

# Leveraging GIS for Climate Action Planning

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Environment



## Expectations

Don't worry – no quizzes! But... participation is appreciated

- **Understand the Role of GIS in Climate Action Planning (Sunny)**
- **Learn about peer approaches (Sunny)**
- **Learn how to use CMRA (Sunny & Dan)**
- **Share workflows, needs and challenges for CMRA updates**

# Agenda At-A-Glance

## Three Core Components

- **The Geographic Approach to Resilience**
  - Overview of the Steps to Resilience
- **Community Approaches**
  - State and Local Government Examples
  - White House CMRA Demo
- **Facilitated Discussion & Next Steps**
  - Exploring State Workflows, Challenges and Needs
  - Future of CMRA
    - Integrating Discussion Findings
    - Tools and Templates



# The Geographic Approach to Climate Action Planning

GIS Supports the Steps to Resilience





# Climate Change Impacts

## Everyone and Everything

- **1-4 to 3.7-10% GDP** ← the \$ lost to climate change in the US
- **\$8 Billion, annually** ← the cost of wildlife/vehicle collisions
- **\$7-13 Billion in insurance costs** ← 2020 Wildfire Season
- **\$40 Billion over 10 years** ← the cost of flooding in the US (increasing)
- **\$8 Trillion – \$22.9 GDP gains** by 2050 if we eliminated structural disparities (social/environmental equity)



# Policy Drives Approach

Uncle BIL and Aunt IRA (Sunny's Version)

**Continue Conducting Your Business**

```
graph TD; A[Continue Conducting Your Business] --> B[Do it Resiliently, Sustainably, and Equitably]; B --> C[Innovate!]
```

**Do it Resiliently, Sustainably, and Equitably**

**Innovate!**

# Policy Drives Approach

Uncle BIL and Aunt IRA (The B Sides)

**Continue Conducting Your Business**

```
graph TD; A[Continue Conducting Your Business] --> B[Do More of It]; B --> C[Here's a Ton of Money to Get it Done...]
```

**Do More of It**

**Here's a Ton of Money to Get it Done...**

# Do These Have to be At Odds?

Brace yourself for optimism

- Regulation viewed as bottleneck
- Becomes a policy discussion, but...
- Now a technology discussion
- Can we have our cake and eat it too?
- But I thought this was a talk about climate action planning...



[Administration](#) [Priorities](#) [Th](#)

JULY 17, 2024

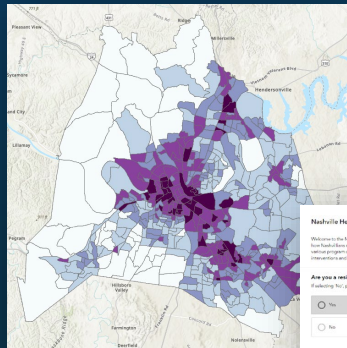
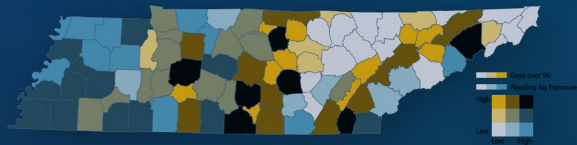
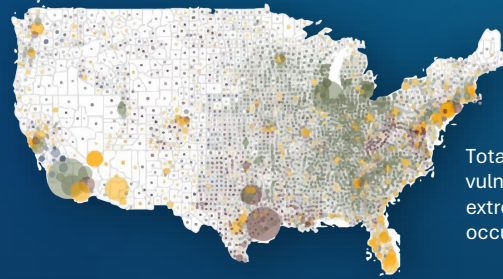
## CEQ Releases Recommendations on Digital Tools to Modernize Environmental Reviews, Increase Transparency and Accessibility of Federal Permitting

 [CEQ](#) [NEWS & UPDATES](#) [PRESS RELEASES](#)



# Steps to Resilience

## GIS Supports Mitigation, Adaptation & Resilience



Metro Nashville Heat Perception Form  
ArcGIS Survey123

**Nashville Heat Perception Survey**

As a resident of Davidson County, how do you feel about the heat in your area? Please select the level of concern you have about the heat in your area and the level of concern you have about the heat in your area.

Are you a resident of Davidson County?

