklin said. The dams have outlived their useful life, Franklin said, and need to be removed to bring safer recreation opportunities back to the Mahoning River in all parts of Warren, Franklin said. Eastgate has generally planned to remove the downstream dams first, moving upstream, but Miller said he hopes to see the dam at Summit Street moved up in priority since the accident in May. If not, Miller said something should be done soon to better warn people of the dam and provide a portage to leave the river.

RESPONSIBILITY

Eddie Colbert, Warren's safety service director, said the city will consider anything that can be done to improve the safety of the river, including working with paddle groups to gather input from the people who use the river the most. Many hands are involved in this section of the river's management, including the Ohio Department of Natural Resources, Trumbull County MetroParks and the city. The dam is owned by the city of Warren and Habosky-Davidson Enterprises. The city owns the land on the west side of the river, and the company, operator of the now-closed Powerhouse Bar, owns the land on the east side. While Ohio law does not assign responsibility for low-head dam signage to ODNR, the department regularly assists private and public landowners by providing advice and signage to warn of waterway hazards and other safety issues, according to a statement from Heidi Hetzel-Evans, communications manager for ODNR. Zach Svette, director of Trumbull County MetroParks, said he recently placed an order for more signs warning of the danger of the dam for the water and launch sites. Signs and buoys placed on the river in the past were swept away during off-season flooding, he said.

Miller suggested ODNR or the city install a cable to hang warning signs above the river, so it cannot be swept away. In the future, Svette said members of the public or the representatives from the city can notify him of missing signs and he will order new ones. "The local municipalities and the county park system will increase education of dangers of dams and highly encourage all users to call the park system to discuss any hazards within a particular section of the river, so that users unfamiliar with the river can be advised of what may lay within their trip," Svette said. "Ultimately it is the dam owner who is responsible for the signage for the dams. As the park district, we try to work with all involved to acquire and place signage and buoys," Svette said. He

said he also will edit brochures and online materials to emphasize how dangerous it is to keep going on the river past Packard Park. Although the materials indicate the Mahoning State Water Trail ends at Packard Park, and that is the last place to get out of the water before the Summit Street dam, and warns to never boat over a low-head dam, there is nothing on the actual map to indicate the dangers of continuing past Packard Park, and describes the park as a place to access the river. Signs at Packard Park that Svette put up last week indicate the site as a part of the water trail, but they do not indicate it is the end of the trail or that it is dangerous to continue.

"The sections of waterways, which are designated water trails, are chosen so boaters can safely enjoy paddling with a minimum of water hazards. The Mahoning State Water Trail brochure includes information on the hazards of low-head dams. We will recommend that Trumbull County MetroParks add this low-head dam location to the brochure, so paddlers understand they should not travel any further than Packard Park. ODNR also offers a public database of the state's boating areas, which details all known boating hazards on navigable waterways," Hetzel-Evans stated in an email. Miller recommends anyone considering boating down the Mahoning read up on the sections they intend to paddle and to ask experienced paddlers in one of several Facebook groups for advice. And, in addition to dangerous dams, boaters also should pay attention to water levels.

Hydro:

(Getting a piece of the Columbia River.)

Portland General Electric and Douglas County PUD partner to advance the Northwest's clean energy goals

By Portland General Company, May 13, 2020, bluemountaineagle.com

PORTLAND, Ore., May 13, 2020 /PRNewswire/ -- Portland General Electric Company (NYSE: POR) and Douglas County Public Utility District No. 1 are partnering to optimize the region's resources in support of clean energy for customers. The two Northwest utilities have signed a five-year power purchase agreement to supply PGE customers with up to 160 megawatts of additional capacity from the Wells Hydroelectric Project on the Columbia River north of Wenatchee, Wash. The agreement also provides Douglas County PUD with PGE load management and wholesale market sales services.

"This partnership demonstrates the value of utilities collaborating to deliver clean energy solutions for customers and our region," said Maria Pope, PGE president and CEO. "We are able to provide our portfolio management expertise as a fully integrated utility to Douglas County PUD while they are providing us access to additional emissions-free hydroelectric power."
The partnership helps pave a path for Oregon and the Northwest to make progress toward achieving their decarbonization goals while maintaining reliability with on-call hydro power when customers need it. In addition, it enables PGE to continue focusing on providing stable, reliable

energy supplies without building new thermal power plants. "Douglas PUD is excited to expand our long-term partnership with PGE. This agreement creates efficiencies for a small utility like Douglas PUD while creating value for PGE, it's a win-win," said Gary Ivory, Douglas PUD General Manager.

The Wells Project can generate up to 840 megawatts of electricity, substantially more power than is used in Douglas County. Revenues from wholesale power sales to other utilities support PUD operations and help keep electricity prices low for area residents and businesses. Beginning in January 2021 the five-year agreement is expected to contribute between 100 and 160 megawatts toward a roughly 250-megawatt power capacity need that PGE identified in its 2019 Integrated Resource Plan. The Oregon Public Utility Commission greenlighted the plan in March 2020. PGE also plans to issue one or more requests for proposals for new non-emitting resources over the course of the next year and to continue to pursue bilateral agreements for existing resources to focus on capacity needs in the 2025 timeframe.

Prior to reaching the agreement with Douglas County PUD, the company estimated these activities could result in approximately 600 megawatts of additional capacity resources and up to 150 average megawatts of new renewable resources. PGE's resource plan aims to support reliability and affordability while driving down greenhouse gas emissions by leveraging energy efficiency and customer programs, existing capacity in the Northwest, new technologies like energy storage, and cost savings afforded by federal tax credits for renewables. The total amount of additional power PGE customers will require by 2025 is currently estimated at approximately 700 megawatts, but this will be refined as demand forecasts are updated, factoring in the economic impact of COVID-19 restrictions and other developments.

(Hydro helps get rid of trash.)

