FORERUNNER

The Road to Resilience: Flood Risk Insights from Climate Central's Edge of America Tour

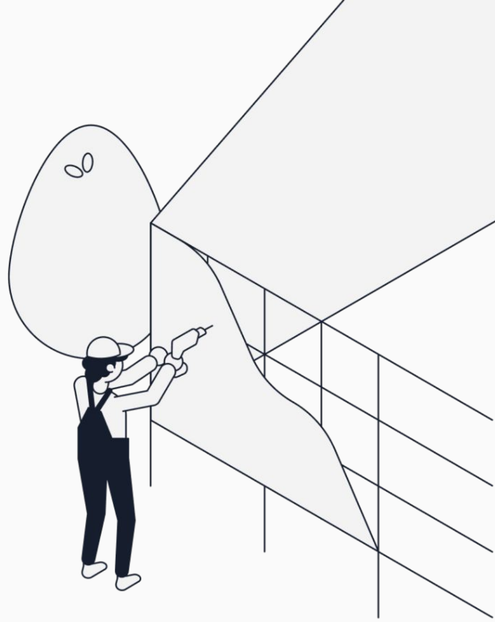
March 25, 2025

withforerunner.com

WELCOME

Housekeeping

- This presentation is being recorded
- The recording and presentation will be shared via email and posted on our blog
- Use the Q+A or the Chat to ask questions
- CFMs: Complete the post-attendance survey to receive your CEC. The CEC Certificate will be sent via email to you (and the list will be sent to ASFPM) next week

