Evolving the Risk MAP Program and Risk Management to Improve Community Resilience

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November 1, 2023

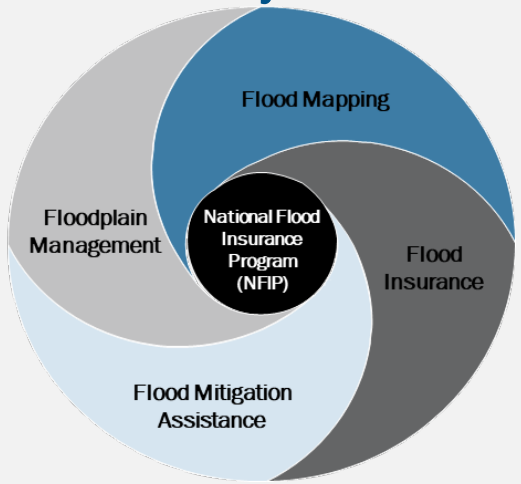
FEMA

$1.3T
in coverage

4.5M
Policies

22,000
Communities

The Risk MAP Program (Flood Mapping) is one component of a larger FEMA ecosystem



Risk MAP Program

The Risk Mapping, Assessment, and Planning (Risk MAP) program provides communities with flood risk information and tools they can use to enhance their mitigation plans and better protect their citizens.

Through more precise flood mapping products, risk assessment tools, and planning and outreach support, Risk MAP strengthens the local ability to make informed decisions about reducing flood risk.

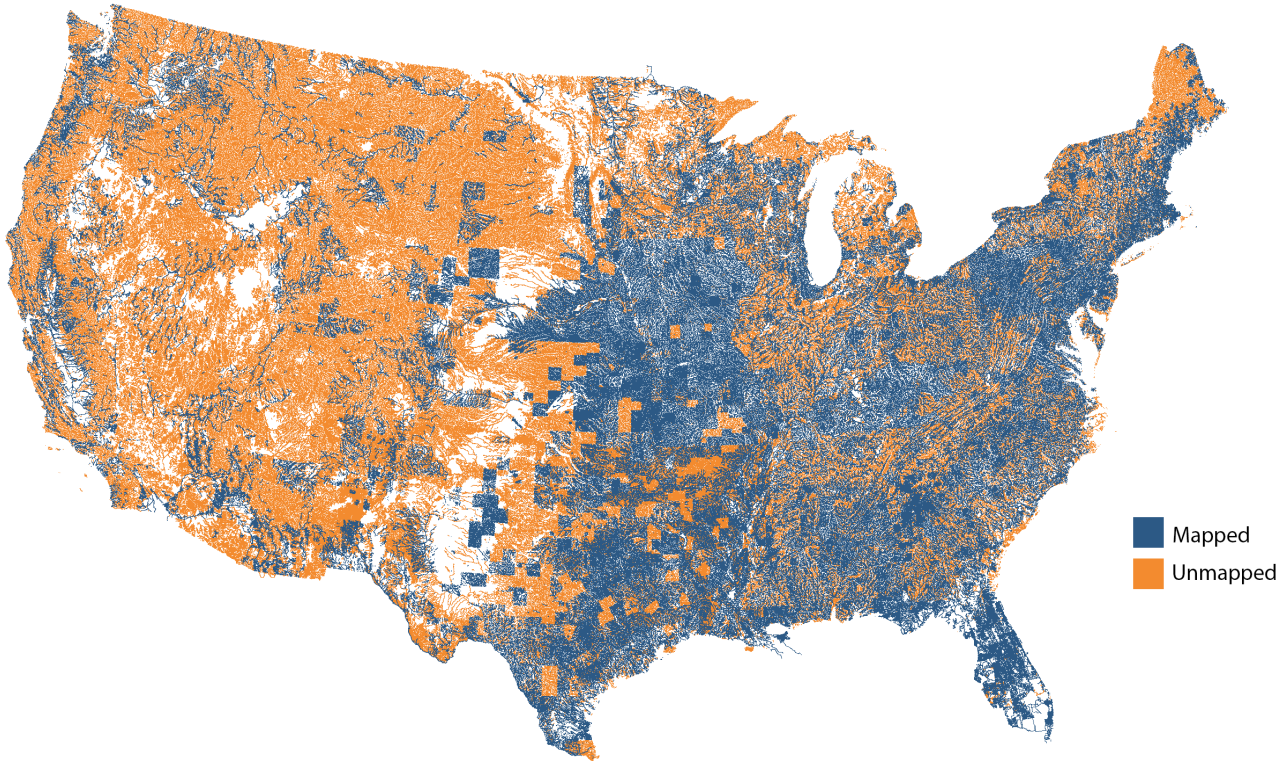
The Evolution of the Program

Phases

Paper Map Production	Digital Map Production	Risk MAP Program	Statutory Reform	NFIP Transformation
1970-1990s	2003-2008	2010	2012-2020	Today
Manual Cartographic driven processes	**Map Modernization** replaced 95% of paper map distribution with all digital inventory • Ensured industry-standard GIS format for viewing and analysis • Established the Mapping Information Platform (MIP) to improve access to flood hazard information	**Risk MAP** program created to support community resilience by: • Providing quality data • Building partnerships • Supporting long-term hazard mitigation planning	The program, in accordance with **2012 Biggert-Waters Flood Insurance Reform Act**, is mandated to review, update, and maintain National Flood Insurance Program rate maps	**The Future of Flood Risk Data** initiative provides a framework for the mapping program to drive towards a risk informed NFIP and is supported by collaboration and coordination with many partners

Risk MAP continues to evolve to keep pace with community needs and technology advancements to provide more precise flood mapping products, risk assessment tools, and planning and outreach support to strengthen the community's ability to make informed decisions about reducing risk.

