Stormwater woes flow downhill, but funding often doesn't

Impacts of land inequity continue to plague low-income communities, people of color

By Jeremy Cox

The Turner Station neighborhood was hardly what someone might call a developer's dream.

Much of it was untamed marshland that often flooded when it rained. If tides or storms caused the adjacent Back River to escape its banks, the low-lying terrain gave way to a sheet of water. Today, all that still happens — but now there are homes and businesses in the way.

The location of the historically African American, low-income neighborhood is no accident, said Dillon Mahmoudi, an urban and economic geographer at the University of Maryland Baltimore County (UMBC).

"It's called altitudinal discrimination," Mahmoudi said. "This is a fancy way of saying that rich people live [uphill] and poor people live in low-lying areas."

That cheap land may equate to cheap housing prices, but it often comes with a steep cost: a significantly higher threat of floods. And the risk is rising, Mahmoudi said, as developers continue to build at higher elevations, displacing more stormwater onto downhill communities. And sea level continues to rise, increasing the frequency of tidal inundation.

Mahmoudi wants to help places like Turner Station avert this wetter future, so he and some UMBC colleagues launched a research lab earlier this year. A $1 million congressional earmark secured by U.S. Rep. Kweisi Mfume of Maryland, a Turner Station native, got the project off the ground.

It has a complex name: the UMBC Laboratory for Flood Risk Impact Assessment and Adaptation in Impoverished Maryland Communities. But its mission, Mahmoudi said, is simple: analyzing why these vulnerable places are flooding and suggesting what can be done about it.

Researchers will study four communities across the state — two in urban and suburban settings and two in rural areas. "We think that that will actually give us a good picture of what communities within Maryland can do," Mahmoudi said.

The researchers plan to develop three-dimensional flood maps showing current and future flood risks down to the street and house level.

"It won't be a bunch of bar graphs," said Alan Yeakley, another UMBC professor and the project's co-leader. "It'll be like, 'Here's where you live, and [do you] see what is happening here in 20 years? This may not even be here anymore,'" he said, adding: "Hopefully, it will connect in ways that scientists normally don't connect."

Margaret Risher, 96, lives on a road in the Maryland community of Turner Station, which frequently deals with flooding. (Jeremy Cox)

The researchers also want to document what local officials are doing — and not doing — to combat these problems. "We think that we can put together kind of a playbook," Mahmoudi said. "It will be like a living document that we revise and add to, so that it reflects the best practices of each community."

Mahmoudi and Yeakley are still trying to pin down three of the communities they want to study. They are leaning toward southern Baltimore City for the urban category, and they're looking to the Eastern Shore to represent the rural ones. So far, the only place they can say with certainty that's going forward is Turner Station.

White and Black workers first flocked to this area southeast of Baltimore after World War I. Many were drawn by its burgeoning factories, including a Bethlehem Steel mill. African American families, though, were excluded from the new housing in Dundalk, so many settled in Turner Station.

It wasn't the best land, but it was land they could call their own, said Margaret Risher, a 96-year-old retired labor and delivery nurse and lifelong Turner Station resident.

A vehicle kicks up floodwater in the Turner Station community near Baltimore after a rainstorm in May 2026. (Courtesy of Olivia Lomax)

"This was nothing but a swampland when I was coming up," said Risher, who lives in a brick townhouse with a rectangle of grass out front bordered by a chain-link fence. Anytime it rains hard, passing vehicles on Sollers Point Road kick waves of floodwater up to her porch steps.

Several roads in the neighborhood have the same problem, residents say. Over the years, the frequent flooding has ruined cars, destroyed store merchandise and forced homeowners to replace ground-level air-conditioning and heating units.

According to a 2022 U.S. Army Corps of Engineers report, the community's main issue is that heavy rainfall often is unable to drain away. Under normal conditions, it should flow downhill into a drain inlet and gush through pipes into Bear Creek. But the stormwater system is so close to sea level that the creek's water frequently backs up into the pipes, limiting their capacity to capture and discharge rainwater.

And climate change is expected to make things worse, the Army Corps says. They predict that by 2080 an intense storm would likely drop 1.5 more inches of rain than an equally intense storm would today. Meanwhile, "nuisance" tides are expected to reach 5.2 feet above sea level, an increase of nearly 2 feet.

Residents have banded together in recent years to draw attention to the neighborhood's flooding problems and push for funding to fix it. "We started raising more hell," said Gloria Nelson, president of the Turner Station Conservation Teams.

"I tell all my Facebook friends that you've got to email and make calls," said Olivia Lomax, another longtime resident. "As long as we're quiet, they'll just think, 'Oh well, they don't care.'"

They've cobbled together several million dollars from state and federal sources, including $3 million championed by Mfume earlier this year for the resilience project. But Risher and other residents say that tangible help hasn't come fast enough.

"They're not telling us when they're going to start," she said.

Lauren Buckler, director of the Baltimore County Department of Public Works and Transportation, said she understands residents' frustration. But, she added, it takes a lot of planning to solve stormwater problems as complex as those in Turner Station.

It also takes money, she said. So far, the county doesn't have enough of it.

The first and most-needed project on the list is installing a new storm drain and pipe outlet in the flood-prone spot in front of Risher's home near the Sollers Point Multipurpose Center. Officials don't have enough funding to cover the $11.7 million price tag, so they plan to tackle the job in phases, Buckler said.

That's just the beginning. More than a dozen projects are planned across the community, totaling more than $350 million. They include a floodwall, drainage ponds, shoreline restoration efforts and backflow preventers on outfalls. But there is no official timetable for the work, Buckler said. ■