Baltimore's Mr. Trash Wheel earns Guinness record for cleaning river

By Ben Hooper, MAY 15, 2020 / upi.com

May 15 (UPI) -- Baltimore's Mr. Trash Wheel, a solar and hydro powered trash interceptor that removes debris from the city's Jones Falls River, was awarded a Guinness World Record for clearing 63.3 tons of garbage in one month. The googly-eyed trash wheel, invented by Baltimore local John Kellett for the Healthy Harbor Initiative of the Waterfront Partnership of Baltimore, cleared 63.3 tons of trash from the mouth of the river from April 1 to April 30, 2017, Guinness World Records announced.

Mr. Trash Wheel will appear in the 2020 edition of the Guinness Book of World Records for earning the record for most floating debris removed by a trash receptor in one month.
"Making it into the Guinness World Records is a bittersweet milestone," Adam Lindquist, Waterfront Partnership's director of the Healthy Harbor Initiative, told CBS Baltimore. It's further proof that the trash wheel technology is extremely effective, but it also highlights how much still needs to be done to reduce the amount of litter in the Harbor."
"Our ultimate goal is to put Mr. Trash Wheel out of a job, and for all Baltimoreans to understand how litter impacts our environmental health," Lindquist said.

Water:

(Here's someone we haven't heard from in a while.)

Here's how to save the Colorado River

By BRUCE BABBITT, Guest columnist, May 17, 2020, laramieboomerang.com

It is no exaggeration to say that a mega-drought not seen in 500 years has descended on the seven Colorado River Basin states: Wyoming, Colorado, Utah, New Mexico, Nevada, Arizona and California. That's what the science shows, and that's what the region faces. Phoenix, Denver, Las Vegas and San Diego have already reduced per capita water use. Yet they continue to consume far more water than the river can supply. The river and its tributaries are still overdrawn by more than a million acre feet annually, an amount in consumption equaled by four cities the size of Los Angeles. To close the deficit, the U.S. Bureau of Reclamation and the states have been struggling to apportion the drastic cuts necessary. So far, the parties have proceeded by adhering rigidly to historic doctrines: first users have absolute rights, though those rights were based on rosy projections of the river's annual flow. For example, In Arizona the six million residents of Phoenix and Tucson will lose fifty per cent of their share before California gives up a single drop. Nevada, which has a 2 per cent share, the smallest of any state, is called on to take more cuts ahead of California, which has the largest share, 29 per cent Within California, water to 20 million residents in cities will be completely shut off before farming districts adjacent to and within the Imperial Valley take any cuts. And in the upper basin, the states of Utah, Colorado, Wyoming and New Mexico are faced with draconian reductions in their entitlements because they must deliver water to the lower basin states.

Brad Udall, a water scientist at Colorado State University, warns that something must give, that we cannot continue with a system that increasingly "violates the public's sense of rightness." There is a better, more equitable pathway for reducing the deficit without forcing arbitrary cuts. It involves 3 million acres of irrigated agriculture, mostly alfalfa and forage crops, which consume more than 80 per cent of total water use in the Basin. By retiring less than 10 per cent of this irrigated acreage from production, we could eliminate the existing million acre-foot overdraft on the Colorado River, while still maintaining the dominant role of agriculture. Pilot programs in both the upper and lower basins have demonstrated how agricultural retirement programs can work at the local level. What's lacking is the vision and financing to bring these efforts to a Basin scale. Fortunately, there's a precedent administered by the Department of Agriculture; it's the Conservation Reserve Program, established in 1985 by the Congress. It authorizes the Farm Service Agency in the Department of Agriculture to contract with landowners to retire marginal and environmentally sensitive agricultural lands in exchange

for rent. Farmers who join the Conservation Reserve remain free to return the lands to production at the end of the renewable contract period, typically 10-to-30 years.

The national Conservation Reserve currently holds nearly 22 million acres under contracts with more than 300,000 farms. This legislation has strong support from the farming community and in the Congress, which appropriates nearly $2 billion each year for the program. With this precedent, it's time to create an Irrigation Reserve Program. To work, it must be voluntary, and farmers who participate must be adequately paid for the use of their irrigation rights. A new Irrigation Reserve on a Basin scale will also require significant public funding. But the mechanism for financing an Irrigation Reserve is already available in existing federal law. In 1973, faced with deteriorating water quality in the River, the Basin states came together and persuaded the Congress to enact a law known as the Colorado River Basin Salinity Control Act. To fund salinity control projects throughout the Basin, the Congress allocated revenues from the sale of hydropower from Hoover Dam, Glen Canyon Dam and other federal dams throughout the Basin. Three hydropower accounts -- the Lower Colorado River Basin Development Fund, the Upper Colorado River Basin Fund and the Hoover Powerplant Act-- continue to capture and allocate revenues to basin projects. Congress should now add financing of an Irrigation Reserve to the list of eligible expenditures.

With these two precedents, the Conservation Reserve Program and the Salinity Control Act, we have the road map to establish a basin-wide Irrigation Reserve. I urge the seven Basin states to make common cause and join together to obtain Congressional legislation. *Bruce Babbitt is a contributor to Writers on the Range.org, a nonprofit dedicated to spurring lively discussion about Western issues. He served as Secretary of the Interior from 1993-2001.*

Environment:

(Virus even affects fish. To the environmentalists Someone's life is less important than a fish. Gimme a break!)

Shad hatcheries, fish lifts fall victim to coronavirus

By: Timothy B. Wheeler, May 13, 2020, southernmarylandchronicle.com

By this time in a typical year, the main fish lift at Conowingo Dam would be busy hoisting thousands of fish daily over the 94-foot high barrier, including a dwindling number of American shad and river herring, so they can swim up the Susquehanna River to spawn. But the lift has been idle so far this spring, another victim of the coronavirus pandemic. Exelon Corp., which owns the hydroelectric facility, suspended fish passage operations just before they were to start. Not running the fish elevator represents another setback for long-running efforts to bring American shad and river herring populations back from historic low levels in most Chesapeake Bay tributaries. But it's not the only, or even the

biggest blow to the migratory fish — health concerns also prompted Pennsylvania, Maryland and Delaware to cancel their annual stocking efforts that collectively release millions of hatchery-reared shad into the Susquehanna and other rivers. "It's hard to do the work and practice social distancing," said Josh Tryninewski, a biologist with the Pennsylvania Fish and Boat Commission. Exelon spokeswoman Deena O'Brien said the power company decided in late March not to run the two fish lifts at Conowingo to comply with Maryland Gov. Larry Hogan's executive order that closed all but essential businesses. The dam is located in Maryland, about 10 miles upstream from where the Susquehanna meets the Bay.

