

# TUWaterWays

Water News and More from the Tulane Institute on Water Resources Law and Policy  
November 22, 2017

## **Hope Floats – Bitumen Does Not**

Last week, the Keystone pipeline leaked an estimated 210,000 gallons of oil onto agricultural land that is only 20-25 miles away from the Lake Traverse Reservation in northeastern South Dakota. State officials assert that the leak did not pollute any surface water bodies or drinking water systems however residents of the reservation are concerned because many use well water in their homes from a subsurface source that could possibly be affected by a leak.

Unlike the Keystone pipeline, which carries crude oil, the proposed Keystone XL would carry a substance called "bitumen." Bitumen is a tarlike substance, which, is chemically diluted, heated to improve flow, and transported at high pressures. While Eminem can walk on water, and crude oil can float, bitumen sinks. This means that if the pipeline spills into the an aquifer, like the Ogallala Aquifer, responders will not be able to simply remove the contaminated soil – they will have to pump contaminated water out, which will draw more water into the area of the contamination.

So what is the legal status of the Keystone XL pipeline, which duplicates the Alberta-to Nebraska pipeline already in place? The project received the required federal approval in March when President Trump overturned President Obama's earlier rejection of the pipeline, and approved the federal permit for it to cross the U.S. border. As of Monday, the project has now received all of the required state approval. Next, the company will need to secure land from more farmers, a process that has already proved difficult. Of the 275 landowners the company needed for its preferred route, 100 have refused to sign leases for the Keystone XL pathway.

## **Iron v. Plastic**

Water infrastructure is a great thing to be thankful for this Thanksgiving. Paris is installing sparkling water fountains all over their city. Singapore is building a 60-mile "superhighway" to transport used water to water reclamation plants. And, in the United States, the plastic and iron industries are fighting over what our future pipes will be made out of. United States municipalities are forecasted to spend \$300 billion over the next decade updating the 1.6 million miles of underground water pipes. While iron and steel currently make up two thirds of existing municipal water pipe infrastructure, as much as 80 percent of new municipal investment in water pipes over the next decade could be spend on plastic pipes. Plastic pipes are cheaper, easier to install, and are corrosion free, but the effect of plastic on the safety of drinking water is unknown. Chemicals can leach into the water from the pipes themselves or may permeate the plastic from

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:

**March 1-2, 2018**

**Coastal Law in Louisiana**  
New Orleans, LA

## Water jobs:

**Coastal Resources Assistant Administrator**  
Coastal Protection & Restoration Authority  
Baton Rouge, LA

**Program Director for Land, Water and Nature Program**  
Resources for the Future  
Washington, DC

**Senior Water Resources Management Specialist**  
World Bank  
Washington, DC

**Intern for Water Policy**  
Northeast-Midwest Institute  
Washington, DC

**Senior Manager, Investor Engagement, Water Program**  
Ceres  
Boston, MA

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surrounding groundwater contamination. Whichever material utilities go with, it might be a good time to get into the [pipe business](#)!

### **Age is just a number**

We have all heard that the water we drink is [very old](#) and has at one time been [dinosaur pee](#). What does it mean for water to be “old?” Old water in the dinosaur pee sense means that those specific hydrogen and oxygen atoms have been bonded as water molecules for a very long time. This characterization of “old water” applies to all water on the planet. While the molecules themselves are very old, the location and form of the water changes because of the [water cycle](#). So water that has been in the same form and location for a long time can also be called “old.” Scientists interested in this type of old water have been researching a “shadow zone” about a mile below the surface of the Indian and Pacific Oceans where waters stays trapped for centuries with barely any vertical movement. Previously, carbon-14 dating revealed that the water in the shadow zone has been there for 2,000 years. A recent study has revealed why this old water stays where it does. Researchers discovered that the geometry of the seafloor creates deep-water movements called abyssal overturning circulation where deep, dense ocean waters are prevented from circulating to the surface. Now that they understand why and how the water is so old, the researchers want to investigate what it means for oceans systems as a whole.

### **The Dock(et) of the Bay**

January will be a [big](#) month for water in the [Supreme Court](#). The Court will be [hearing](#) oral arguments for two cases regarding states’ water rights. [Florida v. Georgia](#) involves equitable apportionment of the waters of the Apalachicola-Chattahoochee-Flint River Basin, and [Texas v. New Mexico and Colorado](#), concerns the apportionment of water to Rio Grande Project beneficiaries. We are all familiar with the Supreme Court exercising its *appellate* jurisdiction by reviewing the decisions of lower courts. Yet, in keeping with the theme that water is special and important, in water apportionment cases among different states, the Court exercises its *original* jurisdiction meaning that it will be the first and only Court to hear the case. The [Constitution](#) limits original jurisdiction cases to those involving disputes between the states or disputes arising among ambassadors and other high-ranking ministers. So although January 8, 2018 might be a bit out of the ordinary for our [Supreme Court Justices](#), it’s going to be like the Super Bowl and the Oscars of interstate water law all in one day!

As you gather around the table with your loved ones this week, we hope we’ve provided you with plenty material to keep the conversations exactly where they should be – on the water!