Matt Johnston

Executive Director

Testimony in SUPPORT of HB 1209 – Climate Ready Floodplain Act of 2023

Environment and Transportation Committee

March 8, 2023

CLIMATE

America underwater

Extreme floods expose the flaws in FEMA's risk maps

By Samuel Oakford, John Muyskens, Sarah Cahlan and Joyce Sohyun Lee
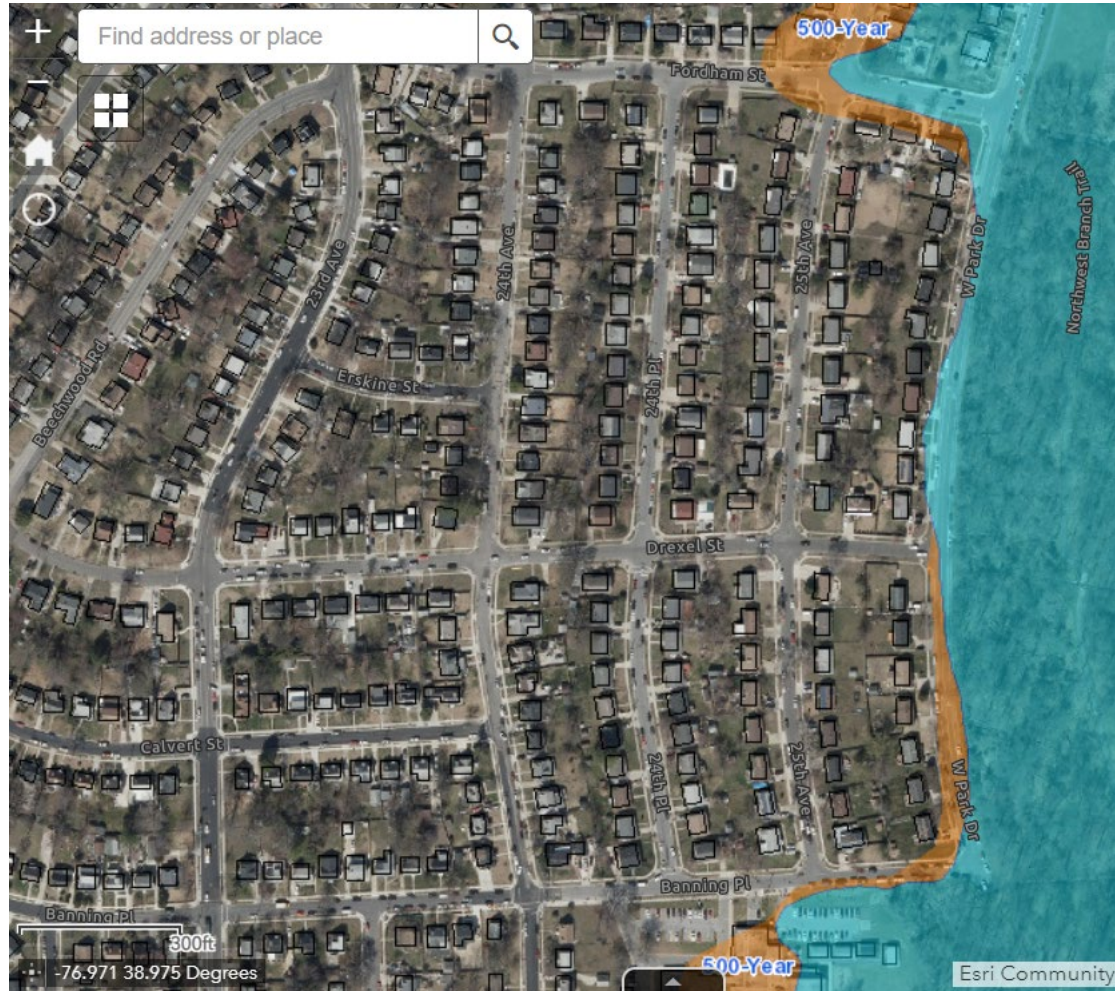
Dec. 6 at 11:59 a.m.

"A Washington Post investigation uncovered communities throughout the country where FEMA's maps are failing to warn Americans about flood risk. As climate change accelerates, it is increasing types of flooding that the maps aren't built to include."

"FEMA officials have testified to Congress that over 40 percent of NFIP claims made in 2017 to 2019 were for properties outside official flood hazard zones, or in areas the agency had yet to map."

