Forensic team seeks info about dam failures

Readers have two ways to confidentially contact investigators

By Ashley Schafer, ourmidland.com, September 15, 2020

The independent forensic team investigating the Edenville and Sanford dam failures is now asking the public for information. The team is requesting relevant information that anyone may have regarding the failures of Edenville and Sanford dams and the flood performance of Secord and Smallwood dams. There are two avenues for individuals or organizations to contact the team, confidentially. First, the team has established an email box accessible only by the team, and information can be submitted to this email box at michigan.dams.forensics@gmail.com. Second, information can also be mailed to “Independent Forensic Team,” courtesy of Alvi Associates, Inc., 110 West Road, Suite 250, Towson, Maryland 21204. When submitting information, the team requests that you provide your contact information so the team can reach out to you with any questions it may have.

The team is currently in the "information gathering and review" phase of its work, according to an announcement shared by the Association of State Dam Safety Officials (ASDSO), which is a
national nonprofit that partnered with the Michigan Department of Environment, Great Lakes and Energy to perform one of the two independent reviews of the state’s Dam Safety Program. As announced in an Aug. 11, the independent forensic investigation team has been engaged by the Federal Energy Regulatory Commission (FERC) to perform an independent examination of the May 19 failures of the Edenville and Sanford dams and operations of Smallwood and Secord dams near Midland, Michigan. The team consists of John France, PE (team chair, Geotechnical and Emergency Action Planning); Irfan Alvi, PE (Human Factors and Structural); Jennifer Williams, PE (Geotechnical); Steve Higinbotham, PE (Hydraulic Structures); and Arthur Miller, PhD, PE (Hydraulics and Hydrology, Reservoir Operations).

(The State keeps the pressure on...)

State issues Emergency Order to Boyce Hydro for Edenville Dam
Sanford Dam remains standing but flooding impacts surrounding area
By Cheyna Roth, mlive.com, Sep 17, 2020

EDENVILLE, MI -- The state is moving forward with needed repairs after the devastating failure of the Edenville Dam. Michigan’s Department of Environment, Great Lakes, and Energy (EGLE) has issued an emergency work order to Edenville Dam owner Boyce Hydro. The order is to partially breach the Edenville Dam’s Tobacco River spillway. This is intended to improve the stability of the Tobacco River portion of the Edenville Dam. "We don’t want residents who live downstream to face another devastating flood," said EGLE Director Liesl Clark. "Boyce needs to step up and do what’s right for the community and property owners, make sure that no further damage is done to natural resources and allow for critical infrastructure work."

While the order requires Boyce Hydro to do the work, the state has already said it doesn’t anticipate the serially delinquent company to make the repairs. They’ve not had one deadline or met one milestone that we’ve asked,” Clark said during a Sept. 1 press conference announcing the work plans and that an emergency order was likely. Attorney for Boyce Hydro Lawrence Kogan said the state is trying to bypass the courts and rule of law, "preferring instead to rely upon its ‘kangaroo’ agency administrative process to secure a procedural advantage." "The agency has issued an emergency dictate against Boyce without ever having established via scientific or engineering evidence, that the Tobacco side of the Edenville Dam poses an immediate/urgent public safety risk," he said in an email to MLive. If Boyce Hydro does not make the repairs itself, the state will move forward without the company and then seek to recoup the costs later, which could prove difficult. Boyce Hydro, LLC and Boyce Hydro Power, LLC, both owned by Lee Mueller, filed for Chapter 11 bankruptcy in early August.

