Indiana Water Summit

Old data won't protect against future flood risk

THE STATUS QUO HAS CHANGED

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The Conversation article

Urgent demand from municipalities

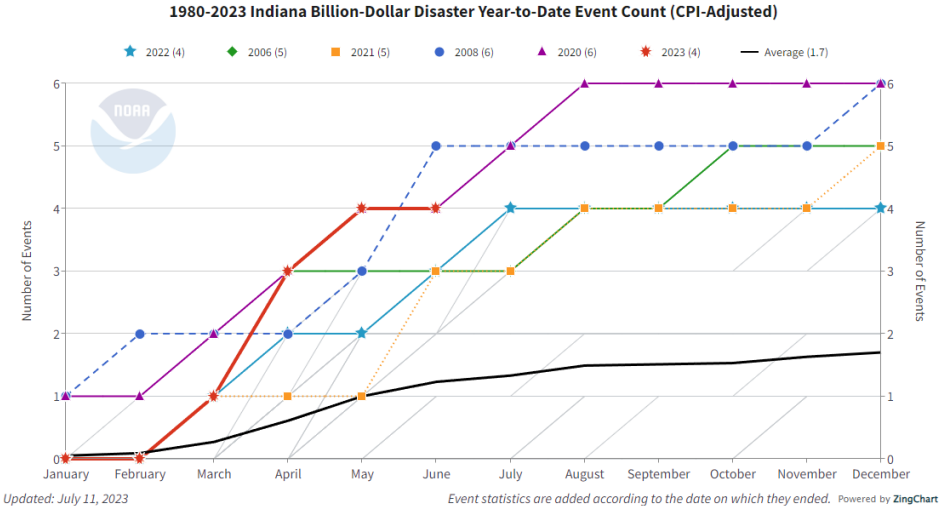
Topics discussed in the article:

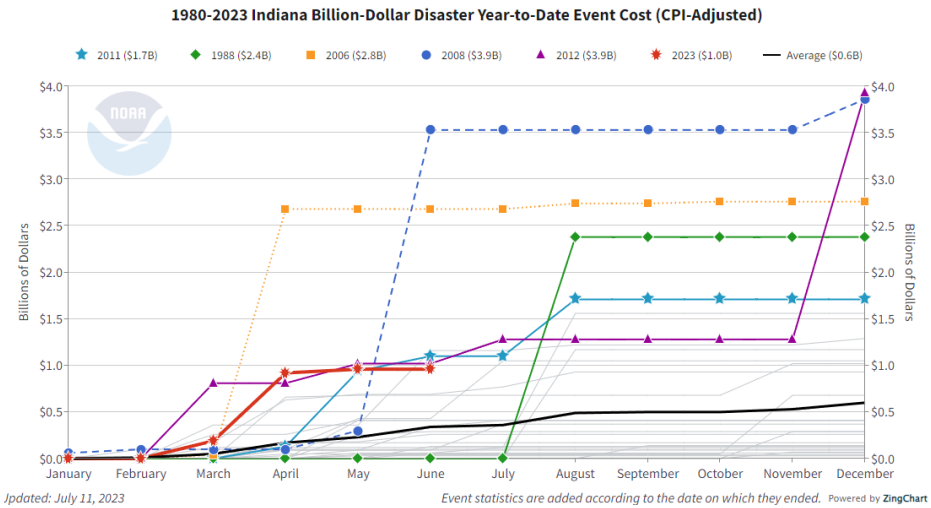
- Infrastructure is failing
- Old data won't protect against future flood risk
- What can communities do?

MS4s (643 respondents from 47 U.S. states) expressed an urgent need for more detailed information on projected rainfall depths, storm durations, and their impact on infrastructure sizing guidelines.