"In addition to the maps being out of date, some decades-old in a changing climate, another problem is how the maps are built in the first place. They capture river and coastal flooding, not inundation caused by intense bursts of rainfall, known as pluvial flooding — a particularly dangerous problem in cities, where many porous surfaces have been paved over."

Source: https://www.washingtonpost.com/climate-environment/interactive/2022/fema-flood-risk-maps-failures/

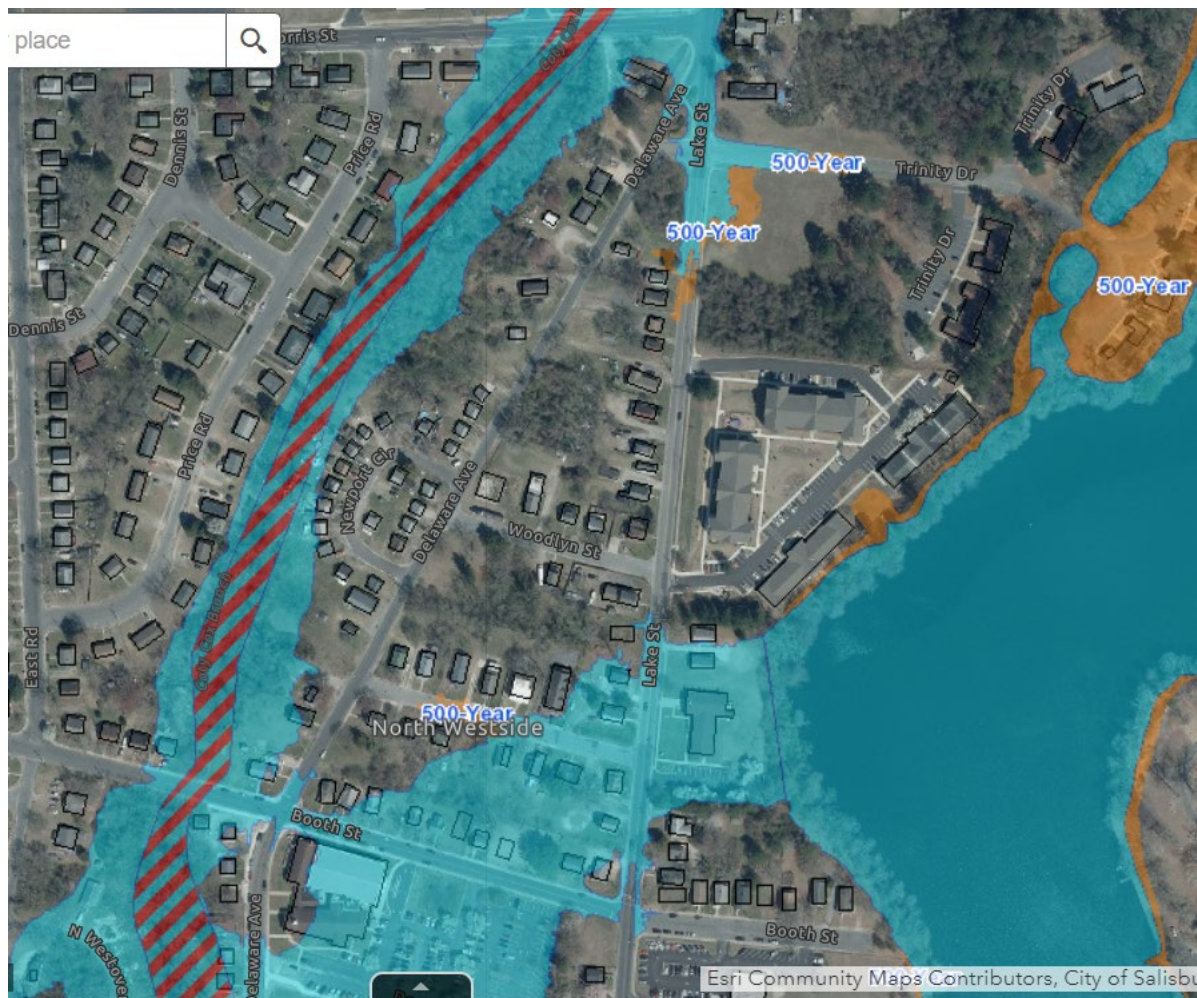# Lewisdale, Prince George's County

FEMA Floodplains

Coast Smart Climate Ready Action Boundary (CRAB)

