

# TUWaterWays

Water News and More from the Tulane Institute on Water Resources Law & Policy  
June 26, 2019

## Fresh-ish water found [under the sea](#)

Last week, researchers published a [study](#) in which they were able to map out extensive low-salinity groundwater stored in an aquifer underneath the ocean along the East Coast. Naturally, most people's [first reaction](#) was to wonder how we can exploit this newly discovered resource.

Apparently [submarine](#) aquifers like this one are naturally occurring all over the world, but they're pretty tough to map out. This study found that the aquifer is at least 350 kilometers, and has pretty extensive freshwater storage. The scientists were able to map the aquifer using electromagnetic sensors that they [towed through the water](#), using the same methods that oil companies have [used to locate subsurface oil reserves](#). Saltwater and freshwater conduct electromagnetic waves differently, so the researchers were able to analyze the salinity of the water based on the measure of conductivity of the water. However, the water isn't completely salt-free, and salinity levels vary throughout the aquifer. Prior to the study, scientists knew that there were some pockets of freshwater under the ocean, but they didn't realize just how extensive this particular aquifer was. We imagine they're now collectively saying: "[Oh . . . that is fresh!](#)"

## New Orleans' latest tourist attraction: giant squids!

While Louisiana has faced some [hard times](#) the past few weeks and had to mourn [another legend](#) this week, something incredible was happening offshore. A live giant squid was filmed in the ocean about 100 miles southeast of New Orleans last week, marking the first time one has been [caught on camera](#) in US water. We've known about giant squids ([aka krakens](#)) for a long time, but most of the scientific research conducted on them has been relegated to post mortems (i.e., examinations of squids that are already dead). Giant squids are notoriously elusive: scientists didn't manage to get a photo of one until 2004, and it wasn't until 2012 that they were able to film one in its natural habitat (unless you believe [fake History channel](#) documentaries). Shortly after the researchers caught the footage, the research ship was hit by lightning and had a near miss with a water spout, which feels very [Melvillian](#).

The whole point of the research, which [was funded by NOAA](#), was to explore life in the "[midnight zone](#)" about 3,280 feet deep in the ocean. The researchers used cameras outfitted with special red lights (which most animals that deep cannot see) to observe how the lack of light at those depths affects ocean life. This has us thinking that a "The Midnight Zone" spinoff of "The Twilight Zone" should be in the works.

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 stewardship of water.

## Coming up:

[Southwest Coastal Public Meeting](#)

June 26th, 2019; Abbeville, LA

[Southwest Coastal Public Meeting](#)

June 27th, 2019; Gueydan, LA

[Pointe-au-chien Living Shoreline Project](#)

June 29th, 2019; Montegut, LA

[Impacts of Oil Spills on Estuaries](#)

July 1st, 2019; Moss Point, MS (livestream available)

[LA Wildlife & Fisheries Meeting](#)

July 1st, 2019; Baton Rouge, LA

[Governor's Advisory Commission Meetings](#)

July 8th and 10th, 2019; Baton Rouge, LA

[CPRA Board Meeting](#)

July 17, 2019; Baton Rouge, LA

## Water jobs:

[Postdoctoral Scholar](#)

University of California, Irvine; Irvine, CA

[Senior Environmental Specialist](#)

The World Bank; Washington, DC

[Research Associate](#)

George Washington University  
Washington, DC

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## **“Water, water, [not] everywhere, nor any drop to drink [in Chennai, India]”—Samuel Taylor Coleridge + [TUWW Editors]**

Chennai, India, a city of over 4.5 million people, is currently facing [a severe water shortage](#). The city’s reservoirs are quickly running out, and Chennai has barely gotten any of the rain it would normally get during monsoon season. As of June 13<sup>th</sup>, the city’s rainfall deficit had [already reached 41%](#). Bottled water is now four times as expensive as it used to be, and there’s barely enough water left for basic necessities like bathing and laundry. The city has started rationing water, and [millions of people](#) are having to line up every day or so to get their allotted quota. The economy has been affected by the shortage too. Some restaurants and businesses have closed, and some companies have asked employees to work from home. Even hospitals have been affected, with some struggling to clean their medical equipment.

[Ironically](#), Chennai used to have a water surplus. So, how did this happen? There are a number of reasons. Chennai has lost around a third of its wetlands over the last ten years (sound [familiar?](#)), as well as 24% of the land that had been used for agriculture. On top of that, Chennai’s built environment has expanded over the years, with development often occurring on “reclaimed” land. Land reclamation involves [filling in water bodies](#) like rivers, lakes, or even oceans with sediment in order to create new land, so you can see why that might cause a water shortage. On top of the reservoirs running low, the city’s groundwater levels have also decreased recently as well. India overall has struggled with groundwater management, with pumping being largely unpermitted and unsupervised. A new report has even found that, by 2020, 21 of India’s big cities will have [almost no groundwater left](#). Perhaps if we send thoughts and prayers their way that will solve the problem.

## **In this week’s edition of totally unsurprising yet very worrisome news: Arctic melting might produce hot temperatures elsewhere**

In case you hadn’t noticed, it’s [been really hot lately](#). In Greenland, temperatures recently got up to [40 degrees higher than normal](#), causing some [serious melting of the ice sheet](#). At one point, around 45% of the ice sheet had experienced melting, which equates to approximately 275,000 square miles. But, this is [far from the first year](#) that the Arctic has experienced a heat wave. On top of that, a [recent study](#) also found that there might even be a relationship between the amount of sea ice in parts of the Arctic and heatwaves in the southern United States. Basically, scientists think that the more the Arctic sea ice melts, the more extreme temperatures become throughout the northern hemisphere.

India has also been experiencing a brutal heat wave, with temperatures [even getting up to 118 degrees](#). This comes after a heat wave hit Pakistan in May, with temperatures reaching [over 110 degrees](#). Next up, Europe is expected to have its own heat wave, with temperatures projected to [hit 100 degrees](#). So maybe these scientists are onto something after all. While [some like it hot](#), this [heatwave](#) is shaping up to be a [cruel summer](#) and leaving people [hot hot hot](#).