Billion-dollar disasters in Indiana

Drought + Flooding + Severe Storm



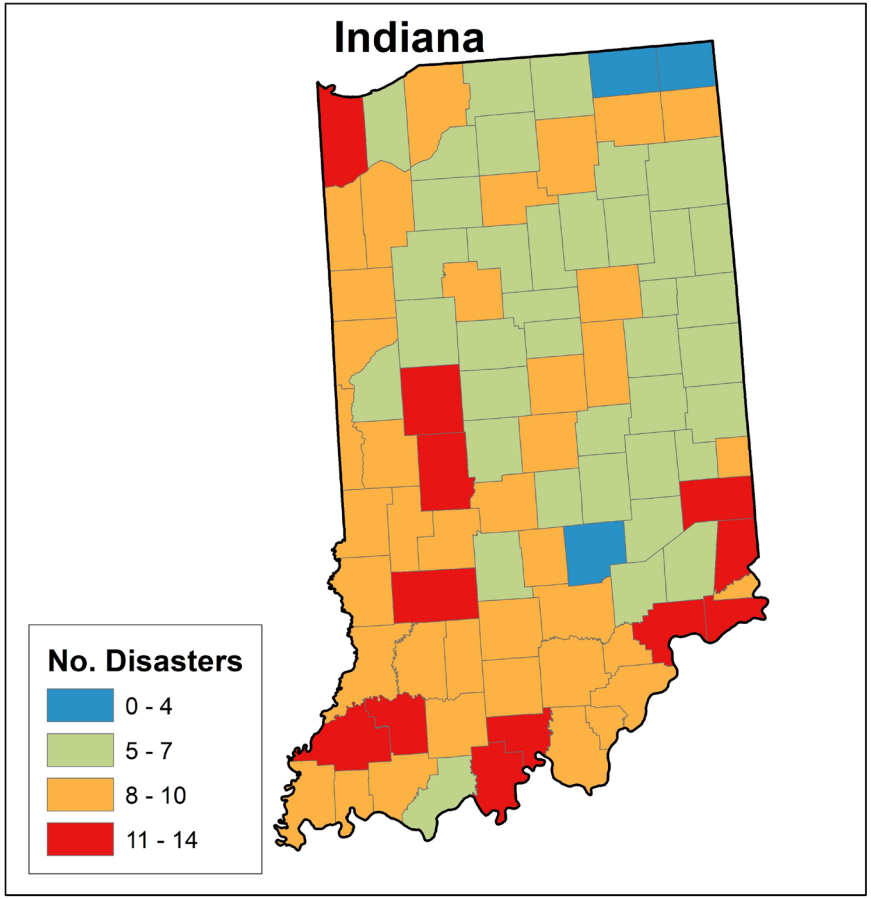


Number of events

These 3 disasters comprise **86.5%** of the total number of disasters (9% + 6.7% + 70.8%)

Economic damages

These 3 disasters represent **92.9%** of total disaster costs (29.5% + 18.5% + 44.9%)

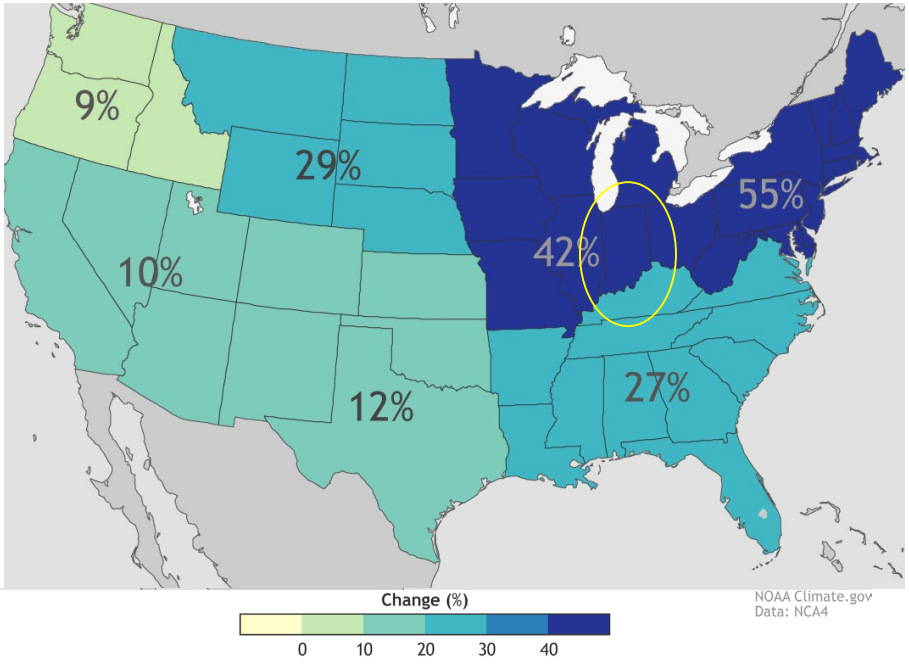


Flood-related declarations from 1989 to early 2022.