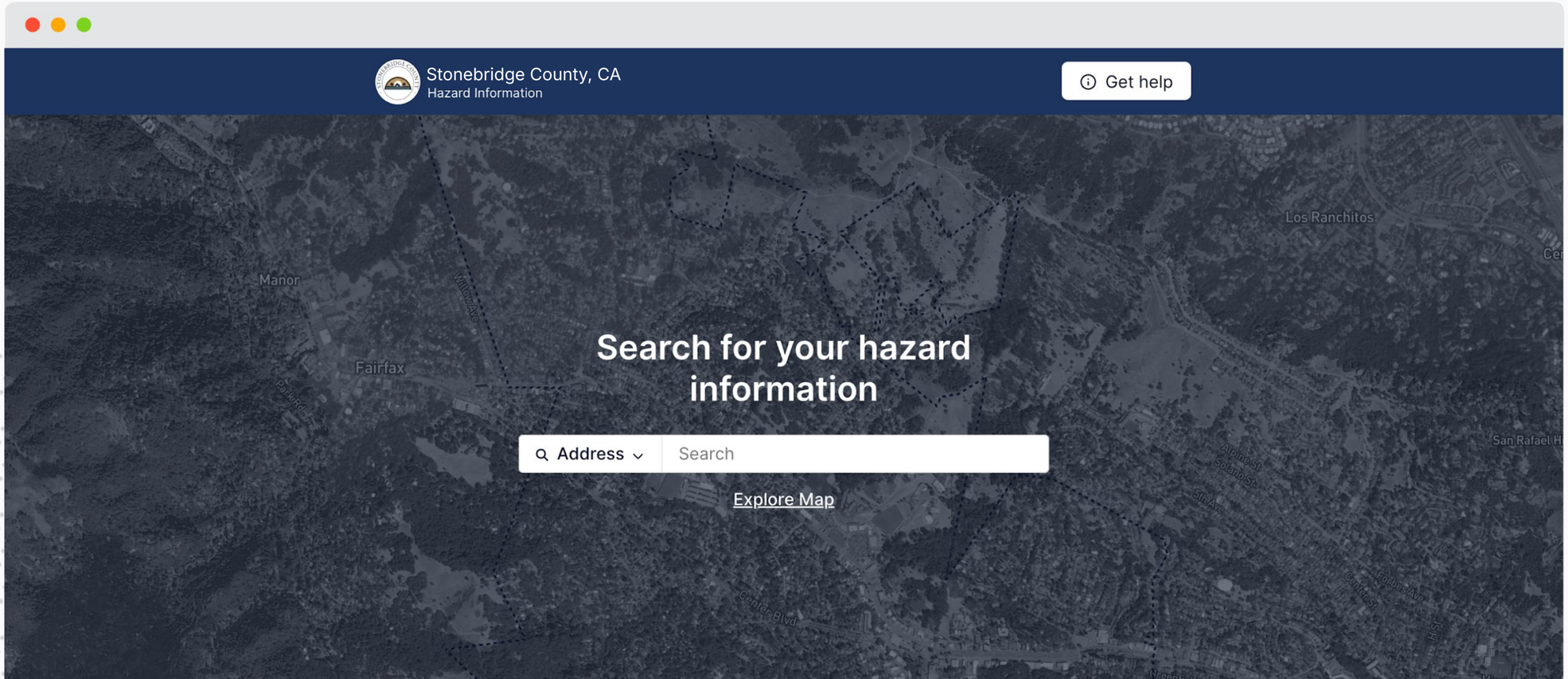


Agenda

1 **Introduction**
2 **The Road to Resilience**
3 **Q&A**

OUR SOLUTION

Forerunner empowers gov. agencies by centralizing hazard data into a single, easy to use, application.



VALUE

Forerunner is a one-stop-shop for all of your hazard management data and workflows.

Letter/Report Generation

Mobile Application

Document Management

Configurable Table Views

Sensitive Data Management

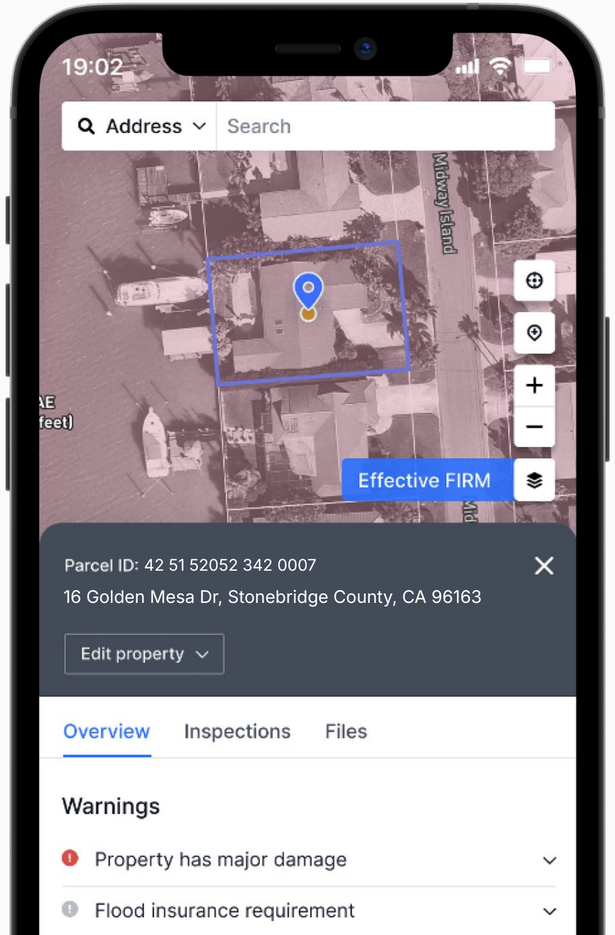
Configurable Records

Regulatory Engine

Damage Estimates

Hazard Zone Determinations

Public Website



PARTNERS

We work with over 130 of the most at-risk communities throughout the U.S.

State of California

State of Florida

Concord
California

Santa Barbara County
California

Raleigh
North Carolina

Harris County
Texas

Lincoln
Nebraska

Lee County
Florida

Miami
Florida

Las Cruces
New Mexico

Peterborough
New Hampshire

Norfolk
Virginia

Jefferson Parish
Louisiana

Kitty Hawk
North Carolina

Orting
Washington

Georgetown County
South Carolina

Agenda

1 Introduction
2 The Road to Resilience
3 Q&A

Daniel Rizza
Director of Sea Level Rise Program
Climate Central

Allison Kopicki
Outreach and Communications
Coordinator - FloodVision
Climate Central