Flood Hazard Data Gaps Remain



Mapped vs. Unmapped Miles

Of the **3.5 million** miles of flooding sources in the United States, there are 1.3 million miles impacting areas of potential development for which Risk MAP is developing a strategy to address.

1.2M **Miles mapped and maintained by FEMA**

1.1M **Miles on Federal Lands and do not need to be mapped**

1.2M **Unmapped Miles**

Risk MAP is responsible for ensuring the Nation's flood hazard information are current and up to date.

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Risk MAP Priority Areas

In FY23, Risk MAP will continue to meet program requirements through it's 5 priority areas

Maintain 80% NVUE	After achieving a significant milestone in the program (80% NVUE), we must maintain that existing inventory of 1.1M stream miles so that flood hazard information meets current program standards.
Advance Ongoing Risk MAP Projects	There are over 1200 projects in progress at different stages in the regulatory production process. We will make progress every year to advance these projects closer to the finish line.
Address Remaining Statute Requirements	Section 216 of the Biggert-Waters Act of 2012 requires FEMA to map areas of possible population growth, identify areas of residual risk and areas of inundation behind levees and downstream of dams, and future conditions.
Modernize Risk MAP IT Infrastructure	This will allow us to keep up with current and future program requirements as well as comply with Federal security and privacy requirements.
Advance Future of Flood Risk Data (FFRD)	We will continue our exploration efforts though the FFRD initiative in support of a risk-informed NFIP and better meet the demands of our customers.

And support on-going Administration Priorities

Federal Flood Risk Management Standard (FFRMS)

FEMA is developing Freeboard Value Approach (FVA) flood hazard data to support FFRMS implementation.

These datasets represent the area that would be flooded if the flood elevations were two or three feet higher than the base flood elevations shown on FEMA's existing Flood Insurance Rate Maps. Utilizing these datasets as the minimum requirements for federally funded projects will help ensure that investments are more resilient to climate change influenced flood impacts.

Justice 40

Risk MAP is working with other FEMA Justice 40 programs and the NFIP to identify what data they need to drive outcomes.

Understanding the Drivers For Change

Over the years, new executive orders and policies have been developed that require the program to adapt to evolving needs. The program has continued to maintain existing efforts while onboarding new capabilities to meet these needs.

UNMET STATUTORY REQUIREMENTS

- Biggert-Waters Act of 2012 (BW-12)
- Homeowner Flood Insurance Affordability Act of 2014 (HFIAA)

EQUITY

- EO 14008: Tackling the Climate Crisis at Home and Abroad (includes **Justice40** requirement)
- EO 14091: Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government
- EO 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

EVIDENCE BASED ACT

- Foundations for Evidence-Based Policymaking Act

CUSTOMER EXPERIENCE

- Memorandum on Restoring Trust in Government Through Scientific Integrity and Evidence-Based Policymaking
- EO1405: Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government

CLIMATE RESILIENCE

- EO14030: Climate-Related Financial Risk
- Community Disaster Resilience Zones Act of 2022 (CDRZ)

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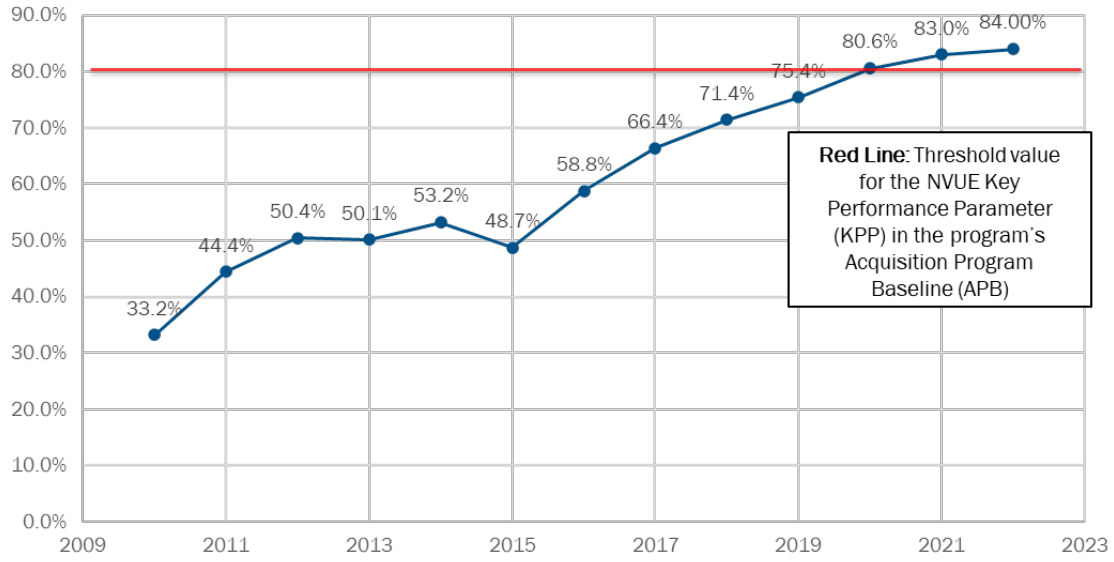
Preparing for the Future

