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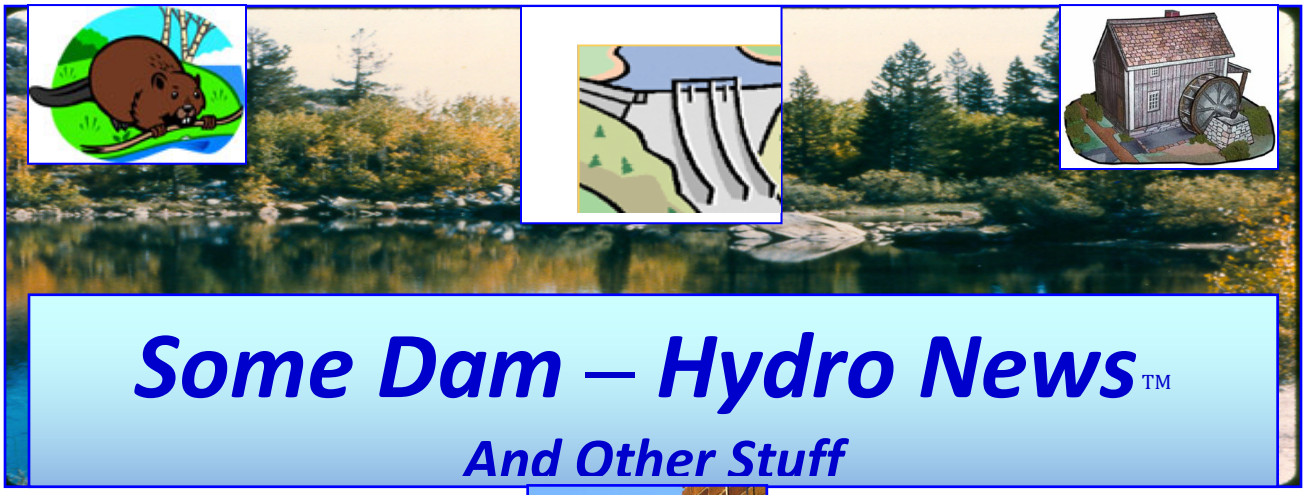


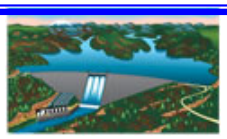
Some Dam – Hydro News™

And Other Stuff

Quote of Note: *"It isn't what you do, but how you do it." - John Wooden*

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 Lava Cap Zinfandel "Reserve"**
"No nation was ever drunk when wine was cheap." - - Thomas Jefferson



Dams:

(Smokin' the peace pipe.)

Environmentalists and Dam Operators, at War for Years, Start Making Peace

Facing a climate crisis, environmental groups and industry agree to work together to bolster hydropower while reducing harm from dams.

By Brad Plumer, Oct. 13, 2020, nytimes.com

Hoover Dam on the Colorado River, is one of the 2,400 hydro plants that produce about 7% of electricity in the U.S, Credit...David Walter Banks, The New York Times

WASHINGTON — The industry that operates America's hydroelectric dams and several environmental groups announced an unusual agreement Tuesday https://woods.stanford.edu/research/hydropower to work together to get more clean energy from hydropower while reducing the environmental harm from dams, in a sign that the threat of climate change is spurring both sides to rethink

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their decades-long battle over a large but contentious source of renewable power. The United States generated about 7 percent of its electricity last year from hydropower, mainly from https://www.eia.gov/tools/faqs/faq.php?id=427&t=3
large dams built decades ago, such as the Hoover Dam, which uses flowing water from the Colorado River to power turbines. But while these facilities don't emit planet-warming carbon dioxide, the dams themselves have often proved ecologically devastating, choking off America's once-wild rivers and killing fish populations. https://www.nytimes.com/2020/01/20/nyregion/its-fish-vs-dams-and-the-dams-are-winning.html

So, over the past 50 years, conservation groups have rallied to block any large new dams from being built, while proposals to upgrade older hydropower facilities or construct new water-powered energy-storage projects have often been bogged down in lengthy regulatory disputes over environmental safeguards. The new agreement signals a desire to de-escalate this long-running war. In a joint statement, https://www.nytimes.com/2020/01/20/nyregion/its-fish-vs-dams-and-the-dams-are-winning.html industry groups and environmentalists said they would collaborate on a set of specific policy measures that could help generate more renewable electricity from dams already in place, while retrofitting many of the nation's 90,000 existing dams to be safer and less ecologically damaging.

The two sides also said they would work together to accelerate the removal of older dams that are no longer needed, in order to improve the health of rivers. More than 1,000 dams nationwide have already been torn down in recent decades. The statement, the result of two years of quiet negotiations, was signed by the National Hydropower Association, an industry trade group, as well as environmental groups including American Rivers, the World Wildlife Fund and the Union of Concerned Scientists. Another influential organization, The Nature Conservancy, listed itself as a "participant," signaling that it was not prepared to sign the full statement but would stay engaged in the ongoing dialogue over hydropower policies. Bob Irvin, the president of American Rivers, which has long highlighted the harm that dams cause to the nation's waterways, said that growing concern over global warming had caused some environmentalists to reassess their longstanding opposition to hydropower. "The climate crisis has become a lot more acute and we recognize that we need to generate carbon-free energy whenever and wherever we can," Mr. Irvin said. "And we do see that hydropower has a role to play there. Mr. Irvin emphasized that his group would still oppose any effort to build new dams on rivers. But that still left plenty of room for compromise.

As an example, he pointed to the Penobscot River in Maine, where environmentalists, energy companies and the Penobscot Indian Nation reached a landmark agreement in 2004 https://www.nrcm.org/wp-content/uploads/2013/09/Penobscot-River-4-pager-FINAL.pdf
to upgrade several dams in the river basin while raising money to remove two other dams that had blocked fish from migrating inland for more than a century. The result: The hydropower companies on the Penobscot ended up producing at least as much clean electricity as before, while endangered Atlantic salmon have returned to the rivers. "The rhetoric has definitely shifted and is becoming more thoughtful," said Malcolm Woolf, president of the National Hydropower Association. "We're now willing to talk about removing uneconomic dams, and environmentalists are no longer talking about all hydropower being bad." Energy experts have said that adding more hydropower could provide a useful tool in the fight against climate change. While wind turbines and solar panels are becoming more widespread, they don't run all the time, and hydroelectricity can offer a backstop as utilities clean up their electrical grids.

In theory, there's potential for the United States to get much more energy from running water. An in-depth study by the Department of Energy in 2016 found the nation could increase its

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hydropower capacity by 50 percent without building any large new dams. Today, less than 3 percent of the nation's 90,000 dams generate power. There are numerous smaller dams built for irrigation or flood control that could be retrofitted with turbines to produce electricity.
"We're not talking about the Hoover Dams of old," said Jose Zayas, a former Energy Department official who oversaw the study. "There have been some big technological advances that now let us produce more energy in a much more sustainable way." Some companies are designing new turbines that allow fish to pass safely through, while others are looking at ways to reduce oxygen depletion in the water caused by dams.