The emergency work order requires Boyce Hydro to immediately hire a contractor to do the work and send EGLE proof of a contract by Sept. 21. The company also has to complete applications for permits by Sept. 25, and start construction on the project by Oct. 19. In May, a flood triggered by heavy rains and the failure of the Edenville and Sanford dams largely wiped out the village of Sanford, and flooded parts of downtown Midland and beyond. Midland County officials have estimated that the flooding caused upwards of $209 million in damage. About 10,000 residents were forced to evacuate the region and five impacted counties, Midland, Saginaw, Gladwin, Arenac and Iosco, estimated that more than 3,700 properties were damaged, many without flood insurance. The Edenville Dam is still listed as a "high hazard dam" meaning that if it fails, it could result in severe damage downstream and possibly result in casualties. The work order is a way to relieve pressure from water held back by the Tobacco River side of the dam and return the Tobacco River back to its natural path. It would also allow for the repair of the destroyed M-30 causeway bridge, EGLE said in a release. “The continued rerouting of the
Tobacco River is delaying necessary safety measures and fixes that are important to stabilize the area affected by the Edenville Dam’s failure,” Clark said. There are currently several ongoing investigations. An independent forensic investigation will look into what caused the dams to fail and who is responsible. There will also be a review of the state’s dam safety operations, performed by the Association of State Dam Safety Officials and the new Michigan Dam Safety Task Force will provide recommendations to the state on how to limit risks going forward. Ahead of the dam safety operations review, the state announced that it was hiring a third dam safety engineer.

(6 years is a long time. They built Hoover Dam in 3 years.)

**Lakes, dams could return by 2026**

FLTF: Initial reconstruction cost estimates around $340 million
By Mitchell Kukulka, ourmidland.com, September 14, 2020

Early estimates predict the return of the four lakes along the Tittabawassee River could come by 2026. During a Sept. 10 webinar, the Four Lakes Task Force detailed an updated action plan regarding the recovery and restoration of the lake system and its dams in the aftermath of the devastating May 19 flooding. The FLTF is a "delegated authority" working on behalf of Midland and Gladwin counties to oversee the maintenance and operations of the four lakes and their dams.

"We all are feeling and experiencing the negative consequences of barren lakes," Dave Kepler, FLTF president, stated in the action plan released last week. "These lakes bring thousands of people to their waters every year for recreation and are some of the best fisheries in the state -- they are a key source of economic development for both counties. Four Lakes Task Force believes the communities should expect lakes and it is our right to have them restored." According to the action plan, the FLTF is working with the GEI Consultants agency to conduct preliminary engineering studies to determine the degree of damage to the dams. According to GEI's findings, the probable cost to reconstruct and rehabilitate the Secord, Smallwood, Edenville and Sanford dams is currently estimated to be about $338 million. Edenville Dam faces an estimated $208 million in repairs, including the demolition of the existing gated spillways and powerhouse, the construction of new primary and auxiliary spillways, repairing embankments and the addition of a cutoff wall. Construction is predicted to occur between mid-2023 and mid-2025, with Wixom Lake potentially returning 2025-2026.

Sanford Dam faces similar repairs to an estimated cost of $92 million. Construction is predicted to occur between mid-2023 and mid-2025, with the lake potentially returning in mid-2025. Repair and rehabilitation efforts on the Secord and Smallwood dams are comparatively minor, with estimated costs at $24 million and $14 million, respectively. Construction on Secord Dam is predicted to take place between January 2022 and mid-2024, with the lake returning 2022–2024. Construction on Smallwood Dam could take place between June 2022 and late 2023 with the lake returning between 2022 and 2024. The action plan specifies that all the predicted timelines are dependent on the timing of FLTF gaining control of the dams, the results of the investigation and collaboration on the community, state and federal government levels. The numbers are expected to be refined over the next five months with a feasibility study. The full action plan, along with future updates from the FLTF, can be found at four-lakes-taskforce-mi.com
(Small dam failure.)

Dam gives way causing major issues on John Pitts Road
By: Anna Hoffman, Sep 17, 2020 / mypanhandle.com

BAYOU GEORGE Fla. (WMBB) — Hurricane Sally may be long gone, but damage and flooding waters are gonna be here for a while. One of the areas hardest hit in Bay County is Bayou George. The heavy rains caused a private dam by John Pitts Road to give way and trap people in their homes. The dam at the Lakewood Manor Estates has been there for years but the heavy rainfall proved to be too much to handle. Residents like Clay Patton watched from their homes as the water inside the dam got higher and higher. “There was a 10 to 12 foot wall of water that came when the dam gave way” at the lake and came across the road,” said Patton. “It did some serious damage.” When it was released, it caused major flooding to roadways and homes. Some residents are trapped with nowhere to go. “There were say three or four hundred families that were on this side of the water, this is the only way in and out,” said Patton.

