

Keynote Address

Navigating the Storm: Resilience, Sustainability and Surface Transportation

Jim Tymon

Executive Director

American Association of State Highway
and Transportation Officials



BUREAU OF
RESEARCH, INNOVATION
& INFORMATION TRANSFER

Navigating the Storm: Resilience, Sustainability and Surface Transportation

26th Annual New Jersey Department of Transportation
Research Showcase

October 23, 2024

Jim Tymon, Executive Director, AASHTO

What is AASHTO?

- Nonprofit association that was founded in 1914
- Members include:
 - Transportation departments of the 50 states, the District of Columbia and Puerto Rico
- We cover all modes of transportation:
 - Highways
 - Transit
 - Rail
 - Aviation
 - Water
 - Active Transportation



2024 AASHTO Leadership

Garrett Eucalitto
President
Commissioner,
Connecticut DOT



Russell McMurry, PE
Treasurer,
Commissioner,
Georgia DOT



Jim Tymon
Executive Director
AASHTO



AASHTO's 2021-2026 Strategic Plan

Vision:

- Providing improved quality of life through leadership in transportation

Strategic Plan Goals:

- Safety, Mobility and Access for Everyone
- National Transportation Policy Leadership
- Organizational Excellence with World Class Services



AASHTO Committees and TSPs

AASHTO Committees

- Committee on Environment and Sustainability
- Committee on Transportation System Security and Resilience
- Special Committee on Research and Innovation
- Research Advisory Committee

AASHTO Technical Service Programs

- AASHTO Environmental Management
- AASHTO Resilience and Sustainability Management
- AASHTO Center for Environmental Excellence

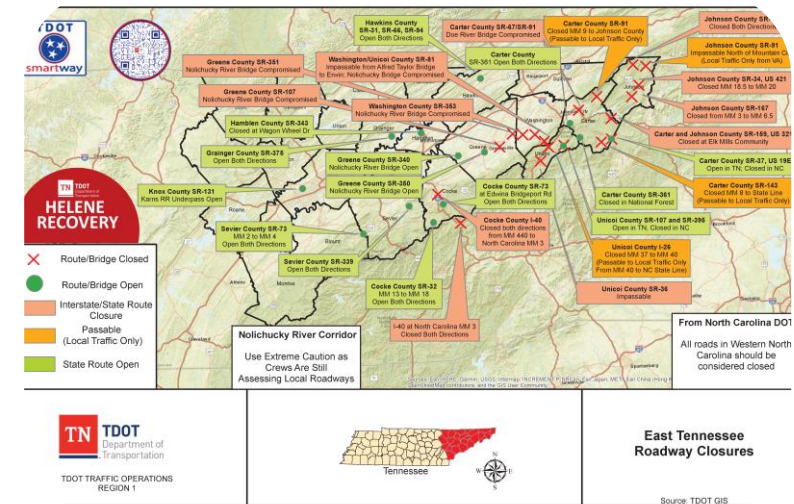
The Impact of Weather and Climate Disasters



N.C. Department of Transportation crews worked on Oct. 9, 2024, to clear U.S. 74A in Gerton, a small community in Henderson County impacted by Hurricane Helene.



State DOTs in the southeast joined National Guard units and other state agency personnel in helping Florida deal with the aftermath of Hurricane Milton.



