

TUWaterWays

Water News and More from the Tulane Institute on Water Resources Law & Policy

[February 19, 2021](#)

A Winter Storm Swept from Sea to Shining Sea, but the Water-Energy Nexus Was the Main Target

[Power outages, boil water advisories, and deaths](#) have been the story of this storm from Oregon to Kentucky. Here in New Orleans, it meant a miserably cold wait in the drive-thru at Popeye's on Mardi Gras Day at the end of the least-celebratory Carnival in generations. But enough of our problems. Texas is where the storm had the widest impact. Millions were without power and clean water. Now, most Texans have had their power restored, but boil water advisories are still abundant.

So much of Texas's problems are wrapped up around [the water-energy nexus](#). One might primarily think of the nexus as putting a name to the need for water to create electricity, but the nexus goes two ways – you need energy to clean and distribute water, too! Maybe it makes sense that Texas, a place that pushes its water resources to the limit and wraps up so much of its identity with energy production, is where the water-energy nexus could all go wrong.

Let's break down everything that went into this catastrophe. First, the cold: [the jet stream left the Arctic](#) and plunged all the way to the Gulf of Mexico ([sorry, turtles!](#)), something that might become more frequent as climate increases (jury's still out on that one).

Second, the energy failure: extreme weather events become disasters when the human landscape – the infrastructure – fails. Basically, none of Texas's energy production infrastructure was (is) set up for this kind of extended deep freeze (despite a similar event in 2011), but Texas's energy grid (which is independent from the large regional energy exchanges to its east, west, and north) is [mostly dependent on natural gas](#) and, uniquely, natural gas that goes directly from the wells (like in the Permian Basin) to the utilities, so there's not much in the way of storage. So, when wells can't pump and pipelines can't flow, it very quickly becomes a big problem.

Third, the water: well, when there's no energy getting to water treatment plants or to the pumping systems needed to move the water [up, down, and all around](#) the Lone Star State, well, you're left with people melting snow to flush toilets. Even with natural gas flowing yet again, it's taking a while to repair the damage to the water infrastructure, so [the boil water advisories endure](#).

Again, this is a disaster not because it got [really cold](#), but because the energy and water infrastructures failed. And, well, it's been a long time since [a big investment](#)'s been made there, and [not just in Texas](#). If only we had [an example](#) of somewhere that has heavily invested in and updated their infrastructure.

Anybody Else Getting That [Sinking Feeling?](#)

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:

[CPRA Virtual Draft FY 2022 Annual Plan](#) – Southwest LA; February 22

[CPRA Virtual Draft FY 2022 Annual Plan](#) – Southcentral LA; February 23

[ELI: PFAS and Public Health: Covid-19, Vaccines, and Environmental Justice](#); February 23

[EPA Small Systems Webinar: Lead and Copper](#); February 23

[CPRA Virtual Draft FY 2022 Annual Plan](#) – Southeast LA; February 24

[Tulane Environmental Law and Policy Summit](#), February 26 and 27

Water jobs:

[New Orleans Policy Manager and Climate Coordinator](#); Alliance for Affordable Energy; New Orleans, LA

[Manager, Conserving Marine Life in the U.S.](#); Pew Charitable Trusts; Washington, D.C.

[Associate Attorney](#); Earthjustice; Seattle, WA

[Director of Conservation](#); The Nature Conservancy; TX

[Senior Staff Attorney](#); San Francisco Baykeeper; San Francisco, CA

[Water Policy Fellow](#); Berkeley Law Center for Law, Energy & the Environment; Berkeley, CA

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One of the biggest concerns for the rest of this century is basically just the height of the land relative to the height of the ocean. Sea level rise! The ocean part of the equation comes from how much water expands when it warms and how much water that's currently on land (Greenland and Antarctica's ice caps) gets added to the oceans. That's relatively straightforward if not massively huge and [difficult to confidently predict](#), but [models are getting better](#).

On the land side, though, it gets complicated because people make it complicated. [Ain't that just like](#) us? For one thing, it turns out people and all our stuff are really heavy. We're heaviest where we congregate the most – cities; a [new study](#) from USGS found that buildings in San Francisco were pushing down on the earth's crust enough to sink buildings by multiple inches. Even more widespread is land's tendency to subside when groundwater, oil, or gas moves underneath it – especially when we pump it out. Another [new study mapped](#) the threat of subsidence at a global scale. Here in the Gulf Coast, subsidence has been especially high because not only do we love to pump things deep out of the ground, but our soils are often different types of clays that collapse when water's removed from the water table to prevent flooding in places like Houston or New Orleans. The good news is that people know what causes the negatives on both sides of the equation. How much we're willing to do about those causes remains to be seen.

26th Annual Environmental Law and Policy Summit—February 26 and 27, Be There or Be Square

In these times that are so often marked by what is not happening and what we can't do, the [26th Annual Tulane Summit on Environmental Law and Policy](#) stands out as something that is happening—thanks to Tulane law students and their Environmental and Energy Law Society. Against long odds and the limits of virtual meeting technology, the Summit team is assembling a remarkable line up of speakers and panels. And it is free, yes free. Even for Continuing Legal Education credits. So, go ahead and register, you will be glad you did.