Source: Coast Smart Climate Ready Action Boundary. Available at: https://mdfloodmaps.net/crab/
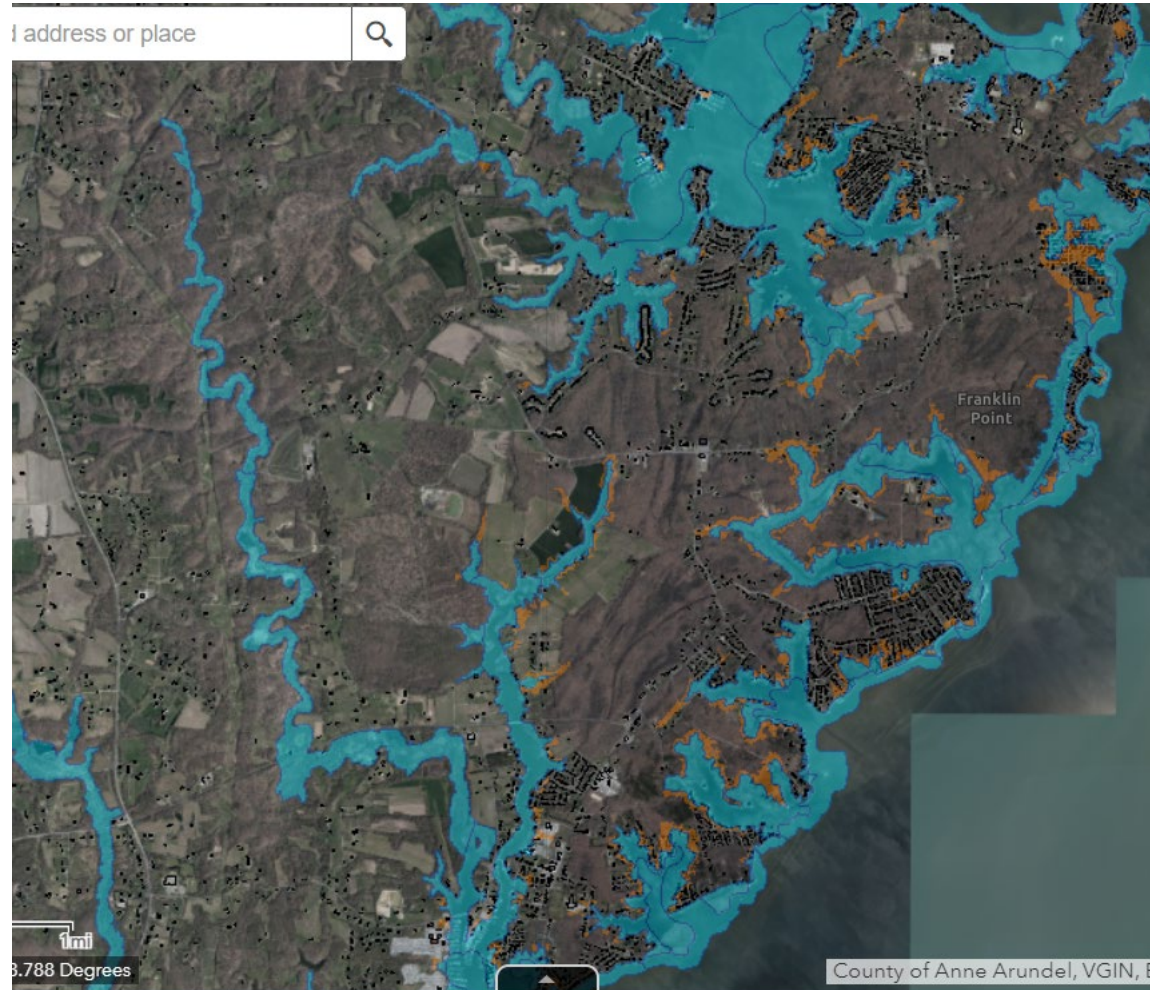
Salisbury, Wicomico County

FEMA Floodplains

Coast Smart Climate Ready Action Boundary (CRAB)

Source: Coast Smart Climate Ready Action Boundary. Available at: https://mdfloodmaps.net/crab/