TDOT Roadway Closures as of October 11, 2024

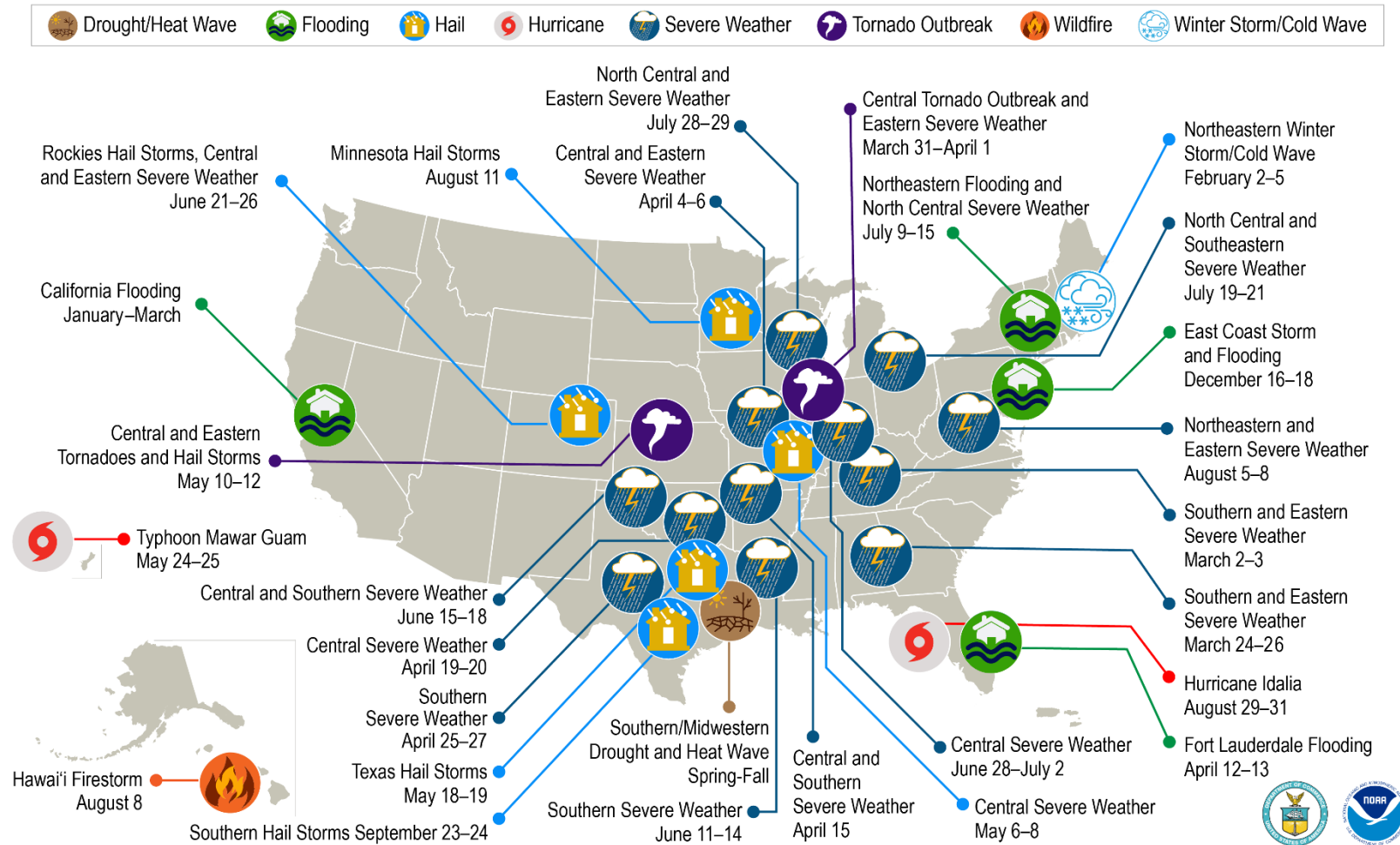
Record Number of \$1 Billion Disasters in 2023:

- Firestorm destroying town of Lahaina on Maui Island of Hawaii.
- Drought and heat wave across the central and southern U.S.
- Four flooding events (in California, Florida, and across the eastern and northeastern U.S.).
- Two tornado outbreaks across the central and eastern U.S.
- Two tropical cyclones: Idalia (Florida) and Typhoon Mawar (Guam).
- 17 severe weather/hail events across many parts of the country.