One day after the storm – the water is subsiding but the leftover damage is very visible. Residents in the area say they have never seen anything like it. “We’ve lived here for about seven years and the lake was probably about 10 feet higher than I’ve ever seen it,” said Keith Hartless. “I’ve never seen it that high.” Bay County workers cleared debris all day from John Pitts road while neighbors gathered to take a look at the scene – most still in shock. “It was a concern watching it,” said Hartless. “I don’t think the dam had a chance.” Although there is still water flowing most of it has seeped into the ground and is now mud. Residents are now able to pass through John Pitts road but at a very slow pace because of all the workers cleaning up debris.

(Guess they don’t need the dam anymore.)

Breaching dam would bring ecotourism benefits
Editorial Board, Florida Times-Union, gainesville.com

What if there were a win-win scenario for breaching the dam on the Ocklawaha River? What if the current wave of ecotourism could produce an increased interest in Putnam County? What if the environmental benefits of infusing fresh water into the St. Johns River were documented and compared to other methods of preserving the river? After all, the Ocklawaha River is the largest tributary of the St. Johns River. Damming it as part of the failed Cross-Florida Barge Canal resulted in stopping up at least 18 springs and preventing fresh water from entering the river. But it also created a reservoir for bass fishermen and a critical piece of the Putnam County economy.

Efforts to breach the Kirkpatrick Dam and infuse fresh water into the St. Johns have run into powerful political opposition based on the fear of losing its economic potential. A story in the Ocala Star-Banner described the two groups competing for the future of the Ocklawaha. The Free the Ocklawaha Coalition is one of several environmental groups that want to breach the dam. American Rivers ranked the Ocklawaha as endangered. A report from the St. Johns Riverkeeper notes that restoring the natural flow of the Ocklawaha River will improve the ecology of the St. Johns River ecosystem and will help to offset the saltwater infusion from increased dredging. The Save the Rodman Reservoir group insists that besides the bass fishing paradise that was created, the artificial lake helps stop pollution from entering the river, helps to improve flood control and even could be helpful for future drinking water use. What if recreation could not only be preserved but improved? Plans to breach the dam would include...
retaining the recreational assets. Meanwhile, opening the Ocklawaha to the St. Johns River would result in a wider variety of fish.

The Economic Development Element of Putnam County's Comprehensive Plan emphasizes the importance of tourism to the county and the potential of ecotourism. The plan calls for improved waterfront areas; outdoor facilities like bike lanes, canoe trails and hiking trails; more visual appeal; upgrading bed and breakfast facilities; assistance to tourism businesses; and support for natural, recreational and historic sites. An artificial lake doesn't fit the desire for authenticity today.

But a return to Mother Nature, the real Florida, does. Since the Ocklawaha River is dammed, where does the water go? Jeremy Stalker, a Jacksonville University associate professor of Marine Science, answered that question in a column published by the Times-Union. Some of the water flows into the underground aquifer system, some evaporates. If water consistently flowed from springs into the river, Stalker wrote, "The Ocklawaha would start to look very similar to other spring-fed rivers like the Crystal River or the Truckee River. This would likely provide a much healthier habitat for a greater variety of fish and for endangered species, like manatees," he wrote. If the dam were breached as part of an overall economic development program for Putnam County, it would be a win for the environment and a win for the economy.

(The sad state of affairs on dams.)

**Aging And Underfunded: America's Dam Safety Problem, In 4 Charts**

By JESSICA PUPOVAC, October 11, 2020, npr.org

There are more than 87,000 dams in America and, like most infrastructure, they go largely unnoticed — until something goes wrong. That was the case in and around South Carolina's capital this week, when at least 20 dams collapsed during catastrophic floods. The number of dam breaches was rare. But to experts who monitor dam safety in America, it wasn't entirely surprising. In its most recent Report Card for America's Infrastructure, the American Society of Civil Engineers gave the state of America's dams a "D," in part because about 4,000 dams in the country are in need of repairs — and about half of those deficient dams could cost lives if they were to fail. That's in large part because of their age. Several of the dams that breached this week in South Carolina were more than 100 years old — and they are far from exceptional. Nearly 3,000 dams across the U.S. predate the 20th century:

And when it comes to dam integrity, age matters. Inside of many of America’s dams, metal pipes and other structural components are degrading. The process is accelerated by chemical runoff in the waterways, particularly in areas that have become more populated in recent decades. Outdated technology is another issue. [Older dams] were built with the best construction and engineering standards available at that time, but we’ve learned a lot since then about things like earthquakes and floods," says John France, with the international engineering consulting firm AECOM. "South Carolina is an example of what can happen," he says, "and, unfortunately, we’re seeing those kinds of floods every few years now." Government officials are well aware of the problem — even more so in recent years, as dam inspections have increased.
But Federal dams are both inspected and financed by the agencies that own them, many of which only have enough money in any given year to tackle the most potentially dangerous defects. The U.S. Army Corps of Engineers, for example, estimates that at current funding levels, it would take them about 50 years to work through their backlog, according to the ASCE report. Meanwhile, many more dams — locally owned, state-owned or privately owned — are monitored by state authorities, which presents its own set of problems. First, the amount each state spends on dam oversight varies widely. The South Carolina Dams and Reservoirs Safety Program, for example, regulates 2,499 dams and spends $260,000 a year doing so. That comes to about 380 dams per dam safety employee. While that's significantly less funding than the national average, it is much more than some states spend. Alabama doesn't even have a dam safety program. Second, while states might pay or contribute to the repairs of those dams that are publicly-owned, most dams in the country are privately owned, which puts the onus on private parties and
associations. When private owners' dams require repairs and the owner is slow to make them, state enforcement mechanisms can be weak and slow, often bogged down in litigation or paperwork, says Mark Ogden of the Association of State Dam Safety Officials. In most states, governments do have the ability to step in if lives or property are in imminent danger. But, he said, "It is not good policy to have to wait until emergency situations to have to deal with a lot of these issues." Still, in many cases, that's exactly what happens. The only source of federal funding for dam repair — for dams that aren't owned and regulated by the feds — comes through
FEMA, and that money only becomes available after a dam fails. Which might create a rare
opportunity in South Carolina to use public money to build stronger, more modern dams. At least 20 of them.

(Bet this was no fun.)

Operator keeps Detroit Dam safe, trapped as huge wildfire rages outside
By Sarah Hurwitz, Sep 16, 2020, kptv.com

MARION COUNTY, OR (KPTV) - When the Beachie Creek Fire hit the Santiam Canyon, a power plant operator at the Detroit Dam realized the fire was coming toward the powerhouse too fast, and he was trapped. Mike Pomeroy was the only operator working at the dam on Monday night when the fires hit the Santiam Canyon. He spent 30 hours keeping the dam in operation and going through every scenario in his head, preparing for anything, he says. Pomeroy says it was around 12 a.m. on Sept. 7 when the wind started to pick up and fires began to erupt. He says he jumped into action when the dam lost power and the generators kicked in, ensuring that the dam would continue to operate.

"What I wanted to do was make sure that those spill gates were in a position that would allow the water to flow properly, whether I had power or not," Pomeroy said. Then, Pomeroy says he tried to evacuate, but it was too late. "I thought I could, you know, just drive through the fire, but really all I did was drive into it," Pomeroy said. "And there was a lot of fire and debris on the road, large boulders, fallen trees, that kind of stuff. I didn't get very far before it became apparent that there was no way I was going to get through that." In the process of trying to leave on Tuesday, he got a flat tire. Luckily, he was able to find his way back to the dam in thick smoke. He says cell service was limited, but he was able to communicate with the command centers to let them know that he'd made it back to the dam, and the message was relayed to his family. Pomeroy settled in Tuesday night, trying to do the best he could to keep operations running at the dam and keep himself safe. "But I began to see little red dots on my security monitors and they started to grow and I realized that was the fire," Pomeroy said. "And it was heading towards the dam, up both sides of the river, heading for the dam. And it was kind of at that point that I knew it was game time."