The large lift on the east side of the dam normally runs from April 1 through the first week of June and carries migrating fish over the structure so they can reach spawning areas upriver. A much smaller lift on the west side, which is used in part to collect American shad eggs for hatchery stocking upriver, has also been idled. In response to Hogan's order, O'Brien said that Exelon had limited access to the dam in late March to only those staff needed to generate electricity. The contractors who normally operate the lift and monitor fish passage were deemed non-essential, she said. That hasn't set well with environmentalists. Ted Evgeniadis, the Lower Susquehanna Riverkeeper, said Exelon has been "shirking its responsibility" to help maintain fish populations in the river. He and Betsy Nicholas, executive director of Waterkeepers Chesapeake, contend that the company's federal license to generate power at Conowingo mandates it to run the lift. "COVID-19 is not an acceptable excuse to lay off workers who are indeed 'essential,'" he said, "as these migratory fish must rely on the fish lift at Conowingo Dam … for their survival." Mike Parker, spokesman for the Pennsylvania Fish and Boat Commission, said officials in his agency were informed of the lift suspension in late March and chose not to fight it.

"I guess in the big picture human safety was given priority over fish passage this season," he said. "It's just an unfortunate result of what's happening in the world right now. It's a shame, something no one wanted to see happen." Exelon, which operates the hydro-power facility under a license issued by the Federal Energy Regulatory Commission, notified it in a March 30 letter that the east fish lift had been idled. But commission staff recently wrote the company asking it to justify its decision, pointing out that assisting fish passage is required as part of its federal license. O'Brien said the company has been working out how to resume fish lift operations at Conowingo. "We feel like we're ready to go again," she said, with a plan that minimizes risks of workers getting sick from having additional people on site to run the lifts.

The company will have medical personnel present to screen people at the dam, she said, and has arranged to provide separate entrances and work areas for the contractors to help ensure "social distancing" from the power generation staff. "Lifting fish is going to look a little different in the age of COVID,'' she said, adding that "our main priority is keeping critical staff safe." O'Brien had said May 7 that lift operations would start soon, possibly over the weekend. But on Monday afternoon, she said that company officials still need to get their plan approved by authorities and to see if fish passage facilities idled at two upriver dams — Holtwood and Safe Harbor — can also be restarted. Those two dams, located in Pennsylvania, are operated by a different company, Brookfield Renewable Energy Partners. Biologists say migrating shad find little suitable spawning habitat until they get past all three dams. "[With] all these moving parts. It's not as easy as flipping a switch," the Exelon spokeswoman said.

UPDATE: Exelon began lifting fish over the dam Tuesday afternoon after Maryland officials okayed the company's plan, O'Brien said. She said the upriver dams are expected to resume fish passage activity "sometime next week." Meanwhile, state agencies that for years have been stocking the Susquehanna and other Bay tributaries with hatchery-reared shad say they've had to forgo their efforts this spring because of the risks of spreading the coronavirus. The Pennsylvania Fish and Boat Commission's Van Dyke shad hatchery released about 830,000 shad larvae into the Susquehanna last year, but in other recent years has produced 3 million to 4 million for stocking. The facility has been idled this year, though, because safety concerns kept contractors from going into the field to collect eggs from spawning adult fish, said the commission's

Tryninewski. Coronavirus-related budget concerns also barred hiring seasonal workers to staff the hatchery.

"No eggs, no staff, can't do field work, can't travel," he said. "This is all … the fallout from COVID." This is the first year since the hatchery began operations in 1977 that it failed to produce any shad for stocking. Delaware, which last year stocked the Nanticoke River with more than 800,000 newly hatched shad, likewise suspended its hatchery operations this year. Michael Globetti, spokesman for the state Department of Natural Resources and Environmental Control, said the agency is using the down time to perform needed hatchery equipment upgrades. Health concerns also caused the Maryland Department of Natural Resources to cancel annual collections of eggs from American as well as hickory shad — a related fish also severely reduced from historical abundance. The state last year released 2.4 million shad larvae and nearly 500,000 young fish into the Choptank River. DNR biologist Charles "Chuck" Stence said agency staff tried to figure out a way to go ahead, but couldn't satisfy the need for social distancing, given the small boats and multiple people needed for such field work. "Since we collect American shad broodstock at night on the Potomac River, I didn't think it would be prudent to operate with only two people on the boat," he explained. "Unfortunately, working a gill net is a three-person job, especially if the gill net hangs on the bottom." The DNR also collects hickory shad on the Susquehanna to retrieve eggs, but Stence said he didn't feel comfortable trying that with just two people in a boat in a fast-flowing and sometimes treacherous stretch of the river.

With the late start of fish lift operations at Conowingo, the traditional spawning season is already half over. By May 11 last year, more than 550,000 fish had taken the lift upriver, according to data on the fish and boat commission website. More than 90% of those were gizzard shad, which are not migratory and not lacking in abundance. But more than two-thirds of the relatively few American shad taking the lift last year had done so by May 11. Built in 1991 at a cost of $12 million, the fish lift on the east side of the dam essentially replaced a small lift that had operated until then on the western side of the structure which was used to capture shad that were then trucked around Conowingo and the upstream dams. The east lift was heralded then as the largest of its kind in the nation. It was the byproduct of negotiations between Conowingo's owner and state and federal officials seeking to improve passage for fish up the Susquehanna, which had been all but blocked to migratory species since the dam was built in 1928. For a decade after the east lift's completion, the number of shad moving upriver past the dam grew steadily, peaking at around 200,000 in 2001. Nearly 300,000 alewife and blueback herring, collectively known as river herring, also took the lift.