Shady Side, Anne Arundel County

FEMA Floodplains
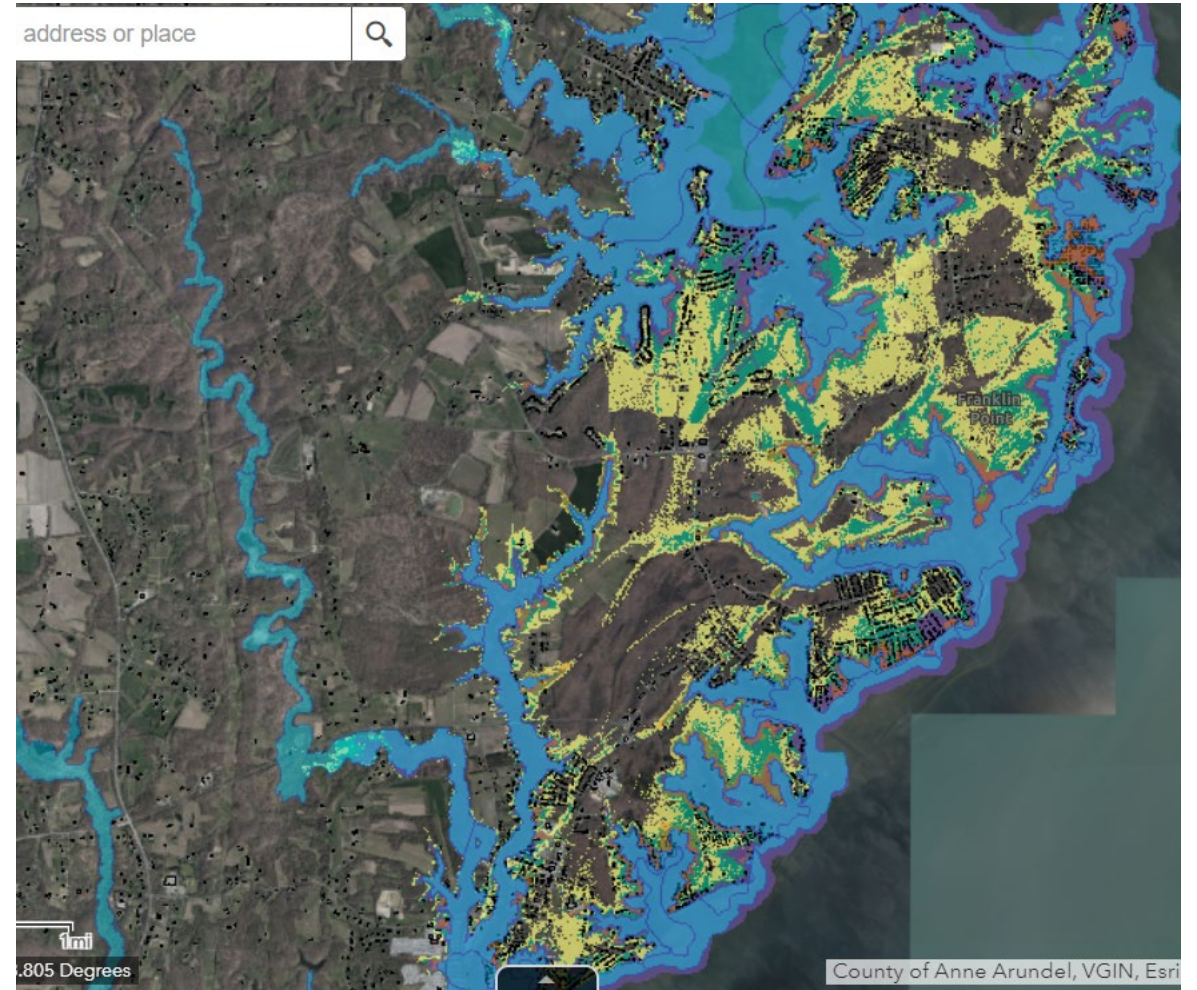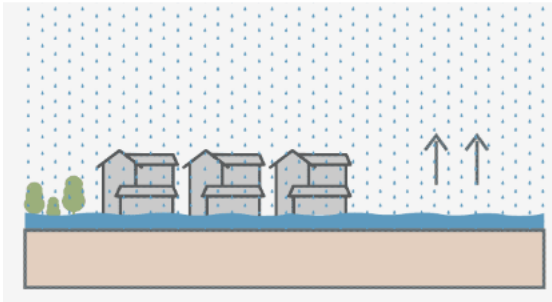
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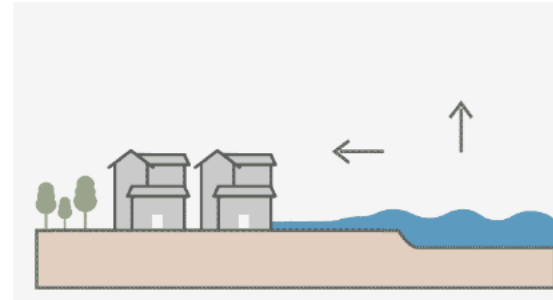
First Street Foundation Flood Inundation Models