Pomeroy says he made preparations to shut down what he could and seek shelter inside the dam, where he thought he would be the most safe. But he was concerned about air quality inside as the powerhouse and other buildings filled with smoke. All Pomeroy could do was wait, until Wednesday, when some of the fire passed and crews were able to get to him. Pomeroy says he feels like the luckiest guy in the world. "At the time that the incident happened I was feeling a little unlucky," Pomeroy said. "But you know, when I finally started driving out of the canyons, when they came and got me and I saw the wreckage and debris and the fire damage, I was just shocked. And you know, my heart really goes out to those families, they've lost so much." Pomeroy says there was no structural damage to the dam or the powerhouse. He says he's grateful to everyone who played a role in keeping communication with him.

(Little guy causes big problems in Bayou County, FL)

Dam gives way causing major issues on John Pitts Road
BAY COUNTY, by: Anna Hoffman / Updated: Sep 17, 2020 / mypanhandle.com

BAYOU GEORGE Fla. (WMBB) — Hurricane Sally may be long gone, but damage and flooding waters are gonna be here for a while. One of the areas hardest hit in Bay County is Bayou George. The heavy rains caused a private dam by John Pitts Road to give way and rap people in their homes. The dam at the Lakewood Manor Estates has been there for years but the heavy rainfall proved to be too much to handle. Residents like Clay Patton watched from their homes as
the water inside the dam got higher and higher. "There was a 10 to 12 foot wall of water that came when the dam gave way at the lake and came across the road," said Patton. "It did some serious damage." When it was released, it caused major flooding to roadways and homes. Some residents are trapped with nowhere to go.

"There were say three or four hundred families that were on this side of the water, this is the only way in and out," said Patton. One day after the storm – the water is subsiding but the leftover damage is very visible. Residents in the area say they have never seen anything like it. "We've lived here for about seven years and the lake was probably about 10 feet higher than I've ever seen it," said Kieth Hartless. "I've never seen it that high." Bay County workers cleared debris all day from John Pitts road while neighbors gathered to take a look at the scene – most still in shock. - "It was a concern watching it," said Hartless. "I don't think the dam had a chance." Although there is still water flowing most of it has seeped into the ground and is now mud. Residents are now able to pass through John Pitts road but at a very slow pace because of all the workers cleaning up debris.

(Here's the weekly dam removal story.)

A river reconnected: Removing the Pilchuck River Diversion Dam

Submitted by the National Oceanic and Atmospheric Administration Sep 21, 2020, sanjuanjournal.com

Washington’s Pilchuck River is close to once again flowing freely after more than 100 years, thanks to a NOAA-supported effort to remove an obsolete dam. Once restoration work is complete, the project will reopen 37 miles of habitat for fish and help protect downstream communities from flooding. The Pilchuck River Dam is located southeast of the city of Granite Falls and is owned by the City of Snohomish, Washington. Built in 1912, the 60-foot wide and 10-foot tall dam previously provided drinking water to the City of Snohomish. But the city now uses water from the more reliable—and less costly—City of Everett water source in the Sultan River watershed, rendering the Pilchuck River Dam unnecessary.

With the dam no longer being used, what remained was an aging, potentially dangerous structure that posed a risk to downstream communities. The dam was at low risk of failure, but without frequent maintenance it might have degraded in the future. That would have posed a risk to downstream landowners and residents if the dam were to fail. Removing the dam increases safety in the area while also providing maintenance cost savings to the City of Snohomish. Removing the dam also benefits threatened species such as chinook salmon, steelhead, and bull trout. Chinook salmon in particular serve as a vital food source to endangered Southern Resident killer whales.