Since then, though, the runs of American shad and river herring past Conowingo have trended downward. Last year, the lift handled only 4,787 American shad and just 15 river herring. Exelon agreed four years ago to revamp its fish passage effort. The deal, struck with the U.S. Fish and Wildlife Service, calls for the company to overhaul the east fish lift at the dam, expanding its capacity and taking steps to try to attract more fish to use it. Until those physical changes are made, the company agreed to augment lift operations by collecting fish at the dam and resume trucking them upriver. That agreement was contingent on Exelon receiving a renewed license. That was drawn out by a dispute with Maryland over what responsibility the company bears for dealing with the buildup of nutrients and sediment in the 14-mile reservoir or "pond" created upriver by the dam.

The parties wound up in court but reached a settlement in 2019. It calls for the company to spend more than $200 million over the next 50 years on projects intended to rebuild eel, mussel and migratory fish populations in the Susquehanna and to reduce nutrient and sediment pollution flowing into the Upper Bay. But several environmental groups and local officials have complained the deal doesn't do enough to offset the ecological harm caused by the dam. They have urged federal regulators not to issue the license until the terms can be renegotiated. The FERC has yet to issue a decision.

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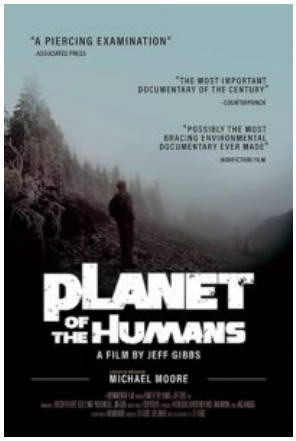
Other Stuff:

(This will take an open mind as well as make a point.)

Planet of the Humans Review

By Ken Braun, MAY 15, 2020, capitalresearch.org

Planet of the Humans Review
"Green" Energy | Debunking Wind and Solar
From Hugging Trees to Burning Trees | The Real Alternatives



Summary: Michael Moore's most recent documentary, Planet of the Humans, is an honest criticism of "green energy." It exposes wind and solar energy as little more than desperately fake measures aimed "not to save the planet but to save our way of life." Wind turbines and solar arrays simply cannot possibly power anything resembling our current industrial civilization. The documentary also exposes the green movement's hypocritical leaders, who personally profit from the comfortable myths (and subsidies) they have been peddling for decades to credulous left-leaning upper-middle-class Americans.

Review: "Green" Energy
https://capitalresearch.org/article/planet-of-the-humans-review-part-1/

Review: Debunking Wind and Solar
https://capitalresearch.org/article/planet-of-the-humans-review-part-2/

Review: From Hugging Trees to Burning Trees
https://capitalresearch.org/article/planet-of-the-humans-review-part-3/

Review: The Real Alternatives
https://capitalresearch.org/article/planet-of-the-humans-review-part-4/

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Some Dam_Hydro News 5_15_2020
Supplement on Edenville Dam and Sanford Dam Failures
Midland, Michigan

(The flood before the failures.)

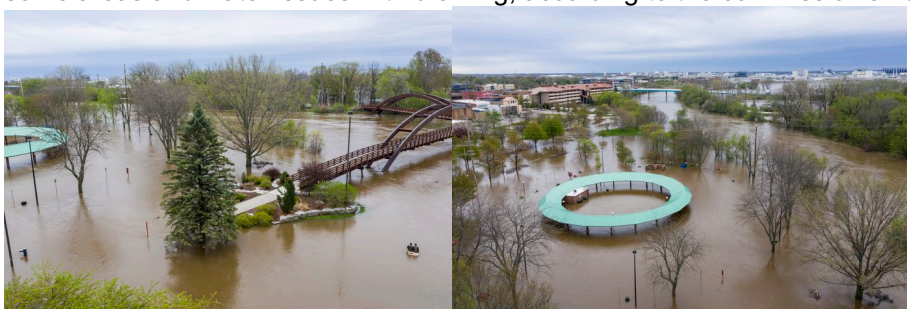
Officials report flooded roadways, evacuations and dams unable to control water in mid-Michigan

By Isis Simpson-Mersha | and Kaitlyn Farley | mlive.com, May 19, 2020

SAGINAW, MI — Mid-Michigan emergency officials are warning citizens about the potential dangers of flooding and to find alternative routes if met with road closures after heavy rains blasted several counties on Monday, May 18.

Bay County

Officials with Bay County Road Commission said the county is experiencing water over roads in some areas and water issues with draining, according to the commission's Facebook post.

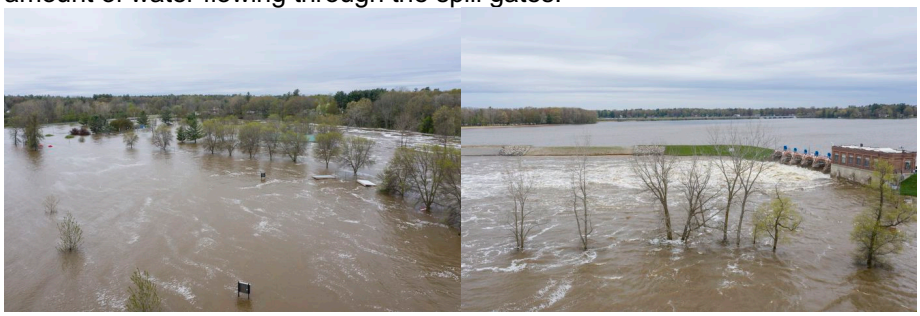


(At this point, the dams didn't cause any flooding. They hadn't failed yet)

Heavy rains cause Midland County dams to flood nearby areas

By Kaytie Boomer | mlive.com, May 19, 2020

Flooded area near the Sanford Dam on Tuesday, May 19, 2020. Residents were told to evacuate due to the dams on Sanford and Wixom Lakes no longer being able to control or contain the amount of water flowing through the spill gates.



