

THE NEW YORKER

FORECAST

CROSSING THE LINE

by Elizabeth Kolbert

NOVEMBER 12, 2012

In the summer of 2007, Eve Mosher, an artist who grew up in Texas and lives in New York, bought a machine known as a Heavy Hitter. Heavy Hitters are typically used to produce the white chalk lines found on Little League fields, but Mosher had an entirely different purpose in mind. She filled the Heavy Hitter with a combination of white chalk and blue pigment and began pushing it through the streets of Brooklyn.

Mosher's idea was to draw a line around the edge of the borough. The line would follow a particular elevation—ten feet above sea level—much like a contour line on a map. Ten feet above sea level was the height that waters were expected to reach in New York during a hundred-year flood. Owing to climate change, though, the whole concept of a hundred-year flood was becoming obsolete. By the twenty-twenties, according to a report that Mosher read by a scientist at Columbia University, what used to be a hundred-year flood could be happening once every forty years. By the twenty-fifties, as sea levels continued to rise, it would become a twenty-year event. And by the twenty-eighties it could be occurring as often as once every four years. Mosher couldn't understand why a projection like this wasn't a major topic of discussion in Washington. In fact, it wasn't being discussed at all.

As Mosher made her way around Brooklyn and, later, Manhattan, she hoped that the High Water Line, as she called her project, would prompt people to ask her what she was doing. "I wanted to leave this visually interesting mark, to open up a space for conversation," she said last week. "The other part of the project was to try to prod some kind of conversation on a government level." During the 2012 campaign, Mosher was—once again—appalled to hear no discussion of climate change: "It was really eerie to be back in this space." Then came Sandy.

"I have pictures of where I drew the line and, if you look at the debris line, they're pretty close," Mosher said. "For instance, the Brooklyn-Battery Tunnel, I drew the line right along that entrance that we keep seeing the flooded images of."

Now that the city has experienced two freakish storms in less than two years—before Sandy, it was Irene—it seems that, in New York, at least, a conversation has begun about the future of the city in a warming world. Last Thursday, Mayor Michael Bloomberg endorsed Barack Obama for President, citing Obama's position on climate change as the main reason. Governor Andrew Cuomo

said, “I think part of learning from this is the recognition that climate change is a reality. Extreme weather is a reality.” At another point, Cuomo said that New York was “going to have to start thinking about” some sort of storm-surge-protection system.

In a quiet sort of way, engineers and marine scientists have been thinking about such a system for several years now. Back in March, 2009, the Metropolitan Section of the American Society of Civil Engineers held a conference titled “Against the Deluge: Storm Surge Barriers to Protect New York City.” The consensus was that the city would need at least three surge barriers: one on the East River; another near the Verrazano-Narrows Bridge, which connects Staten Island and Brooklyn; and a third in the Arthur Kill, which runs between Staten Island and New Jersey. Such a system, comparable to the Maeslant Barrier, outside Rotterdam, or the Thames Barrier, in London, would cost on the order of ten billion dollars. And, even then, large sections of the city would remain vulnerable.

“One of the questions is: Where do you draw the line?” Brian Colle, a professor of atmospheric sciences at Stony Brook University, who attended the conference, said. For example, barriers on the East River, the Narrows, and the Arthur Kill wouldn’t prevent flooding in the Rockaways. “There was even a discussion of whether a barrier could be built from Sandy Hook, New Jersey, to Long Island, which would be a mammoth undertaking but would protect more people,” Colle recalled.

A “softer” approach would be to try to deal with the threat in a more localized way: entrances to flood-prone subway stations could be raised, for instance, as could critical equipment like pumps and transformers and wastewater pipes. But, as Sandy demonstrated, this sort of block-by-block approach would also be an enormous undertaking.

Mosher, recalling her days pushing the Heavy Hitter, said that she was struck by how much of New York lies below the high-water line. “In parts of Brooklyn, it goes really far inland,” she observed. During the course of her project, which lasted, on and off, for six months, she passed many low-income housing developments, along with luxury apartment buildings and power stations and nursing homes and hospitals.

“I keep hearing about incidents that, sadly, don’t surprise me at all,” she wrote last week on her blog. Mosher titled the entry “I Never Wanted to Be Right.” ♦

To get more of *The New Yorker's* signature mix of politics, culture and the arts: **Subscribe Now**