Maintaining Ongoing Mapping Program

Risk MAP

While Preparing for the Future

In FY 2020, Risk MAP **achieved the objective of 80.6% NVUE ahead of schedule.**

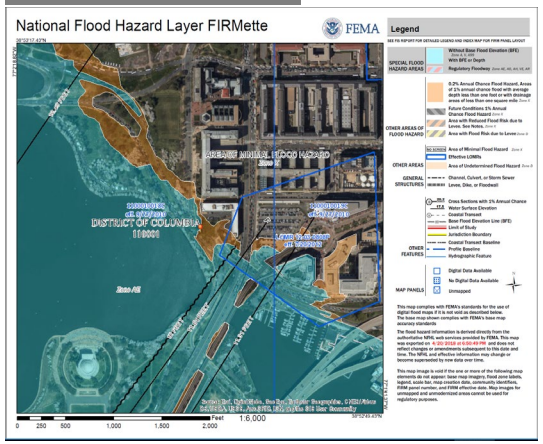


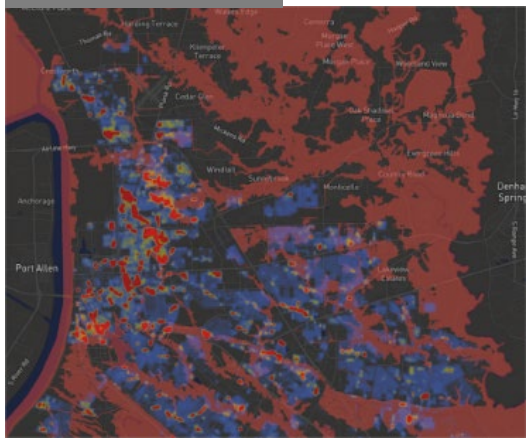
Risk MAP will continue to maintain and exceed the NVUE target

Flooding is changing and our ability to analyze it is too. More and different data is needed to understand the scale of the risk.

There are **several benefits with the approach to shift from binary to graduated risk analysis** including improving understanding of flood risk, providing data that drives actions to mitigate risk and improving the insurance rating.

BINARY → **GRADUATED**





Risk MAP will provide regulatory and non-regulatory **flood hazard and risk information** in expanded areas across the nation that meet the needs of stakeholders, address unmet statutory needs, and provide the basis for a risk informed NFIP.

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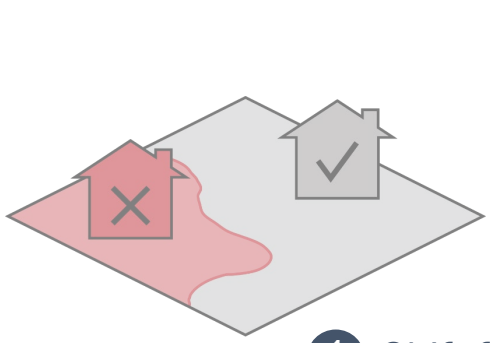
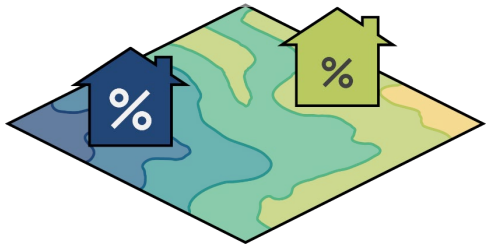
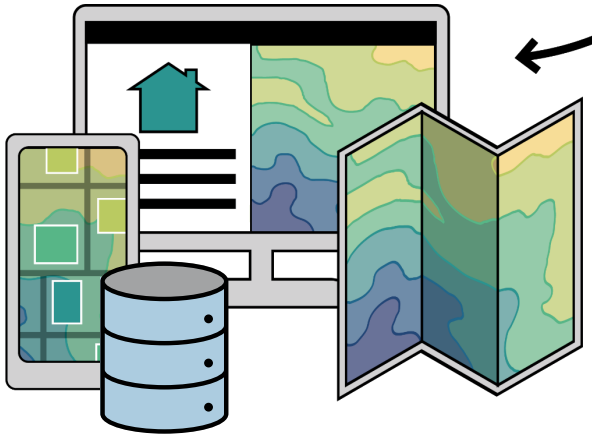
Future of Flood Risk Data Objectives