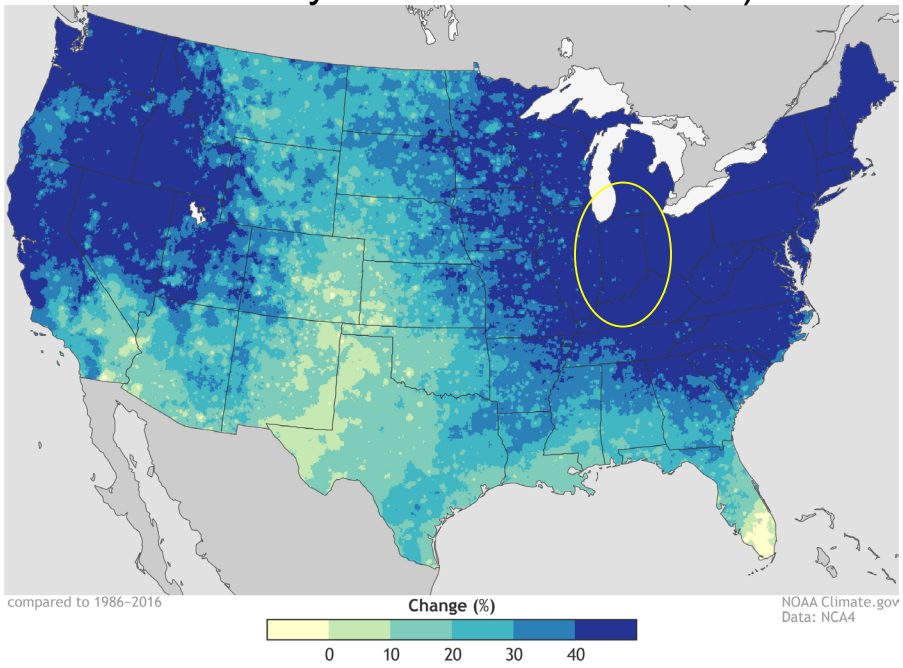
Exacerbated extreme rainfall

Status quo needs to change

Observed recent change (1958-2016)

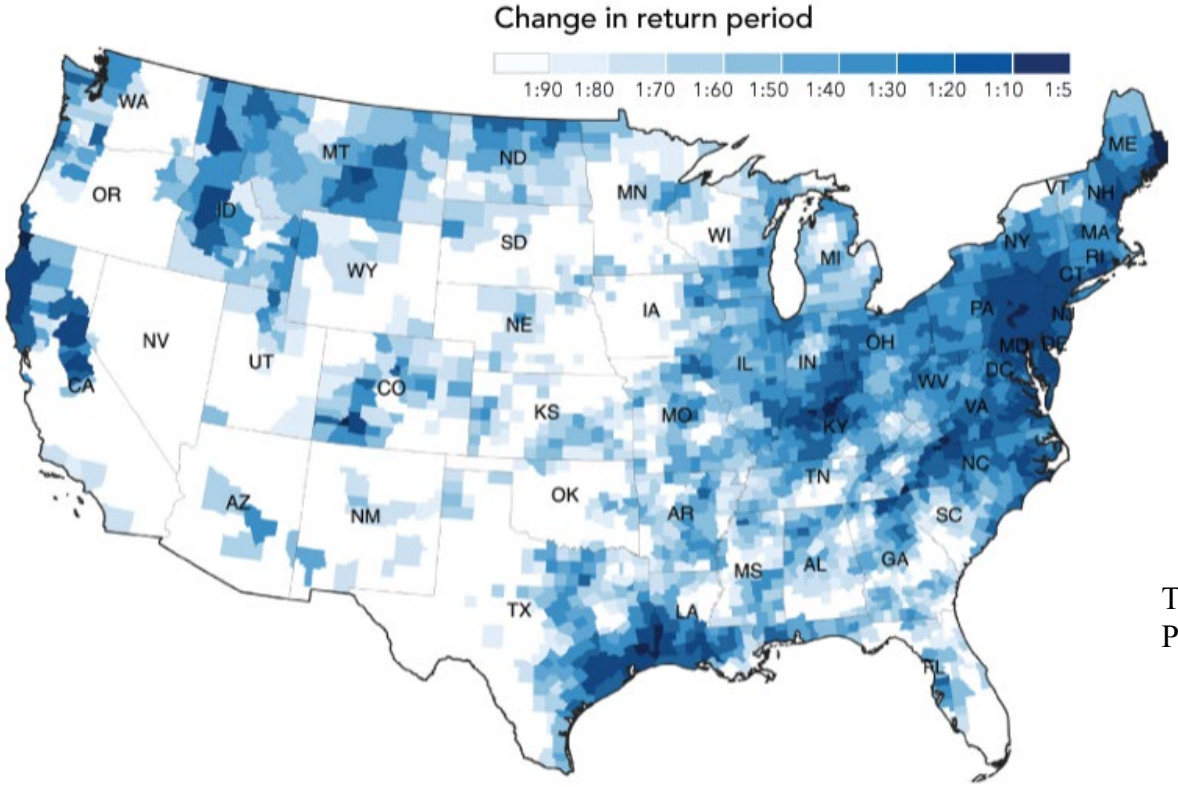


Future change under a warming climate (End of century relative to 1958-2016)



