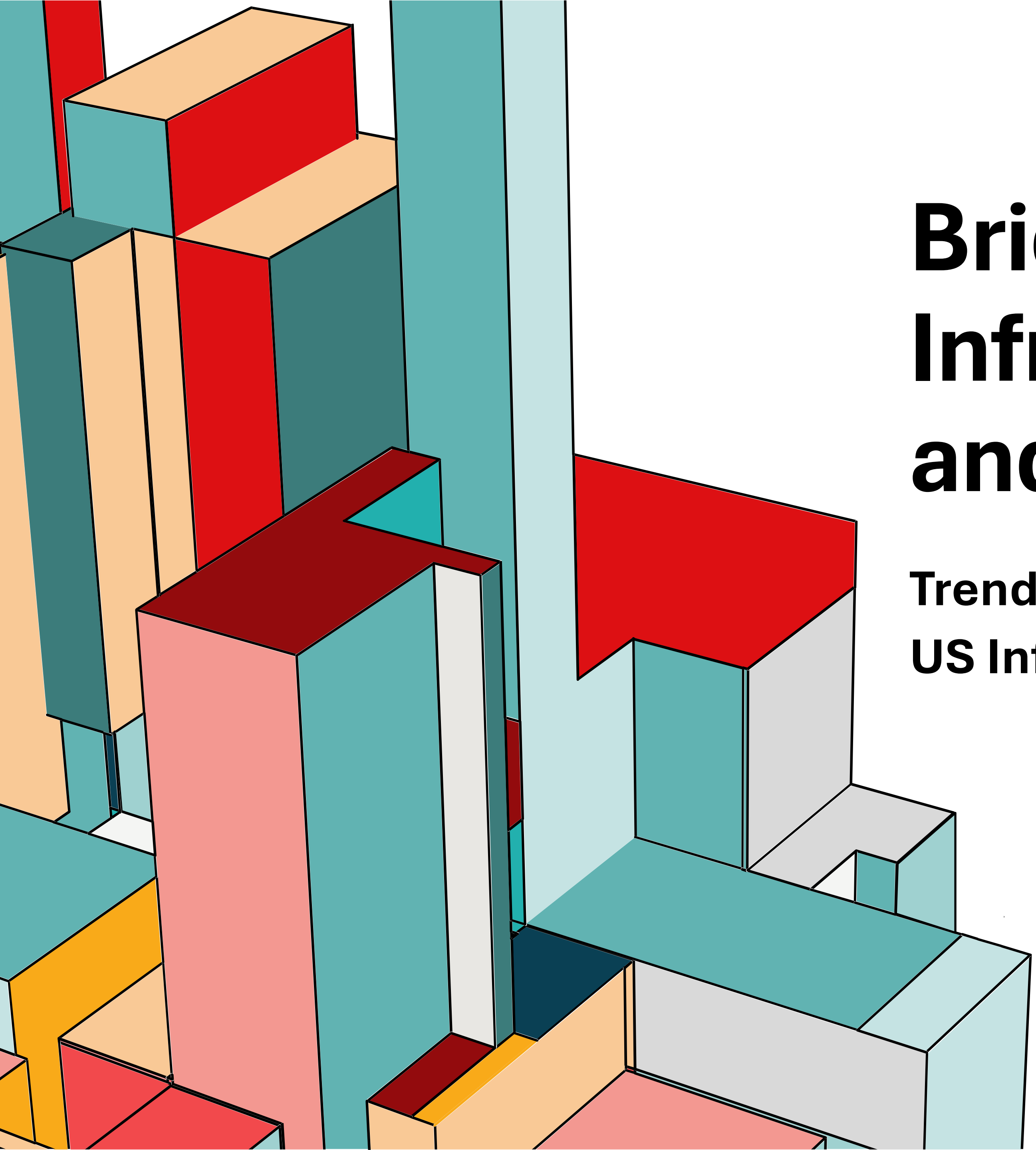
2025 High Yield Municipal Bond Conference

Bridging the Infrastructure Funding and Financing Gap

Terry Smith

Maria Lehman



Bridging The Infrastructure Funding and Financing Gap

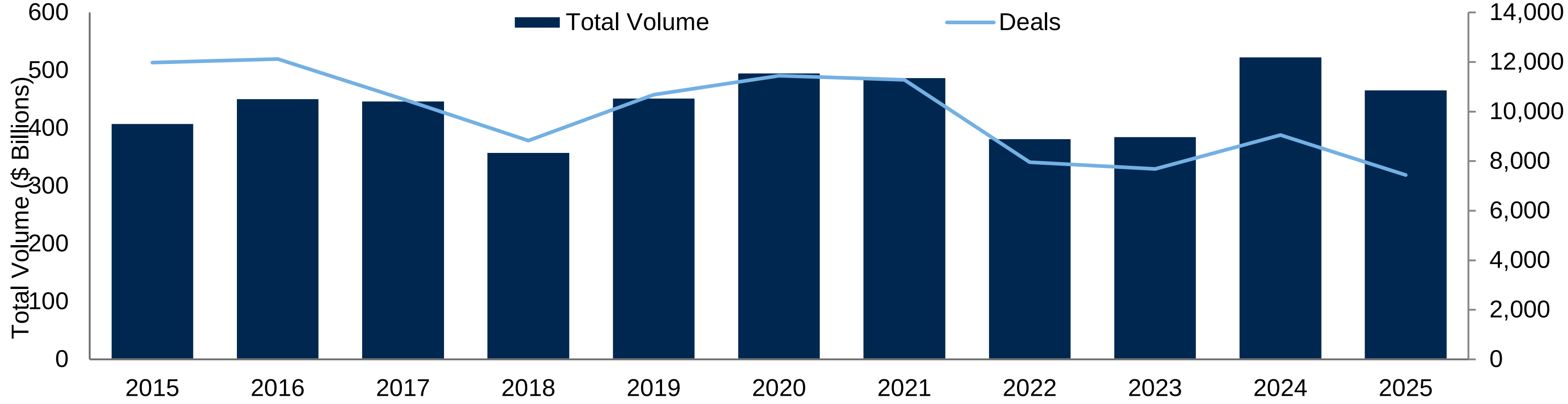
Trends and Strategies in US Infrastructure Markets

Terence M. Smith
ASCE's Committee for America's Infrastructure Report Card
Smith's Research & Gradings