Yes

No

How important is Extreme Heat to you?

Not important

Somewhat important

Important

Very important

# Steps to Resilience

## GeoAnalysis

Assets, people, resources are threatened by climate-related hazards



Unacceptable risks identified



## GeoDesign

Team agrees on priorities for taking action



## GeoAccounting

Align funding and political will

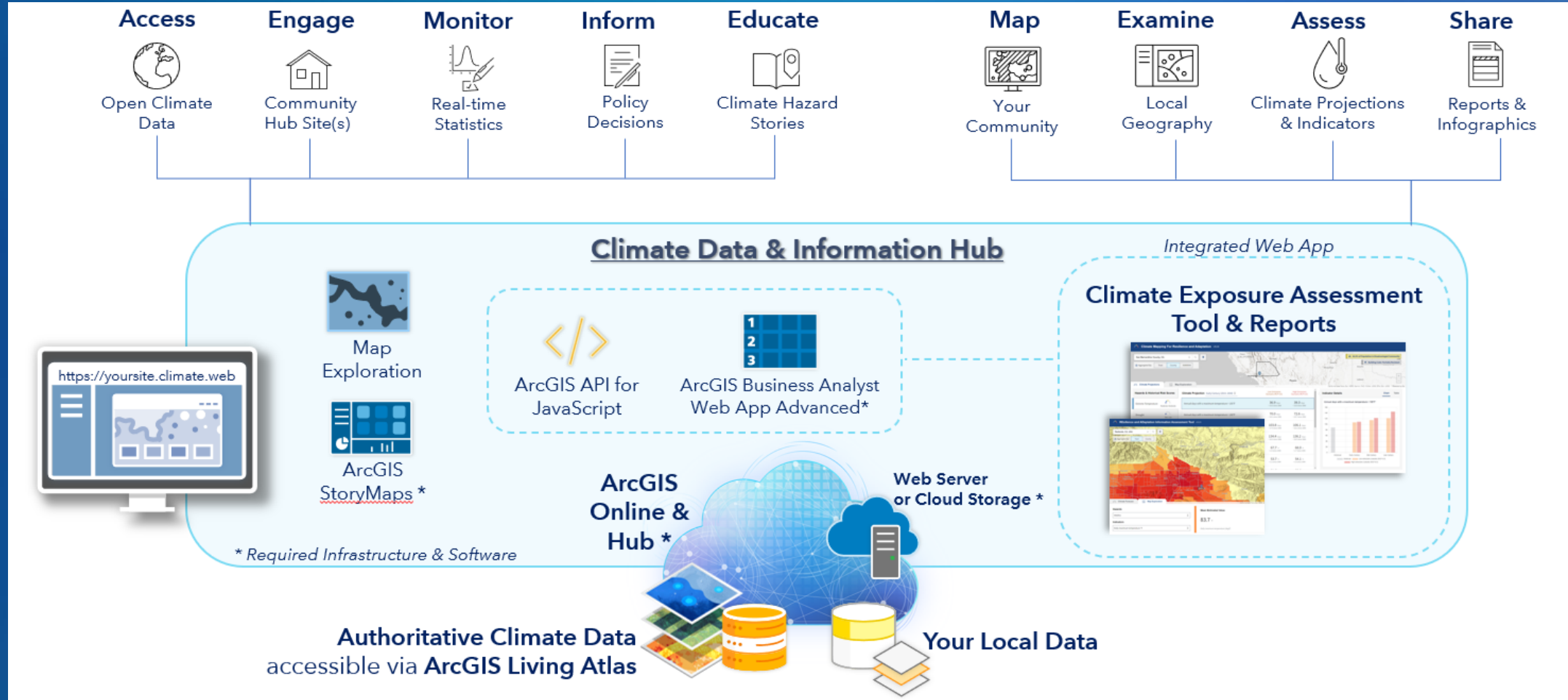
## GeoVisualization

Engage community vision and goals



## GeoCollaboration

# Geospatial Strategy for Climate Action



# Community Approaches

To Climate Action Planning

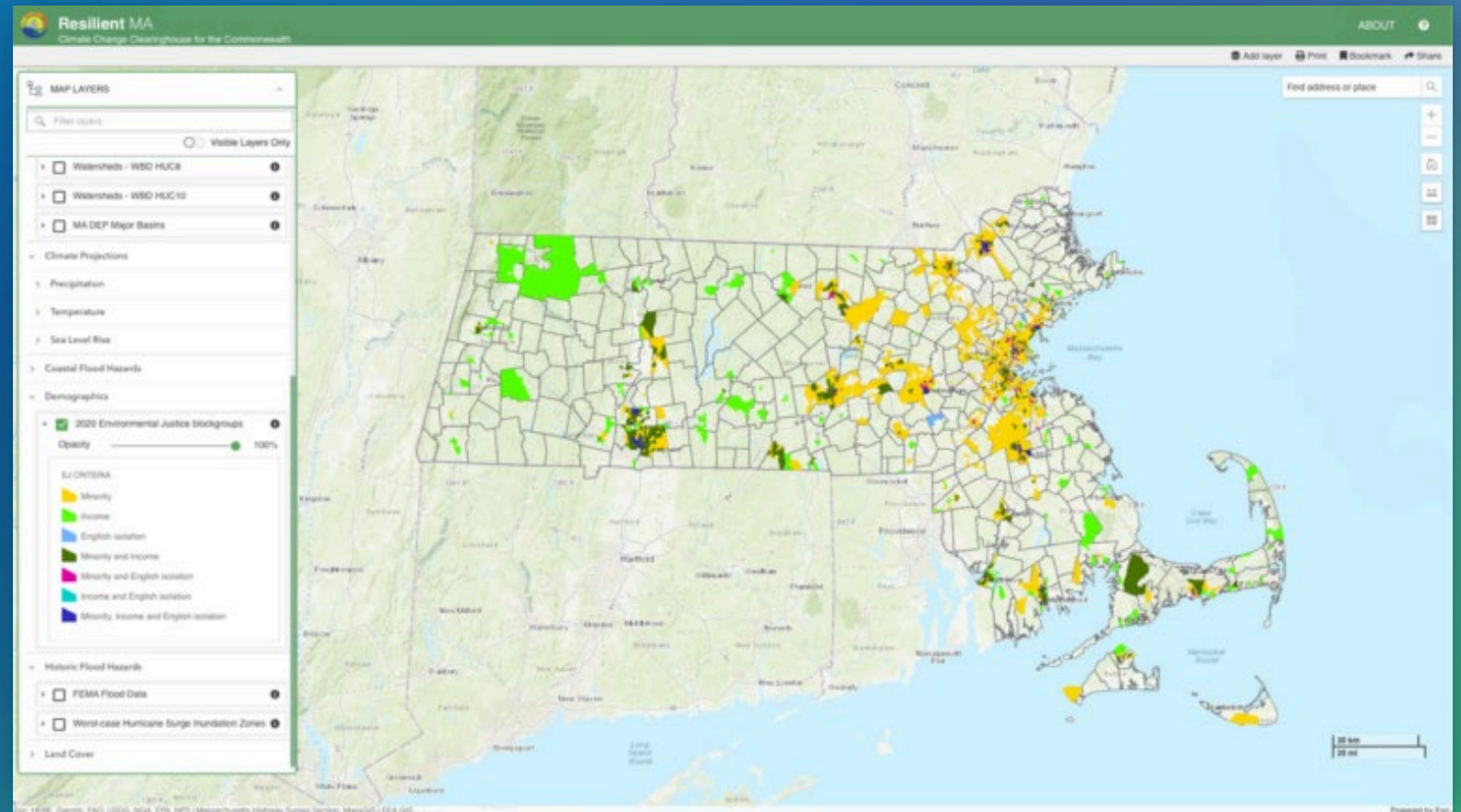