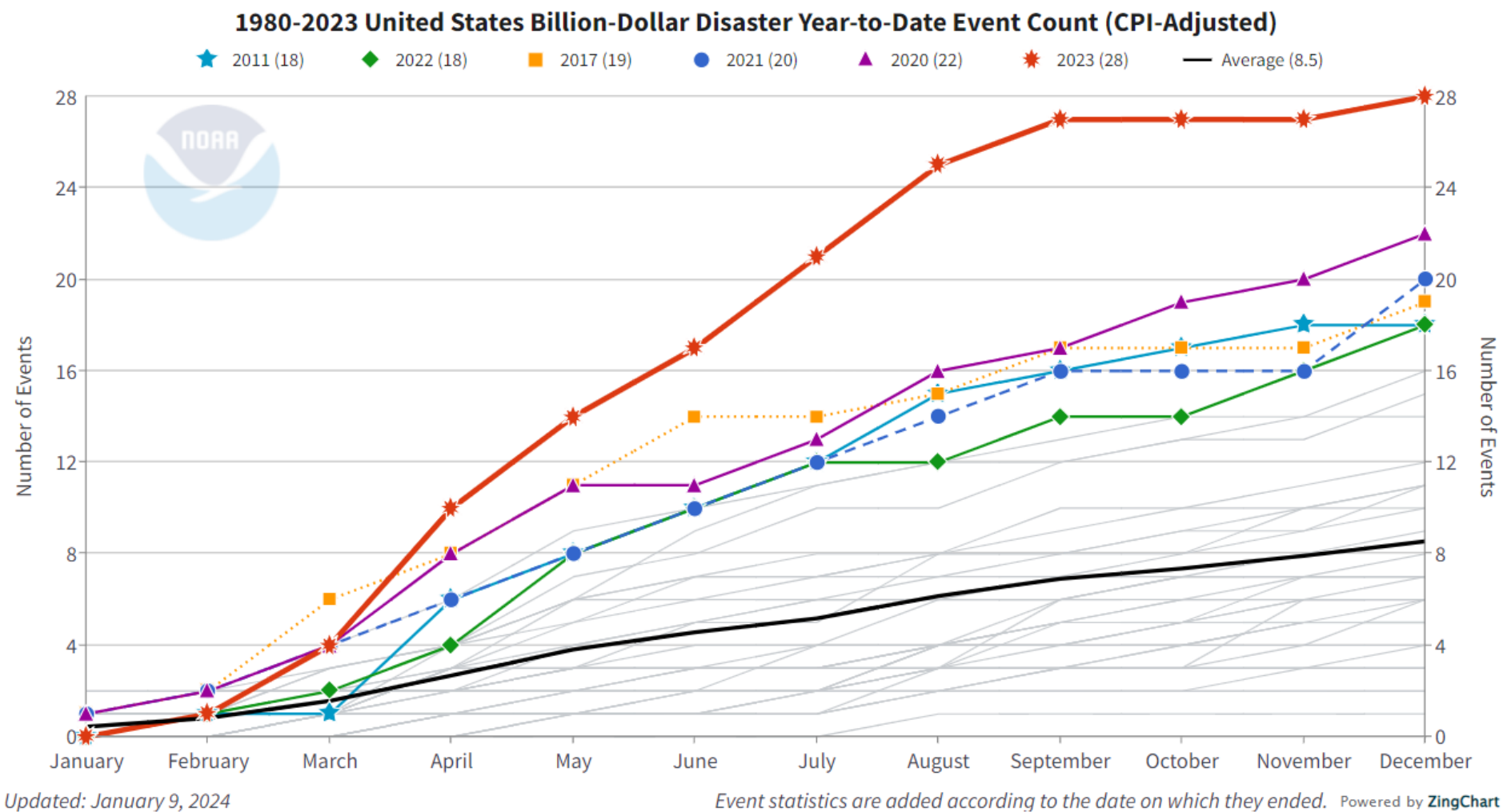
Burned cars, signs, and other structures in Lahaina, on Maui Island, following a deadly fire on August 8, 2023.