The Pilchuck River Dam is located roughly where the middle and upper portions of the Pilchuck River meet. The middle portion of the river, below the dam, lacks high-quality habitat and has high summer temperatures. Above the dam, in the upper portion of the river, high-quality habitat is abundant and water temperatures are cooler. Removing the Pilchuck River Dam allows fish to access more than 37 miles of this high-quality habitat. The Snohomish River Basin Salmon Conservation Plan identifies the Pilchuck River as an important location for habitat restoration. Removal of the Pilchuck River Dam is also listed as a priority in the Puget Sound Steelhead Recovery Plan and the recommendations of the Southern Resident Orca Task Force. Demolition of the Pilchuck River Dam began in late July, and the main spillway of the dam is now gone. Throughout the remainder of this summer, other structures such as concrete and buried crib
dams, the water intake, and the fish ladder will be demolished. Once the dam has been fully removed, restoration work will focus on reforming the river channel and restoring the river’s natural processes. The goal is for the restored river to closely resemble how it looked before the dam was built, allowing for complete restoration to a natural, free-flowing waterway.

This NOAA-supported dam removal effort is a collaboration between the Tulalip Tribes and the City of Snohomish. The Tulalip Tribes work to protect and preserve the resources their people have depended on for fishing, hunting, and cultural connections for thousands of years. Both entities want to restore and enhance the once abundant resources provided by the Pilchuck River, such as clean water and abundant salmon runs. Partnering on this project has provided opportunities for the teams to meet, better understand each other, and come up with creative solutions to problems. In addition to the Tulalip Tribes and City of Snohomish, NOAA and many other partners have been involved in the effort to remove the Pilchuck River Dam. These partners include Puget Sound Partnership; U.S. Environmental Protection Agency; U.S. Geological Survey; Puget Sound Acquisition and Restoration Fund; Washington State Salmon Recovery Funding Board; and the Paul G. Allen Family Foundation.
The NOAA Restoration Center provided financial support to the dam removal effort with funding through its Community-based Restoration Program.

(Can’t even build a dry dam because there will be opponents. People are their least concern.)

Army Corps Releases NEPA Review on Dam EIS: State Environmental Policy Act Impact Statement Completed Early This Year; Now Residents Can Comment on National Review

By Claudia Yaw, chronline.com, Sept 21, 2020

Months after a draft Environmental Impact Statement (EIS) under the State Environmental Policy Act (SEPA) was completed for a proposed flood-retention dam on the Chehalis River, a national review of possible environmental impacts of the project has now been released.

The EIS required by the National Environmental Policy Act was released Friday. It details how the project, estimated to cost more than $400 million, would impact fish species, water quality, wetlands and other environmental facets of the land.

Public meetings will be held from 6 p.m. to 8 p.m. Oct. 8 and 4 p.m. to 6 p.m. Oct. 14, at which individuals can comment on the proposed project. Comments can also be submitted beforehand. Details can be found at https://chehalisbasinstrategy.com/eis/nepa-process/.

The proposed project would create a new 1,550-foot wide dam structure near Pe Ell, which would close only during flooding events. The project would also raise the existing levee near the Chehalis-Centralia airport. The goal is to mitigate the effects of major floods, which occur, on average, every seven years, and catastrophic floods which occur at a 100-year interval. However, the Quinault Indian Nation and Chehalis Tribe have spoken out against the plan, which would significantly impact fish populations, and have called for a non-dam alternative.

The statement considered the effects of project construction, which is estimated to last five years, as well as its operations after-the-fact. Chehalis Basin Board Member J. Vander Stoep said the next step is for the board to consider mitigation efforts that could reduce these impacts. “There is no mitigation plan that has formally been submitted,” Vander Stoep said. “So both the State Department of Ecology and Army Corps are looking at the worst case scenario.” Ecology completed the state EIS, while the Army Corps of Engineers completed the national EIS.

One of the major environmental impacts predicted by the statement is “high permanent impairment of habitat function” for fish species. Decreased water quality and increased
temperatures would result in significant and long-term impacts for spring-run and fall-run Chinook salmon, coho salmon and steelhead. These impacts would be sustained after construction is finished. However, on the scale of the whole Chehalis Basin, the statement concluded that the impacts would only be high for spring-run Chinook.

Operations of the facility would also significantly decrease habitat for non-salmon fish and impact aquatic plants, even when the dam structure is left open. Nine endangered species and three threatened species may be present in the project area, and could be impacted due to the 485 acres of land that would need to be cleared of trees and other vegetation. Construction of the project would also require excavating material and placing it into 1.23 acres of wetlands. “Those impacts would be direct permanent impacts because the affected resources would cease to exist following excavation and fill placement,” the statement reads. The tree removal at the reservoir site would significantly impact about 340 acres of wetland and stream buffers and would make the area more vulnerable to invasive plant species. The levee improvements at the airport would also mean a “medium loss” of 4.54 acres of wetlands and 16.61 acres of wetland buffers.