Penobscot River

One particularly promising approach is to build more facilities known as pumped hydro storage, an old technology that involves connecting two reservoirs of water, one at a higher altitude than the other. When there's surplus electricity on the grid, these facilities use that power to pump water from the lower reservoir to the higher one. When electricity is needed, such as during lulls in wind or solar power, the water flows back downhill, spinning a turbine to generate electricity. Although many grid operators are now installing large arrays of lithium-ion batteries for this type of storage, batteries can typically only store 4 to 6 hours' worth of electricity. A pumped-hydro facility could potentially store power for much longer periods of time, allowing utilities to juggle even more solar and wind energy. The downside is that these massive, billion-dollar pumped-storage facilities face steep regulatory hurdles, and can attract opposition even when they don't require large new dams. While energy companies have proposed or applied for federal approval to build 50 gigawatts worth of pumped-storage projects — roughly 30 times the capacity of all the batteries connected to the grid today — hardly any new pumped storage has been built since 1995. Investors tend to be wary of these projects, because there's a lot of regulatory risk," said Lee Bailey, managing director of the U.S. Renewables Group, a private equity fund.
https://www.energy.gov/eere/water/downloads/hydropower-vision-report-full-report"https://www.energy.gov/sites/prod/files/2018/02/f49/Hydropower-Vision-021518.pdf
As part of the new agreement, environmental groups and industry said they would collaborate to help expand the pumped-storage market, exploring lower impact off-river technologies and new policy incentives. The groups also said they would work together to make the regulatory process for upgrading and removing dams more predictable.


The Tittabawassee River flooded downtown Midland, Mich. in May when Edenville Dam failed during heavy rains.Credit...Tannen Maury/EPA,

The groups also agreed to lobby for policies to repair, or in some cases take down, the thousands of aging dams around the country that are in danger of collapse. In May, rain-swollen flooding breached two dams in Central Michigan, forcing thousands of nearby residents to flee their homes. Heavier downpours fueled by climate change are putting many dams at increased risk of failure. Experts have estimated it could cost tens of billions of dollars to repair and upgrade the 15,500 dams nationwide classified as high hazard. Achieving many of these goals will be difficult, requiring significant regulatory changes at both the state and federal level, as well as major new sources of funding. Many of the nation's dams serve a vast array of purposes, such as producing electricity, controlling floods, irrigating crops and creating reservoirs for boaters. Taking down older dams or upgrading existing ones can often be a complicated process that requires balancing numerous competing interests.

The two sides will also have to overcome a legacy of mutual antagonism. Even today, environmentalists and industry have clashed over a new Trump administration proposal to modify clean water rules around hydropower projects, as well as over negotiations to remove four aging dams on the Klamath River in Oregon and California. Many environmental groups came of age opposing hydropower dams in the 20th century, and defusing those tensions will take time. "I certainly wouldn't call this peace in our time just yet," said Mr. Irvin of American Rivers. "The two

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sides will continue to have serious policy differences." But, he added, the fact that both sides had agreed to work on a set of concrete actions to promote clean energy while reducing the ecological impact of dams was "a big deal." Dan Reicher, a senior scholar at Stanford's Woods Institute for the Environment and founding director of Stanford's Center for Energy Policy and Finance, who helped convene the dialogue between industry and green groups, said that neither side benefited from the current deadlock over hydropower. The regulatory disputes around dam upgrades have made it harder for the industry to attract investment, while environmentalists have so far made only slow progress in removing dams.

"What's different now is climate change," Mr. Reicher said. "The industry has realized it can prosper by offering an important solution to the climate crisis. And the conservation community has realized that global warming is the biggest threat faced by the rivers they love. If rising temperatures fry or flood a river, then what have you really accomplished?" *Brad Plumer is a climate reporter specializing in policy and technology efforts to cut carbon dioxide emissions. At The Times, he has also covered international climate talks and the changing energy landscape in the United States*

(Dam removal keeps rolling along with all dams under attack.)

Dams Across the Great Lakes: End of the line for aging infrastructure?

By Lorraine Boissoneault, October 12, 2020, greatlakesnow.org

This article is published in conjunction with PBS's "The Age of Nature" series which begins airing on Oct. 14. Join **Great Lakes Now**'s "Watch Party: Damming Decisions – A discussion about dam removals and what they mean for the environment" on Facebook on Monday, Oct. 19, at 7 p.m. EST. The author of this story along with two scientists will be participating in a Q&A where you can ask questions. Click HERE for more information: https://www.facebook.com/events/335786774154576/

After nearly a century of generating hydroelectric power on the St. Regis River in upstate New York, the Hogansburg Dam came down in December 2016. Fish who could now swim freely along the river weren't the only ones celebrating. The end of the dam also marked the first time a tribal nation led the decommissioning process for a federal dam. "There's now a beautiful ripple and cascade in a spot where it was just a forgotten industrial site," said Tony David, the director of the Saint Regis Mohawk Tribe's environment division. "Now people can go there and enjoy the fish resources, they can enjoy the natural beauty of the river. It's a source of pride for a lot of community members." Thanks to the removal of the dam, around 500 miles of river and stream habitat have been connected to the Great Lakes system again via the St. Lawrence River. And after four years of the river flowing freely, David and others are getting ready to do more scientific research on how the aquatic wildlife have benefitted.

Hogansburg Dam removal on the St. Regis River (Photo Credit: Saint Regis Mohawk Tribe)

The positive results of the dam removal were the end of a long and extensive process. The Saint Regis Mohawk Tribe and their state partners in the state Department of Environmental

Conservation and U.S. Fish and Wildlife Service spent years doing studies to make sure removing the dam was the best option for the community and the environment. In the end, they discovered that the Hogansburg Dam turbine had been damaged and that to renovate the dam to the necessary standards would cost millions of dollars, whereas removal would only cost around $1.5 million. Because the community is so close to a much larger dam on the St. Lawrence River, the loss of the hydroelectric energy produced by the Hogansburg Dam would be negligible. All

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these factors contributed to the decision to remove the dam. “Ultimately the goal was to improve the river habitat quality and also to reconnect the downstream St. Lawrence River with the St. Regis River,” David said. Four years on, he can say those goals have been accomplished.

Aging infrastructure across the Great Lakes region

More than 91,000 dams impede the passage of rivers all around the United States. Some of the dams were built for the purpose of generating power. Others were meant to provide water for agriculture or create lakes for recreation. Based on a 2017 report by the American Society of Civil Engineers, many of those dams are increasingly in need of repairs. Most dams have a lifespan of about 50 years, and many that exist in the United States were built long before the 1970s—including the Edenville Dam, which failed earlier this year. Lisa Hollingsworth-Segedy, the director of river restoration for non-profit conservation group American Rivers, says that around 75% of dams in her state of Pennsylvania are over 50 years old.