(Water is getting higher.)

Flooded area near the Sanford Dam on Tuesday, May 19, 2020. Residents were told to evacuate due to the dams on Sanford and Wixom Lakes no longer being able to control or contain the amount of
water flowing through the spill gates.
(More. It's non-stop,)

Evacuations called for some areas of Gladwin, Midland counties

By Devon Mahieu, May 19th 2020, upnorthlive.com


MIDLAND COUNTY, Mich., (WPBN/WGTU) -- If you are near Sanford and Wixom Lakes in Midland County, you need to evacuate your home immediately. According to Midland County Emergency Management, there has been an imminent failure of the Edenville and Sanford Dams. Boyce Hydro said at this time, the dams are structurally sound but they are unable to control or contain the amount of water that is flowing through the spill gates. Shelters have been set up at Meridian Junior High School and at Coleman High School for anyone who needs a place to go. Evacuations are also being called for along some areas of Gladwin County. Right now, there is a flash flood warning for Gladwin County until 7:45 a.m. Tuesday. Gladwin County Emergency Management said flash flooding is imminent on the Cedar River below the Chapel Dam. People along this area are asked to seek higher ground immediately. The Gladwin Chamber of Commerce said evacuation centers have been set up Grace Christian Church, the Save-A-Lot parking lot, Fruchey's parking lot on M-30 and Rivertown, if you are in need of dire health help.

(The owner of the project had his license terminate in 2018 by the FERC.)

Mid-Michigan dam that failed was cited for years for safety violations

By Joel Kurth, Mike Wilkinson, Kelly House, May 19, 2020, bridgemi.com

MIDLAND — The owner of a Gladwin County dam that failed and prompted widespread evacuations Tuesday was cited repeatedly by federal officials for safety violations, including failing to fix spillways used to prevent flooding, records show. Federal authorities revoked the licenses of owners Boyce Hydro Power LLC in 2018, alleging that it "failed for many years to comply with significant license and safety requirements, notwithstanding having been given opportunities to come into compliance."
In court papers and federal records, regulators wrote that Boyce Hydro of Midland had a "history, going back to 2004" of missing deadlines to make repairs on the Edenville Dam that failed. That long history of noncompliance ranges from failing to report structural instability to

inadequate water quality monitoring — but Boyce Hydro's failure, in particular, to increase the spillway capacity to address flood risk has raised serious concerns about public safety," the Federal Energy Regulatory Commission wrote in a federal lawsuit over regulations in 2017.

The dam's failure following heavy rains prompted a massive evacuation of thousands in mid-Michigan that was ongoing Tuesday night, and torrents of water threatened another dam and triggered the immediate evacuation in and around Midland. Michigan Gov. Gretchen Whitmer announced plans to declare a state of emergency after rising water from heavy rains punched a huge hole in the Edenville dam which holds back Wixom Lake from the Tittabawassee River. "This is unlike anything we've ever seen before," Whitmer said during a Tuesday evening press conference. "I feel like I've said that a lot over the last number of weeks, but this truly is a historic event that is playing out in the midst of another historic event and so we need to make sure that we keep our wits about us and work on this together." Whitmer said downtown Midland could be under as much as 9 feet of water by noon Wednesday and said the evacuation included parts of south and west Midland but also the Dow Chemical facilities and nearby Thomas and Saginaw townships in Saginaw County.
Residents near the dams have been ordered to move and Whitmer implored them to heed the warnings. "If you are in those areas you must evacuate as soon as possible. Please get somewhere safe now," she said.

"This is serious and it is time for people to take action to keep themselves safe and to evacuate. We still need thousands of people to take this action," Whitmer said. "If you have a relative or a friend somewhere else in the state that you can go and stay with please go to their homes." Four emergency shelters were set up around Midland and the State Police, the Red Cross and the Michigan National Guard will be providing assistance, she said. "I don't want anyone to go to bed tonight not knowing how serious the situation is and that it's time to make sure that they evacuate right now," she said.
Midland County said weather forecasters are predicting the river will crest Wednesday morning at 38 feet — 4 feet above the highest recorded ever during a flood in 1986. That flood was considered a once-every-500-years flood. Aerial footage of the Tittabawassee River near Midland showed dramatic flooding of homes, businesses and infrastructure after the dam was breached Tuesday evening. The dam is located in Gladwin County, about 20 miles northwest of Midland.

County 911 officials have advised area residents to evacuate immediately. Along with the Edenville dam, two smaller dams — the Smallwood and Sanford dams — also failed, according to the Michigan Democratic Party. The evacuation covers an area that straddles the Tittabawassee from the Sanford dam to just southeast of Midland and it includes Windover High School and the residential neighborhood west of downtown Midland. The Midland area got more than 4 inches of rain over two days ending Tuesday morning, according to the National Weather Service. But sewers and dams are in rough shape to The Edenville dam can store over 21 billion gallons of water, according to the Army Corps of Engineers. It was built in 1925 and is largely used for flood control. It is owned by Boyce Hydro Power, LLC, federal records show. Records show Boyce Hydro submitted paperwork in 2011 to the Federal Emergency Regulatory Commission for major repairs that were slated to last through 2020. Instead, federal regulators moved to revoke the company's license in 2017, writing: "The Edenville dam has a high hazard potential rating, which means a failure of the project's works would create a threat to human life and/or would cause significant property damage."