October 28, 2025

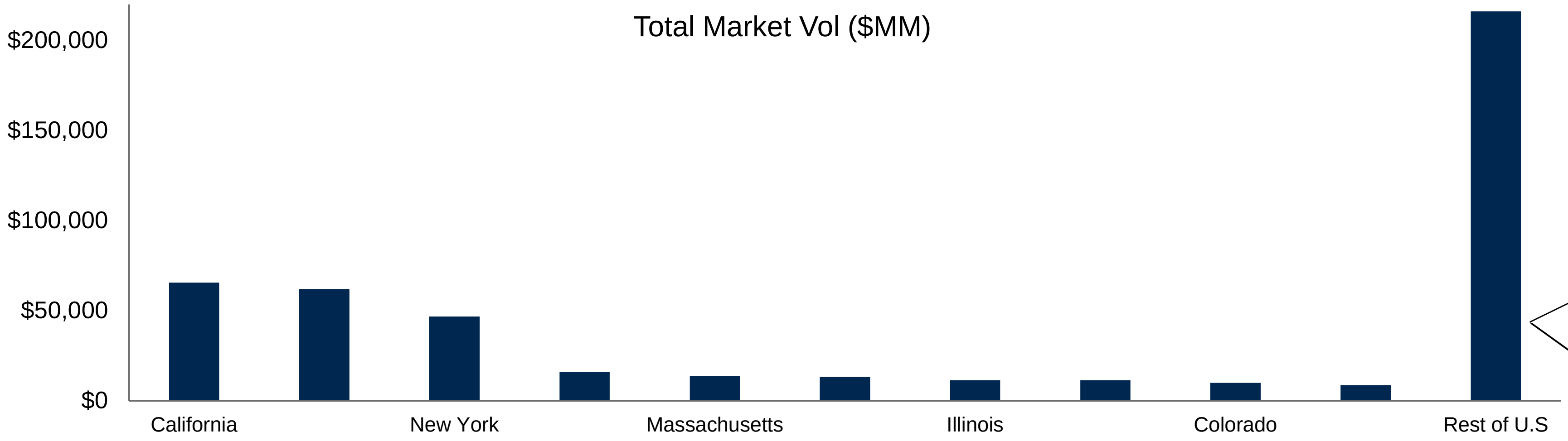
Municipal Industry Issuance

Total Municipal Issuance by Year



Source: Bloomberg as of October 7, 2025

2025 YTD Total Municipal Issuance by State

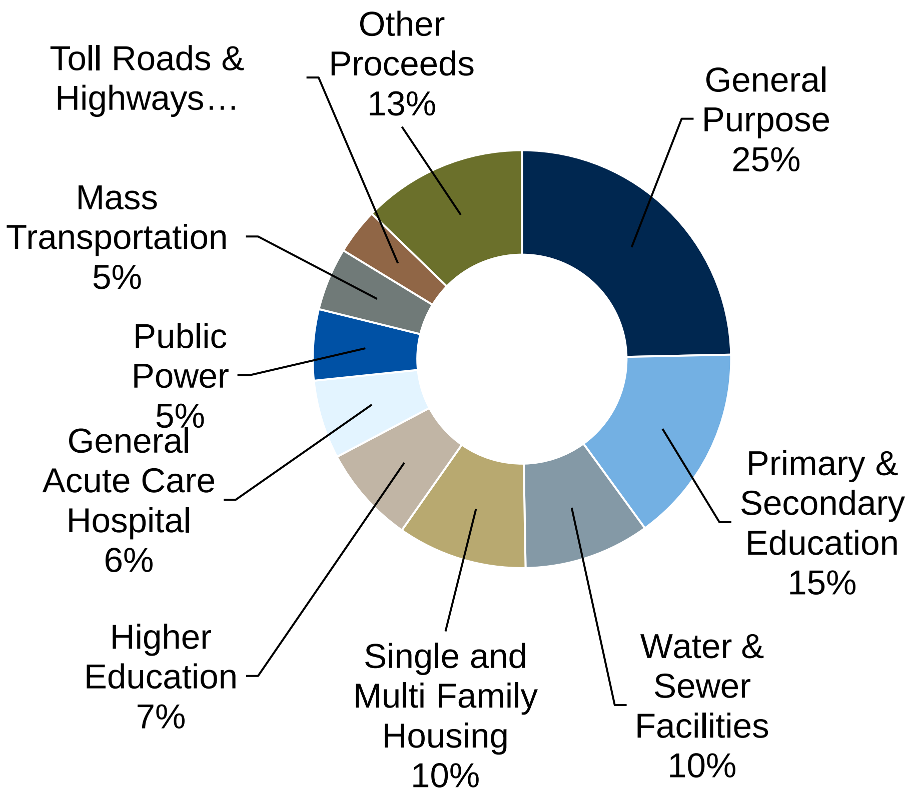


Source: Bloomberg as of October 7, 2025

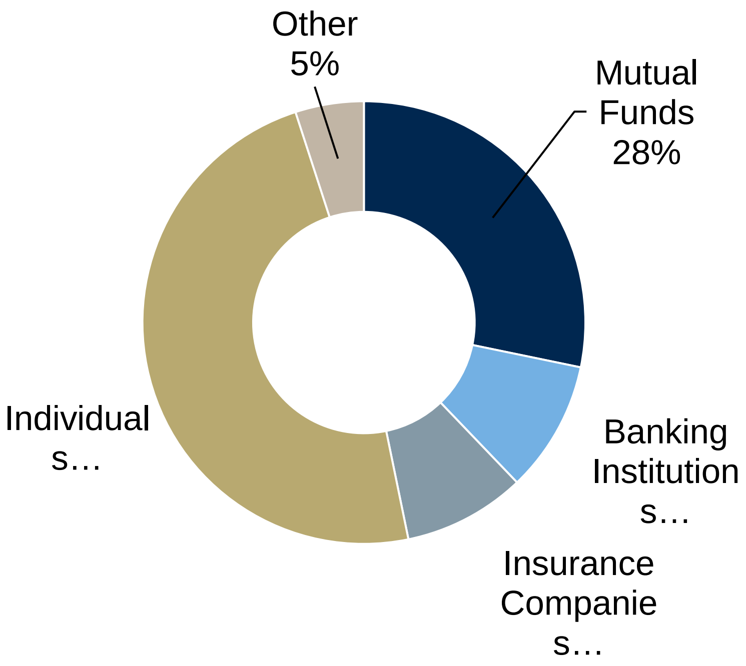
SMITH'S RESEARCH & GRADINGS

Historical Use of Proceeds and Holders of Municipal Bonds

US Municipal Financings by Use of Proceeds (2024)[1]



Holders of Municipal Bonds (as of June 30, 2025)[2]



[1] Municipal Market Facts: 2024 Issuance by Sector - LSEG
[2] 2025 Fixed Income Securities Statistics Report – SIFMA

