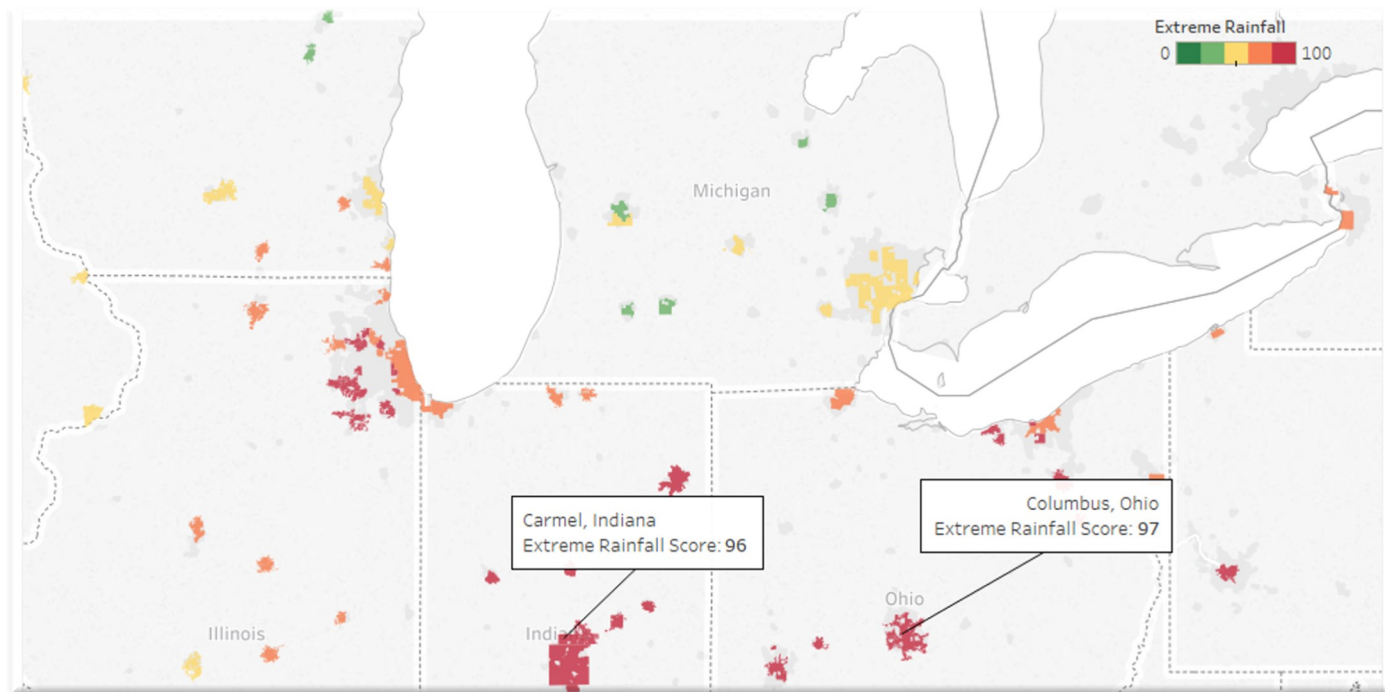


Municipal Risk Scores



Four Twenty Seven's forward-looking data analytics empower investors to identify and mitigate risk in their municipal bond portfolios.



For illustrative purposes only

6

Climate hazards assessed at the city and county level — hurricanes, sea level rise, extreme rainfall, heat stress, water stress, wildfire (forthcoming)

3,142

U.S. counties scored for their climate risk exposure by hazard, with scores presented relative to their peers

761

U.S. cities scored for their climate risk exposure by hazard — every city over 50,000 in population

20

Years into the future—scores compare historical temperature and precipitation to future conditions to assess relative risk

Use Cases

- **Municipal bond portfolio managers** - incorporate physical climate risks into your portfolio construction and risk management processes.
- **Credit risk analysts** - evaluate credit worthiness of issuers as a function of forward-looking climate risks.
- **Rating agencies** - enhance analysis of issuer quality with data-driven views of the impacts of climate change.



Product Details

- Data feed subscription
- Aggregated total risk score for each city and county
- Exposure scores for each climate hazard
- Additional cities and municipal entities forthcoming

City Name	State	Total Score	Hurricane	SLR	Extreme Rainfall	Heat Stress	Water Stress
Miami Beach	Florida	76.17	84.73	92.37	37.48	98.92	67.34
Sarasota	Florida	73.25	71.01	72.38	81.31	83.24	58.30
Pompano Beach	Florida	72.73	86.14	72.17	48.57	96.05	60.73
St. Petersburg	Florida	72.06	63.21	77.45	76.10	84.86	58.67
Boca Raton	Florida	71.54	84.58	69.49	48.68	94.20	60.73
North Miami	Florida	71.39	83.48	75.90	37.48	98.92	61.17
Bradenton	Florida	71.21	65.86	66.36	82.18	83.37	58.30
Deerfield Beach	Florida	71.16	84.58	67.61	48.68	94.20	60.73
Fort Lauderdale	Florida	71.01	86.14	62.14	48.19	97.89	60.69
Boynton Beach	Florida	70.88	83.48	74.11	43.98	91.67	61.17
Galveston	Texas	70.69	84.58	89.28	64.99	48.49	66.15
Delray Beach	Florida	70.66	86.14	67.22	44.60	94.20	61.17
Miami	Florida	70.11	83.33	70.56	35.11	98.39	63.18
Jupiter	Florida	69.89	84.89	84.27	41.54	83.42	55.35
Largo	Florida	69.75	59.31	72.76	73.55	84.49	58.67
Clearwater	Florida	69.22	59.31	76.02	68.65	83.43	58.67
Melbourne	Florida	68.43	95.18	66.22	51.21	73.42	56.10
Coral Gables	Florida	68.23	80.68	73.43	35.11	98.39	53.57
Kenner	Louisiana	67.63	77.40	100.00	77.68	49.60	33.48
Port Arthur	Texas	67.62	91.13	71.60	62.68	49.75	62.93
Fort Myers	Florida	67.39	67.73	68.49	52.40	82.57	65.73

For illustrative purposes only



*forthcoming

Methodology

- Four Twenty Seven's municipal risk scores use temperature and precipitation climate projections at a 25x25km resolution.
- Hurricane and typhoon scores are based on mapping of historical data on 1200 cyclones from 1984-2017.
- Water stress scores combine forward-looking climate projections with data on current water scarcity and demand, mapped at the watershed level.

About Four Twenty Seven

Four Twenty Seven, an affiliate of Moody's, is a publisher and provider of data, market intelligence and analysis related to physical climate and environmental risks. As the leading provider of climate intelligence for financial markets, Four Twenty Seven serves asset owners, commercial banks, Fortune 100 corporations, development finance institutions and government agencies. Our other products include risk scores for equities and sovereigns and on-demand scoring for real assets.

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