In 2018, the Federal Emergency Regulatory Commission cited Boyce Hydro for numerous violations including performing "unauthorized dam repairs" and failing to "file an adequate Public Safety Plan"
"Boyce Hydro has a long history of non-compliance with those terms and conditions and with related provisions in the FPA and Commission regulations and orders," the federal agency wrote on Feb. 26, 2018. The biggest issue, regulators wrote, was the failure to increase spillway capacity to ensure the dam would not fail during a major flood, records show. "Current

spillway capacity can only pass about 50 percent of the PMF (possible maximum flood) of the Edenville Dam," federal regulators wrote in a 2018 report. The revocation of the license prompted litigation that lasted for years. Earlier this year, Boyce agreed to sell the dam and others over the next two years for $9.4 million to the Four Lakes Task Force, an authority working for Midland and Gladwin counties.
Bridge left messages late Tuesday night with Boyce Hydro officials that weren't immediately returned.
Former State Rep. Sam Singh, D-East Lansing, wrote on Twitter late Tuesday that "Boyce Hydro needs to be held accountable for the structural failure of these dams. Their consistent disinvestment and fighting with regulators leads to devastation."

In 2019, state Sen. Jim Stamas, R-Midland, secured $5 million in state grant money to buy and repair dams in Midland and Gladwin counties, money that would help fund the Four Lakes Task Force, Midland County Administrator Bridgette Gransden said. The repairs had not yet been made.
"Everyone was aware that repairs needed to be made on those dams," Gransden told Bridge late Tuesday. At the West Midland Family Center in Shepherd, west of Midland, about two dozen evacuees milled about the parking lot and munched on bagels inside the center to pass the time while they awaited news on the fate of their homes. They'd fled in a hurry after first responders came knocking on the door Tuesday evening, or driving through the neighborhood in fire trucks with sirens blaring, advising them to leave before the waters came. Janet Parsons and her son, Sean Parsons, stuffed some clothes, medication and toiletries in two plastic bags, and hit the road. During the 1986 flood, months after Parsons bought her home in Midland near the confluence of the Chippewa and Tittabawassee rivers, the water came up to her lawn. But there was a key difference in 1986: The dams held. This time, Parsons is expecting the waters to do more damage. "I just hope we don't lose everything," she said.

She and others evacuated before the floodwaters arrived, and had no idea whether their homes would stay dry through the night. As they talked, they scrolled cellphones, watched social media video footage and read news reports. How many dams have failed? Where is the power out now? Which roads are passable? Did animal control officers manage to get to the house and retrieve dogs they left behind? Carla Sexton wondered if she could get to her doctor's appointment Wednesday afternoon in downtown Midland. The Edenville resident, 58, has been in and out of the hospital with blood clots in her legs and lungs. Now, she doesn't know whether she'll have a home by the morning. "I just keep telling myself it'll all work out," she said. But given all the bad things she said she had heard about the structural integrity of Edenville and Sanford dams, she's not so sure. Greg Dorrien, executive director of the Midland Family Center, said poor maintenance at Edenville has been a source of community anxiety for years. When the Four Lakes Task Force took it over, residents were hopeful the dams would receive needed upgrades. "Unfortunately," he said, "I think this flood happened before they could finish."

(It failed. I guess it overtopped and washed out.)

Dam in Michigan ruptures

By: C.A. Printup, May 19, 2020, abc57.com

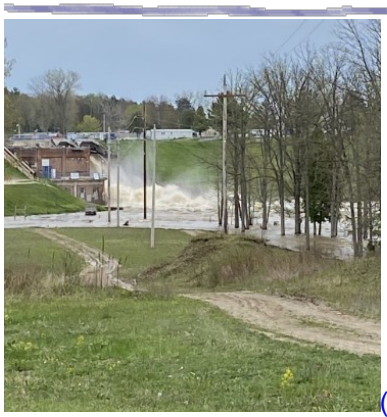
EDENVILLE, Mich. – The Edenville dam in Michigan has failed and is breached.
Governor Gretchen Whitmer has issued an emergency declaration in response to the dam failure. She has also ordered that any emergency order issued in response to COVID-19 crisis is temporarily suspended "to the extent such order impedes the emergency response effort under this declaration."

From Video of the dam breach

(With the Edenville dam failure, it's getting ansty.)

Residents told to evacuate immediately due to dam failure

Midland County, MI (WNEM) — Residents in the Edenville and Sanford areas are being asked to evacuate their homes immediately due to a dam failure in the area. According to an alert from Midland County 911, the Edenville Dam has failed and is breached. Officials are asking residents to evacuate downstream immediately. Find higher ground as far east and west of the Tittabawassee River as possible. US-10 will be closed in both directions at Sanford Lake.



(Looks like it's time to panic.)

Edenville Dam failure, Sanford Dam expected failure

By Whitney Bryan, May 19, 2020, wnem.com

Residents in the Edenville and Sanford areas are being asked to evacuate their homes immediately due to a dam failure in the area. According to an alert from Midland County 911, the Edenville Dam has failed and is breached. Now Midland City residents west of Eastman, south of US-10 also need to evacuate.
All Midland Township residents on Ashby Road between Poseyville and Patterson roads evacuate now and take shelter at Bullock Creek High School. Midland City residents looking for shelter can go to Midland High School located at 1301 Eastlawn. Homer Twp. residents on East Wheeler or North Homer are asked to respond to Carol Creek to be evacuated. Lincoln Twp. residents east of M-30 on any streets between Price and Wackerly must evacuate immediately. Officials are asking residents to evacuate downstream
Immediately. Find higher ground as far east and west of the Tittabawassee River as possible. Click here for evacuation routes

Officials said Coleman High School is without power. Shelter is being moved to West Midland Family Center located at 4011 W. Isabella Rd. US-10 will be closed in both directions at Sanford Lake.
Officials are asking that you only call 911 if you are unable to evacuate.\ Gov. Gretchen Whitmer said she's planning to issue an emergency declaration this evening to ensure state and local officials have the resources they need to respond to the Dam failure. "The State Emergency Operations Center is already activated and fully engaged in the response. State officials from multiple departments have been on-site throughout the day," Whitmer said.

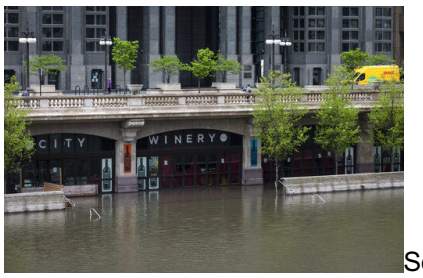
(A fix was on the way, but didn't get there in time.)