CLIMATE CENTRAL

FloodVision®
Road to Resilience

March 25, 2025

Dan Rizza
drizza@climatecentral.org

Allison Kopicki
akopicki@climatecentral.org

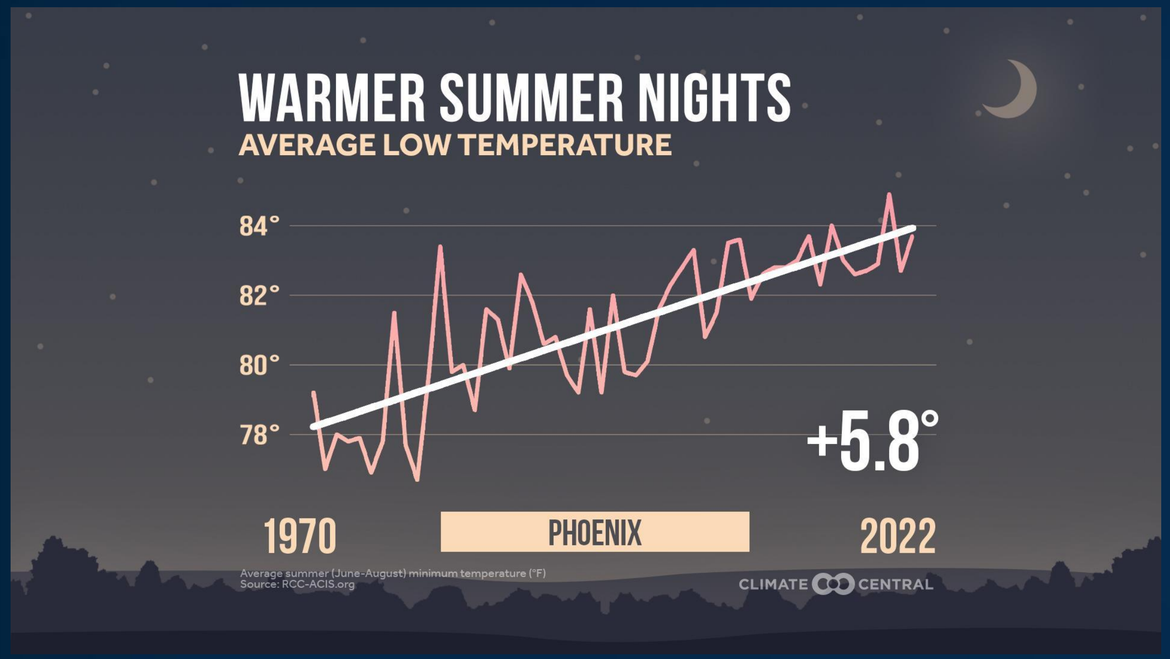
A Little About Climate Central

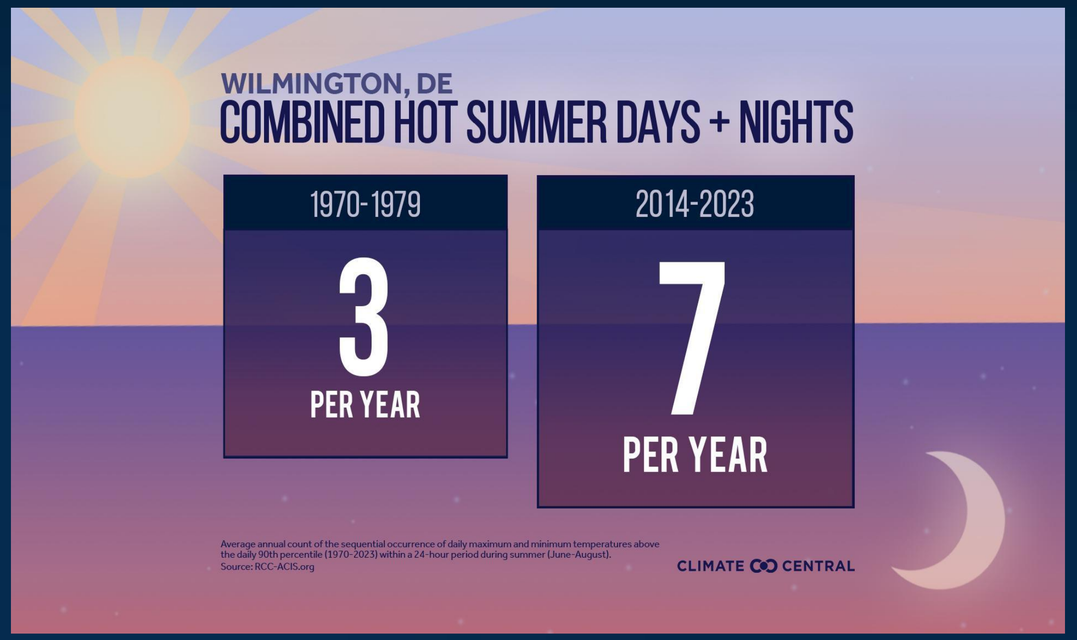
- We use science, big data, and technology to generate thousands of local storylines and compelling visuals that **make climate change personal** and **show what can be done about it**