U.S. 2023 Billion-Dollar Weather and Climate Disasters

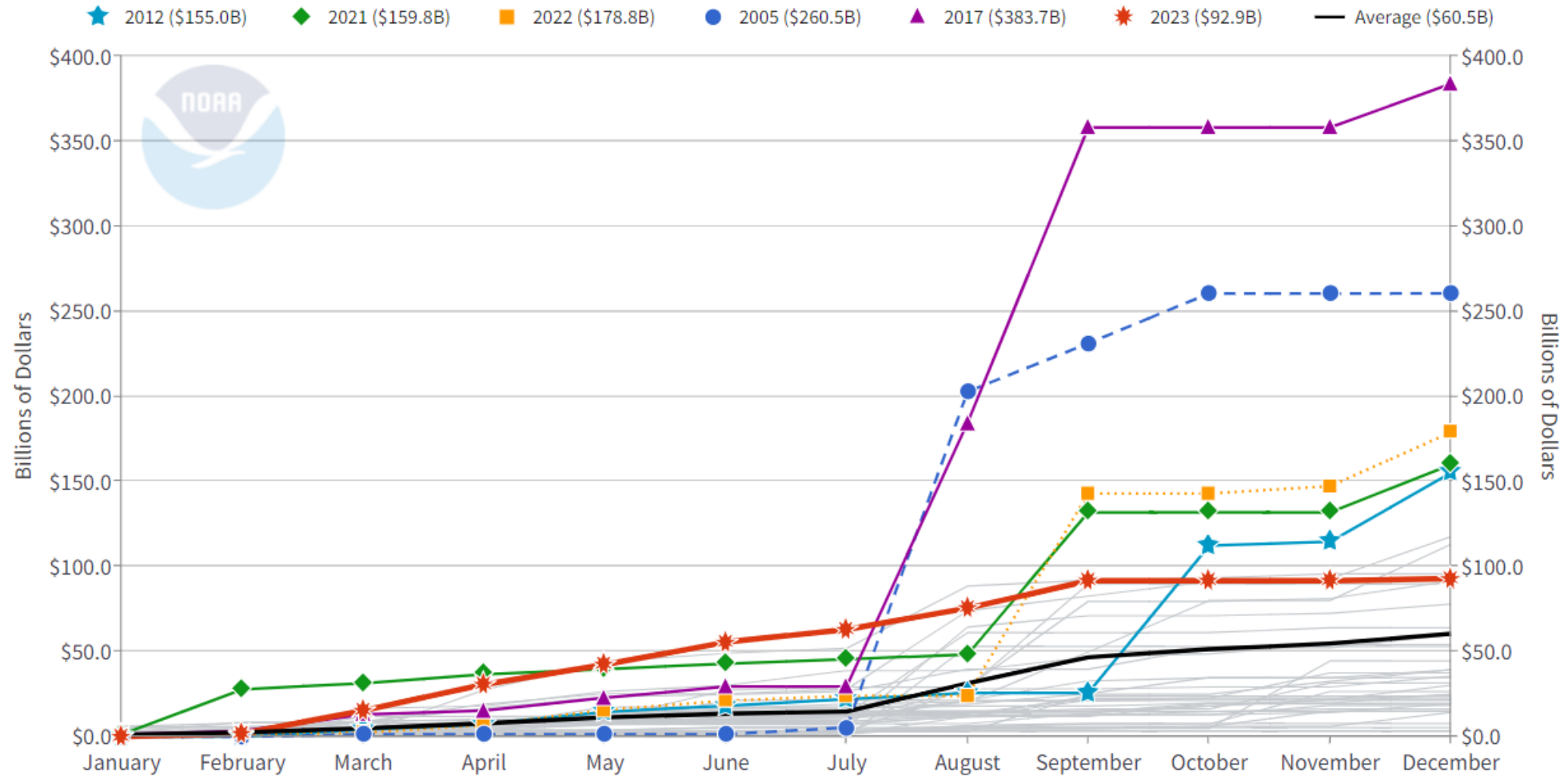


This map denotes the approximate location for each of the 28 separate billion-dollar weather and climate disasters that impacted the United States in 2023.