“I would not be surprised if it was about the same nationally,” Hollingsworth-Segedy said. She added that dam removal usually costs a tenth to a third of the amount that would be needed to repair dams. American Rivers published a map in 2019 of the 1,722 dams that have been removed since 1912, noting that their removal has led to improved river health, revitalized fish and wildlife communities, and even increased recreational opportunities. “Removing dams generally increases nonmotorized boating, hiking and fishing. It returns everything to a normal system,” Hollingsworth-Segedy said. This seems to be reflected in certain state budgets, like that of Michigan. According to The Detroit News, nearly 80% of Michigan’s $16.95 million dam management grants have gone toward dam removal projects since 2012. Among the success stories are the dams that were removed from the Boardman River, which produces about one third of the water volume for Grand Traverse Bay. Since 2012, three dams on the river have been removed, reconnecting 160 miles of river habitat and restoring more than 250 acres of wetlands.

Advantages and disadvantages for river-dwellers

The environmental benefits of dam removal are often touted as a main reason to choose that path over repairing the dams. Environmental scientist Stephanie Januchowski-Hartley, who currently works as a research fellow at Swansea University, has studied this issue around the Great Lakes watershed. “Many fishes are required to move upstream or downstream in order to reproduce and access food resources,” Januchowski-Hartley said. “When they do that, they also bring nutrients and food to freshwater ecosystems. Things like salmon, when they die after they spawn, that brings nutrients into the local ecosystem. When they deposit eggs, that’s food.”

And it’s not only dams that impede this movement. In 2013, Januchowski-Hartley was the lead author on a paper in Frontiers in Ecology that looked at infrastructure besides dams that can cause problems with aquatic connectivity. Road crossings are 38 times more numerous than dams across the Great Lakes basin, and only about 36% of those roads are fully passable to fish. But both Januchowski-Hartley and Hollingsworth-Segedy note there’s another issue besides the cost of dam repair that plays into discussions of dam removals in the Great Lakes: invasive species. Advocates of some dams have said that both sea lamprey and Asian carp are impeded by the presence of dams. Keeping those species from spreading is a high priority for fisheries managers. If dams along rivers leading into the Great Lakes are removed, will that suddenly allow freer access to the lakes for these aquatic invasives?

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Januchowski-Hartley said it's an area that deserves more research, but that there might be unexpected results from dam removal. "If we think about it broadly, what was the river system like before the dam? Would the sea lamprey or carp persist if we were to remove dams and restore the system to more natural flows?" Januchowski-Hartley said. In Traverse City, the Great Lakes Fishery Commission is attempting to see if it can work around that question. They're replacing one of the Boardman River dams with FishPass. The first-of-its-kind project incorporates a variety of technologies to allow native species to travel the river while blocking invasive species like sea lamprey. The project will break ground at the end of 2020 with construction aimed to complete by 2022.

A model for future decommissioned dams

With tens of thousands of dams still operating around the country, the issue of removal or repair won't disappear anytime soon. But the successful decommissioning of the Hogansburg Dam in New York has plenty of lessons to offer. "These are very complicated projects and a lot of things can go wrong, so it's important that you have studies in place so people can make informed decisions," David said of his experience. Recently the Saint Regis Mohawk Tribe worked with experts at Clarkson University to study ice jams on the river and whether the removal of the dam created conditions for even more ice build-up. Their research showed that the dam only reduced the ice jams when water flow was relatively low, but not when it was moderate or high. "We have this vulnerability regardless of whether or not the dam is there, so we really ne to get down to the business of producing policies for floodplain management that reinforce resilience," David said.

David said more than 6,000 dams still exist in the state of New York. Thousands more are operating across the Great Lakes. What communities decide to do with those dams will vary from place to place, but it's clear that the questions will need to be asked—and answered.

(Sometimes, dam removal like this one have merit.)

Showcasing the DNR: Kalamazoo River to be restored through Trowbridge Dam removal project in Allegan County

BY RACHEL LEIGHTNER, Michigan Department of Natural Resources, October 16, 2020, manisteenews.com

The Trowbridge Dam is shown before the removal and stabilization project was initiated. On the right is the earthen embankment, which is built over the location where the Kalamazoo River was historically more. Discovered in the impoundments of an old Kalamazoo River dam are decade's worth of toxic sediments nestled precariously between the riverbanks. Should this more-than-a-century-year-old dam fail, a surge of dangerous contaminants would be released into the river's watershed. Recognizing the risk of the deteriorating structure, the Michigan Department of Natural Resources and the U.S. Environmental Protection Agency are removing the dam and restoring this contaminated space to a place benefitting the community.

The scene

Stretching 175 miles across the southwest corner of the Lower Peninsula, the Kalamazoo River has been a catalyst for growth and industry in the region.

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In 1898, the Trowbridge Dam was built to supply hydroelectric power for a newly installed streetlight system in the city of Kalamazoo. Constructed by Consumers Energy, this dam was one of seven built to supply power to paper mills and municipalities along the river.
The river was also used to dispose industrial byproduct waste, contaminating the water, riverbanks and dam impoundments with carcinogenic, persistent polychlorinated biphenyls, known more commonly as PCBs. Though this practice was banned in the 1970s, an accumulation of PCBs and other toxins is still concentrated in the impoundments behind the dams. In 1967, Consumers Energy gave four Kalamazoo River dams, including the Trowbridge Dam, to the state of Michigan to oversee and maintain. As a land and wildlife management agency, the Michigan Department of Natural Resources became the caretaker of the dam, with all its complexities. "As with any dam, the condition of the Trowbridge Dam has declined over time," said Mark Mills, field operations manager and dam removal project leader for the DNR. "If the dam were to give way, the concern is not only a surge of water, but an uncontrolled release of contaminated sediments washing downstream, exposing wildlife and humans to contaminants, and complicating cleanup efforts.

Ranked highest priority

Due to public safety concern, the Trowbridge Dam was slated as the state's highest-priority dam removal project in 2019. The DNR's Wildlife Division received $1.9 million for removing the dam from the Michigan Dam Management Grant Program. This assistance program provides funding and technical aid for removal and repair projects at privately and publicly owned dams that will enhance recreational opportunities, restore natural resources, and improve public safety. The DNR and the EPA will oversee this cooperative, multi-phased project. Also recognized as a national priority, the dam was selected as one of 21 contamination sites to receive immediate and comprehensive attention from the EPA. The Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site, consisting of the riverbanks, floodplains, and paper mill properties along the 80-mile stretch of the Kalamazoo River – from Morrow Dam to Lake Michigan, and a 3-mile stretch of Portage Creek – was established. This vast site was split into seven sections, divided by dams, and each will have its own remediation plan.

