TUWaterWays

Water News and More from the Tulane Institute on Water Resources Law & Policy
July 11, 2019

Way Down Below the Ocean, Where Fresh Waters Be

Ever wonder where cities get their water? No, not from the tap. The answer is, from rivers, lakes and underground aquifers (yes, we know that last one is redundant), sources that are increasingly under stress if they are not downright played out. Necessity, being the mother of invention and political will, is drawing oceans more into the mainstream of water planning. Usually that means desalination, which is no simple or inexpensive proposition, but maybe there options out there. Not in oceans, but under them. It turns out that aquifers, big ones, exist out there as the recent discovery off the coast of New Jersey (not to be confused with a less recent discovery on the coast of the Garden State) speaks to. Needless to say tapping these aquifers pose technical and legal challenges (not the least of which is squaring things with the ruler of the depths, Aqua(fer)man) including who has jurisdiction over them, are the renewable, and who should benefit from them. This will require wisdom and technology that calls upon the best of our Atlantian roots. Hail Atlantis!

We Have Seen the Future, and It Looks Like…

Trees. But we are getting ahead of ourselves. It is raining in New Orleans today and that means using pumps to keep us dry (or make us dry again). The pumping system here is a marvel of brute force engineering and it depends on fossil fuels to make it all work. As it must. Or must it? What if there some other way to lift large volumes of water that was cleaner, less fragile, and even nice to look at? There is and we call them trees. It is all about capillary action and learning to do what trees do has been a hard nut to crack, at least on a relevant scale. But that may be changing if research published in ACS Nano and reported in Phys.Org pans out. The tech uses ultramodern materials like carbon nanotubes and aerogels to mimic trees' ability to lift water and use the sun to purify water like survivalists armed with a plastic sheet apparently do. Defying both Newton and Einstein may be on the low side of this technology's useful applications, since water purification and desalination might be even riper opportunities—chores even trees have a hard time doing. This tech is probably going to turn out less useful than trees when it comes to definitely maybe battling global warming.

Catch you on the Flippity Flip

This somewhat abbreviated issue of TUWW is necessitated by the fact that Tulane University has closed until next Monday on account of Barry. No, not that Barry. Or that one. Or that other one. Or even that other, other one. Tropical Storm/Hurricane Barry that is. While we

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:

CPRA Board Meeting
July 17, 2019; Baton Rouge, LA

Water jobs:

NEPA Advocate
EarthJustice
Washington, DC

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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take all storms seriously, concerns are running higher for Barry than one might expect for a tropical storm or Category 1 hurricane. The reason is water. Barry is expected to spawn 6-20 inches of rain, and nobody is ready for that. Beyond that, it could drive 3-6 feet of surge up the river which could overtop levees along the Mississippi River. In a normal summer (remember those?), spring highwater season on the River would be over or waning. Not this year. Thanks to a remarkably wet winter and spring in the Mississippi River basin, the river has been at or near flood stage for months. As a result, there are only a few feet of free board (the distance between the water and the top of the levee) to accommodate Barry's surge and rains, and some overtopping is likely. None of this is unforeseen, but the combination of Gulf Storm, high river, and rain is not what planners at all levels have prepared for. The odds are that the system will be tested but hold, though some flooding is almost certain. To the extent the system does work, nobody should take it for granted. Thanks be to the taxpayers! But, whether it passes the test or doesn't, this is a time to rethink just how our plans stack up against reality. Until climate change, sea level rise, and public infrastructure get more than lip service we can expect more rude awakenings. We are looking at you, Baton Rouge and Washington DC. As Tom Waits reminds us, you deal with what you get and not what you planned for.