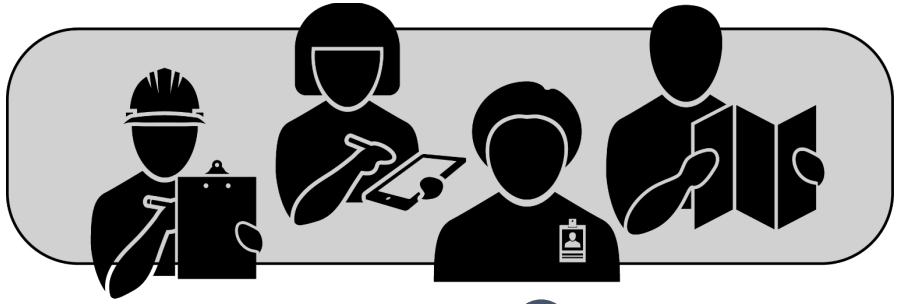


1 Shift from binary to probabilistic analysis

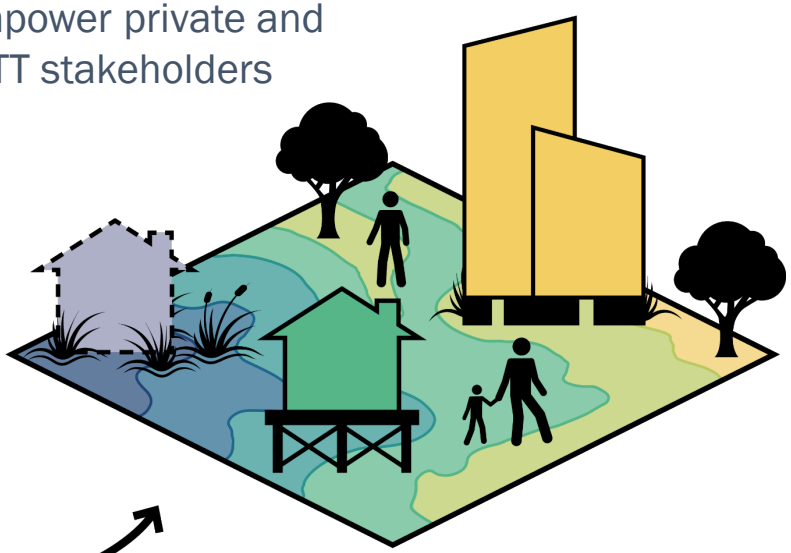




2 Modernize data management and delivery



3 Empower private and SLTT stakeholders



4 Drive risk-informed actions

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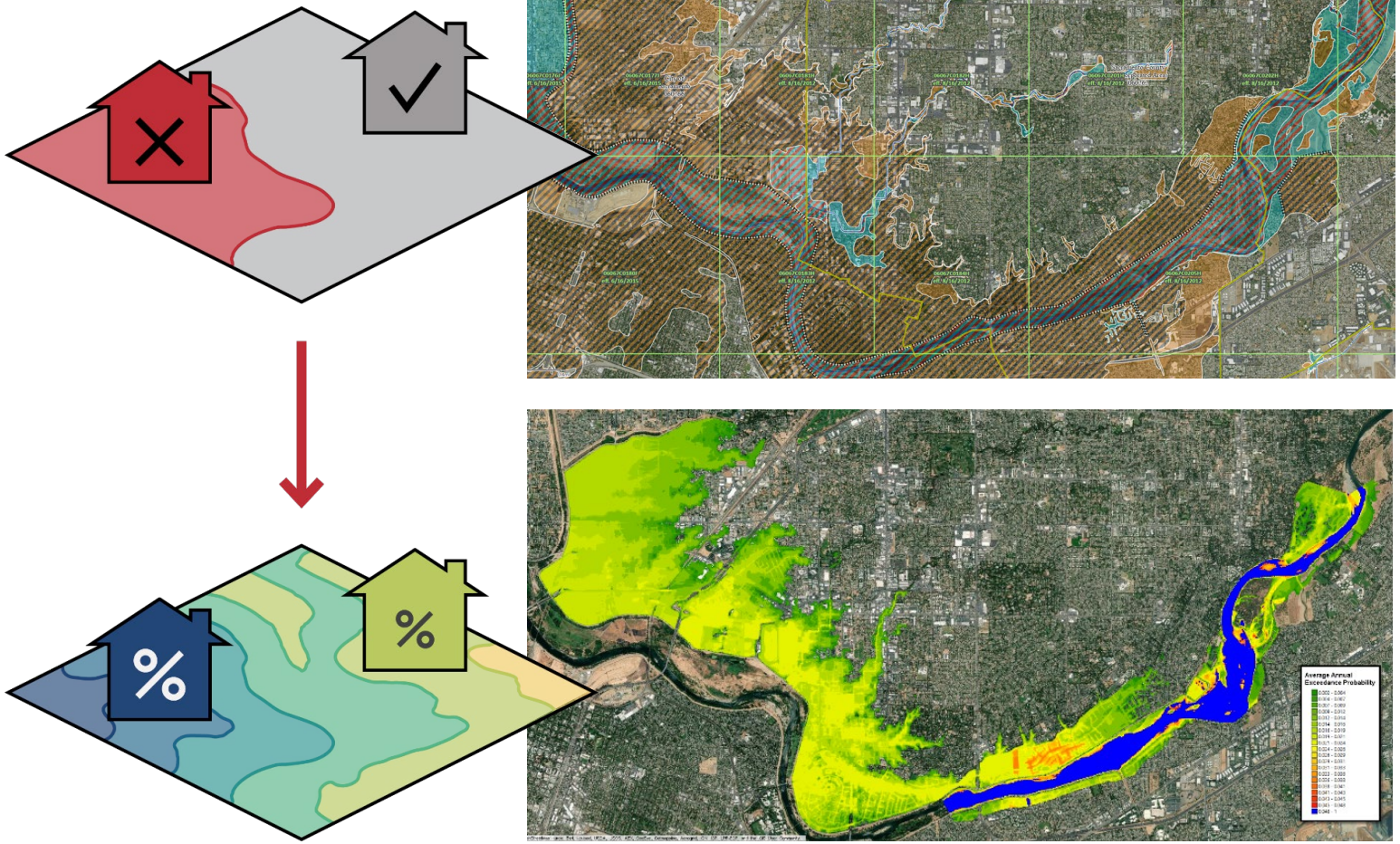
A Shift From Binary to Probabilistic