Facilitated by the DNR, the first phase of the Trowbridge Dam removal project began in August 2019, with the purpose of stabilizing the existing structure and initiating removal of the dam.
In this phase, metal sheet pile (long structural sections that connect to form a continuous wall) was installed along banks that were failing, and a section of the dam's powerhouse structure, where generators and turbines were housed, was removed. This project phase was completed in April this year. For the subsequent removal phases, the EPA has ordered the remediation and removal of PCB-contaminated sediment from the dam impoundment. State and federal agencies will work with the companies liable for the pollution to remove the contaminated sediments, which will allow for removal of the remainder of the Trowbridge Dam structure and for restoration of the Kalamazoo River to its natural flow. "The EPA will be working with the state of Michigan, local governments, neighbors and responsible parties on a time-critical removal action to address the 2.4-mile stretch of river immediately upstream, which is impounded by the current structure," said Paul Ruesch, on-scene coordinator for the EPA's Region 5. "Beginning in 2021, it is anticipated that thousands of tons of PCB-contaminated sediments and soils will be removed, culminating in the removal, in its entirety, of the dam and spillway structure."\

Funding future and past clean ups

In December 2019, a $245 million settlement was agreed upon, ordering the company responsible for the PCB contamination, NCR Corp., to pay for the remediation plan and fund future restoration efforts along the 80-mile stretch of the Kalamazoo River Superfund site. The EPA, U.S. Department of Justice, Michigan Department of Environment, Great Lakes, and Energy, and Kalamazoo River Natural Resource Trustees partnered to negotiate the cleanup proposal. Funds from the settlement will also pay for past cleanup efforts and damage to natural resources. The Trowbridge Dam cleanup will cost an estimated $55 million and will take three years to complete. In that time, NRC Corp. is responsible for excavating the contaminated

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sediment, stabilizing 2.4 miles of riverbank, removing the dam and restoring any areas impacted by the removal efforts.

Pace to community place

So, what will occupy this once-contaminated space? Potentially, a community place. An open house was held in Trowbridge Township in August to discuss the recreational use of this space. State, county and local officials met to consider potential recreation opportunities for the waterfront property adjacent to the Trowbridge Dam. Currently this parcel of land is part of the Allegan State Game Area and is managed by the DNR. No matter the decision, it is certain that the benefits of this project will be plentiful and observable. Fish will be able to migrate upstream, water quality and wildlife habitat will be improved, recreationists will be able to explore more of the river, and the lingering worry of a failed dam will dissolve.

There are approximately 2,500 dams on rivers and streams throughout the state, ranging from small berms to large hydroelectric dams. Many of these structures were installed nearly a century ago and require intense observation and maintenance to be kept in stable condition. According to the Michigan Department of Environment, Great Lakes, and Energy, 1,059 dams are regulated by the state. Of these, 730 are privately owned and 329 are owned by the public. Another 92 dams are regulated by federal agencies, while 1,370 smaller dams are unregulated. Owners of dams are responsible for infrastructure upkeep, which can be burdensome, as the price tag on repairs and maintenance monitoring is heavy. However, as seen this spring when the Edenville Dam in Midland County failed, neglecting these frailties can lead to devastation. The Trowbridge Dam removal is slated to be completed in 2022. This will be the final state-owned dam to be removed from the Kalamazoo River, which will come as a relief to local land managers. "This effort has been a constant priority and concern since the state first decided to pursue removal of the dams in 1984. Successfully removing Trowbridge Dam and restoring the flow of the Kalamazoo River will have tremendous positive impacts to the health of the river and its wild inhabitants and will further enhance the recreational opportunities available to the public," Mills said. "That said, there's still more work to accomplish, including the removal of the Otsego City and Allegan City dams."

The continued efforts put forth by the DNR, EPA and partners to protect the Kalamazoo River watershed are crucial for the health of Michigan's waters and the character of our state. Nearly all waterways in Michigan flow into the Great Lakes, and more than 30 million people in eight states and Canada acquire their drinking water from the lakes, as reported by the National Oceanic and Atmospheric Administration. In addition to being home to the largest freshwater ecosystem in the world, the Great Lakes region is an economic powerhouse, supporting numerous water-based industries and supplying $8.8 billion in wages annually. As Michiganders and stewards of the land, we are all responsible for the health and integrity of our waters. The ongoing actions to restore the Kalamazoo River watershed have made tremendous improvements to water quality, wildlife habitat and recreational opportunity. The removal and remediation of the Trowbridge Dam will undoubtedly further those achievements.

(A lot of people disagree on a dam with a hole at the bottom. Sounds a lot like tha Lower Snake River case except this would be a new dam with a novel design.)

Pro- and Anti-Dam Groups Sharply Divided After Environmental Review

CONCERNS: Opponents Say Dam Would Crush Already-Suffering Salmon, Orca Populations

By Claudia Yaw, chronline.com, Oct 16, 2020

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

All but one commenter spoke in opposition to the proposed Chehalis River dam Wednesday at the Army Corps' final public meeting after the release of a draft Environmental Impact Statement (EIS). Although proponents of the project, including County Commissioner Edna Fund, tried this week to encourage supporters to attend, residents, tribal members, and environmental groups in opposition to the project dominated the meeting, painting the project as an environmental nightmare for fish, orcas, and the surrounding land. The proposed dam, which would only close during floods, would be constructed at an important spawning area for spring-run and fall-run Chinook salmon, according to the EIS. The virtual comment session Wednesday was part of the EIS process under the National Environmental Policy Act. The state Department of Ecology earlier this year released its own EIS under the State Environmental Policy Act. Completion of the state process has been paused by Gov. Jay Inslee, who has asked stakeholders to continue working on mitigation measures for the potential environmental damage identified in the EIS, while also coming up with a viable non-dam alternative.

According to the NEPA EIS, for Spring-run Chinook in the project area, a potential population decrease of 78 percent was identified during the five years of construction. In that case, the population of only about 15 fish returning to spawn at that location could be at risk of extinction in the next 100 years. The EIS also predicted significant and permanent detriment to habitat used by coho salmon and steelhead, mainly due to water temperatures increasing by 9 degrees and the clearing of 485 acres worth of trees and vegetation. The Quinault Indian Nation and Chehalis Tribe have continuously opposed the structure, saying it would impact salmon that the communities rely on for sustenance, religious purposes, and economic prosperity, and could impact sites used for religious purposes. "The basin has been home to my family for nearly 600 generations, and in that time we have witnessed somewhere around the order of 15,000 floods, and we've adapted every time," one virtual commenter identified as William T. said. He discussed sacred sites on the river used for spiritual bathing and prayer, which could be impacted by the project Religious Freedom Act and the Land Use and Institutionalized Persons Act. "But most of all, the destruction of religious and spiritual sites that are sacred to the Chehalis, Cowlitz, and Nisqually people is unconscionable," he said. Other speakers echoed the sentiment, taking a broad historical view of development in the flood basin by white settlers, which ultimately put thousands of residents at risk of devastating flood damage.