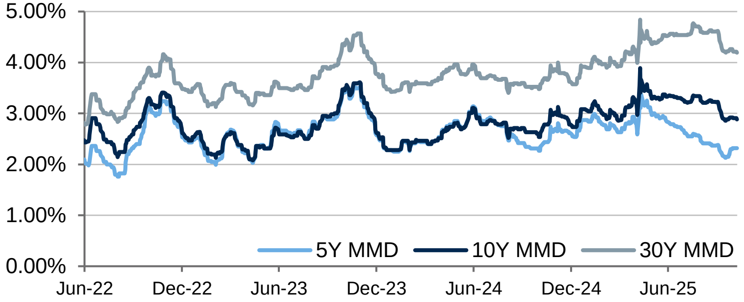
SMITH'S RESEARCH & GRADINGS

Municipal Market Interest Rates as of October 8, 2025

Tax Exempt Rates

Change in MMD

	10/8/2025	Daily Δ (bps)	Weekly Δ (bps)
3yr MMD	2.27	0	0
5yr MMD	2.32	0	0
7yr MMD	2.55	0	0
10yr MMD	2.88	-3	-3
30yr MMD	4.19	-2	-2



Market Commentary

- Tax exempt benchmark yields were unchanged from 2026-33, declined 3bps in 2034-41 and declined 2 bps in 2042-55.
- Treasury yields were mixed, and little changed on the day.
- Municipal secondary trading saw lighter activity.
- EPFR reported $281MM of aggregate daily inflows, with all funds reporting inflows

U.S. Treasury Rates

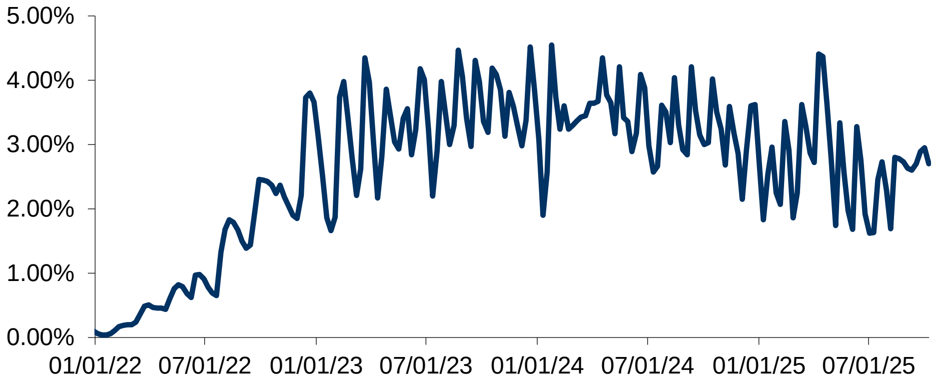
Change in Treasuries

	10/8/2025	Daily Δ (bps)	Weekly Δ (bps)
3yr UST	3.58	2	2
5yr UST	3.72	1	4
7yr UST	3.91	1	3
10yr UST	4.13	-1	1
30yr UST	4.72	-1	0

Change in MMD/UST Ratio

	10/8/2025	Daily Δ (%)	Weekly Δ (%)
3yr Ratio	63%	0%	0%
5yr Ratio	62%	0%	-1%
7yr Ratio	65%	0%	-1%
10yr Ratio	70%	-1%	-1%
30yr Ratio	89%	0%	0%

Short Term Market



MMD stands for Municipal Market Data; which is the daily index off of which all municipal bonds are priced. Sources: RBC Capital Markets as of October 27, 2025, Bloomberg (MUNIPSA Index)
Sources: Refinitiv, Bloomberg, https://www.treasury.gov/resource-center

Municipal Bond Underwriting Rankings

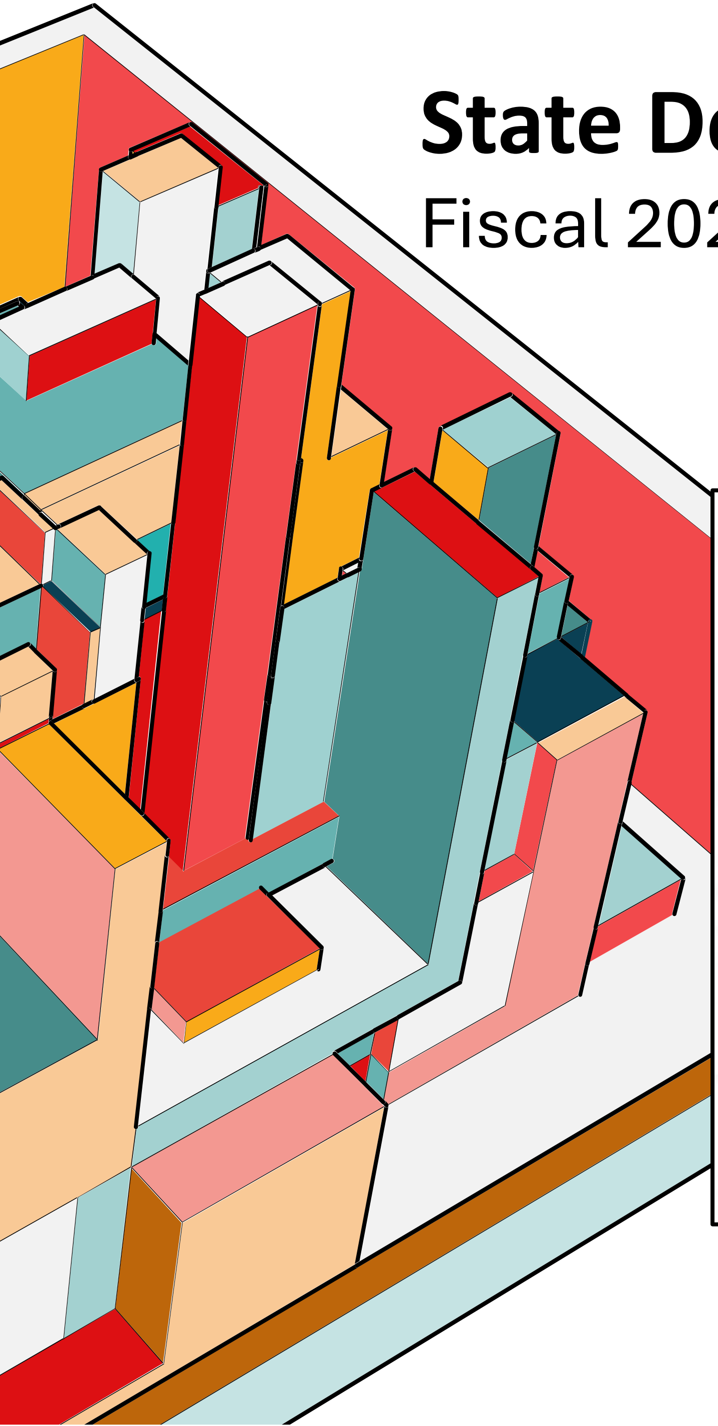
2025YTD Negotiated Lead Mgr Rankings (by Par)