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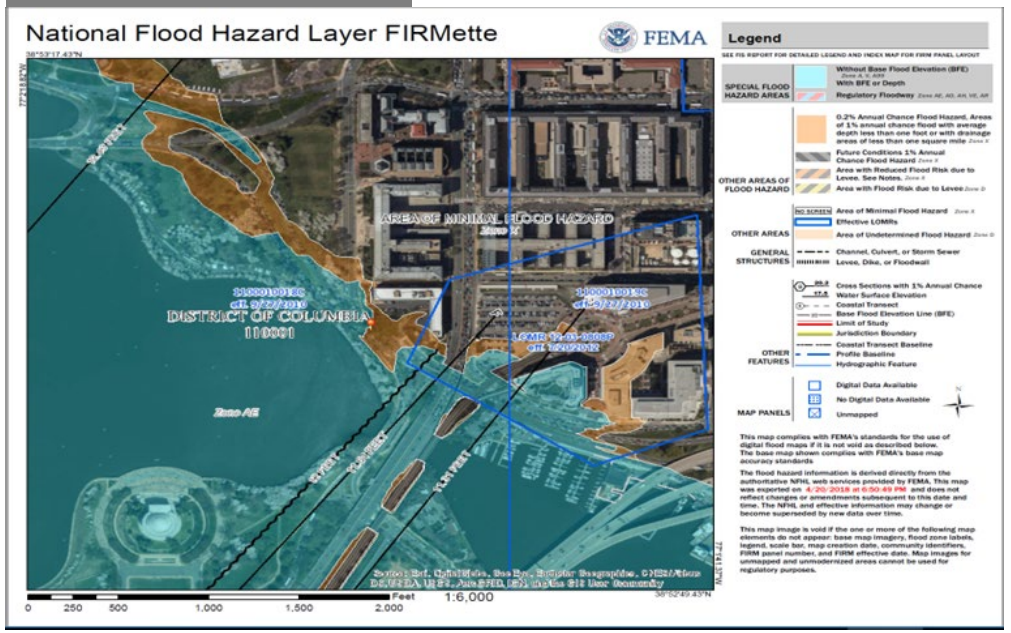
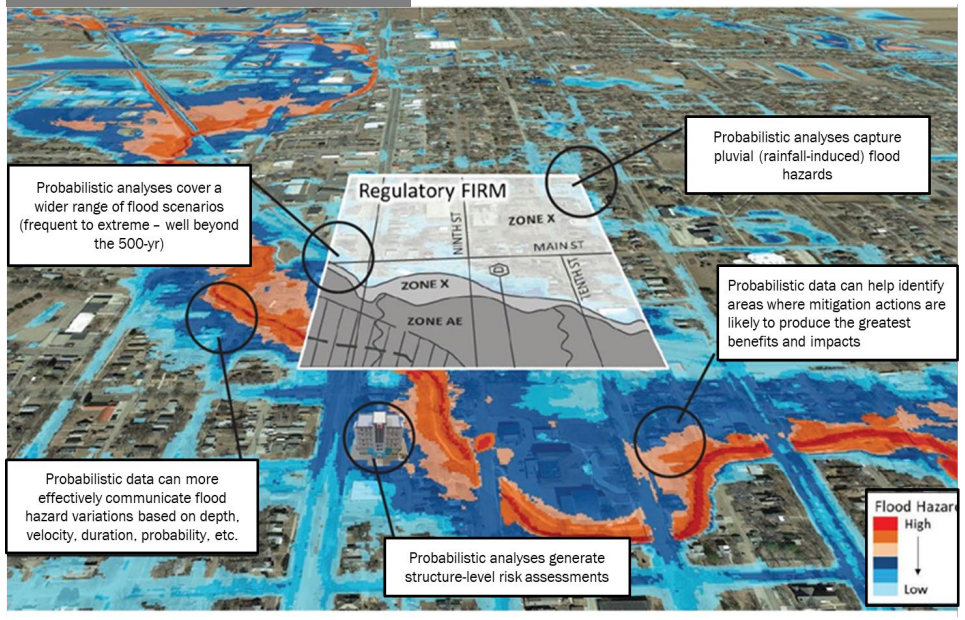
Future of Flood Risk Data (FFRD) Approach: A strategic shift

Risk MAP must continue to evolve to support the NFIP transformation to a risk-informed program.