# ResilientMass Maps & Data Center

Bolsters Resilience with Accessible Climate Data and Tools

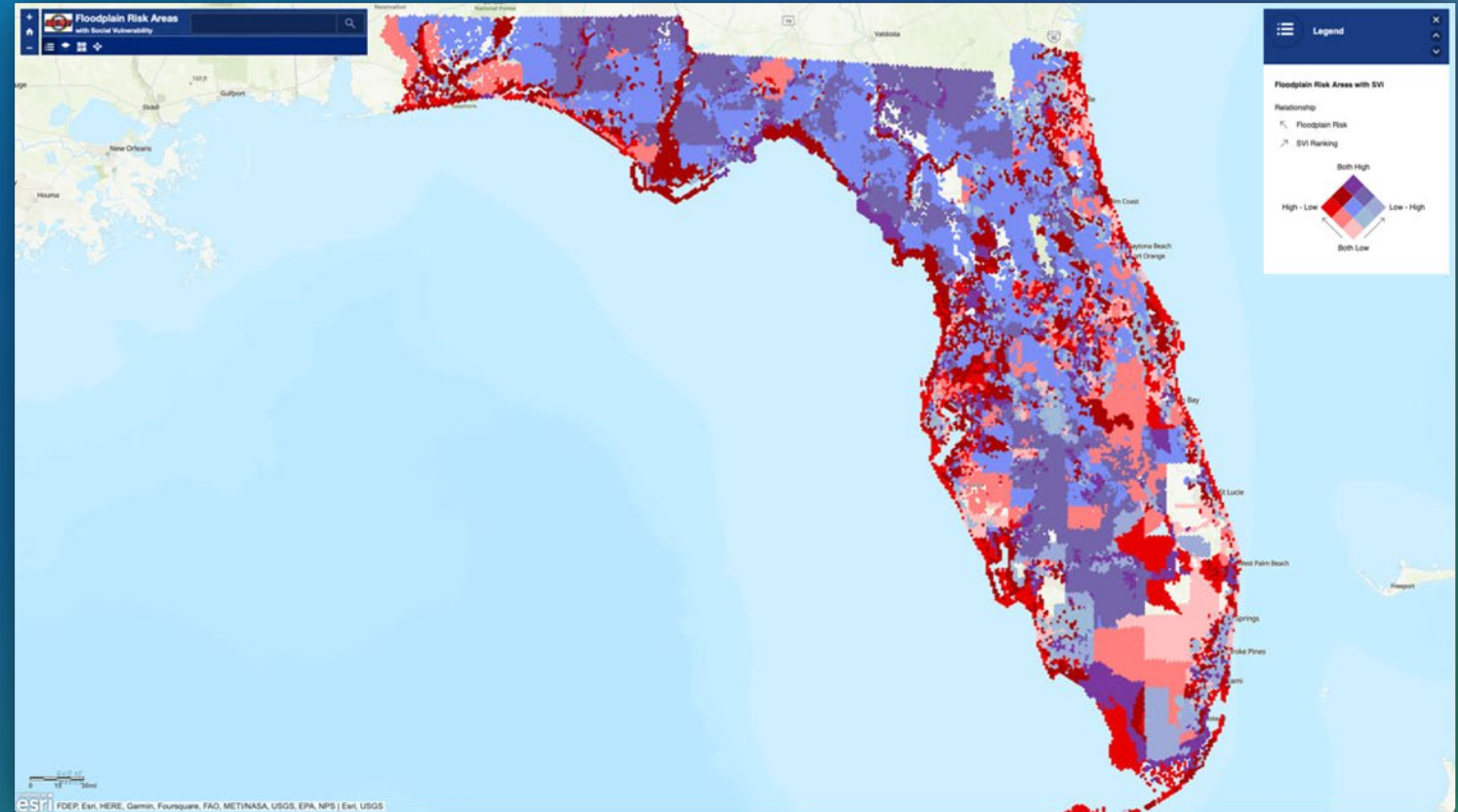
- Helps communities improve climate resilience
- Tools for planning and prioritization
- Ensures equitable funding
- Increases community engagement