Design standards need to be updated

FSF-PM correction (in years) to Atlas 14's 1-in-100 year return period

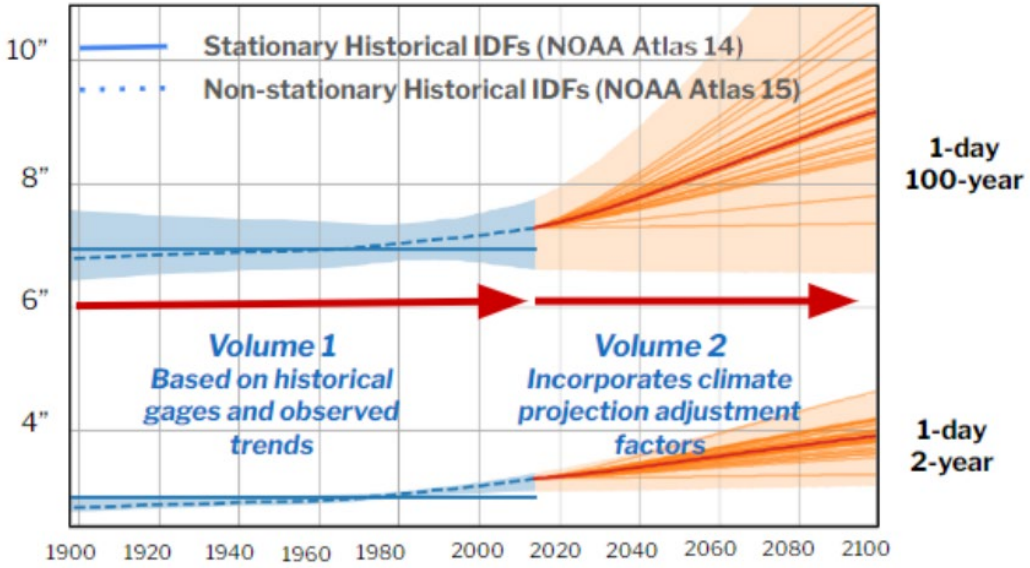


The Precipitation Problem

The 8th National Risk Assessment: The Precipitation Problem l © First Street Foundation