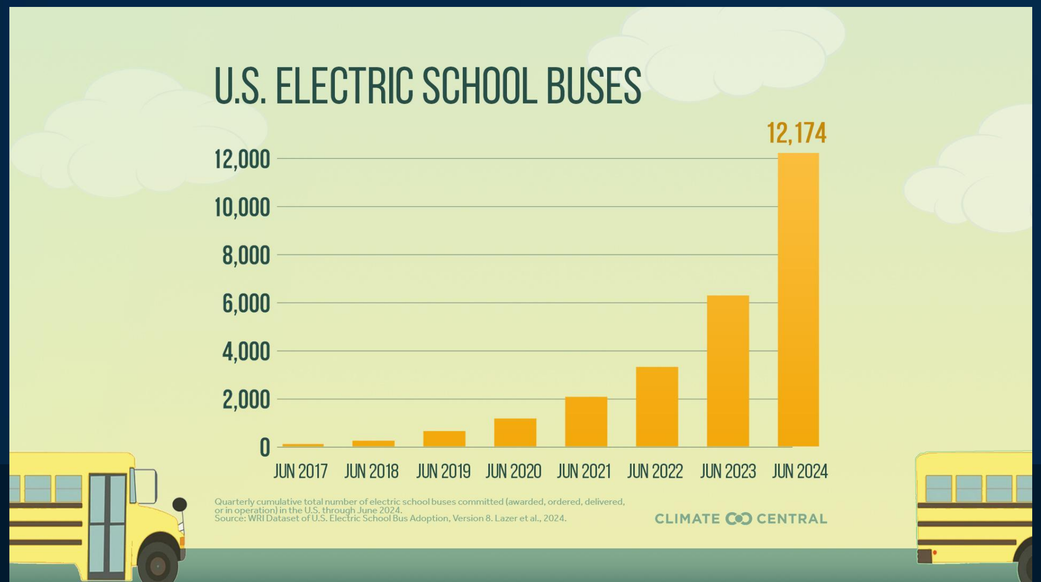
- We are **non-profit**, **non-partisan**, **non-advocacy**

