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TOXIC RISK

Sachs and Flores column: A call to action on the risk of toxic floodwaters in Virginia

By Noah M. Sachs and David Flores 11 hrs ago



Light gray fluids flow out of a flooded coal ash dump toward the Cape Fear River at Duke Energy's L.V. Sutton Power Station in Wilmington, N.C., Sept. 21, 2018.

2018, N.C. DEPARTMENT OF ENVIRONMENTAL QUALITY

By Noah M. Sachs and David Flores

This week, Gov. Ralph Northam proclaimed the first-ever Flood Awareness Week in Virginia, just days after the James River surged over its banks and the Department of Health issued warnings about sewage contamination. This threat of contaminated floodwaters will only increase due to climate change. Virginia now faces the triple threat of flooding from heavy rains, storm surge from hurricanes and sea-level rise.

Sewage is just one source of floodwater contamination. Meanwhile, a potentially more dangerous source of contamination — industrial facilities storing toxic chemicals — remains largely unaddressed in the commonwealth. When Hurricane Harvey hit Texas and Hurricane Florence hit North Carolina, we saw that severe storms can unleash everything from toxic coal ash to petroleum products to carcinogenic chemicals. The result is a toxic soup whose residue can last for years. Industrial facilities and government agencies were unprepared for the onslaught.

Over the past two years, we have joined with colleagues at the James River Association and Chesapeake Commons in examining the risks from toxic floodwaters in Virginia, with a specific focus on the James River watershed.

What we documented in a [recent report](#) — “Toxic Floodwaters: The Threat of Climate-Driven Chemical Disaster in Virginia’s James River Watershed” — should set off alarm bells for every Virginia policymaker:

- More than 1,000 industrial facilities in Virginia that likely use, store or discharge toxic chemicals are both flood-exposed and located in communities that are among the most socially vulnerable to disaster nationwide. This includes low-income communities, communities of color, and communities that lack access to adequate housing and transportation.
- More than 473,000 of the 2.9 million people in the James River watershed — roughly one in six — live in these communities.
- Facilities can be flood-exposed for many reasons that their owners may not know about, including being located in a FEMA-designated flood plain, being in the projected path of hurricane storm surge, or being at an elevation likely to be flooded by sea-level rise.
- Between Richmond and Hampton Roads, 234 industrial facilities would be flooded by future sea-level rise between one and five feet. Ninety-one of these facilities would be flooded by just one foot of sea-level rise, which climate scientists expect to occur by 2050.
- Of the most socially vulnerable communities in the James River watershed, 125 contain at least one flood-exposed industrial facility. Many contain more. On average, the most socially vulnerable communities each contain 25 flood-exposed industrial facilities.

Northam’s flood awareness proclamation and his 2018 executive order on climate change resilience are important first steps to address the problem. Neither document, however, mentions the potential flood risks from industrial contamination, or how industry should prepare.

Much more should be done to address these risks. We can’t prevent all flooding, but policymakers should require that facilities that use or store toxic chemicals be hardened to prevent discharges in the case of severe flooding, or require that toxic chemicals be removed, if possible, from the path of likely floodwaters.

Resiliency and equity should be threaded throughout any work on climate and toxic floodwaters in the commonwealth. Regulators can use existing legal authority under the Clean Water Act and other laws to prevent climate-driven chemical disasters, and they should improve public access to data about potential chemical hazards in communities. They can establish construction and monitoring requirements for chemical storage tanks, which are unregulated even though Virginia has comprehensive regulations for oil storage tanks. We also recommend a toxic floodwaters task force to investigate this issue further, work with first responders and propose policy reforms.

Virginia has recently taken a number of laudable steps on addressing toxic hazards, including the recently passed coal ash disposal bill. Gaps remain, however, and recent extreme weather events such as Hurricane Florence one state away serve as a warning: We need to reduce toxic chemical hazards in our communities. When the next hurricane comes knocking on Virginia's door, we need to be ready.

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Their report is available at <http://www.progressivereform.org/vatoxicfloodwaters.cfm>.