Underwriting Firm	Par Amount ($ mil)	Rank	Mkt. Share (%)	# of Issues
BofA Securities	$44,522.1	1	12.6	206
RBC Capital Markets	40,249.2	2	11.4	269
JP Morgan	30,616.8	3	8.7	142
Morgan Stanley	24,852.9	4	7.1	92
Goldman Sachs	23,830.1	5	6.8	56
Wells Fargo	22,578.2	6	6.4	112
Raymond James	21,022.2	7	6.0	350
Jefferies	19,915.7	8	5.7	105
Stifel	18,003.3	9	5.1	505
Barclays	17,622.2	10	5.0	67
Industry Total	**$ 354,497.7**	**-**	**100.0**	**3,735**

2024 Negotiated Lead Mgr Rankings (by Par)

Underwriting Firm	Par Amount ($ mil)	Rank	Mkt. Share (%)	# of Issues
BofA Securities	$66,409.7	1	16.5	274
RBC Capital Markets	41,753.3	2	10.3	354
JP Morgan	37,087.9	3	9.2	187
Morgan Stanley	28,669.0	4	7.1	95
Wells Fargo	25,572.7	5	6.3	158
Jefferies	25,196.3	6	6.2	114
Goldman Sachs	24,759.1	7	6.1	60
Raymond James	22,390.2	8	5.6	397
Stifel	22,303.4	9	5.5	723
Barclays	17,170.1	10	4.3	82
Industry Total	**$408,315.7**	**-**	**100.0**	**4,507**

Source: Bloomberg, as of 10/8/25



State Debt & Liabilities

Fiscal 2023 actual

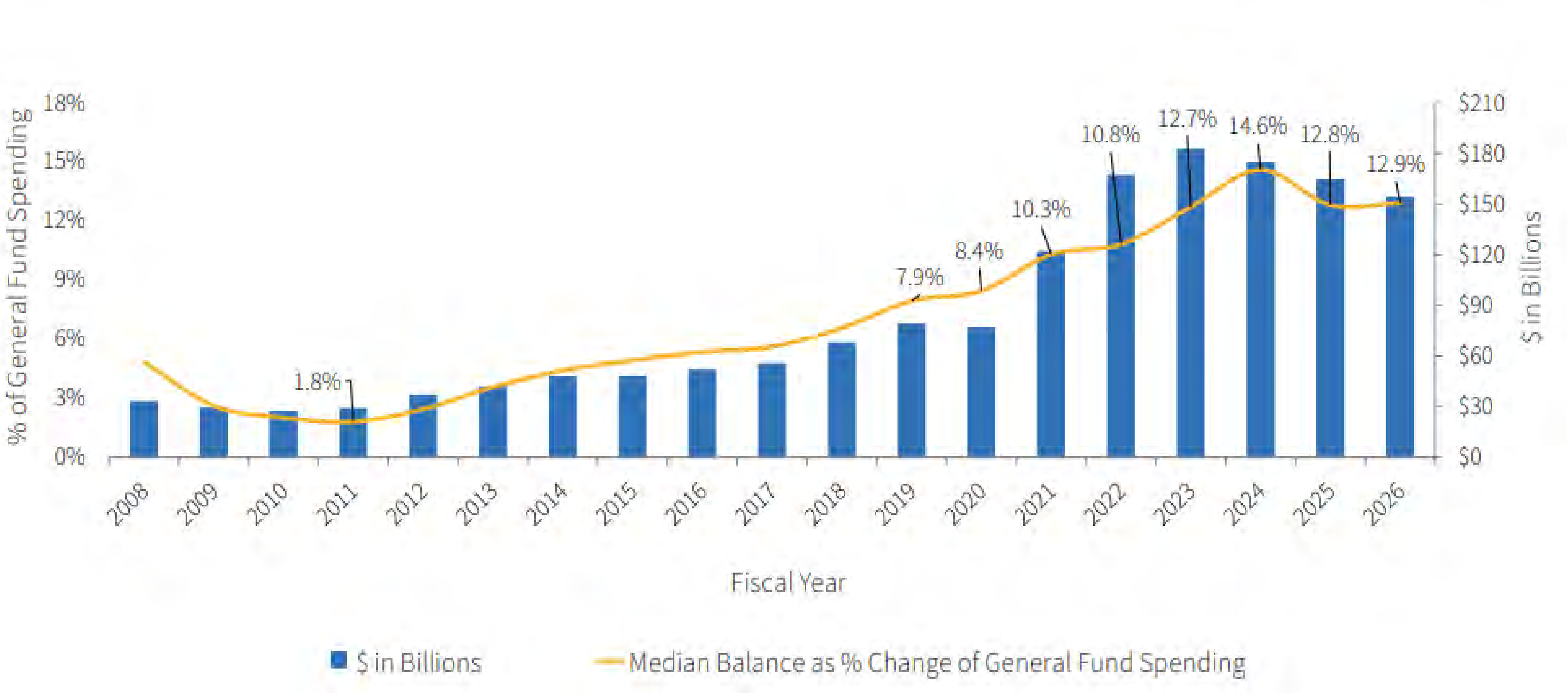
U.S. state debt affordability over time

	2019	2020	2021	2022	2023
Net debt service as a % of governmental expenditures	3.7	3.7	3.3	3	2.9
Net direct debt as a % of personal income	1.9	1.8	1.7	1.7	1.7
Net direct debt as a % of real GSP	1.6	1.7	1.6	1.5	1.4
Net direct debt per capita (mil. $)	940	932	1,000	1,006	1,067

GSP--Gross state product. Source: S&P Global Ratings.