## Rainfall/Stormwater (Pluvial)

High intensity rainfall causes flooding when an area's sewage system and draining canals lack the necessary capacity to drain away the amount of rain that falls. Urban areas are particularly susceptible because there is little open soil that can store water.

Tidal

Tidal flooding, sometimes known as sunny day flooding, king tide flooding, or nuisance flooding, is the temporary flooding of low-lying areas near the coast.
It usually occurs during exceptionally high tide events, like full and new moons, and some areas experience this flooding multiple times a year.

Riverine
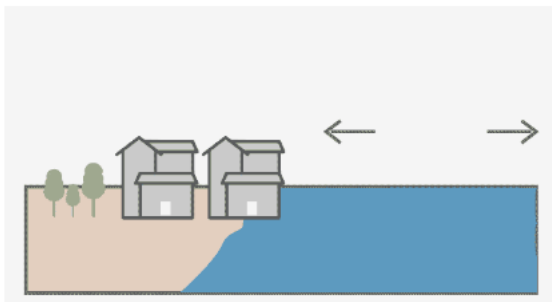
Overbank flooding of rivers and streams happens when there is an increase of water volume in a river channel, causing it to spill onto and flood the adjacent floodplain. Ongoing riverine floods can intensify and become flash floods when heavy rainfall results in a rapid surge of rising flood waters.

Tidal
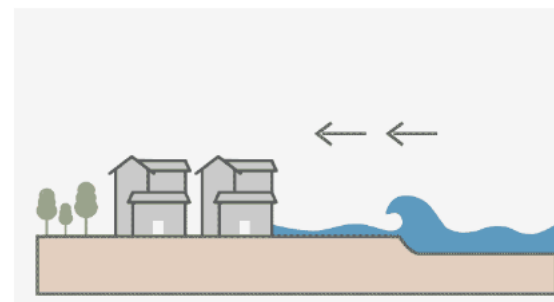
Storm surge refers to the rise of water generated by a storm, over and above predicted water levels. The more severe the hurricane or storm, the greater the storm surge, and the further water can travel. This flooding is often exacerbated by the rainfall that occurs along with the storm.

First Street Foundation Flood Inundation Models

County	Today	In 30 Years	Increase	Percent Increase	County	Today	In 30 Years	Increase	Percent Increase
Allegany	6,901	7,017	116	**2%**	Harford	2,723	2,930	207	**8%**
Anne Arundel	11,225	13,170	1,945	**17%**	Howard	3,229	3,361	132	**4%**
Baltimore	16,332	17,873	1,541	**9%**	Kent	1,324	1,576	252	**19%**
Baltimore City	9,594	10,500	906	**9%**	Montgomery	11,566	12,148	582	**5%**
Calvert	2,695	2,966	271	**10%**	Prince George's	15,819	16,631	812	**5%**
Caroline	1,294	1,413	119	**9%**	Queen Anne's	3,029	3,825	796	**26%**
Carroll	3,168	3,329	161	**5%**	Somerset	7,938	8,824	886	**11%**
Cecil	3,069	3,367	298	**10%**	St. Mary's	3,666	4,184	518	**14%**
Charles	4,025	4,249	224	**6%**	Talbot	2,351	3,160	809	**34%**
Dorchester	5,864	6,384	520	**9%**	Washington	5,572	5,806	234	**4%**
Frederick	6,499	6,705	206	**3%**	Wicomico	4,642	5,067	425	**9%**
Garrett	2,459	2,514	55	**2%**	Worcester	16,722	18,698	1,976	**12%**
						Today	**In 30 Years**	**Increase**	**Percent Increase**
					Statewide	151,706	165,697	13,991	**9%**

Source: First Street Foundation Flood Inundation Model. 2020. Published by Risk Factor.com. Available at:
https://riskfactor.com/methodology/flood.