“Although the affected wetlands would continue to exist in the reservoir footprint, the changes in vegetation communities and their associated functions and values would be permanent,” the statement reads. About 93.65 acres of other waters, including Crim, Rogers, Hull, Big, Lester and Browns Creeks, would also be impacted.

During flooding events, which are likely to happen in late fall and winter, about 500 acres of land could be underwater by the temporary reservoir for anywhere from 4-25 days, killing native species including Douglas firs, red alders, big leaf maples and western hemlocks. In terms of water quality, several short-term impacts would occur during construction, which would be “low, temporary and limited to the construction phase of the project.” Operation of the facility could also reduce dissolved oxygen concentrations upstream and increase chlorophyll a levels upstream. Groundwater impacts would be low. A 1,165-foot section of the Chehalis River would be rerouted during construction, and about 450 feet of the river would be permanently replaced by the retention facility, according to the statement. Mahaffey Creek would also need to be temporarily diverted during construction. The statement also predicted significant long-term impacts from soil erosion around the retention facility. An alternative project was also considered, which would be largely the same except for its smaller foundation, which would produce less environmental impacts and wouldn’t allow for future expansion of the retention facility. The application for the project has been received by the U.S. Army Corps of Engineers, but Project Manager Brandon Clinton said there is no immediate timeline for when the review of the application [will be completed].

**Hydro:**
(The more, the better. Gotta get them voted!)

**Ted Deutch Helps Get Water Power Research and Development Act to House Floor**

By KEVIN DERBY, 09.13.20, floridadaily.com

tides, and currents from our ocean can be captured and converted into clean, renewable energy to power our homes, buildings, and communities," said Bonamici when she introduced the bill.

"Marine energy is one of the last untapped renewable energy sources. It can play an important part in addressing the climate crisis, but it requires stronger federal investments. Our bipartisan Water Power Research and Development Act will help accelerate innovative research and development, like the work that is being done at Oregon State University and the Pacific Marine Energy Center, to help us transition to a 100 percent clean energy economy." “I have long supported harnessing Alaska’s vast hydropower capabilities, and was proud to support projects such as the Terror Lake Hydroelectric Plant and the Swan Lake Hydroelectric Project,” said Young. “Hydropower is an important energy resource, and we should be doing all that we can to empower communities in Alaska and across the country to pursue opportunities in hydropower. This is a very good bill, and I want to thank my good friend Congresswoman Suzanne Bonamici for her leadership on this crucial effort.” “In Florida, we’re surrounded by a powerful, renewable energy source that’s waiting to be harnessed,” said Deutch. “Marine and hydrokinetic energy should be part of our national strategy to diversify our energy sources and include more renewables. This legislation would encourage and support the research, development, and implementation of the science and technology to ultimately connect marine and hydrokinetic energy to our electric grid. I’m proud of the innovative team at Florida Atlantic University’s Southeast National Marine Renewable Energy Center working to improve our understanding of the potential of recovering power generated by waves, currents, and tides.”

This week, the U.S. House Science, Space, and Technology Committee passed the proposal which is now headed to the House floor. “With oceans covering more than 70 percent of the planet’s surface – including all around Florida – we should harness this powerful, renewable energy resource. According to estimates, there is enough kinetic energy in waves and tides along U.S. coastlines to meet a significant portion of our nation’s power needs,” Deutch noted on Thursday. “Importantly, the bill authorizes funding for existing and new National Marine Energy Centers, including Florida Atlantic University’s Southeast National Marine Renewable Energy Center. I’m proud of the innovative team at FAU working to improve our understanding of the potential of recovering power generated by waves, currents, and tides,” he added. The legislation does not have a companion bill over in the U.S. Senate.