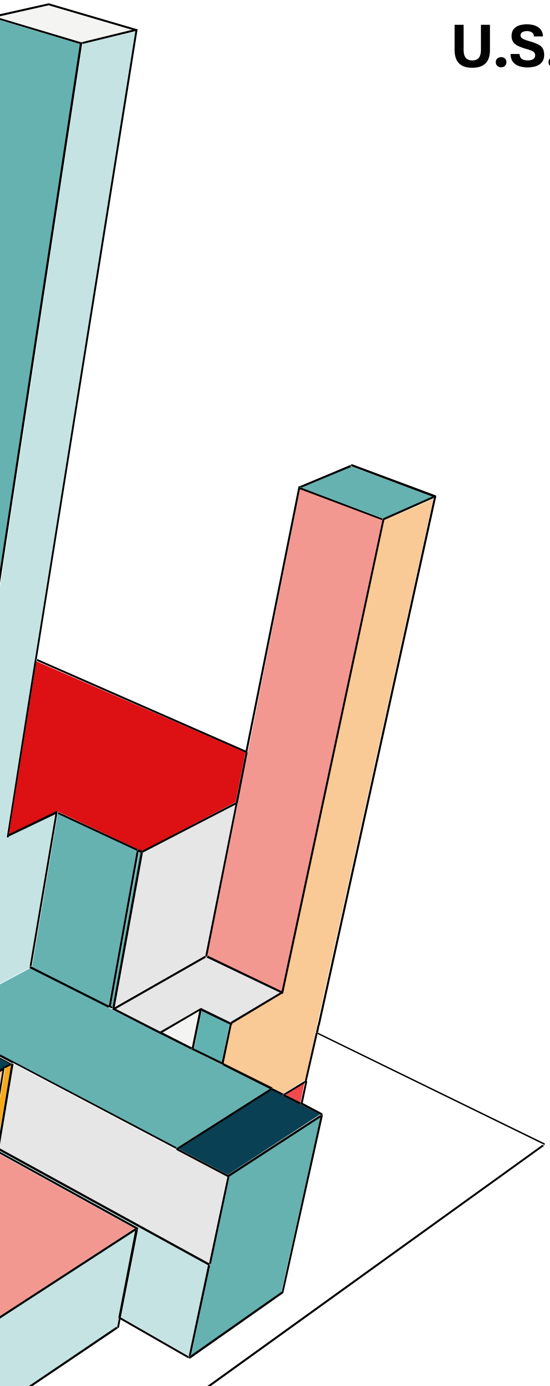
Rainy Day Fund Balances

- Median Balance as a Percentage of General Fund Expenditures (Graph by NASBO)



Source: S&P Global - NASBO Fiscal Survey of the States; FY25 & FY26 estimated.

SMITH'S RESEARCH & GRADINGS



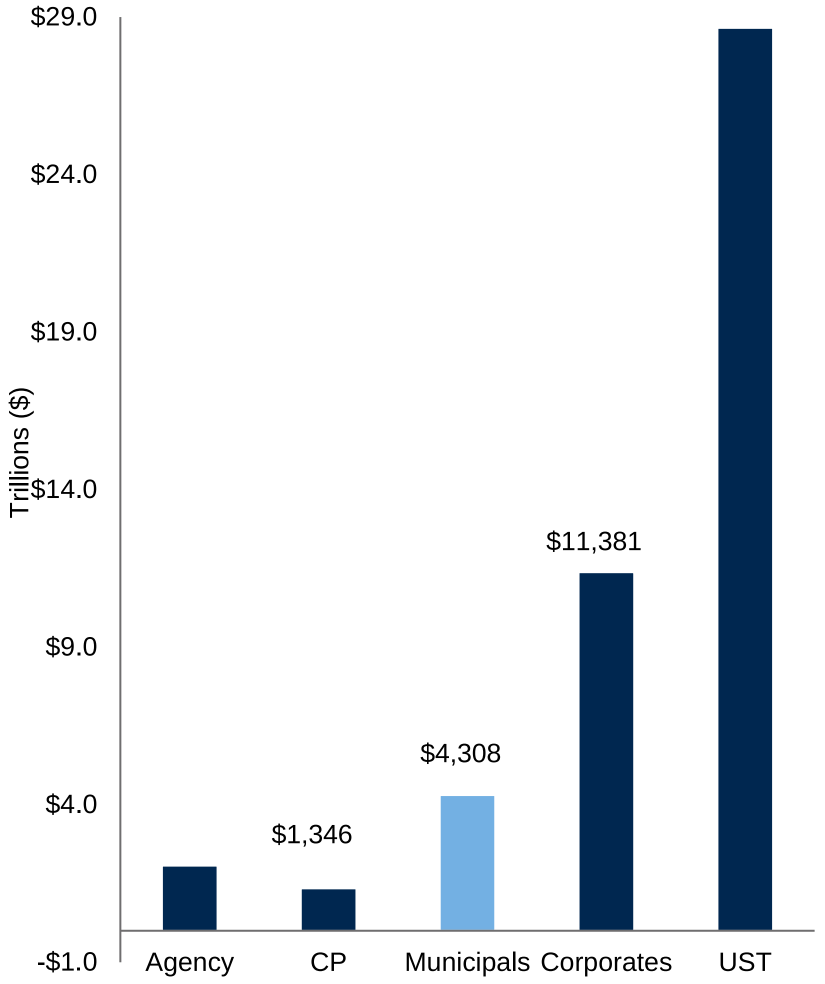
U.S. Municipal Bond Market

The U.S municipal market is a $4.3 trillion market and has been vital to the funding of U.S public infrastructure across various sectors

U.S Debt Sectors ($ in trillions)

- **Size and Scale** – The U.S. municipal bond market is one of the largest fixed-income markets globally, with roughly $4.3 trillion outstanding, spanning over 17,700 state and local issuers.
- **Credit Quality** – Municipals are generally high-quality and low-default securities – about two-thirds of the market is rated AA or higher, supported by strong tax bases, essential-service revenues, and conservative debt management.
- **Issuer Types & Structures** – The market includes General Obligation (GO) bonds backed by taxing power and Revenue bonds secured by specific project revenues.
- **Investor Base & Market Drivers** – The market is primarily domestic retail with mutual funds, investment managers, and insurance companies playing key roles. Demand is heavily influenced by tax-exempt income, interest rate environment, and state-specific fiscal trends.

U.S Debt Sectors ($ in trillions)*



Bloomberg as of October 7, 2025
*2025 Fixed Income Securities Statistics Report – SIFMA