# FL State Hazard Mitigation Plan

## Telling the Story of Modern Risk Mitigation

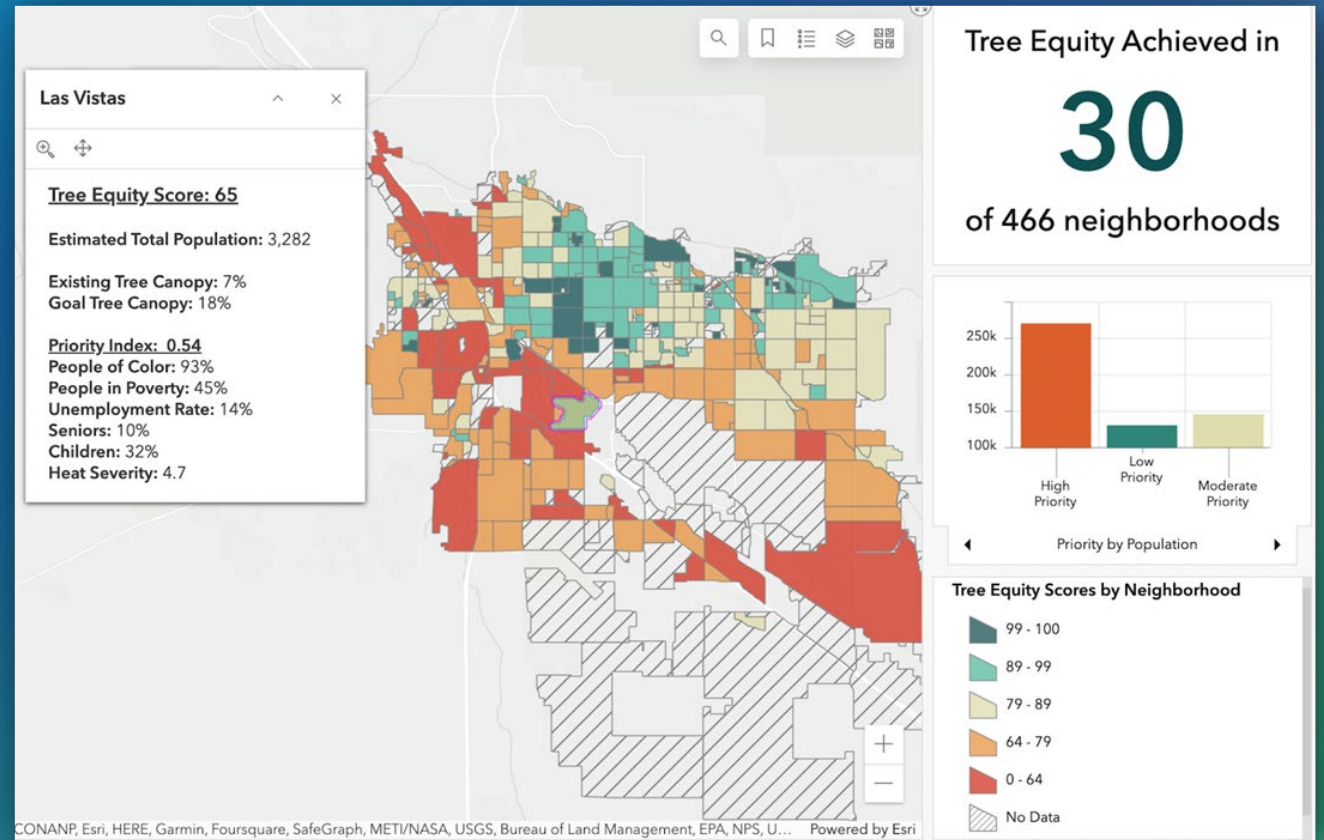
- Meets FEMA Mandate for climate/resilience considerations in hazard mitigation plans
- Open data supports statewide and local efforts
- Facilitates understanding through visualization
- Increases collaboration



# Tucson Climate Action Plan

## Making Climate Action Easy

- Visualizes risk and equity
- Empowers community action
- Digestible summaries of complex science
- Transparent government