(EnviroWeb: Good website.)

https://www.eia.gov/kids/energy-sources/hydropower/
powerful, callous radicals in developed countries. The chasm between modern, industrialized nations and still-impoverished countries is as shocking as it is unnecessary and intolerable. But the reasons for that chasm—and what can and must be done to eliminate it—are readily available for anyone who wants to discover them, for anyone who wants to use that knowledge to dramatically improve lives and living standards in all those still impoverished countries. Impoverished countries need freedom to function, create and build responsibly, under reasonable, responsible laws and regulations. They need to eradicate diseases that kill people and make them unable to work for weeks or even months.

To do that, they need doctors, nurses, modern clinics and hospitals, clean water, insecticides, medicines—homes and buildings with doors and window screens to keep disease carrying insects out. They need abundant, nutritious food—through modern agriculture and the seeds and other technologies that produce more crops, from less land, using less water, with less backbreaking labor, and are able to survive locust and other insect plagues. Perhaps more than anything else, they need energy—especially electricity—abundant, reliable, affordable energy from coal, natural gas, nuclear and hydroelectric sources. Those countries need to recognize that expensive, intermittent, unreliable, insufficient energy—from millions of wind turbines, billions of solar panels and billions of backup batteries—requires a hundred times more raw materials, mining, land use, habitat destruction and wildlife decimation than those now hated coal, gas, nuclear and hydroelectric sources. Each of these steps and components creates jobs, incomes, prosperity, health and better, more productive lives—that multiply and multiply over time.

In fact, all these things are fundamental human rights. I’m talking about the fundamental human right of access to these modern technologies. The fundamental right for all human lives to be improved and blessed the way ours have been. The fundamental human right to never be denied access to these technologies.

A Dark and Evil Force
So what is holding these impoverished nations back? Inertia and inaction, sure. Corruption, certainly. But there is another factor, a dark and evil force throwing roadblocks in their way. That dark, evil force is the veritable army of rich, powerful government agencies and non-governmental organizations—NGOs—that lie, pressure, harass and intimidate families, businesses and entire countries into doing nothing, into rejecting modern technologies, into settling for minuscule improvements in their lives and living standards only at the margins.

These pressure groups use their vast wealth, prestige, power—and control over trade, loans and technology transfers—to perpetuate poverty, disease, malnutrition and death. It’s eco-manslaughter. And yet they get lionized and even canonized, for supposedly protecting Mother Earth. The NGOs enjoy tax-exempt status and global prestige, because the horrific human and environmental costs of their actions are mostly ignored by news media, celebrity, human rights and other supposed watchdogs.

Maybe even worse, they are financed by taxpayers—and by super-wealthy, supposedly charitable foundations—many of which got their billions of dollars from fortunes made in the same industries and technologies that they now deny to poor families and countries. What they are doing is akin to denying cancer patients access to chemotherapy, because they are concerned about possible side effects. They would rather see the patients die, than allow them to suffer hair loss or depressed immune systems. As though it’s their decision, instead of the cancer patient’s. But it’s even worse. Because the supposed side effects of the modern technologies that these powerful NGOs, government agencies and international anti-development banks are denying to impoverished families and countries are mostly exaggerated or fabricated. They exist in their imaginations, computer models, press releases and fund-raising appeals. Not in reality. These pressure groups won’t even let families get Golden Rice—which could prevent 500,000 children from going blind and 250,000 from dying every single year from Vitamin A deficiency and malnutrition. These radical agencies, foundations, banks and NGOs are committing crimes against humanity. They are perpetrating and perpetuating millions of deaths every year—millions of poor, dead, dark-skinned parents and children—at the hands of mostly rich, white radicals in
wealthy developed countries. These cold-blooded eco-imperialists should be condemned for crimes against humanity and racist eco-manslaughter. They should lose their funding and tax-exempt status. They should be banned from college campuses and polite civil society. They should be hauled before the UN Human Rights Commission and International Court of Justice. All of you at this conference could help make this happen. You could turn this dark, evil paradigm on its head. You could help bring a new birth of freedom, health and prosperity to dozens of countries—and billions of people—around the world. I hope you will join me and my colleagues in making it happen. Thank you.

Other Stuff:
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