

Florida phosphate reservoir on the verge of collapse: An exposure of industrial and government negligence

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On Sunday, the state of Florida began pumping millions of gallons of radioactive contaminated wastewater into Bishop Harbor, an ecologically sensitive inlet connecting to Tampa Bay. This was done to prevent the “imminent” collapse of the Piney Point retention pond, a phosphate reservoir that began leaking in late March. This breach is only the latest incident in a decades-long history of environmental disasters involving the property.

After a significant leak was detected Friday, April 2, Florida Governor Ron DeSantis declared a state of emergency, and Manatee County officials established an evacuation zone where it is possible that 340 million gallons could engulf the area in a “20 ft wall of water” in a matter of minutes if the breach cannot be repaired. Engineers have been working since March to plug breaches in the reservoir with rocks and other materials and are performing a controlled daily release of 35 million gallons of water at Port Manatee.

The evacuation zone includes more than 300 houses, several businesses, and a local jail with more than 1,000 inmates. As of Sunday evening, only 345 inmates were reportedly being evacuated. This is being done to “free up bed space” for the remaining inmates on the upper level of the jail, which is only 10 feet above ground.

During his press conference, DeSantis tried to downplay the presence of radioactive materials in the water being pumped into the bay. “The water meets water quality standards, standards for marine waters, with the exception primarily of the phosphorous and the nitrogen.” The wastewater stored in the holding pools in fact contains not only these two chemicals but also ammonia and small amounts of radium and uranium. In a tweet announcing the state of emergency, DeSantis described the toxic water as “mixed saltwater.”

“What we’re looking at now is trying to prevent and respond to, if need be, a real catastrophic flood situation,” DeSantis stated. “The water quality issues that are flowing

from this for us is less than the risk of everyone’s health and safety, particularly folks who may live in the area.” DeSantis noted that the Florida Department of Environmental Protection (DEP) brought in 20 new pumps to ease pressure on the reservoir.

Central Florida contains the largest known deposits of phosphate in the United States, part of the Pliocene-age “Bone Valley Formation.” These deposits are centered in present-day Polk County and underlay parts of Hardee, Hillsborough, and Manatee counties in central and western Florida. As of 2013, phosphate was being extracted from five mines in the Bone Valley mining district.

The phosphorite deposits of Florida contain between 0.005 and 0.02 percent uranium, which was extracted at multiple phosphate plants in central Florida between 1952 and 1998. Although no uranium has been recovered from these phosphate plants over the past 20 years, the deposits in central Florida are North America’s largest uranium resource, containing an estimated one million tons of the substance.

For each ton of phosphoric acid produced by processing phosphate rock, five tons of waste are generated. This waste takes the form of phosphogypsum, a radioactive solid which has no modern-day use. Somewhere between 100 and 280 million tons of phosphogypsum waste are estimated to be produced annually worldwide. Piney Point is notable for housing two large “gypsum” stacks on its property today. It is on top of these stacks that the holding pools store 400 million gallons of radioactive wastewater.

Piney Point has a long history of problems regarding pollution and the release of its wastewater into the surrounding area. The reservoir was once home to a phosphate plant that opened in 1966, and within the first years the owners were caught several times dumping waste into Bishop Harbor, resulting in a series of fish kills. The plant repeatedly changed hands and caused unending environmental problems, releasing toxic fumes that sickened

workers, killed cattle, and drove neighbors from their houses.

Rather than stepping in, the DEP allowed the owners to operate freely before they declared bankruptcy and abandoned the property in 2001. Whenever rains filled the Piney Point pond to its brim, the DEP opted to keep the pollution out of Tampa Bay and release it into the Gulf of Mexico, based on the idea that a deeper body of water could better dilute the pollution. In 2004, a hurricane knocked a hole in one of the dikes, dumping 70 million gallons of contaminated water into Bishop Harbor.

The DEP then allowed Piney Point's bankruptcy trustee to sell the property for \$4.3 million in 2006 to HRK Holdings LLC, despite objections from local environmental activists. HRK turned part of the property into a storage terminal for companies using Port Manatee, and in 2011 a DEP official told the *Sarasota Herald-Tribune* that the site was now a "success story." That same year, a liner beneath one of the two gypsum stacks on the site tore, spilling 170 million gallons of contaminated water into Bishop Harbor.

HRK has since been in and out of bankruptcy, and yet again, in 2020 and 2021, rainfall has filled up the ponds to their brims. Last October, a DEP representative reported that the company had been getting rid of 55 million gallons of wastewater each year through spray evaporators, but that rainfall has exceeded their ability to get rid of the water. At that time, they said that they only had remaining storage for about 19 inches of rainfall. HRK staff also documented small holes or weaknesses in plastic seams in the decades-old plastic liner on several occasions throughout 2020.

Piney Point is not the only location with immense gypsum stacks in Florida. There are about 25 such stacks at phosphate processing sites all over central and north Florida, some as high as 200 feet, collectively storing more than a billion tons of radioactive waste.

In 1997, a dam broke atop one of the two phosphate stacks at a plant near Mulberry in Polk County, unleashing a 56-million-gallon spill of acidic wastewater into the Alafia River. The pollution killed everything in its path for 42 miles including one million baitfish and shellfish, 72,900 gamefish near the river's mouth, and an unknown number of alligators.

In 2016, a massive sinkhole opened below a phosphate stack 30 miles east of the City of Tampa, releasing 215 million gallons of wastewater into the Floridan aquifer, the main source of drinking water in much of central and northern Florida.

When asked by the Florida Phoenix news outlet last year about how they plan to handle these pools of pollution going forward, Mike Williams, a government and industrial affairs manager for the Florida Phosphate Council, simply said:

"The regulating community says this is the way you'll store it, so that's the way we store it."

Manatee County Administrator Scott Hopes told journalists that he anticipates that the risk level will decrease by Tuesday but also admitted that this situation could have been resolved two decades ago. "What I've seen in the past four days from the governor's office is that all agencies and entities are now committed to a permanent resolution."

Jeff Barath, a representative for HRK, appeared on video over the weekend with emotional distress and spoke through tears while briefing the Manatee County commissioners about the situation. "I'm very sorry," he said, before reporting that he had only slept a few hours that week because he was trying to fix the situation.

Barath submitted a report to the state on March 26, explaining, "I was anticipating that the gypstack itself was destabilizing at a very rapid rate and recommended that we consider an emergency discharge." He noted that failure points were happening "constantly, I mean hourly." On March 30, the DEP ordered the company to "take immediate action" and said that pipes at that time were repaired and discharges were initiated to prevent any pressure buildup. This did not, however, prevent the significant leak that occurred on Friday.

When asked about the danger posed to drinking water in the area, County Commission Chairman Vanessa Baugh assured residents that "the water distribution system is a closed system without any way for flood water to enter. There is also no threat at all to our primary source of drinking water, Lake Manatee."

This entire ordeal has shown the criminal negligence of the Florida DEP, which has allowed a private company to continue to mismanage the property and profit from its use, despite the fact that it has been a ticking time bomb for the community and the larger region for decades. Private enterprises like HRK have repeatedly left state and local governments to pay for the messes they have left across Florida, resulting in a range of negative impacts on the health of the working class and the environment at large.



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