

TUWaterWays

Water News and More from the Tulane Institute on Water Resources Law & Policy Authors: Christopher Dalbom, Mark Davis, Haley Gentry, Ximena De Obaldia, and Katie Moreland October 11, 2024

In times of flood, plan for drought

With every <u>Milton, Beryl, and Helene</u> dumping water pell-mell, causing floods this way and that, it's important to remember that water shortages are also frequent, disastrous, and expanding. Additionally, proper planning and management for one can and should go hand in hand with the other. There are plenty of reasons for a water shortage. One could be getting the influx of too much water – as is happening in <u>North Carolina</u> and <u>Mexico</u>, where Helene and John, respectively, flooded out water treatment plants leaving a severe shortage of potable water, one that could last weeks or even months. Some shortages could be simply a function of a desert ecosystem. And some places are just dry and force us to adjust how we carry out our daily routines, something the <u>US Army had to deal with</u> when their vehicle cleaning regulations ran afoul of the reality of limited waters in Tunisia.

Some water shortages, though, are almost inconceivable. At least, they would have been a couple of decades ago. The world's largest rainforest has been dependably watery for almost all of human memory. But, maybe you've heard, the times they are a changin'. 2023 was a record-breaking year of drought for the Amazon, and a study released early this year found that anthropogenic climate change increased the likelihood of drought in the basin by a factor of 10. Therefore, it's only mildly surprising (yet still wholly disappointing) that 2024 is another record-breaking year of drought there. In many places, the rivers are the only highways of commerce, leaving communities with additional transportation challenges on top of all the other reasons droughts are awful to deal with.

Lest you think this is a "them problem," recent studies have found that the world's <u>water cycle is more erratic</u> than ever, and widespread drought plays <u>havoc with both food supplies and energy production</u>. In the <u>world's cities</u>, where they usually consume far more food and energy than they produce, <u>are not ready for it all</u>. It's an everyone problem, especially should <u>a certain project</u> come to fruition.

Of course, there are things that can be done to increase resiliency to water shortages (and floods!). Assuming a transition away from emitting greenhouse gases (and why wouldn't' you assume that? Stop laugh-crying. Or crylaughing), there are a lot of things that can be done – stop putting grass in the desert or use floating solar panels to reduce evaporation from water sources. But all those things take money, and if you really want your country's water to be dependable in an increasingly vagrant world, you have to have a plan and be willing to spend big time to see it through. One prominent example is Singapore. It's a city state with no freshwater sources and has had to <u>make water</u> <u>management an organizing principle</u>. Since gaining independence in the 1960s, it first secured freshwater from neighboring Malaysia, but since then has pushed on every front to increase its independence and resilience: rain and floodwaters are saved and stored, desalination plants double as public parks, and wastewater is treated and recycled. Textbook water resilience stuff that represents billions upon billions of dollars of investment. But look at it this way, would there be nearly as many Asians who are Crazy Rich in Singapore if there wasn't even enough water to come out of the taps, no matter how luxurious? Water resilience investments have cost a lot, but not nearly as much as it would have cost to be left to the wiles of nature. But if you're really, really crazy rich (Asian or not), maybe you want to invest in <u>palladium</u>. Yep. The stuff that was <u>killing Tony Stark</u>. What? Well, as seen in who knows how many <u>Matt Damon movies</u>, if you don't have any water at all, you have to make some – smush some hydrogen and oxygen atoms together and hope you don't make <u>hydrogen</u> <u>peroxide</u>. And palladium? Well, <u>researchers at Northwestern</u> recently got to witness the formation of the world's smallest water bubbles thanks to <u>palladium's ability to work a surface for the joining of hydrogen and oxygen</u>! How long until space-fixated tech billionaires start buying up the world's palladium? Maybe not until after they finish trying to <u>buy</u> an <u>election</u>. But seriously, it's great researchers are pressing the boundaries of the water cycle, from <u>hurricane control</u> <u>devices</u> to <u>yarn</u>.

Coming Up:

Tulane Environmental Law Summit March 28-29, 2025

Water in Americas' Human Landscapes: Tulane

Law & Policy Symposium June 16-18, 2025 Water jobs:

Engagement Manager; National Audubon Society; New Orleans, LA

Community Science and Environmental Education Manager; Pontchartrain Conservancy; New Orleans LA

<u>Sportsmen Outreach and Policy Specialist;</u> National Wildlife Federation; New Orleans, LA

<u>Visiting Professor (Clinical Assistant Professor)</u>; Tulane Environmental Law Clinic; New Orleans, LA

<u>Water Program Policy Specialist, Arizona</u>; The Nature Conservancy; Phoenix, AZ



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.

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