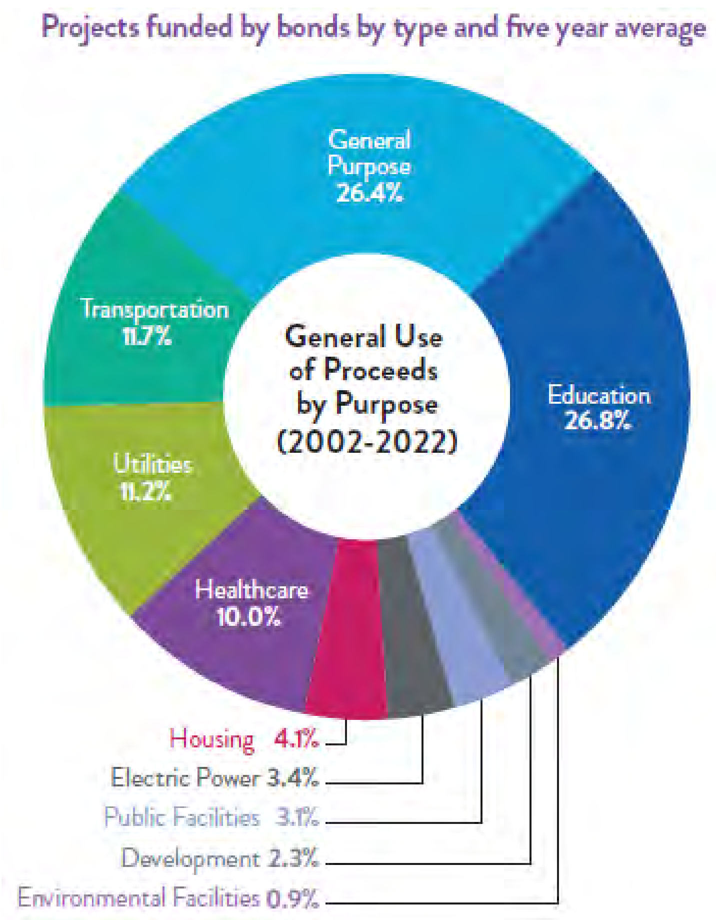
Report Card History

Categories	2025	2021	2017	2013
Cumulative Grade	C	C-	D+	D+
Aviation	D+	D+	D	D
Bridges	C	C-	C+	C+
Broadband	C+	NG	NG	NG
Dams	D+	D	D	D
Drinking Water	C-	C-	D	D
Energy	D+	C-	D+	D+
Hazardous Waste	C	D+	D+	D
Inland Waterways	C-	D+	D	D-
Levees	D+	D	D	D-
Public Parks	C-	D+	D+	C-
Ports	B	B-	C+	C
Rail	B-	B	B	C+
Roads	D+	D	D	D
Schools	D+	D+	D+	D
Solid Waste	C+	C+	C+	B-
Stormwater	D	D	NG	NG
Transit	D	D-	D-	D
Wastewater	D+	D+	D+	D

SMITH'S
RESEARCH & GRADINGS

Importance of Tax-Exempt Muni Bonds

- State and local governments—not the federal government—pay for the majority of U.S. infrastructure development and maintenance.
- State and local governments are responsible for over 90% of public sector construction spending, most of which is funded through tax-exempt bonds.
- In 2023, nearly $400 billion in new municipal bonds were issued, with the expectation that tax-exempt municipal bonds will finance another $3 trillion in new infrastructure investments by 2031.



Source: ASCE

SMITH'S RESEARCH & GRADINGS

Municipal Bond Financing for Capital Projects and Infrastructure

Ways for Municipalities to Fund Capital Improvement Projects and Infrastructure Development

Ways to Fund Projects

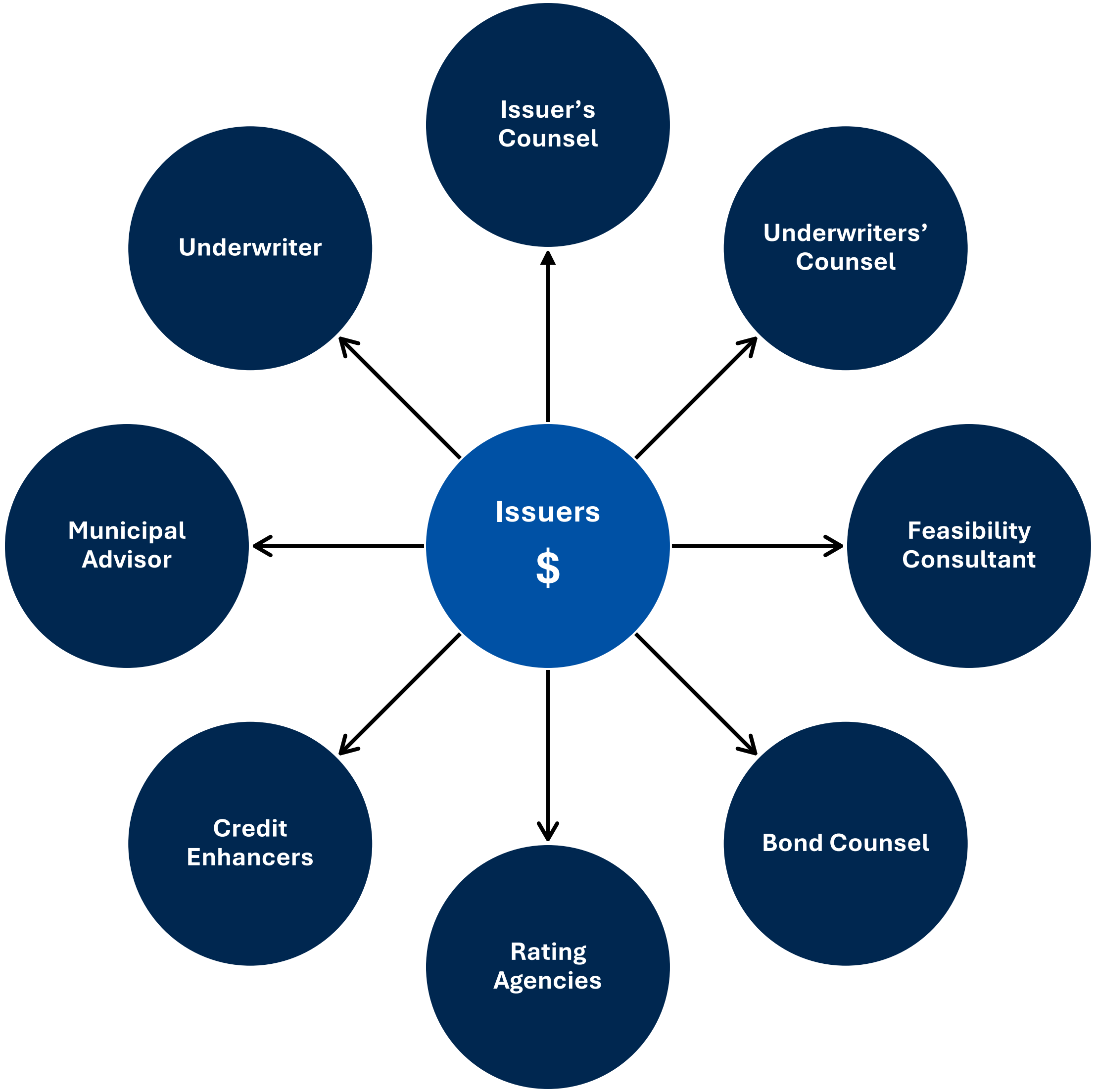
Available Cash
- Pay-As-You-Go funding

Bond Financing
- Can be used to accelerate project construction
- Spreads the cost of construction over the life of the asset

Grants or Loans
- Subject to availability
- Process can be onerous

SMITH'S RESEARCH & GRADINGS

Main Participants in a Transaction



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INFRASTRUCTURE LEADERS
BUILDING COMMUNITIES

Financing the Future with Tax-Free Municipal Bonds

Smith's High Yield Municipal Conference
Greenwich, CT - October 28, 2025

Maria Lehman, P.E., NAE, NAC, ASCE 2023 President, EnvSP, F.ASCE
ASCE Interim Executive Director, GHD Director of U.S. Infrastructure

Society Depends on Civil Engineers

Challenges for the Future

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2025 REPORT CARD
FOR AMERICA'S INFRASTRUCTURE