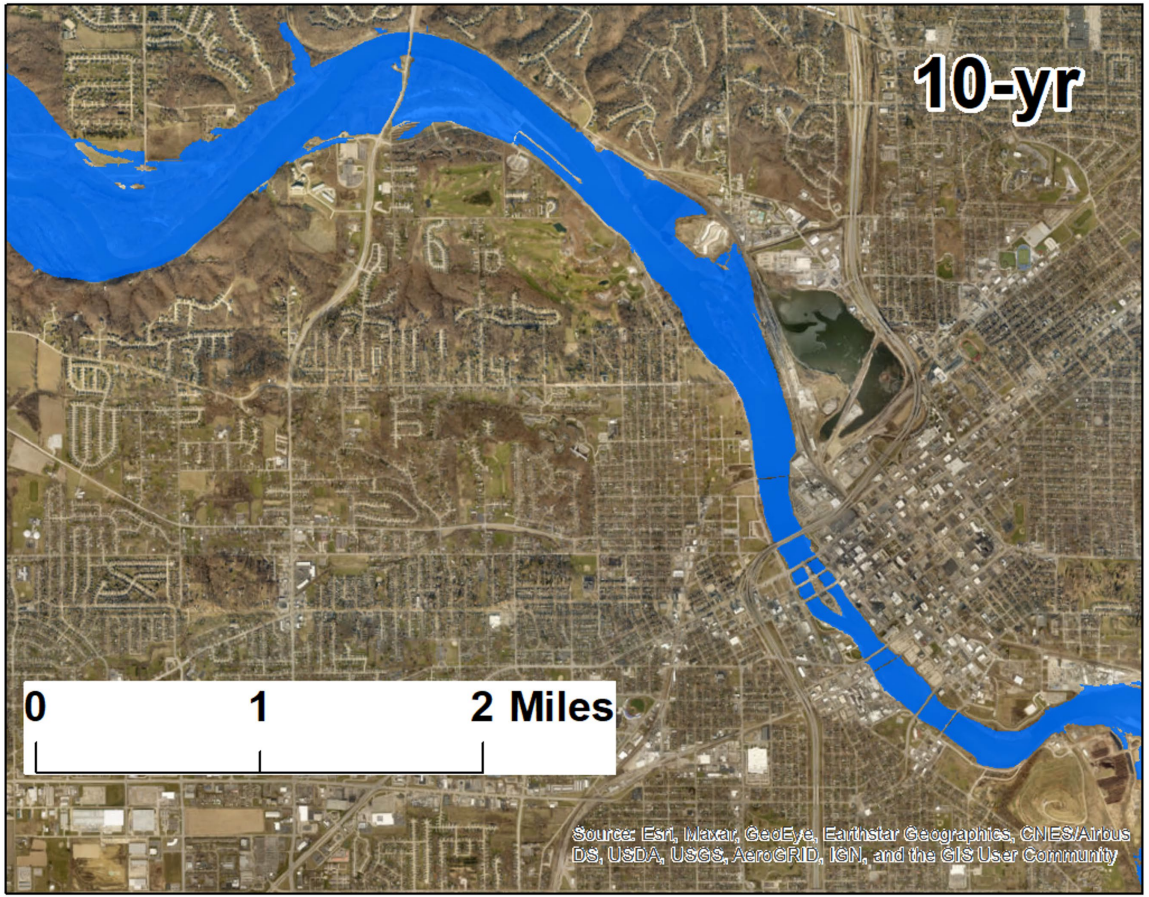
NOAA Atlas 15

New National Precipitation Frequency Standard

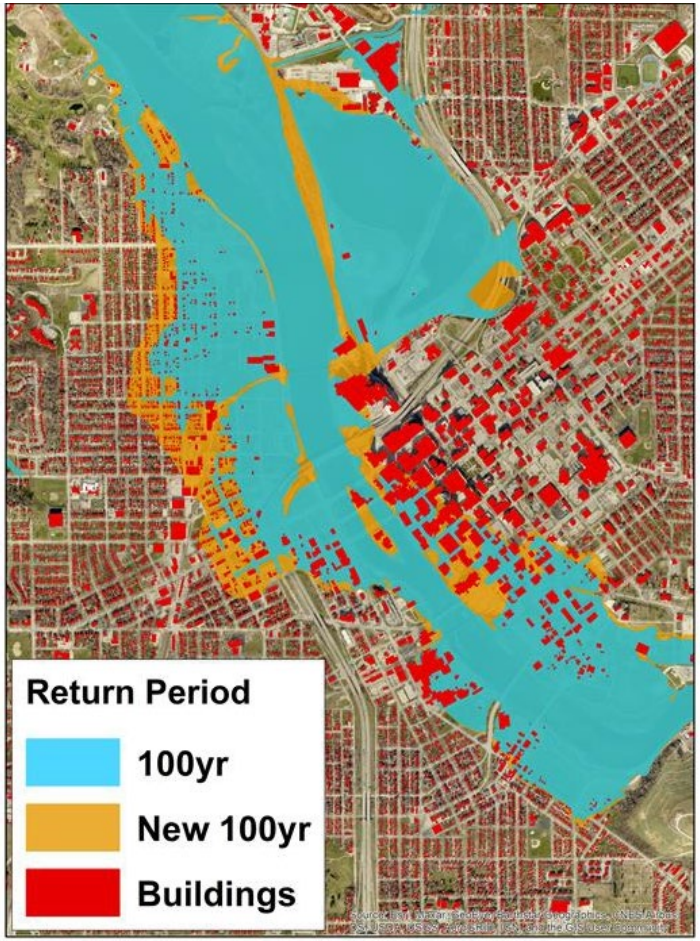


Historical and future intensity-duration-frequency estimates (IDFs)

We are designing infrastructure based on a climate we no longer live in.



Updated floodplain maps are key to decreasing flood damages



Floodplain	Number of Buildings
500 yr	2072
100 yr	581
New 100yr	*1121*

Updated floodplain maps allow people to know their actual flood risk

What can communities do?

- Reconsider building new homes in flood-prone areas (balance with political pressure and housing shortages)
- Incorporate climate change into infrastructure planning (change the status quo)
- Managed retreat from coastlines and riversides (more successful if community-led)
- Advocate for and invest in long-term solutions ($1 for disaster mitigation saves $6)

Contact Us

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