"When European settlers first came to the Chehalis basin, we ignored the sage advice of the Indigenous peoples that have called this land home for thousands of years," Orca Conservancy Executive Director Shari Tarantino said. "We were warned not to build in the flood plain, but we did so anyway, leading to our current dire situation." John Henricksen, a strong proponent of the dam and citizen representative of the Chehalis River Basin Flood Control Zone District, said the argument is "irrelevant." "They're exactly right, but we're here now. I can't undo that," he told The Chronicle. "We can't undo what's already been done." The issue of flood damage prevention can be an emotional one for Lewis County residents, especially for those who lived through the massive flood of 2007, which caused $938 million of basin-wide damage, according to Scott Boettcher, Staff to the Chehalis River Basin Flood Authority, the body that proposed the dam. Last week, at the Army Corps' first public comment period, a resident whose house was flooded in 2007 expressed support for the project. However, this week, an online commenter identified as Elizabeth and an Independence Valley resident, said the $40,000 she spent raising her home is a much better approach than the dam. "I believe that getting people out of harm's way has proven to be the most cost-effective way to reduce flood damage," she said, noting that she would expect project construction to last more than the expected five years.

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Among the environmental organizations that attended to voice opposition were Trout Unlimited, Defenders of Wildlife, Orca Network, Orca Conservancy, Great Old Broads for Wilderness, Conservation NW, and Citizens for a Clean Harbor. "Even with mitigation measures, most dammed rivers are a sad echo of what they once were," Robb Krehbiel, Northwest Representative of Defenders of Wildlife said in public comment. "Washington is one of the most dammed states in the country, and our efforts to dam almost every river and stream has significantly contributed to the collapse of salmon across the region, leading to cascading effects on other wildlife ecosystems, fishing economies, and tribal cultures and ways of life." Several commenters brought up concerns about fish populations, one pointing out that the Chehalis River and tributaries were already closed to fishing this year due to low steelhead returns. Decreased salmon populations would be felt disproportionately by the tribes, who have also brought up concerns about their treaty fishing rights, as established by the Olympia Treaty of 1865. Krehbiel said the dam's impact on the fish would likely lead to litigation around a potential violation of the treaty that established a reservation and promised fishing rights "in all usual and accustomed grounds and stations." Environmentalist groups also raised concerns that the dam's impact on salmon could directly impact Southern Resident killer whales, an endangered species that primarily relies on Chinook salmon to survive. The EIS estimated that Southern Resident killer whales would be minimally impacted, as "salmon from the study area are a small percentage of all the salmon in Grays Harbor."

"This is a serious understatement," Orca Network education coordinator Cindy Hansen said. "Chehalis River salmon are part of the West Coast Chinook salmon stock that has been identified as a priority stock … the loss of even a small part of their food source could be devastating to this endangered population with only 74 individuals remaining." We are certainly sympathetic toward those in the Chehalis Basin who have been impacted by floods, but this project poses an unacceptable risk toward our Washington state marine mammal." A single commenter expressed support for the project. Fund and Henricksen said they expected the opposition. "These organizations have their agendas, and they want to save the fish," Henricksen said. "That's basically what most of the comments were about." Fund still hopes that opponents will change their tune after the flood authority develops strategies to mitigate environmental damage — something that's required for the permitting process. "We didn't have the opportunity to show what mitigation would be available, so if I were a tribal member and just read that EIS … I would totally agree with them, I would not want that either," Fund said in an interview. Fund has also emphasized that the proposed project is not a permanent dam, and would only be closed during floods. But some have raised concerns that with climate change increasing flood intensity and frequency, the structure would operate more often than predicted, producing more environmental destruction than predicted by the EIS.

(Might be the parties were not on the same page. Wouldn't a phone call ferret out the issue?)

Feds: Tacoma Power Operated Within License During February Flooding

By Eric Rosane / yelmonline.com. 10, 19, 2020

The public utility operating the Nisqually River Project dams was within its license agreement last February when staff released large amounts of water at LaGrande Dam that some suspect caused widespread flooding on the lower Nisqually River, an Oct. 14 letter from the Federal Energy Regulatory Commission determined. The letter was in response to an inquiry made shortly after the February delta flooding by Howard Glastetter, a resident concerned with the general outline of Tacoma Public Utillity's license with the Federal Energy Regulatory Commission (FERC). Glastetter's inquiry triggered the review of Tacoma Power's data and handling of the situation. Glastetter, also separately a member of the Nisqually River Council's citizens advisory committee, originally alleged that staff acted in an unsafe manner when they allowed the incoming water flows to be raised just feet from the reservoir's maximum capacity before substantially increasing discharge in late January and early February.

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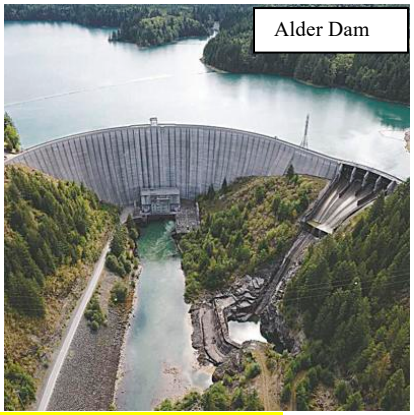
He also recommended a change to the license to accommodate lower water levels during the winter months. But, according to FERC's letter to Tacoma Public Utility, the operator of the project complied with its license during this timeframe. "The operational data demonstrated that you were in full compliance with your license," FERC's letter read. "We strongly encourage you to continue when possible and consistent with your license requirements to voluntarily use the available reservoir storage space to reduce flooding downstream, to the extent that your license, hydraulic conditions, and dam safety constraints allow."

FERC also encouraged Tacoma Power to continue to review its license requirement at its discrepancy and, if needed, amend it based on its "review and other factors experienced at a project." Water levels at Alder Lake — the body of water sitting above Alder and LaGrande hydroelectric dams — are currently required to stay above 1,197 feet during the summer months and above 1,170 feet all other months. In his inquiry, Glastetter said he would like to see the license amended to require pool elevations stay below 1,197 feet — 10 feet from the maximum during the winter months and wet season.



In his letter back to FERC Secretary Kim Bose, Glastetter wrote that he disagreed with the agency's "narrow conclusion" of his complaint. "My complaint was not about compliance to the license. It was about the license itself," he wrote, adding later: "During the rainy season there is no reasonable obligation to keep dangerously high reservoir levels. There is an abundance of water that is constantly being refreshed." In an interview, Glastetter said he had been expecting that sort of judgement from FERC on license compliance. He said he hopes either FERC or Tacoma Power will reconsider his suggestion and take it upon themselves to revise their license to mitigate flooding risks, though he thinks little more action will come from the public utility. Glastetter added that it would be a positive for all stakeholders if they went forward with a wintertime maximum. "Any loss of revenue during the winter by being a little conservative is going to be miniscule," Glastetter said. "There's no reason this can't be a win-win." Tacoma Public Utilities was not able to comment by Tuesday morning's press deadline, but community relations specialist Monika Sundbaum said the utility planned to respond. That response will be published in next week's edition of the Nisqually Valley News if it is issued.

