

TUWaterWays

Water News and More from the Tulane Institute on Water Resources Law & Policy
December 22, 2021

[All I Want for Christmas is Hurricane Protection](#)

The Army Corps of Engineers approved [\\$1.9 billion to improve New Orleans hurricane levees](#), relieving the full burden of the project from the state and levee authorities. The plan will protect against so-called 100-year storms (those with a 1% chance of occurring each year) for half a century. But will this be enough? The Corps could have—and Gov. John Bel Edwards said they should have—[adopted a higher level of protection](#) against 200-300-year events.

Upriver in St. John the Baptist Parish, [construction of the West Shore Lake Pontchartrain Hurricane Levee will resume](#) following an order from a three-judge panel out of Louisiana's 5th Circuit. Construction on the project [began this summer](#) but unfortunately had to [take a break](#) before [Hurricane Ida](#) struck in August. Earlier this month, [construction was delayed by a lawsuit](#) challenging the manner and authority of the levee district to appropriate private land for hurricane levees. This week, the judicial panel ruled that the lower court should not have combined the levee district's expropriation request with the landowner's appropriation lawsuit. In other words, construction should not be halted while the appropriation process is challenged.

[We Fish You a Merry Christmas](#)

There is much to say about tiny fish this week. And for any of you doubting the importance of tiny fish, we refer you to the story of the [snail darter](#). But today we will be talking about two other tiny fish: the mosquitofish and the Delta Smelt.

Mosquitofish are only a few inches long, but they're one of the [worst invasive species on the planet](#). Ironically, mosquitofish were originally introduced in many regions to deal with mosquito populations before becoming pests themselves (except in [Russia where they're revered](#)). Now, scientists in Australia are using an innovative tool to control the rampant mosquitofish population: [robotic fish](#). The robofish are designed to look like natural predators and terrify the fish into not reproducing. And boy is it working! The poor mosquitofish are so scared they're acting erratically and their entire biology is changing, as males have evolved more streamlined body shapes to escape the [mechanical nightmare](#).

While scientists in Australia struggle to keep fish population levels down, agencies in California are doing the opposite. Last Friday, the USFWS announced that it was [reintroducing captive produced Delta Smelt](#) into the Sacramento-San Joaquin River Delta. Nonetheless, a [lawsuit filed by NRDC](#) alleges that the [Interim Operations Plan](#) currently in place is insufficient to protect the Delta Smelt, as well as

The **Tulane Institute on Water Resources Law and Policy** is a program of the Tulane University Law School.

The Institute is dedicated to fostering a greater appreciation and understanding of the vital role that water plays in our society and of the importance of the legal and policy framework that shapes the uses and legal stewardship of water.

Coming up:

[UF Water Institute Symposium](#), February 22-23

[Tulane Environmental Law Summit](#), March 11-12

[Coastal Law in Louisiana \(CLE\)](#), April 21- 22

Water jobs:

[Assistant General Counsel & Policy Researcher](#); The Water Institute of the Gulf; Baton Rouge, LA

Louisiana Bucket Brigade; [Campaign Director](#), New Orleans, LA; [Economic Development Manager](#), River Parishes, LA;

[Adaptation Program Director](#); Georgetown Climate Center; Washington, D.C

[Sustainability/ESG Director](#); PwC; multiple locations

[Research Associate](#); University of New Orleans; New Orleans, LA

[Communications Specialist](#); Environmental Defense Fund; Multiple

[Research Associate 1](#); University of Louisiana Lafayette; Lafayette, LA

[Organizing Representative](#); Sierra Club; New Orleans, LA

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salmon and the rest of the Delta. [Tribes in the region are particularly opposed](#) to the current management of the area and the lack of tribal consultation sought on major projects.

[Dreaming of a Wet Christmas](#)

Roasted chestnuts and visions of sugar plums can stay, but Americans may need to [adjust other expectations](#) for the holiday season. Turns out, the [chances of a white Christmas in the lower 48 have been steadily decreasing](#) since the 1980s. This comes on the heels of announcements that in the not-too-distant future [snow may vanish from the American West](#) for years at a time. And, when the snow does come, it will likely [fall later in the season](#).

And snow isn't the warming climate's only [frosty](#) victim—glaciers the world over are shrinking and the consequences are more serious than outdated carols. New data shows that [glaciers in the Himalayas](#) have shrunk 10 times faster in the past 40 years than in the previous seven centuries. The melting has caused avalanches and flooding that threatens the water supply of nearly 2 billion people. The situation is also [grim in Antarctica](#) where scientists are warning that the [Thwaites Glacier](#) could deteriorate within the next five to ten years. Total collapse of the Florida-sized glacier would trigger at least 2 feet in global sea level rise, threatening many coastal communities.

In addition to avalanches, floods, and sea-level rise (if that weren't already enough), a new study suggests that glacial erosion also leads to [declines in atmospheric oxygen level](#). Scientists already knew that oxygen levels were declining but weren't sure of the cause. While we might have just blamed global [deforestation](#) (which is [on the rise](#) despite pledges from [governments](#) and [industry](#)), a team from Rice University looked a bit deeper and found that the dip is likely due to increased oxidation of surfaces previously covered by ice.

It's not all bad news in Antarctica though—researchers have discovered an unexpected array of [marine life hundreds of meters below ice shelves](#). A staggering 77 species were found in an environment previously considered nearly unlivable.

[What's this? Water on Mars?](#)

Speaking of unlikely discoveries in underground places, [“significant amounts” of water were discovered](#) below the surface of a Martian canyon 10x longer and 4x deeper than the Grand Canyon. While this may seem like old news given that water was first discovered on Mars almost two decades ago, this reservoir is located near the equator, an area previously thought to be too warm for water. Not too mention, the amount of water—40% of an area the size of Netherlands—is far more than was expected. Now if only the same discovery could be made under our Grand Canyon.

[And a Happy New Year!](#)

This will be the last TUWaterWays of 2021 as we take a short break to rest and recharge. Thank you for sticking with us for another year and reading each week. WaterWays may not always bear the happiest news, but it brings us a lot of joy to write and readers like you keep us hopeful. We wish you a safe and cheerful finale to 2021 and a bright new year. See you in 2022!