1 Michigan dam breached, another at risk amid Midwest floods

May 18, 2020, wvnews.com

EDENVILLE, Mich. (AP) — People living along two lakes and a river in mid-Michigan rushed to evacuate Tuesday after the breach of a dam following days of heavy flooding across parts of the Midwest. Two schools were opened for evacuees in the Midland area, about 140 miles north of Detroit, after the breach of Edenville Dam, which holds back Wixom Lake. Red Cross worker Tom Restgate, who had been helping residents of the area seek shelter from the threat of rising waters, said he received an alert over his cellphone that "the dam ... it breached."

Residents in a span of several miles were urged to evacuate. Officials also were watching the Sanford Dam south of Edenville. The city of Midland, which includes the main plant of Dow Chemical, sits on the banks of the Tittabawassee River about 8 miles away from that dam. More than 50 roads have been closed in the area. The evacuations in Michigan followed days of heavy rains in parts of the Midwest that also brought flooding to Chicago and other parts of Illinois, Ohio and other states. "The water is very high," Catherine Sias, who lives about a mile from the Edenville Dam, said before the breach. "Last night, emergency responders came door-to-door to make sure everybody got out. We have mild flooding every year, but this is unusual." Sias, 45, has five cats and two dogs and was about to check into a hotel that allowed pets when she learned it was probably safe for people not living in low-lying areas to return home. "I'm on the high bank, about 20 feet up," she said. "A lot of people are having a harder time. Most of them are going to be dealing with flooding in their homes."



Some residents, such as Jon St. Croix, went to shelters set up in area schools. We were lying in bed when I heard sirens," St. Croix told the Midland Daily News. "A fire truck was driving around, broadcasting that (we needed) to evacuate. It's a scary thing — you're sleeping and awake to sirens." St. Croix, 62, his wife and a next-door neighbor were among more than a dozen people sheltering in one school. Their home was not flooded, but St. Croix said he had seen flooding in the area. Volunteers at the schools said about 120 vehicles were in the parking lots of a couple of schools and about 30 people had been staying on cots inside, according to WNEM-TV. About a dozen people hunkered down overnight at a school in Sanford but had left by early Tuesday afternoon, said Tom Restgate, an American Red Cross safety officer. The cots inside the school were spread out to observe social distancing recommendations to fight the spread of the COVID-19 virus, Restgate said.

Heavy rains also caused flooding in parts of northwestern Indiana, including Crown Point — the Lake County seat — where about seven inches fell over the weekend. Floodwaters swelled quickly on Sunday when 1 inch (2.54 centimeters) of rain fell within 15 minutes, swamping streets and sending water into basements and homes, including Mayor David Uran's residence. Those waters receded Monday, but Uran and many other residents were continuing to clean up the watery mess on Tuesday, said Uran's chief of staff, Greg Falkowski. "He got between 2 and 3 feet in his basement, so that's what he's working on right now," Falkowski said Tuesday afternoon. In Chicago, water that flooded some areas downtown was receding on Tuesday, but Larry Langford, a fire department spokesman, said that he did not expect power to be restored at the iconic Willis Tower for days because the rains caused the building's subbasements to fill with as much as 25 feet (7.6 meters) of water. The building was closed to tenants and visitors. And in DuPage County, west of the city, a search for an 18-year-old woman who was swept away by a surging DuPage River last Friday remained suspended on Tuesday because the water remained too high and the current too swift to conduct the search safely. Tony Martinez, spokesman for the DuPage Forest Preserve District, said the area of the river where the woman was swept that is typically about 25 feet wide remained 200 yards wide. "We hope to resume searching later this week," he said.

The driver of a pickup truck in mid-Michigan had to be rescued by first responders after the vehicle was swept away on a flooded road in Tittabawassee Township, WNEM-TV reported. School buses and dump trucks were called out Tuesday in southwest Ohio to help evacuate people trapped in flooded areas in a commercial area with dozens of businesses in suburban West Chester Township. By noon, West Chester Township spokeswoman Barb Wilson said a dozen people had been taken to a nearby high school, while other people were able to make it out of the flooded area in their own vehicles. There were no injuries reported immediately in the area just off Interstate 75 north of Cincinnati.

Flood warnings in Michigan were issued following widespread rainfall of up to 4 inches (10.2 centimeters) since Sunday, according to the National Weather Service. Heavy runoff pushed rivers higher. "A lot of the rainfall came and hit the Saginaw Valley over the last 48 hours," meteorologist Andrew Arnold said Tuesday morning. "For the most part, the rain is over." The weather system was moving into Indiana, Ohio, parts of Illinois and the Tennessee Valley, Arnold said. More flooding was forecast for parts of the Tittabawassee River, which was at 26.5 feet (8.1 meters) Tuesday morning. It was expected to crest Wednesday morning at about 30 feet (9.1 meters). Flood stage is 24 feet (7.3 meters). Midland County 911 sent out a series of alerts saying the Edenville and Sanford dams were at risk of failing, and those living near Sanford Lake,

Wixom Lake and other area waterways should evacuate. Midland County Emergency Management later said that the dams were "structurally sound." It said water flowing through the dam spillgates couldn't be controlled, however, so evacuation measures remained in place.

In 2018, the Federal Energy Regulatory Commission revoked the license of the company that operated the Edenville Dam due to non-compliance issues that included spillway capacity and the inability to pass the most severe flood reasonably possible in the area. The Edenville Dam was rated in unsatisfactory condition in 2018 by the state, while the Sanford Dam received a fair condition rating. Both dams are in the process of being sold. There were 19 high hazard dams in unsatisfactory or poor condition in Michigan in 2018, ranking 20th among the 45 states and Puerto Rico for which The Associated Press obtained condition assessments. Just to the north in Gladwin County, the weather service issued a flash flood warning for the Cedar River below the Chappel Dam. And other parts of the state saw isolated flooding following heavy rains in recent days.