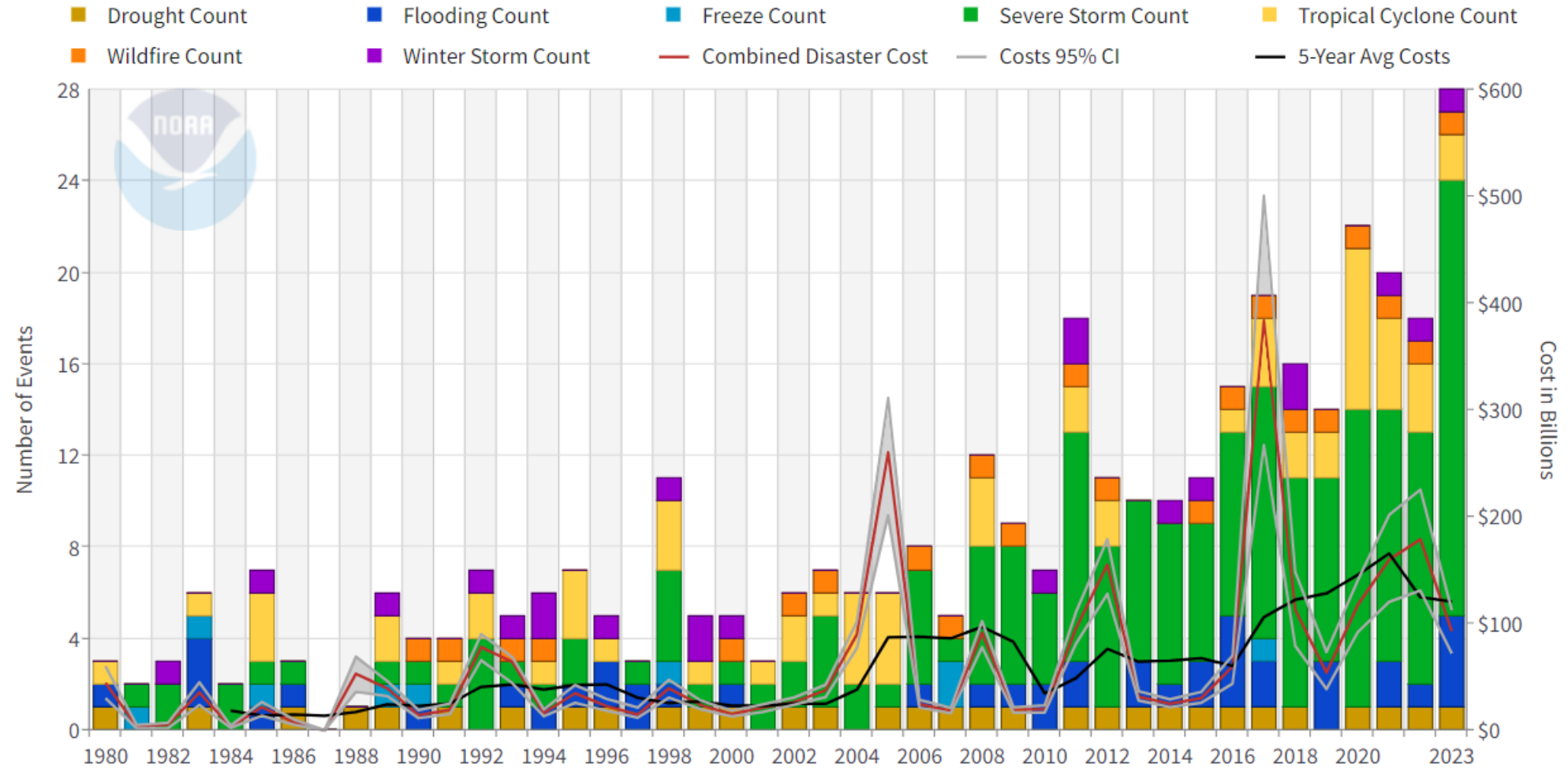




1980-2023 United States Billion-Dollar Disaster Year-to-Date Event Cost (CPI-Adjusted)



United States Billion-Dollar Disaster Events 1980-2023 (CPI-Adjusted)



<https://www.climate.gov/news-features/blogs/beyond-data/2023-historic-year-us-billion-dollar-weather-and-climate-disasters>



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NCEI in Asheville has been significantly impacted by Hurricane Helene. We are working to resolve these issues as soon as possible. We apologize for any inconvenience.