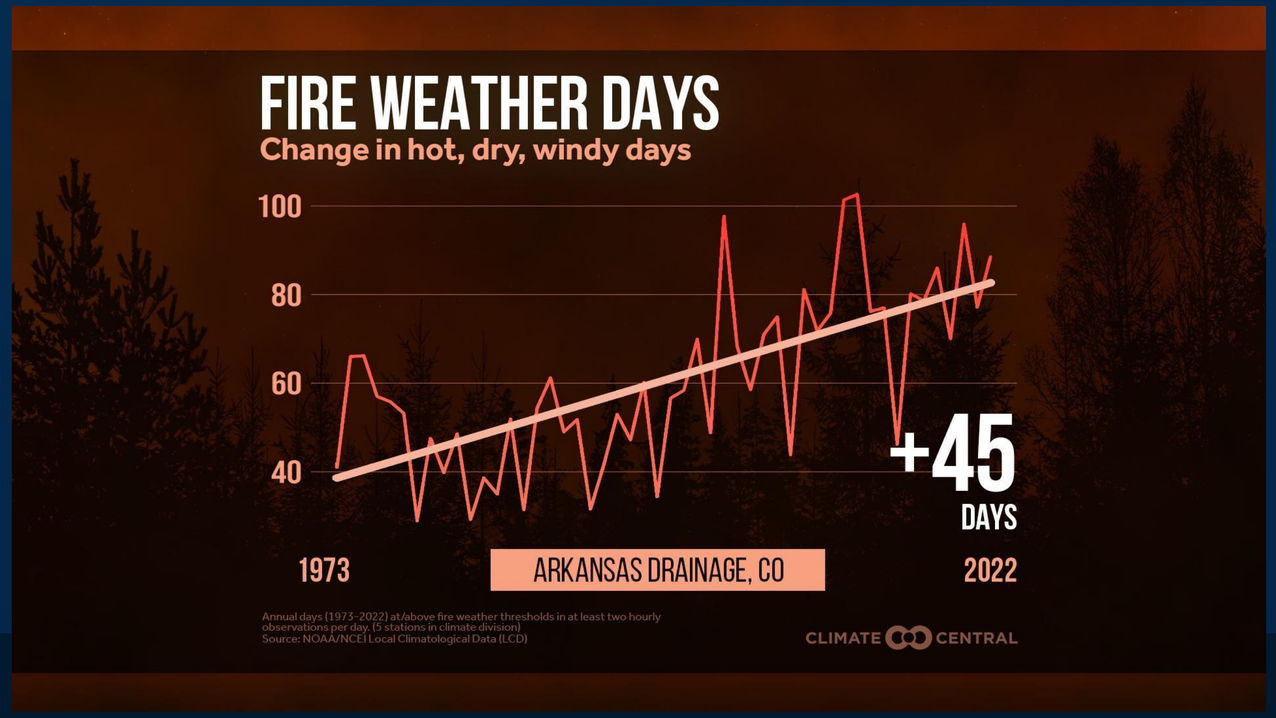
- We provide **localized** and **evidence-based information** on **climate science, impacts, & solutions**