2025 Report Card for America's Infrastructure

AVIATION	D+
BRIDGES	C
BROADBAND (NEW)	C+
DAMS	↑ D+
DRINKING WATER	C-
ENERGY	↓ D+
HAZARDOUS WASTE	↑ C
INLAND WATERWAYS	↑ C-
LEVEES	↑ D+
PARKS AND RECREATION	↑ C-
PORTS	↑ B
RAIL	↓ B-
ROADS	↑ D+
SCHOOLS	D+
SOLID WASTE	C+
STORMWATER	D
TRANSIT	↑ D
WASTEWATER	D+

America's Cumulative Infrastructure Grade

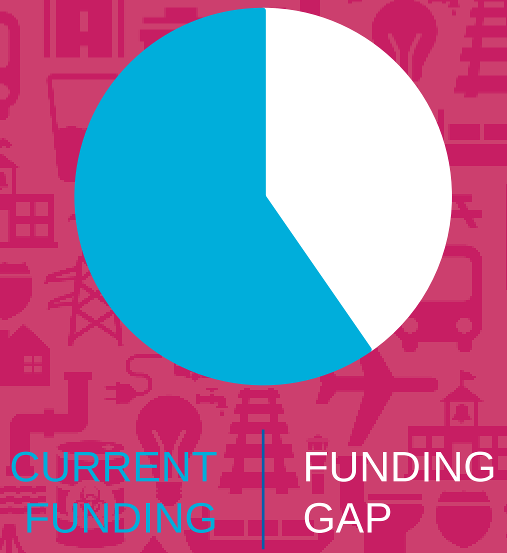
C

A	EXCEPTIONAL
B	GOOD
C	MEDIOCRE
D	POOR
F	FAILING

Investment Gap

Infrastructure System	TOTAL NEEDS	FUNDED	FUNDING GAP
AVIATION[3]	$310	$197	$113
BRIDGES[4]	$538	$165	$373
BROADBAND[5]	$61	$61	$0
DAMS[6]	$185	$20	$166
DRINKING WATER[7]	$670	$361	$309
ENERGY[8]	$1,886	$1,308	$578
HAZARDOUS & SOLID WASTE[9]	$162	$146	$16
INLAND WATERWAYS & PORTS[10]	$45	$32	$13
LEVEES[11]	$97	$7	$91
PUBLIC PARKS[12]	$106	$62	$44
RAIL[13]	$145	$113	$32
ROADS[14]	$2,233	$1,549	$684
SCHOOLS[15]	$1,100	$671	$429
TRANSIT[16]	$618	$466	$152
WASTEWATER + STORMWATER[17]	$983	$293	$690
TOTALS	**$9,139**	**$5,450**	**$3,689**

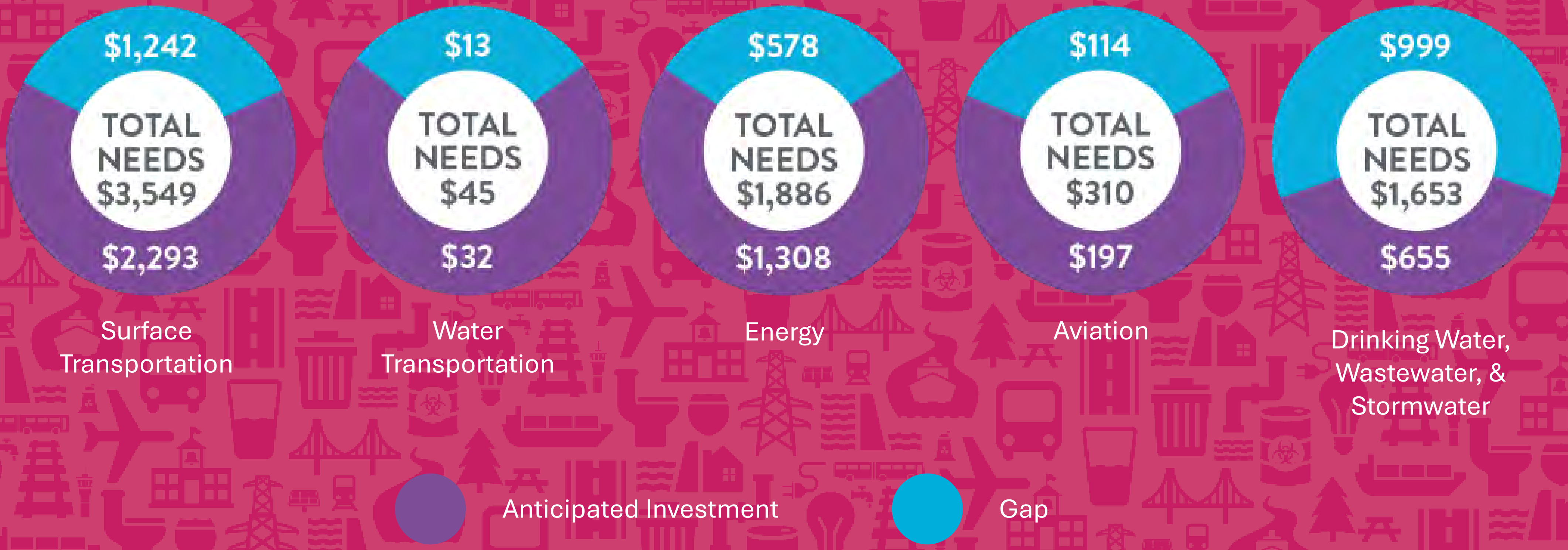
$3.7 Trillion needed



Bridging the Economic Impact

Ten-Year Gaps with Continue to Act Scenario, 2024-33[3]

Total Needs - Anticipated Investment = Gap *Dollars in 2022 Billions* *Columns may not add due to rounding.*