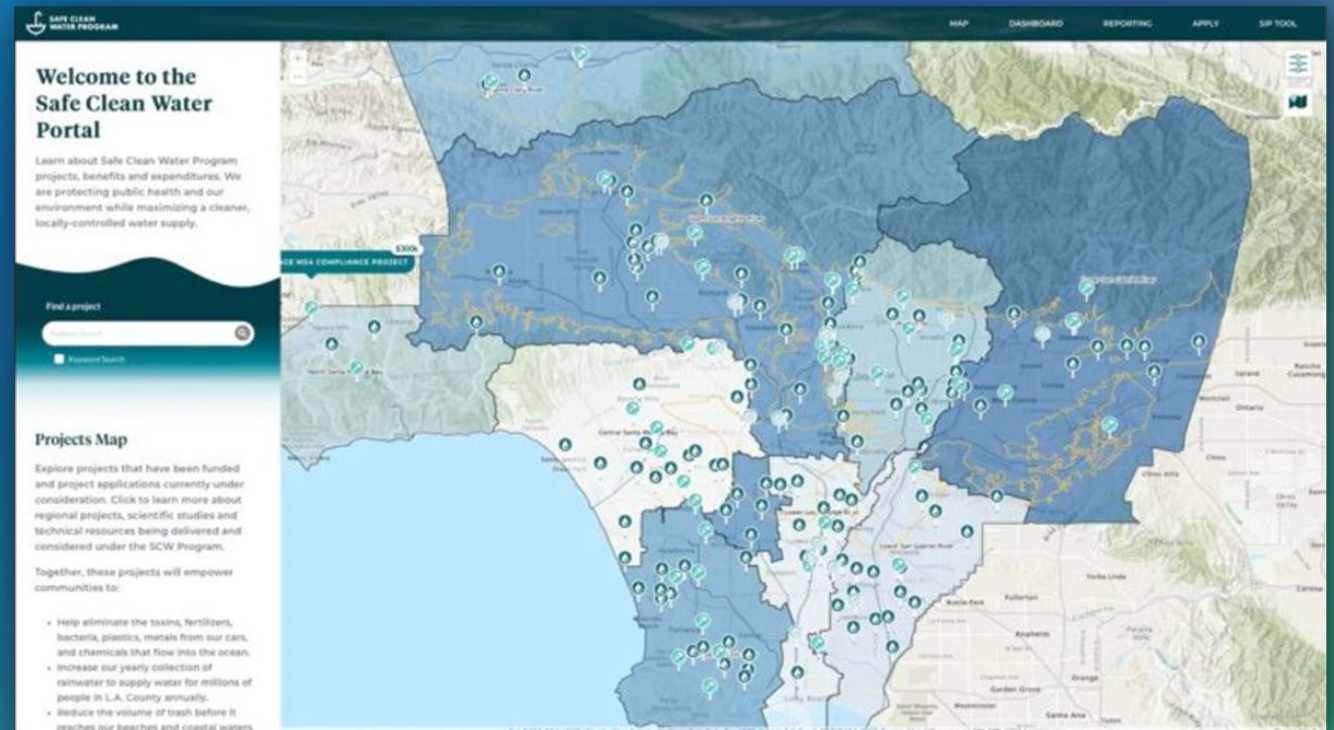




# LA County Safe Clean Water Portal

## Extracting Greater Value from Data

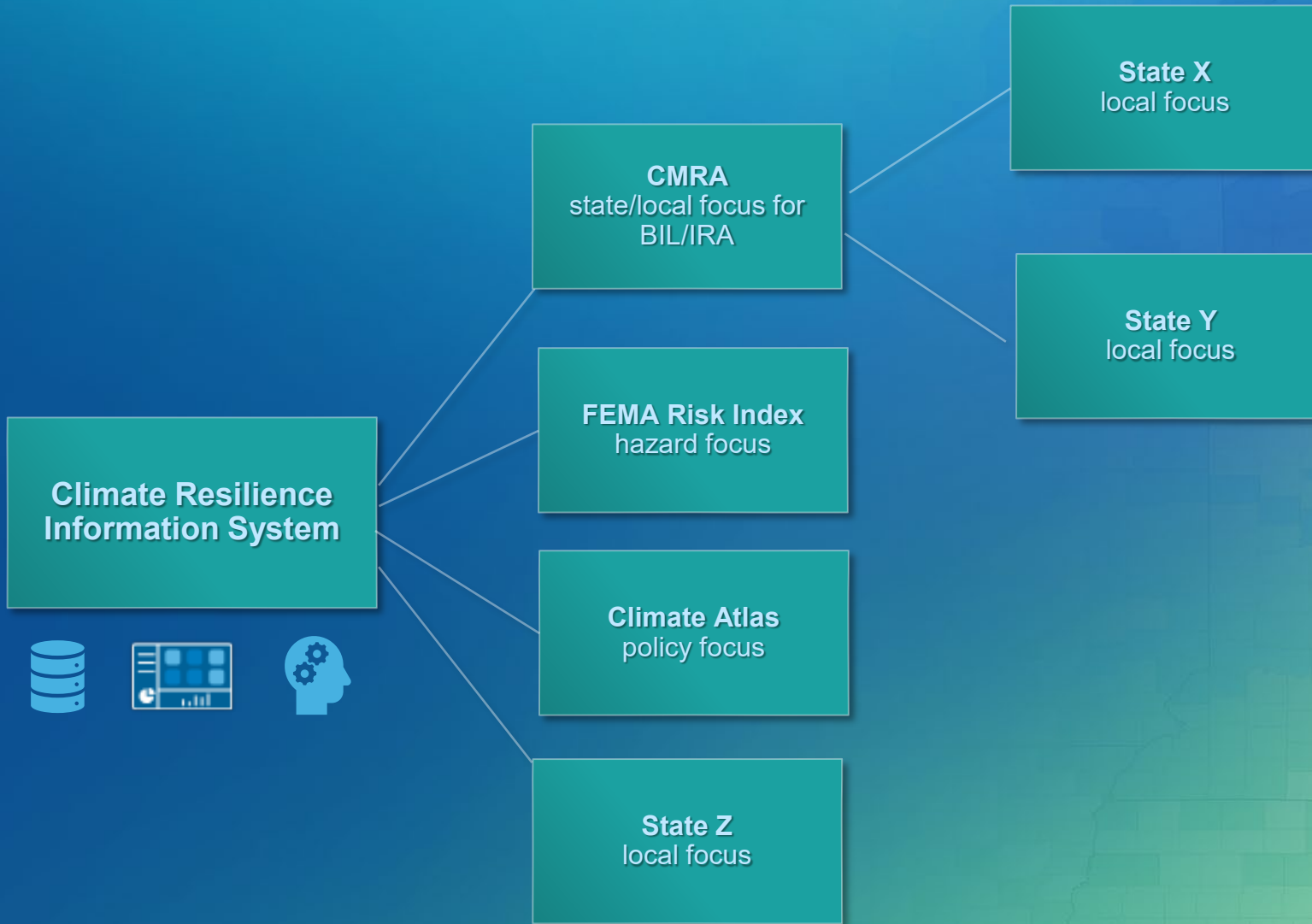
- Organization-wide persona-driven tools and insight
- Project tracking through space and time
- Intuitive public-facing tools
- Single source of truth



The screenshot shows the CMRA website interface. At the top, a navigation bar includes the following links: CMRA, Get Started, Assessment Tool, Hazards, Federal Funding, New Policies, Open Data, and About. The main content area is split into two sections. On the left, a dark blue sidebar contains the title "Climate Mapping for Resilience & Adaptation" and four white buttons: "Get Started", "Steps