(Now, we have 2 dam failures. Oy! What are they going to do if we have a PMF?)

2 Dams Fail in Michigan, Forcing Thousands to Evacuate

The failure of the dams was expected to bring record-setting flooding, with the response complicated by the coronavirus.

By Daniel Victor and Christine Hauser, May 20, 2020, nytimes.com

Severe flooding struck central Michigan on Wednesday after two dams were breached by rain-swollen waters, forcing the evacuation of thousands of residents and prompting officials to warn of life-threatening danger. The failures on Tuesday of the Edenville Dam and the Sanford Dam, about 140 miles northwest of Detroit, led the National Weather Service to issue a flash-flood warning for areas near the Tittabawassee River, with downstream effects expected from Midland to Saginaw. Residents in nearby towns, including Edenville, Sanford and Midland, were evacuated. Gov. Gretchen Whitmer said at a news conference on Tuesday that downtown Midland, with a population of more than 41,000, could be under nine feet of water by Wednesday morning. About 10,000 people were evacuating from Midland, and about 1,000 more residents in townships outside of the city were ordered to leave their homes, Bridgette Gransden, a Midland County spokeswoman, said in a telephone interview on Wednesday "More homes than that could have been affected," she said.

 On Wednesday, the Weather Service said that the Tittabawassee River had reached 34.72 feet just before 9 a.m., a full 10 feet above flood levels, and that it was continuing to rise. The service said that life-threatening flooding along the river would continue during the day. Bridges across the river were closed and many roads were underwater, Midland County said. While imploring residents to take the threat seriously and evacuate immediately, Ms. Whitmer said they should continue to observe precautions related to the coronavirus, including wearing masks and maintaining social distancing. She acknowledged that distancing would be difficult in shelters that had been set up in the area. “To go through this in the midst of a global pandemic is almost unthinkable,” she said. “But we are here, and to the best of our ability we are going to navigate this together.” In Sanford, a village of about 580 people in Midland County, water coursed through the streets, video from local news agencies showed. Some single-story structures were submerged nearly over doorways, and water had swept across a bridge over the Tittabawassee River, photos and video showed. Midland County public schools were taking in people who had evacuated, including large crowds of older residents, the county’s superintendent of public schools, Michael Sharrow said on Twitter. “Tough to see them go through this,” he wrote, posting photos of residents and supplies in a school gymnasium.

It was the second time in 24 hours that residents were told to evacuate. Four to seven inches of rain drenched the area on Sunday and Monday, according to the National Weather Service. Dow Chemical Company, based in Midland, has activated its emergency operations center and will be adjusting operations, Rachelle Schikorra, a spokeswoman, told The Associated Press. Ms. Whitmer said on Tuesday night that thousands of people still needed to evacuate and that the scale of the disaster would not be known until late Wednesday morning. “This is unlike anything we’ve ever seen before,” she said. “I feel like I’ve said that a lot over the last number of weeks. But this truly is a historic event that is playing out in the midst of another historic event.”

(And to sum it up and there’s a third dam failure. That’s a lot of rain.)

Michigan floods bring 'substantial' concern about dams, 'cutoff low' to pack drenching rain

By Travis Fedschun, Brandon Noriega | Fox News, May 19, 2020, foxnews.com

A slow-moving storm dumped heavy rain across Michigan, leading to warnings about the stability of dams as the same weather system threatens parts of the Mid-Atlantic and Southeast. The National Weather Service's (NWS) Weather Prediction Center (WPC) said heavy rain that spanned from Michigan to the Ohio River Valley will shift to the southern Appalachians, Carolinas, and western Virginia on Tuesday and Wednesday. The threat of flash flooding is likely, especially in the western Carolinas and Virginia.

"We have flash-flooding concerns in all of these areas and that is going to be a big deal over the next couple of days," Fox News senior meteorologist Janice Dean said on "Fox & Friends First." Flood watches, advisories, and warnings stretch from the Midwest to the southern Mid-Atlantic due to a slow-moving storm system. "Parts of the Carolinas need to be on alert for a cutoff low, this is actually going to be worse than Arthur ever was," Dean said Tuesday.

Cutoff lows are storm systems that have been "completely displaced" from prevailing winds, which can remain nearly stationary for days, according to the NWS.

A "cutoff low" is forecast to bring heavy rain across the southern Mid-Atlantic and into the Southeast. (Fox News) Dean said the cutoff means there is "nothing to push it out of the way quickly." The storm system has the potential to bring drenching rain across several regions, including the Carolinas, Virginia, and the Ohio and Tennessee River Valley. A "cutoff low" is forecast to bring heavy rain across the southern Mid-Atlantic and into the Southeast. "Over the next 48 hours some of these areas could receive close to a foot, a foot of rainfall," Dean said Tuesday. Flood watches are in effect for the western Carolinas.
Heavy rains turn streets into rivers in Chicago Back-to-back storms drop over five inches of rain, sending floodwaters into Lake Michigan. The same storm system brought heavy rain and flooding to the Chicago area over the weekend before moving east. On Monday, rain in Michigan spurred warnings about the stability of several dams in the state. The Gladwin County Central Dispatch said the Chappel Dam failed, with flash flooding expected downstream, 9 & 10 News reported. In neighboring Midland County outside of Saginaw, Midland County Central Dispatch initially ordered evacuations around 12:22 a.m. on Tuesday after an "imminent dam failure" was determined.

Imminent Dam Failure: Edenville residents that live along Sanford and Wixom Lakes need to evacuate immediately. Shelters are set up at Meridian Jr High School and at Coleman High School. This is NOT a test. Take action now! Officials told residents in Edenville Township to leave their homes. Those along Sanford and Wixom Lake were asked to vacate and head to shelters. Central dispatch later said that it's been working with Boyce Hydro to further assess the situation. "At this time, Boyce reports they are structurally sound but they are unable to control or contain the amount of water that is flowing through the spillgates," the agency said Tuesday. "The flooding concerns are still substantial for the residents along the Sanford and Wixom Lake."