(Full court press.)

Yurok: Support the Un-Dam the Klamath River Day of Action Oct. 23

By MEGAN BENDER, October 23rd 2020, krcrtv.com

DEL NORTE, Calif. — The Yurok Tribe is asking for support on the Un-Dam the Klamath River Day of Action on Friday, Oct. 23, 2020. Read the tribe's full Facebook post below:

"The Klamath River's once abundant salmon runs are in serious trouble. The Yurok Tribe has cancelled its commercial fishing seasons in four of the last five years to protect these imperiled fish. In 2019, the year the Tribe had a commercial fishery, fishers harvested only a fraction of the quota because there were so few salmon. This year is even worse. The Klamath dams are the driving force behind the rapidly declining fish stocks. These antiquated structures are the single biggest threat to the Yurok lifeway. The dams need to come down as planned in 2022 before it's too late and the wild Klamath salmon are gone forever. Please support the Un-Dam the Klamath River Day of Action on Friday, October 23. For more info, please visit https://bit.ly/2HpACTI ."

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

(Poor planning or no planning.)

River Of Tears: How Chinese Dams Are Devastating The Mekong

By Bruno Philip, LE MONDE, 2020-10-23, worldcrunch.com

BAN MUANG — Seen from the Thai side, facing the jungle-covered hills of the Laotian bank, the great river bordering the two countries ebbs continuously, like a body of water symbolizing the eternal course of life. The melancholic and beautiful flow of the Mekong, so steady and slow, seems to carry its traditional majesty along with its flat, white waters. But this is an illusion, and an error of judgment: The Mekong is in danger, and so are the fish, vegetation and people it has nourished since living memory. There is one statistic that illustrates how important the river and its resources are for those who live along its banks: Two million tons of fish are caught in the Mekong every year, a world record for rivers.

"Look at the middle of the river," says Chaiwat Parakun, a fisherman from the village of Ban Muang in northern Thailand, pointing to the grassy islets protruding from the brown surface. "Since we have entered the rainy season, they should all have been submerged by this time. But no: the Mae Nam Kong (the Mekong in Thai) is at least three meters lower than its usual height." We are now at the beginning of August and it will take weeks before the river level finally reaches almost-normal levels in early September. In 2019, the Lower Mekong Basin, which includes Thailand, Cambodia, Burma, Laos and Vietnam, experienced its worst drought in 40 years. The waters of the Tonlé Sap, a lake in Cambodia fed by the Mekong, were also unusually low this August. This was due to a delay in the famous biannual "turnaround" of the river, which sees its course reversed in a beneficial phenomenon of regulatory pulsation. In Cambodia alone, the human stakes are enormous: The average Cambodian derives about 60% of their protein intake from fishing in the lake and the river that crosses it.

The number one culprit identified by most experts is not climate change: it's China. Since the start of the century, China has built more and more infrastructure, including 11 dams on the Lancang Jiang (the Mekong, in Chinese), the "turbulent river" that originates in the Tibetan heights and flows into Laos. This has carried consequences. The fluctuations of Asia's third longest river, after the Yangtze and the Yellow River, are now unpredictable, as dams have upset its ecological balance. The engineering structures cause silt to settle in the reservoirs and prevent valuable nutrients from moving downstream. In 2019, to the surprise of residents, the absence of nutrients turned the river, normally the color of a flat white coffee, blue.

Straight to disaster

Laos, a small country that has become dependent on its northern neighbor, is aggravating the situation. At the end of 2019, the opening of a first dam on the Laotian part of the Mekong was met with anger and bitterness by the Thai fishermen downstream. On the Thai side, it was time for citizen mobilization. Fishermen and residents organized themselves into an association defending the integrity of the Mekong. The discontent continues to spread around the northeast Isan province in the 64 tambon (local governing units) bordering the river. "For years — especially since 2010 — we've been trying to make the authorities hear our observations and about the negative developments underway," says activist Chanarong Wongla, leaning against the railing that runs along the river in the large town of Chiang Khan, located in the western Loei province. "We're heading straight for disaster." As if to demonstrate that the survival of the Mekong River is a global issue, he is wearing a black T-shirt that reads: "All lives matter, here I can't breathe," a reference to the slogan now known worldwide in memory of George Floyd, who died asphyxiated below the knee of a white policeman. Unfortunately, says Wongla, the authorities have so far remained indifferent to the "asphyxiation" of river life and the alarms sounded by fishermen. "We submitted a 180-point report concerning the erratic fluctuations of the

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river, the erosion of the banks and the progressive disappearance of certain species of fish," explains Wongla. Yet when it comes to the river, there is little difference between the current government of Prime Minister Prayuth Chan-o-cha, heir to a recent military junta, and the democratically-elected governments of the past. At Wongla's side is Thong-in Rueng Kham, a 65-year-old who has just returned from fishing. The veteran nods to the leader while the waning sun sets the entire landscape ablaze, bringing an additional dramatic touch to Kham's observation that sounds like a death knell: "We're heading straight for disaster. When I was young and went fishing with my grandfather, we could bring back about 50 fish a day. Ten years ago, fishing was still good. Now, we are happy when we catch about 10. Sometimes we don't catch any at all."

The good times of bountiful fishing are over. Kham doesn't remember when he last caught a pla buek, the famous Mekong giant catfish (Pangasianodon gigas) and one of the biggest freshwater fish in the world. As its name indicates, the fish is only found in the waters of this particular river. "Half a dozen species [out of more than 1,000 — 700 of which are migratory species in the Mekong] seem to have disappeared from the waters where I fish," he says. The future looks bleak: "The river level is sometimes so low that the fish no longer swim up the river and there is no more room to lay their eggs," says fisherman Chaiwat Parakun of Ban Muang village. He gives a very specific example: "Every year, the pla rak kluay period [a term meaning that the last fish coming up the river have arrived for spawning] is a pivotal time of the season. From now on, everything will be unpredictable: This movement of fish arrival can occur earlier or later."
A study published in April and financed by the U.S. State Department highlights China's responsibility for the degradation of a river that is the largest reservoir of freshwater fish on the planet. The aquatic life of its lower basin provides a livelihood for 66 million people in four countries, a third of whom are Thai. The findings are the subject of fierce debate at a time of unprecedented tensions between China and the United States. According to the report, China retained a considerable volume of water behind its dams on the Mekong in 2019, without worrying about the drought that this could cause downstream.

Worse, Beijing's denial that China was also a victim of the same drought was a lie, according to a study by Eyes on Earth, an American research center for water-related issues. "The satellite data doesn't lie, and there was plenty of water in the Tibetan Plateau, even as countries like Cambodia and Thailand were under extreme duress," Alan Basist, a co-author of the report, recently told the New York Times. Basist said there is no doubt that the Chinese caused the drought by withholding water for their power plants and "regulate their river flow." Another April report from the Stimson Center, a nonprofit think tank, confirms this thesis.