BINARY → **GRADUATED**





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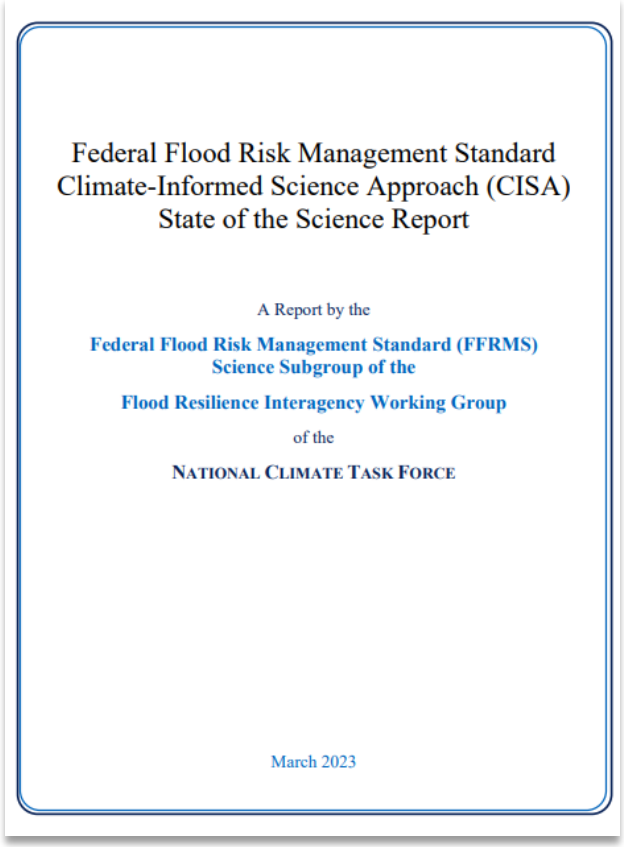
Agency Collaboration and the Promise of FFRD



Federal Flood Risk Management Standard
Climate-Informed Science Approach (CISA)
State of the Science Report

A Report by the

Federal Flood Risk Management Standard (FFRMS)
Science Subgroup of the

Flood Resilience Interagency Working Group

of the

NATIONAL CLIMATE TASK FORCE

March 2023

"As FEMA transitions to a risk-informed NFIP, through initiatives such as the program's updated pricing methodology (Risk Rating 2.0), explorations to update modeling approaches to incorporate climate impacts like those underway in FEMA's **"The Future of Flood Risk Data" (FFRD) initiative will help meet the Nation's needs for comprehensive hazard and risk data to drive decisions.**

Engaging with Stakeholders

National Association of Flood & Stormwater Management Agencies
NAFSMA

USGS
science for a changing world

Association of State Floodplain Managers
ASFPM

NOAA

EXECUTIVE OFFICE OF THE PRESIDENT OF THE UNITED STATES
OFFICE OF SCIENCE AND TECHNOLOGY POLICY

APA
American Planning Association

NASA

GlobalChange.gov
U.S. Global Change Research Program

US Army Corps of Engineers®

Technical Mapping Advisory Council (TMAC)

The TMAC is charged with reviewing the national flood mapping activities authorized under the law and provide recommendations to the FEMA Administrator.

In 2022, FEMA tasked the TMAC with the following:

- Evaluate the barriers that disadvantaged communities face in understanding their risk and acting to reduce their risk. Recommend ways for the program to overcome these obstacles and better meet the needs of these communities.
- Evaluate and recommend ways for Risk MAP to identify and limit the potential negative impact and unintended consequences that might result from Risk MAP products and program delivery.
- Evaluate and recommend ways for Risk MAP to improve stakeholder engagements with disadvantaged/underserved communities.
- Evaluate ways the agency could use statistical data and analysis regarding social vulnerability and underserved populations and provide recommendations on how that data and analysis should inform future annual investment decisions for Risk MAP.