to Resilience", "Assessment Tool", and "Federal Funding". On the right, a network map of the United States is displayed, consisting of a dense web of white lines connecting various nodes. Several nodes are highlighted with colored icons: a red icon with a person, an orange icon with a tree, a yellow icon with a gear, a blue icon with waves, and a purple icon with a building.

# CMRA

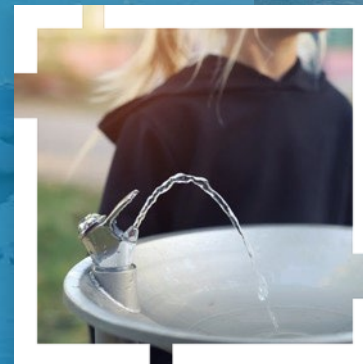
[resilience.climate.gov](https://resilience.climate.gov)





# Guided Discussion

Dan Pisut



# Getting Started

GIS for Climate Action & Mitigation

## Contact:

Sunny Fleming

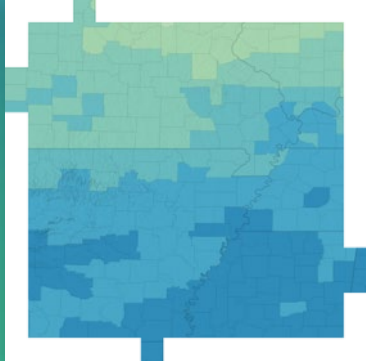
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