"More water is discharged from Chinese dams to the lower Mekong River in the dry season and less water in the rainy season. That means a reduction of drought and flooding in the lower Mekong countries. That was the ideal ‘cooperation' Thailand, Laos, Cambodia and Vietnam expected from China," reads an editorial in the Bangkok Post published this past April. "In reality, China seems to have done the opposite."On July 5, the Chinese English-language publication Global Times, one of the regime's voices for external propaganda, persisted in maintaining that "hydrology researchers found China was one of the countries that suffered the most from a severe drought along the Lancang-Mekong River in 2019, in contrast with allegations by some foreign researchers which blamed China for the drought in countries on lower reaches of the river." The daily paper went on to assert that there was no "causal link" between the dams and the phenomena observed downstream: as Chinese "scientists have found continued high temperatures and decreasing rainfall are the main causes of the drought."

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The indifference of the Middle Kingdom to the destinies of its smaller neighbors not only causes drought but also floods. The excessive proliferation of dams has upset the rhythms of the rivers, which are at the whim of Chinese decisions to open or close the sluices at will. So much so that, downstream, it can be dry when it should be wet and vice versa.

The small Thai village of Ban Muang faces the Laotian bank. On a Sunday in August, over the voices of a deafening karaoke, the fisherman Chaiwat Parakun explains, "From the beginning, we knew the dams would have a negative effect. We didn't think it would be this bad." All the fishermen we met along the river reacted in the same way to qualify the Chinese authorities: "Liars!" While the Chinese are responsible, they haven't acted alone. In fall 2019, Laos erected its first large dam on the Mekong River, erected in the province of Xayaburi. The 1,285 megawatts of electricity generated by this 32-meter high structure, built by the Thai company CK Power, will be used primarily to supply power to Thailand. Therein lies the problem for the kingdom's fishermen. They are upset by Chinese achievements but equally concerned about the consequences of dams built by companies from their own country. "And yet we have more than enough electricity in Thailand," says activist Chanarong Wongla.

Construction frenzy

Laos doesn't seem to have any intention of stopping. In January, the government announced a new dam project, which will be built 2 kilometers from the Thai border in the Sanakham district. The hydroelectric production will likely be purchased by Thailand but work on the dam, which was supposed to start at the end of this year, was halted by COVID-19. The Chinese company Datang Hydropower is behind the construction, at a cost of just over $2 billion. "Why does Thailand want to continue to build certain dams when it does not need more electricity?"

Obsessed by its goal to become the "battery of Southeast Asia," the small, landlocked Laos (seven million inhabitants) is experiencing a construction frenzy. Laos would be able to sell its electricity to neighboring countries on a large scale and thus ensure its continued development. A total of 50 or so dams are currently under construction in Laos, despite the sometimes critical opinions of the Mekong River Commission. The regional advisory committee brings together authorities from Thailand, Laos, Cambodia and Vietnam and has its headquarters in Vientiane, the capital of Laos. China refused to join. According to Martin Burdett, a contributor to the International Journal on Hydropower and Dams, Laos "would have the hydroelectric capacity to provide 6,500 megawatts per year and has so far developed only 5% of this potential."

Besides, "more than 130 dams are being considered for all the countries of the lower river basin," according to Open Development Mekong, a nonprofit organization. The figure seems excessive, and it's is possible that, in 20 years, several projects will be canceled and the frenzy will subside. Will the fishermen's mobilization and the negative impacts of the dams begin to make the Thai authorities react? The deputy prime minister, former General Prawit Wongsuwan, who also serves as chairman of the National Mekong Committee, announced on Aug. 4 that he would ask the concerned authorities to find ways to mitigate the possible environmental consequences of the Sanakham dam project in Laos. Wongsuwan said he was "concerned" about the impact of such a dam.

Very Narrow Vision

However, Paiporn Deetes, head of the NGO International Rivers for Thailand, is skeptical: "We can see an awareness in the deputy prime minister's statement. For my part, the real question that hasn't been asked is: Why does Thailand want to continue to build certain dams when it does not need more electricity? One of the answers is that it makes Thai companies work."

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At the University of Udon Thani, located in northeastern Thailand, Professor Santiprop Siriwattanaphaiboom, who teaches in the Faculty of Science and Environment, wonders about the reasons behind Chinese "selfishness." "The volume of the Mekong River in China represents only 18% of the river's total volume," says Siriwattanaphaiboom. "The countries with the largest volume in cubic meters are Thailand and Laos. We are, therefore, the first concerned and the ones entitled to ask: what exactly do the Chinese want? To use the potential of nature — in this case, that of hydroelectricity — to consolidate their political power? Is this a strategy to ensure control of the river, in terms of navigation and trade, even downstream?" For Siriwattanaphaiboom, the Thai people are not helped by Prime Minister Prayuth Chan-o-cha, who was behind the last coup d'état in 2014. "His vision is very narrow; he does not see the connections between ecology, the life of the riverside residents, nature and the environment," he says.

Further north, in Nong Khai, on the very edge of the river, the activist Ormboon Teesana points out with a discouraging gesture that the river is "at such a low level for a monsoon." She conveys her dismay into a disenchanted sentiment, which goes well with the melancholy of the great river: "The dams are based on a vision of the economy that flows on the tears of the people."

(Fixed' it up before it gets shakin' up.)

Dam safety work completed at Reclamation's Boca Dam in California

10.20.20, hydroreview.com hydroreview.com

The U.S. Department of Interior's Bureau of Reclamation has completed work on a safety project at Boca Dam. Boca Dam, 27 miles west of Reno on the Little Truckee River in California, provides flood protection for Reno and Sparks, Nevada. The reservoir provides water for irrigation, recreation, fish and wildlife, power generation and drought supplies for the Truckee Meadows area. Based on extensive engineering analysis, Reclamation found that Boca Dam and Dike was at risk from structural failure during an earthquake due to the presence of sand and gravel within the dam's foundation. During an earthquake, the dam had the potential to slump or crack, leading to overtopping or a breach.

Upgrades to the 81-year-old dam corrected seismic risks as part of Reclamation's Safety of Dams Program. Under this program, Reclamation completes studies and resolves safety issues on its dams. As part of the modifications at Boca Dam, Reclamation added a stability berm, a 25-foot wider crest and reinforced the road across the dam. Reclamation invested $26 million in the Safety of Dams project at Boca Dam. Combined with the Safety of Dams project just upstream at Stampede Dam, about $59 million was spent between the two projects in four years. "The Trump Administration completed work in under two years to ensure the safety of downstream communities," said Reclamation Commissioner Brenda Burman. "Through Reclamation's Safety of Dams Program, we were able to complete these important improvements and support many local jobs while doing so—another advantage of modernizing Reclamation's infrastructure." Reclamation is the largest wholesale water supplier and second largest producer of hydroelectric power in the U.S.