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NCEI Asheville Hurricane Helene Outage





NCEI in Asheville has been significantly impacted by Hurricane Helene. As a result, many key webpages, products and services are currently unavailable. We are working to resolve these issues as soon as possible. We apologize for any inconvenience.

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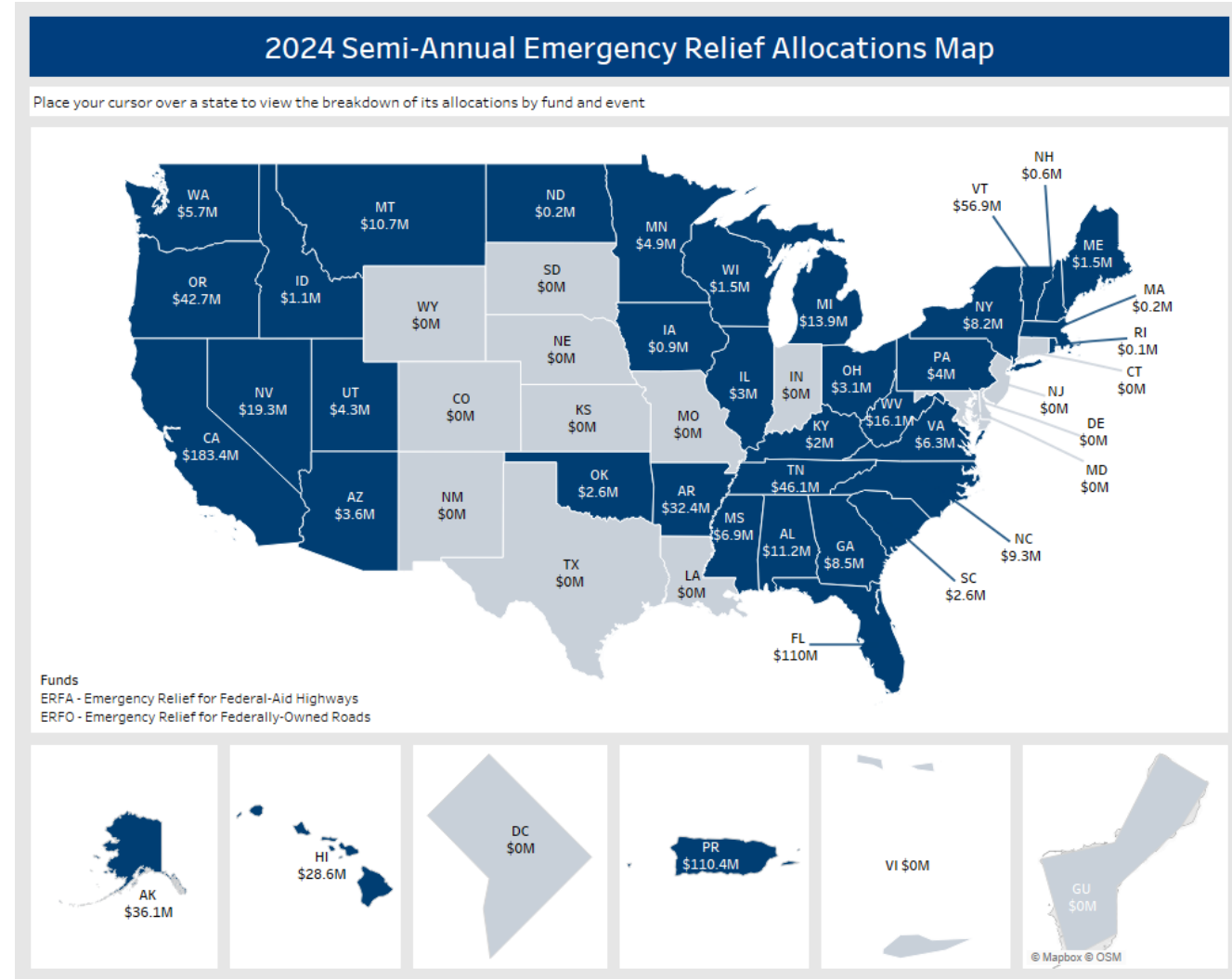
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The Financial Impact to Transportation System of Extreme Events and Climate Change