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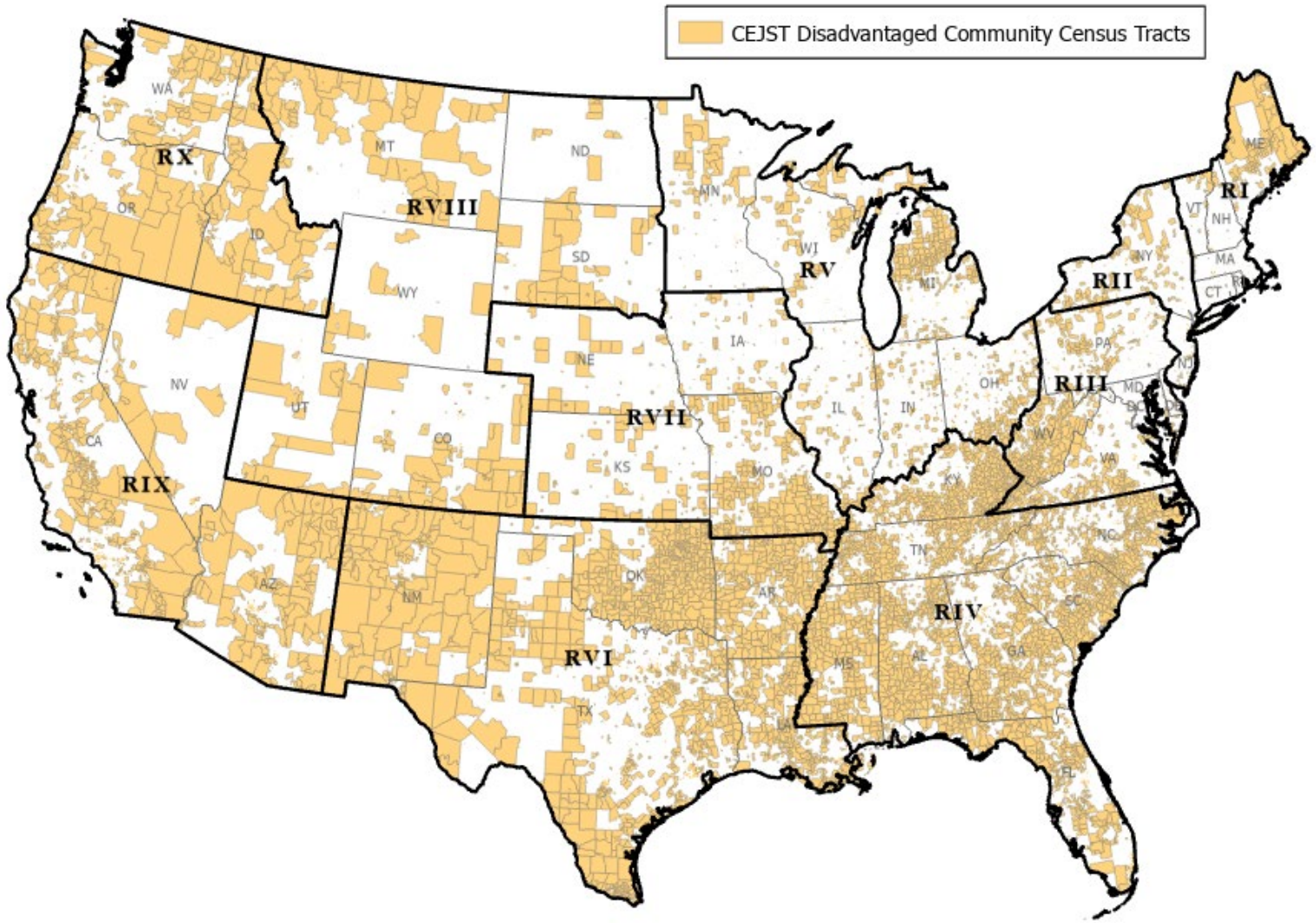
CJEST DAC Census Tracts

- 37% of all census tracts are classified as Disadvantaged Communities (DACs)



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FFRMS Overview

- The Federal Flood Risk Management Standard (FFRMS) was established in E.O. 13690 and reinstated in 2021
- FFRMS is a flexible framework that supplements E.O. 11988 *Floodplain Management* (1977)
- Purpose:
  - to address current and future flood risk
  - to protect projects funded with taxpayer dollars
- How:
  - expand management from the Base Flood Elevation to a higher vertical flood elevation and corresponding horizontal floodplain
- FEMA is a lead agency in the Executive Office of the President (EOP) Flood Resilience Interagency Working Group and provides FFRMS guidance to other agencies
- FEMA has elected to incorporate the Climate-Informed Science Approach into its policy and has accounted for it in the economic analysis

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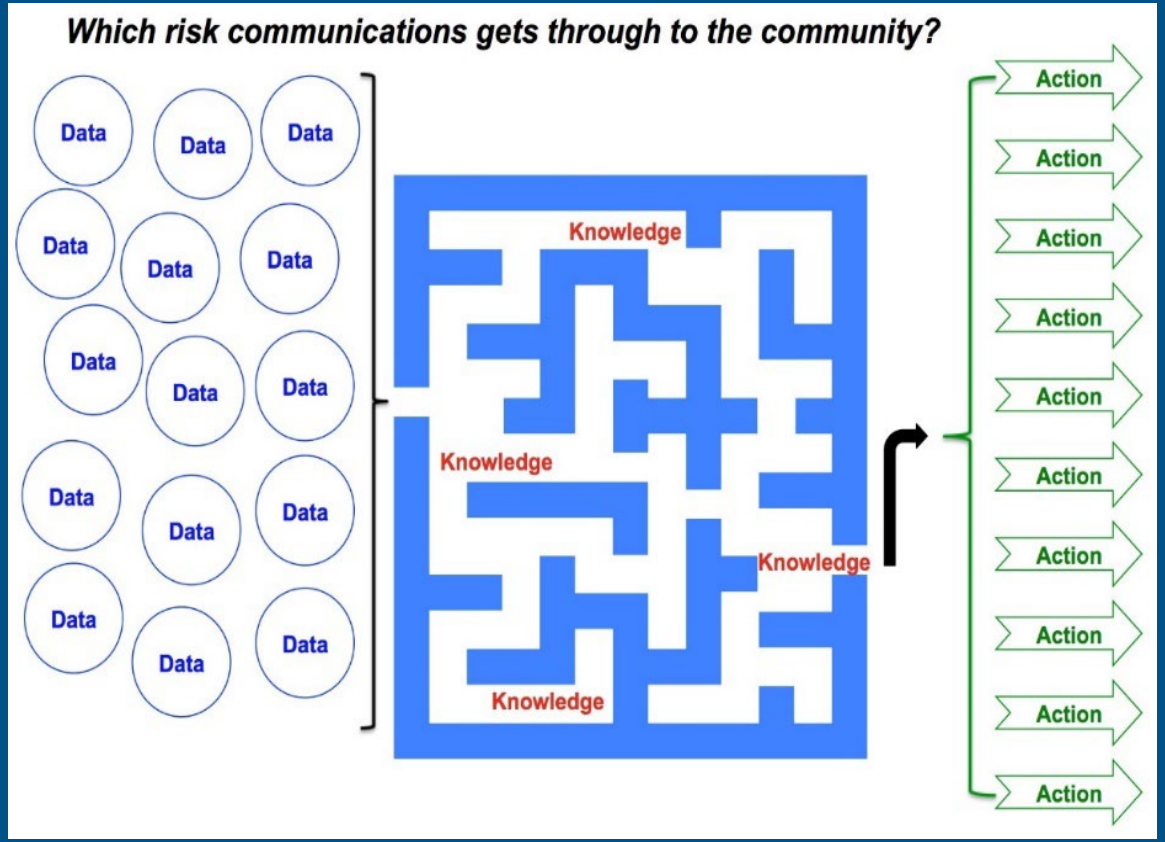
New initiatives to help FEMA better achieve its objectives