Hydro:

(This sounds more like an ad for wind energy. They're renewable but intermittent. It's not dependable capacity or the energy panacea!)

HYDROPOWER TO HELP INTEGRATE WIND POWER AND SOLAR ENERGY RESOURCES

OCTOBER 13, 2020, evwind.es,

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The American Wind Energy Association (AWEA) today issued the following statement after U.S. hydropower industry and environmental and conservation organizations agreed to increase collaboration on decarbonizing the nation's electric grid, while protecting America's waterways. AWEA this year partnered with America's hydropower, solar, and energy storage industries as part of a shared vision of renewables reaching a majority of U.S. electricity generation by 2030. "We applaud this important agreement that could help enable the greater use of hydroelectric power to support a green grid by focusing on its ability to help integrate wind and solar through water-powered energy storage projects and ensuring they are done in an increasingly environmentally friendly way. These types of 'win-wins' are a hallmark of renewable energy." – Tom Kiernan, AWEA CEO.

AWEA is the national trade association for the U.S. wind industry, the largest source of renewable energy in the country. We represent 1,000 member companies, 120,000 jobs in the U.S. economy, and a nationwide workforce located across all 50 states. AWEA serves as a powerful voice for how wind works for America. Members include global leaders in wind power and energy development, turbine manufacturing, and component and service suppliers each year at the Western H. They gather hemisphere's most efficient and targeted event for utility-scale renewable companies, the AWEA CLEANPOWER Conference & Exhibition, next in Indianapolis, June 7-10, 2021. An outgrowth of the AWEA WINDPOWER Conference & Exhibition, CLEANPOWER is the first trade show focused exclusively on the utility-scale renewable power sector, bringing together all the major developers, utilities, OEMs, suppliers and buyers under one roof.

Water:

(Water, water everywhere but not here.)

Projects would expand state's water storage

By Christine Souza, Issue Date: October 14, 2020, agalert.com

Warning that California needs a concerted plan to adapt its aging water system to meet "significant and steadily mounting water insecurity issues" in the 21st century, the California Farm Bureau Federation has reiterated its support for two federal reservoir-expansion proposals.
In separate comment letters, CFBF backed plans by the U.S. Bureau of Reclamation to increase the capacity of Lake Shasta Reservoir and San Luis Reservoir. The Shasta project involves raising the 602-foot-tall dam by 18.5 feet, or 3%, to increase water storage in Shasta Lake by 634,000 acre-feet. The Bureau of Reclamation says dedicated environmental storage from the expanded reservoir would improve water quality in the Sacramento River below the dam, by lowering water temperatures for survival of fish such as chinook salmon and others that migrate from the ocean to rivers to spawn. In addition, the agency said, the project would improve operational flexibility for the Sacramento-San Joaquin Delta watershed downstream.
"Just as Shasta Dam and Lake are and have long been a cornerstone of California's existing statewide water system, a modest expansion in this critical location is an indispensable part of any meaningful statewide water infrastructure adaptation strategy for the future," CFBF wrote in its comments, filed last week.

Justin Fredrickson, California Farm Bureau Federation environmental policy analyst, said the Shasta expansion project has been talked about and studied for years, noting that it was among a handful of surface storage projects identified in the late 1990s and early 2000s through the Cal-Fed Bay-Delta Program, a cooperative state-federal planning effort intended to protect the delta and provide water for urban and agricultural purposes. The Shasta project has also drawn opposition. California Attorney General Xavier Becerra said the project "poses significant adverse

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effects on the free-flowing condition of the McCloud River and on its wild trout fishery" and would impact fisheries habitats and sacred tribal sites. Becerra asserted that the federal government cannot fast-track the project under the Clean Water Act because Congress hasn't authorized the dam raise. The bureau would also need permits from the State Water Resources Control Board and other authorities to proceed.

Though some opponents of the Shasta project have cited fisheries among issues of concern, CFBF said in its comments that "between warming temperatures, shrinking snowpack, periodic drought and competing demands, the reality is that without the project it may be very difficult to sustain and recover the cold-water species in question indefinitely into the future." The Shasta project, CFBF said, "is perhaps as much necessary for the survival and recovery of anadromous fish, if not more so, than for any other purpose." Meanwhile, Farm Bureau noted, variable precipitation patterns, including the possibility of larger floods, long droughts, higher temperatures and less snow, "further highlight the great importance and considerable promise of this project." The additional storage space identified in the project's preferred alternative would provide about 191,000 acre-feet of cold water for fish survival and between 60,000 and 120,000 acre-feet in critical or dry years, respectively, for municipal and industrial water deliveries. The alternative also includes spawning gravel augmentation and restored riparian, floodplain and side-channel habitat in the upper Sacramento River, Fredrickson said, and is projected to boost annual in-river fish production by 171,000 fish.

Pointing out that one of the greatest constraints on Central Valley Project agricultural water reliability in recent years has been the level of summer cold-water restrictions on releases from Lake Shasta and related fisheries concerns, CFBF said it was disappointed the preferred alternative does not include a direct agricultural water-reliability component. Despite that, Farm Bureau said it anticipates indirect benefits for agricultural water contractors, due to added operational flexibility and from the increase in cold-water and municipal/industrial reserve water in dry and critical years.

CFBF also filed comments in support of a project proposed jointly by the Bureau of Reclamation and the San Luis & Delta-Mendota Water Authority to create an additional 130,000 acre-feet of storage space in San Luis Reservoir. The project would add 10 feet to the crest of B.F. Sisk Dam while implementing dam-safety modifications. San Luis Reservoir serves as the main facility for holding water exported from the delta for the CVP and State Water Project until it can be delivered to farms and cities in Central and Southern California. Scott Petersen, director of water policy for the San Luis & Delta-Mendota Water Authority, said the project would enhance the year-to-year reliability for water customers south of the delta. Without the project, Petersen said, "the challenges associated with water supply reliability for communities south of the delta and in the San Joaquin Valley will continue," adding that as implementation of the Sustainable Groundwater Management Act moves forward, "not approving this project would be another lost opportunity."

Under current conditions, many years are very low or zero-allocation years for agricultural water contractors in the San Luis/Delta-Mendota system and south of the delta. Fredrickson said the proposed San Luis project "offers the ability to store more carryover water that can tide you over, and gives you greater flexibility and resilience in the drier years." Ryan Jacobsen, chief executive officer of the Fresno County Farm Bureau, said of the reservoir-expansion projects, "The Central Valley must have more long-term reliability with its water deliveries in order to sustain our agricultural communities. In the boom-or-bust cycles of California precipitation, we have to do more to capture the water available in wet years, knowing drought is just around the corner." (Christine Souza is an assistant editor of Ag Alert. She may be contacted at csouza@csouza@cfbf.com.) *Permission is granted, credit to the California Farm Bureau Federation.*

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