- Allocation of ER Funds, Fiscal Year (FY) 2024 Obligation Needs - ERFA
 - \$ 524,002,050.31



Building a More Resilient Transportation System



Cars move slowly through Matlacha, Florida, on Thursday after Hurricane Milton damaged power lines. Marta Lavandier/AP



Several lanes of I-40 in N.C. near the Tennessee line washed out and collapsed during catastrophic flooding from Helene. The North Carolina Department of Transportation said I-40 was closed in multiple locations between Asheville and eastern Tennessee due to washouts and debris. NC DOT

Resilience Planning Cycle

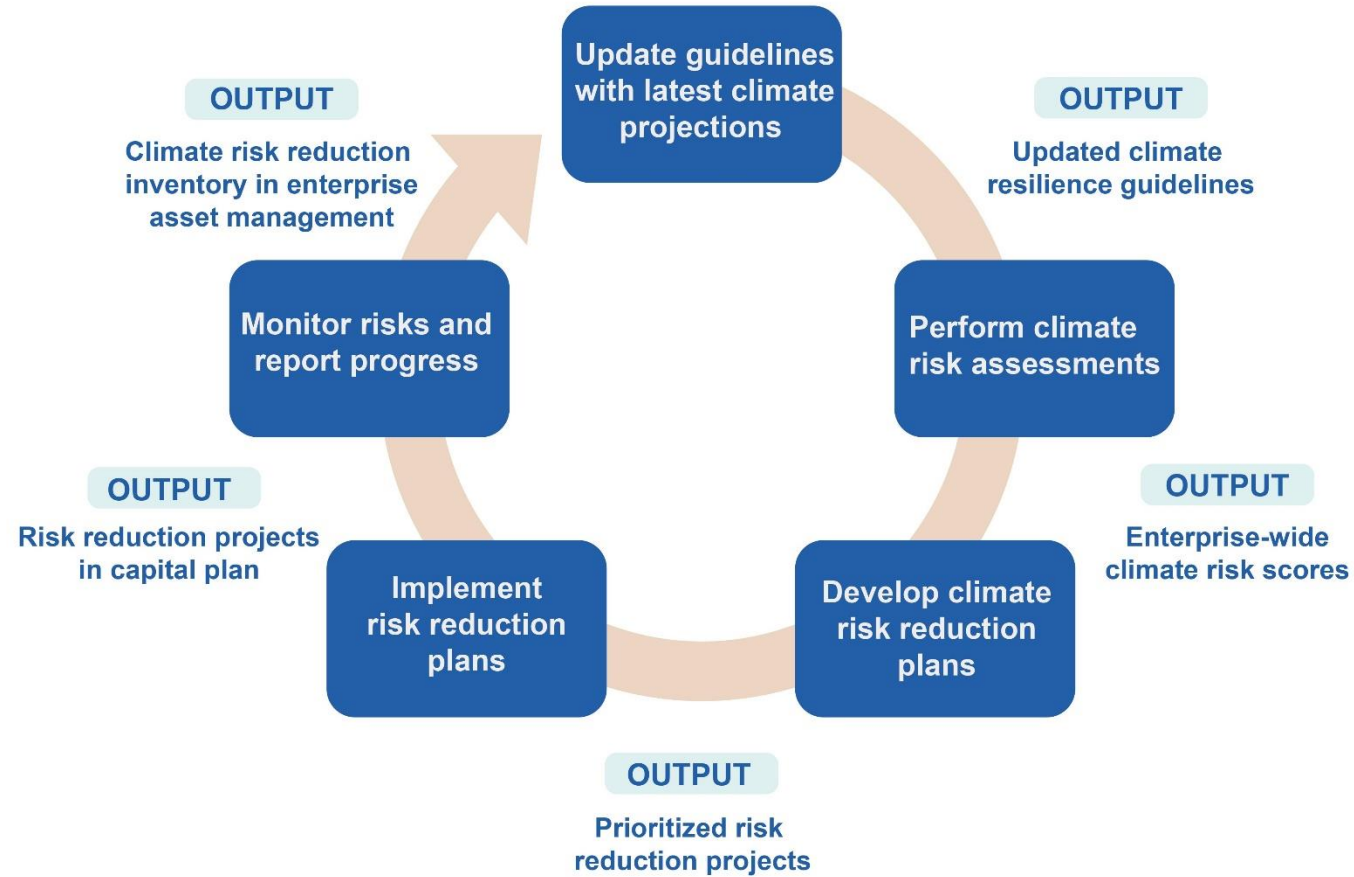


Figure credit: Port Authority of New York and New Jersey

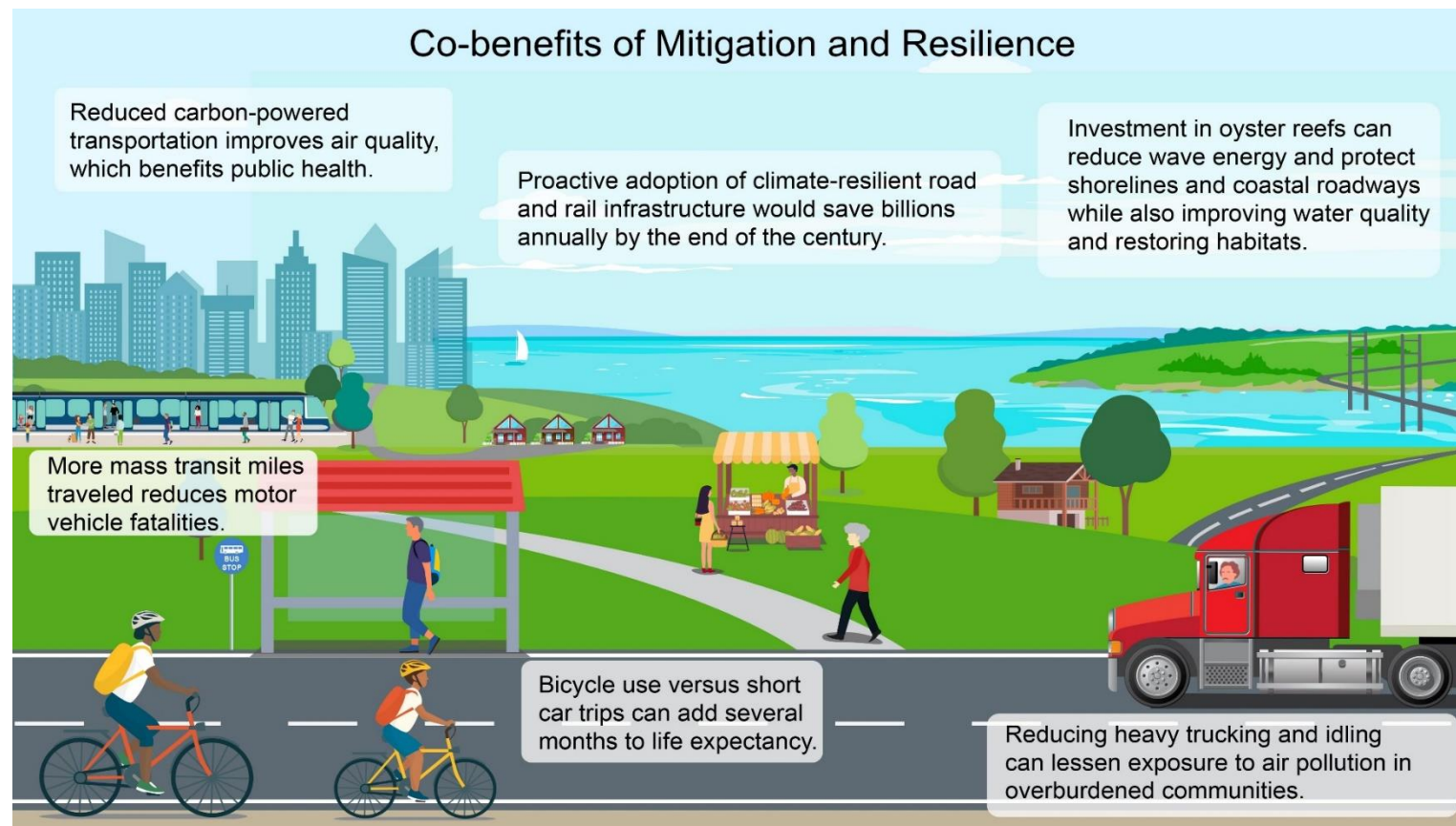
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Program