- FEMA is actively engaging in conversations with traditional and nontraditional stakeholders, such as CODE.
- FEMA understands continuous improvement and strives to improve the customer experience, including for disaster survivors
- Risk MAP is the current iteration of many years of improvements and continues to evolve (e.g., FFRD, mainstreaming our data).
- FEMA understands that we need to make our data more accessible to all, including vulnerable and resource constrained communities
- FEMA understands critiques of our products often stem from misperceptions of Risk MAP products and/or the potential pocketbook impacts to our customers.



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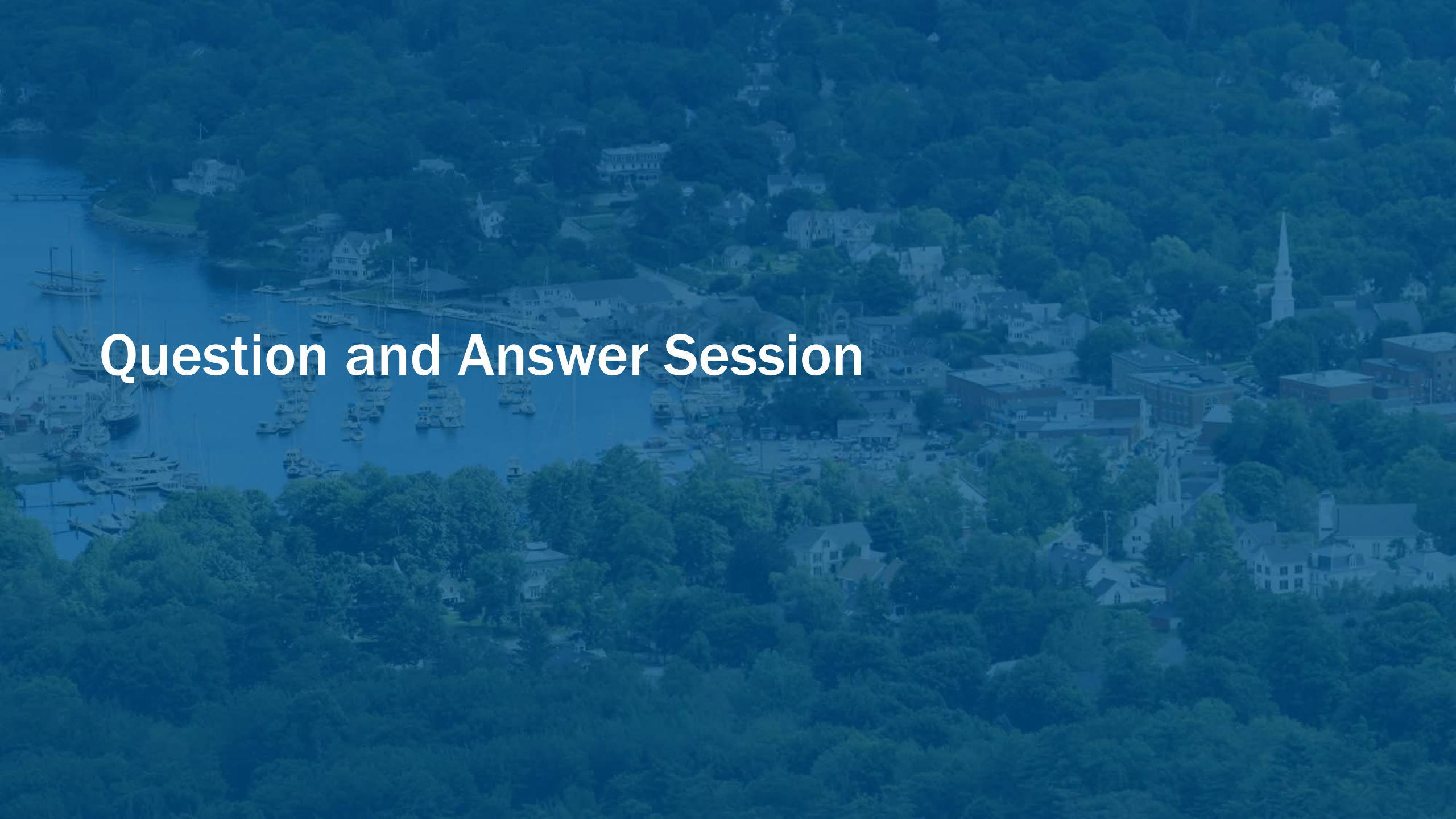

Question and Answer Session

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