



## First Street Foundation releases new data disclosing the flood risk of every home in the contiguous U.S.

**FOR IMMEDIATE RELEASE: Monday, June 29, 2020**

Brooklyn, NY-- The nonprofit research and technology group [First Street Foundation](#) has publicly released flood risk data for more than 142 million homes and properties across the country. The data, based on decades of peer-reviewed research, assigns every property in the contiguous United States a “Flood Factor™,” or score from 1 to 10, based on its cumulative risk of flooding over a thirty-year mortgage. People can look up a property’s Flood Factor and learn more about its past, present, and future flood risk at [FloodFactor.com](#), the Foundation’s new online visualization tool, launching today.

While FEMA classifies 8.7 million properties as having substantial risk, or within Special Flood Hazard Areas (SFHAs), the First Street Foundation Flood Model identifies nearly 70% more, or 14.6 million properties with the same level of risk. This means nearly 6 million households and property owners have underestimated or been unaware of their current risk. This discrepancy exists because the Foundation uses current climate data, maps precipitation as a stand-alone risk, and includes areas that FEMA has not mapped.

When adjusting for future environmental factors like changing sea levels, warming sea surface and atmospheric temperatures, and changing precipitation patterns, the Foundation’s model finds the number of properties with substantial risk grows to 16.2 million by the year 2050. A report highlighting significant national, state, and city findings of the First Street Foundation Model, titled “The First Annual National Flood Risk Assessment: Defining America’s Growing risk” can be found [here](#).

“In environmental engineering, there is a concept called stationarity, which assumes that today is going to be like yesterday, and tomorrow is going to be like yesterday,” said Dr. Ed Kearns, First Street Foundation’s chief data officer. “This concept used to work, but with a changing environment it’s a poor assumption and no longer does. FEMA’s method assumes stationarity, First Street’s does not.”

The model was developed by more than 80 of the world’s leading hydrologists, researchers and data scientists from First Street Foundation; Columbia University; Fathom; George Mason University; Massachusetts Institute of Technology; Rhodium Group; Rutgers University; The University of California, Berkeley; and the University of Bristol. Building upon their decades of peer-reviewed research and model outputs, as well as data from FEMA, the USGS, NOAA, and other government agencies, the collaborators were able to create the country’s first publicly available comprehensive flood risk model.

“Sophisticated investors have privately purchased flood risk information from for-profit firms for years,” said Matthew Eby, executive director of First Street Foundation. “First Street Foundation has not only taken this kind of data to the next level, using peer-reviewed science, but is correcting an asymmetry of information by providing free access to everyday Americans.”



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The model identifies the likelihood of previous flooding by recreating 55 past hurricanes, tropical storms, nor'easters and major inland flooding events. A lack of disclosure laws in many states makes this information difficult or impossible to find. The model also calculates the current probability of tidal, storm surge, pluvial (rainfall) and fluvial (riverine) flooding for individual homes and properties.

In addition to current risk, future risk is calculated by incorporating anticipated environmental changes like sea-level rise, changing precipitation patterns, and warming sea surface and atmospheric temperatures. The technical documentation pertaining to the model development can be found [here](#).

The First Street Foundation Flood Model and data have been shared with roughly 100 researchers from 20 of the world's top academic institutions, through the [First Street Foundation Flood Lab](#). The researchers, from MIT, Harvard University, Johns Hopkins University, The Wharton School of the University of Pennsylvania, and other top universities, will use the data to analyze flooding's impact on the U.S. housing market; its implications for lower income and minority communities; its cost to federal, state, and local taxpayers; climate gentrification; and fairness in federal flood mitigation spending among other issues.

"Through its Big Data partnerships and its growing team of data scientists, First Street is establishing itself as the leader in the emerging field of climate risk measurement," said Dr. Matthew Kahn, director of Johns Hopkins University's 21st Century Cities Initiative. "As a researcher seeking to understand the challenges and opportunities for U.S. real estate investors in the face of rising climate risk, I look forward to continuing to partner with First Street."

For-profit entities looking for access to the data will be able to purchase it through the Foundation's Application Programming Interface (API). Revenue generated will fund the Foundation's continuing research.

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[First Street Foundation](#) is a nonprofit 501(c)(3) research and technology group working to define America's growing flood risk. The Foundation uses transparent, peer-reviewed methodologies to calculate the past, present, and future flood risk of individual homes and properties across the United States. The Foundation's data addresses an asymmetry of information in the U.S., empowering Americans to protect themselves from increasing flood risk. The Foundation's previous research found a \$15.9 billion loss in relative home values caused by tidal flooding and sea level rise.