Project Types	Description
Resilience Planning	Development of Resilience Improvement Plans, resilience planning activities, capacity building, and evacuation planning and preparation.
Resilience Improvements	Projects to make existing surface transportation assets more resilient, such as improving drainage, upgrades to meet or exceed design standards, relocating roadways, or elevating bridges.
Community Resilience and Evacuation Routes	Improvements to make evacuation routes more resilient or add capacity and redundant evacuation routes.
At-Risk Coastal Infrastructure	Protecting, strengthening, or relocating coastal highway and non-rail infrastructure.

What are the Benefits of Developing a Resilience Improvement Plan?

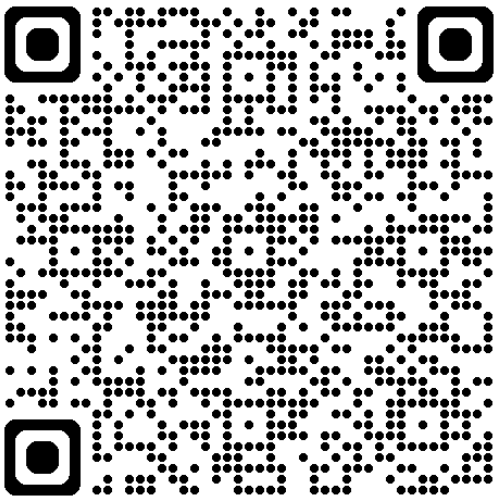
- Improved system reliability
- Incorporation of resilience into transportation planning and programming activities
- Support for the resilience planning factor
- 7% and 3% potential reductions in required non-Federal share match for formula and discretionary program projects.

Building a More Sustainable Transportation System



Decarbonizing transportation could save money and improve air quality, social equity, and the health of people and ecosystems.
Figure credit: George Washington University and Jacobs.

THE U.S. NATIONAL BLUEPRINT FOR TRANSPORTATION DECARBONIZATION



Convenient

Planning

Telework
E-Commerce

Travel
Demand
Management

Active
Mobility

Improve Community Design
and Land-use Planning

Efficient

Pool Riding

Operational
Improvement

Public
Transportation

Rail
& Shipping

Increase Options to Travel
More Efficiently

Clean

Vehicle Fuel
Economy

Clean
Electricity

Sustainable
Biofuels
E-fuels

Clean
Hydrogen

Transition to Zero Emission
Vehicles and Fuels

Carbon Reduction Program Highlights



Source: NYC DOT

- States to develop **Carbon Reduction Strategies**
- **\$6.4 Billion** in total funding from 2022-2026
- Funding for **projects to support carbon dioxide reductions from on-road highway sources**
- Developed by States in consultation with any Metropolitan Planning Organizations within the State
- Identify projects and strategies to reduce transportation emissions



The M/V Wenatchee, seen here in September 2023, is the first JMI vessel to be converted to hybrid-electric power while also receiving its midlife propulsion upgrade at Vigor Shipyards in Seattle. (Photo courtesy of the Washington State Department of Transportation/[@wsdot](#) on Flickr)



https://stormwater.pca.state.mn.us/index.php?title=Green_stormwater_infrastructure_-_climate_resiliency_and_climate_adaptation

Thank you.

Jim Tymon, Executive Director, AASHTO