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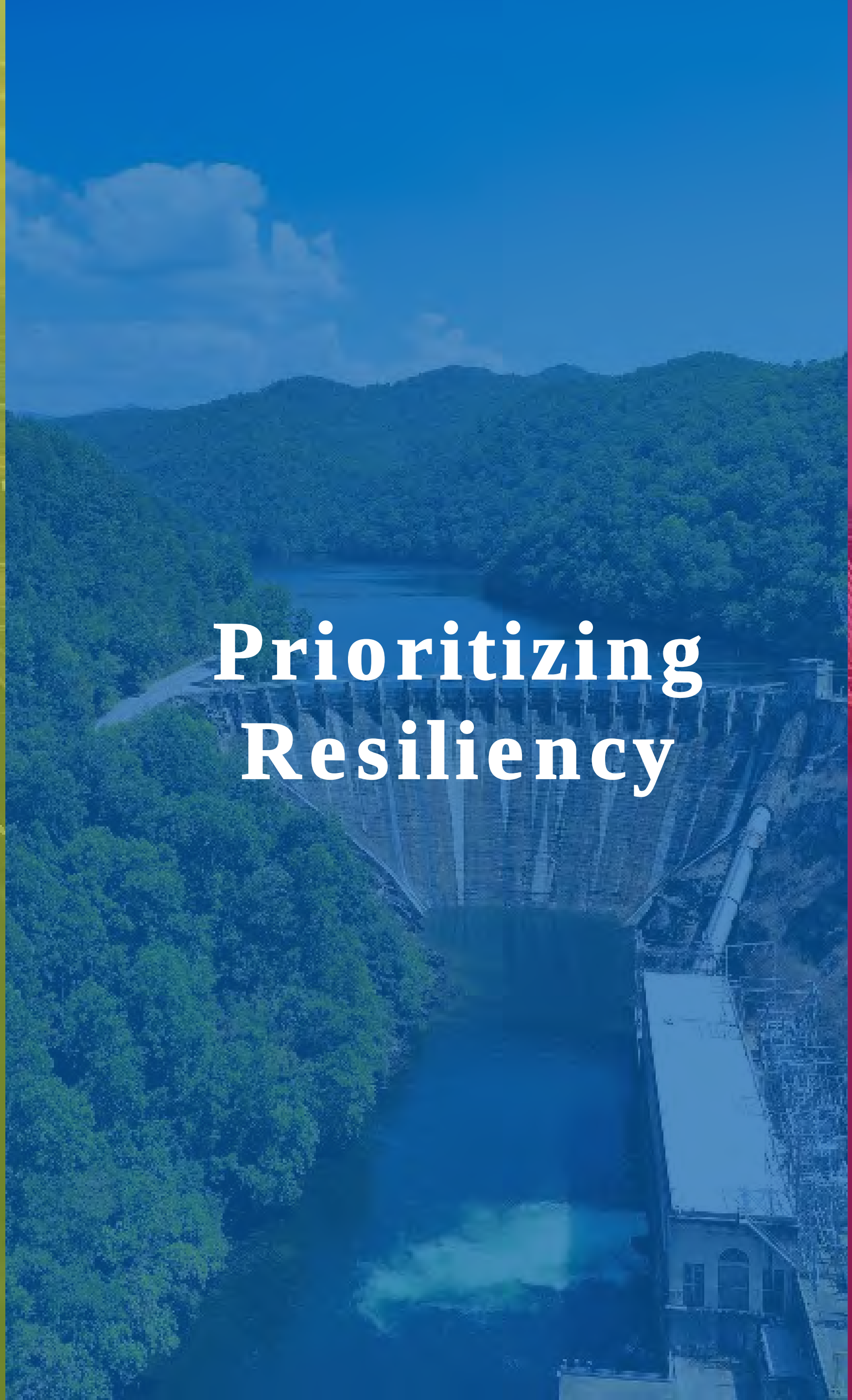
presents
FUTURE WORLD VISION
Infrastructure Reimagined

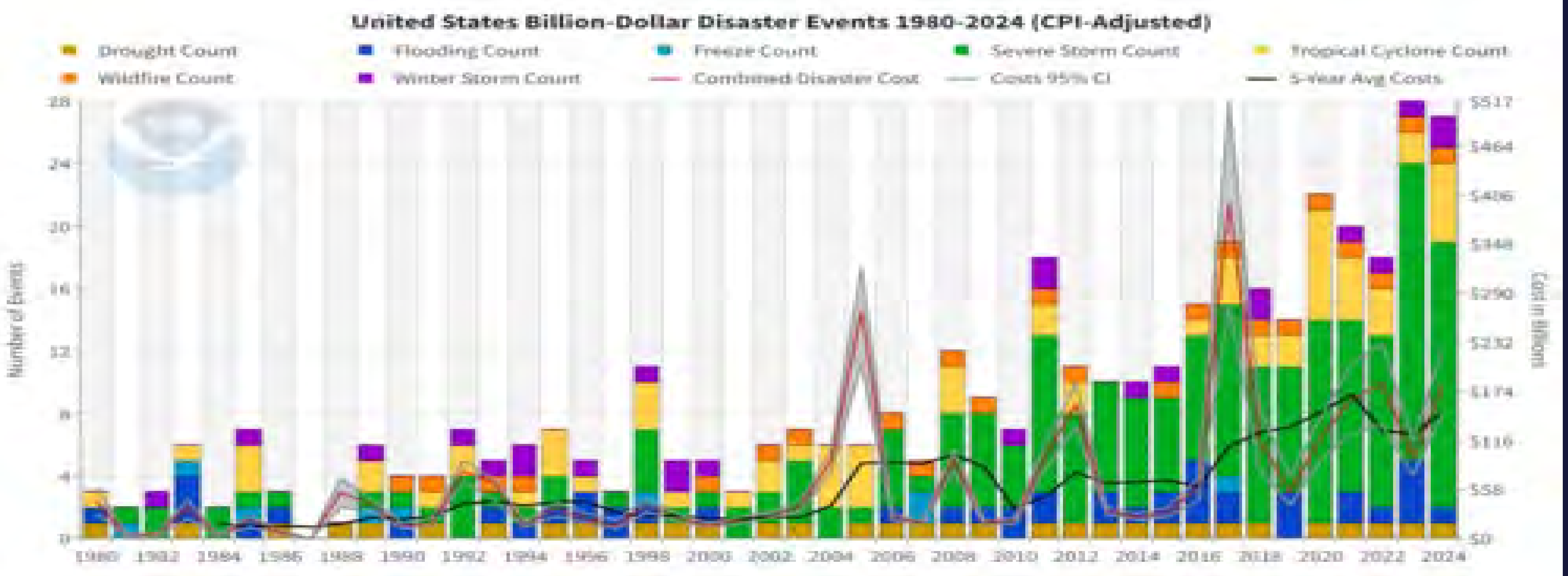
Cities of the Future: Reimagining Our World


CITIES OF THE FUTURE


Sustaining
Investment


Prioritizing
Resiliency


Advancing
Policy &
Innovation



United States Billion-Dollar Disaster Events 1980-2024 (CPI-Adjusted)
Drought Count
Flooding Count
Freeze Count
Severe Storm Count
Tropical Cyclone Count
Wildfire Count
Winter Storm Count
Combined Disaster Cost
Costs 95% CI
5-Year Avg Costs
Number of Events
Cost in Billions

Resilience Investments Pay Dividends

New Orleans' Levee System

$14 billion of investment in new levees, pump stations, and other upgrades protected the city against Hurricane Ida

Alaska Earthquake

In 2018, Anchorage was hit by a 7.1 earthquake. The part of the city following ASCE 7 standards only reported one damaged building and no fatalities.

Adopting Future-Ready Standards

The Power of Bonds in Federal Policy


Thank you