Climate Matters Program





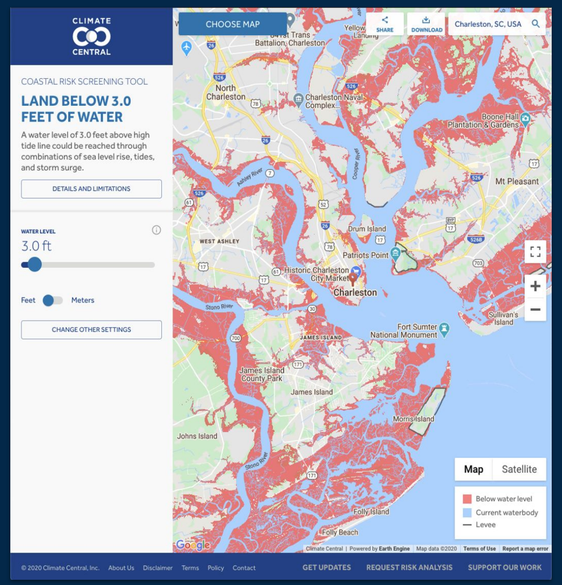




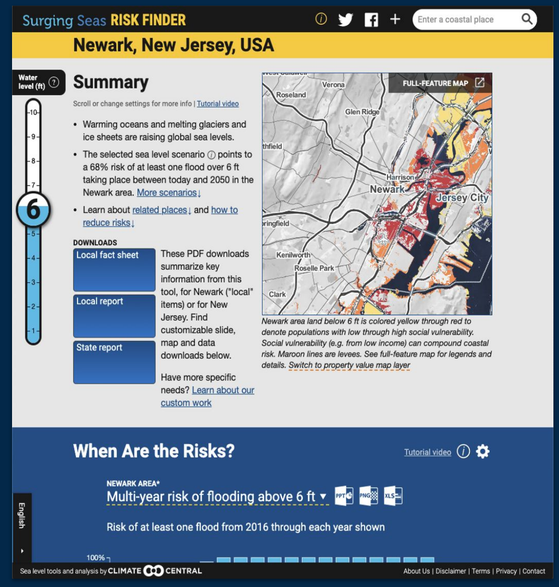
Sea Level Rise Program

FloodVision®

Edge of America Tour



Coastal Risk Screening Tool



Risk Finder

CLIMATE CENTRAL

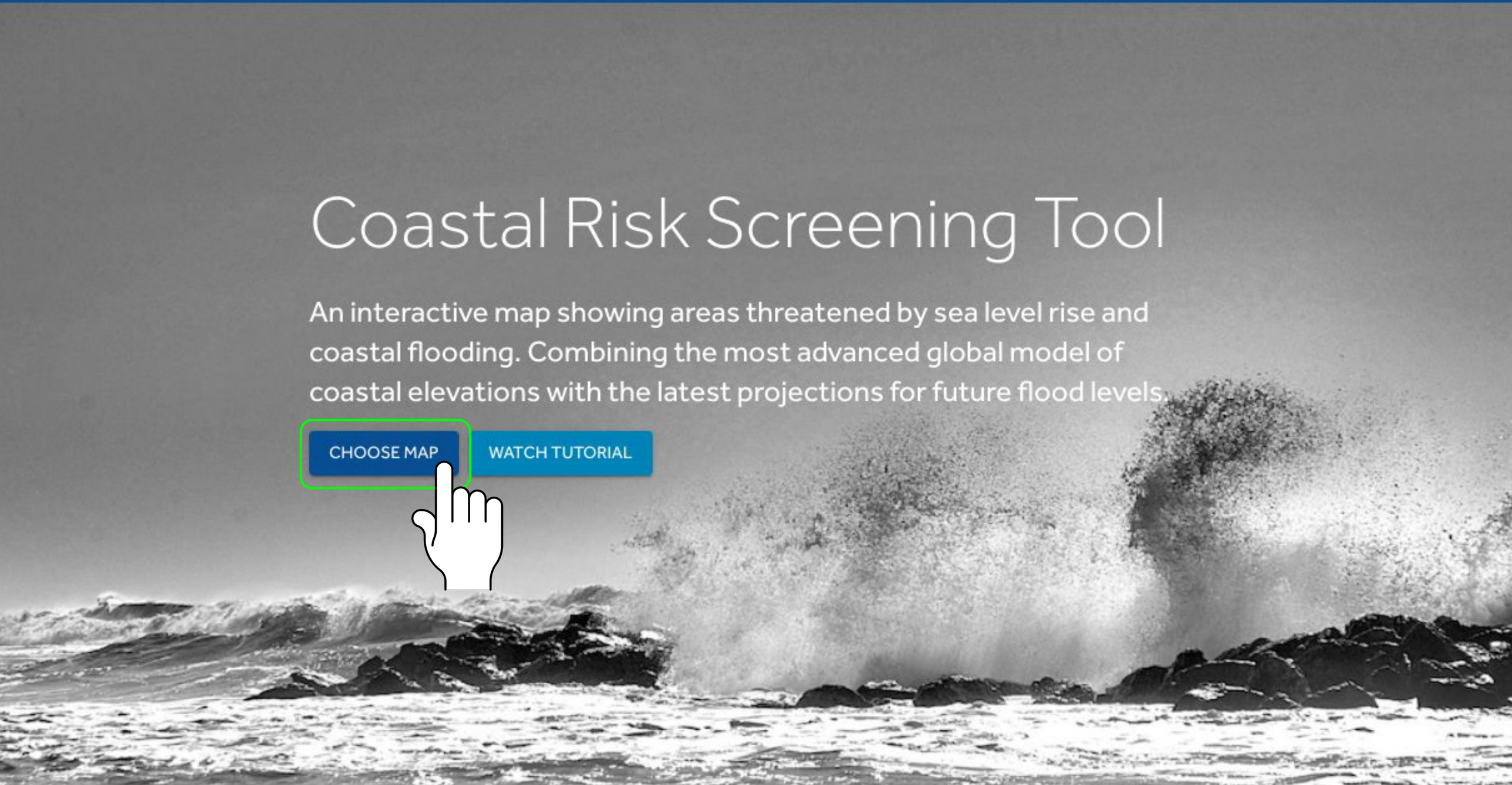
CLIMATE CENTRAL

Coastal Risk Screening Tool

An interactive map showing areas threatened by sea level rise and coastal flooding. Combining the most advanced global model of coastal elevations with the latest projections for future flood levels.

CHOOSE MAP

WATCH TUTORIAL



CLIMATE CENTRAL

COASTAL RISK SCREENING TOOL

LAND PROJECTED TO BE BELOW ANNUAL FLOOD LEVEL IN 2050

Explore sea level rise and coastal flood threats by adjusting the controls below.

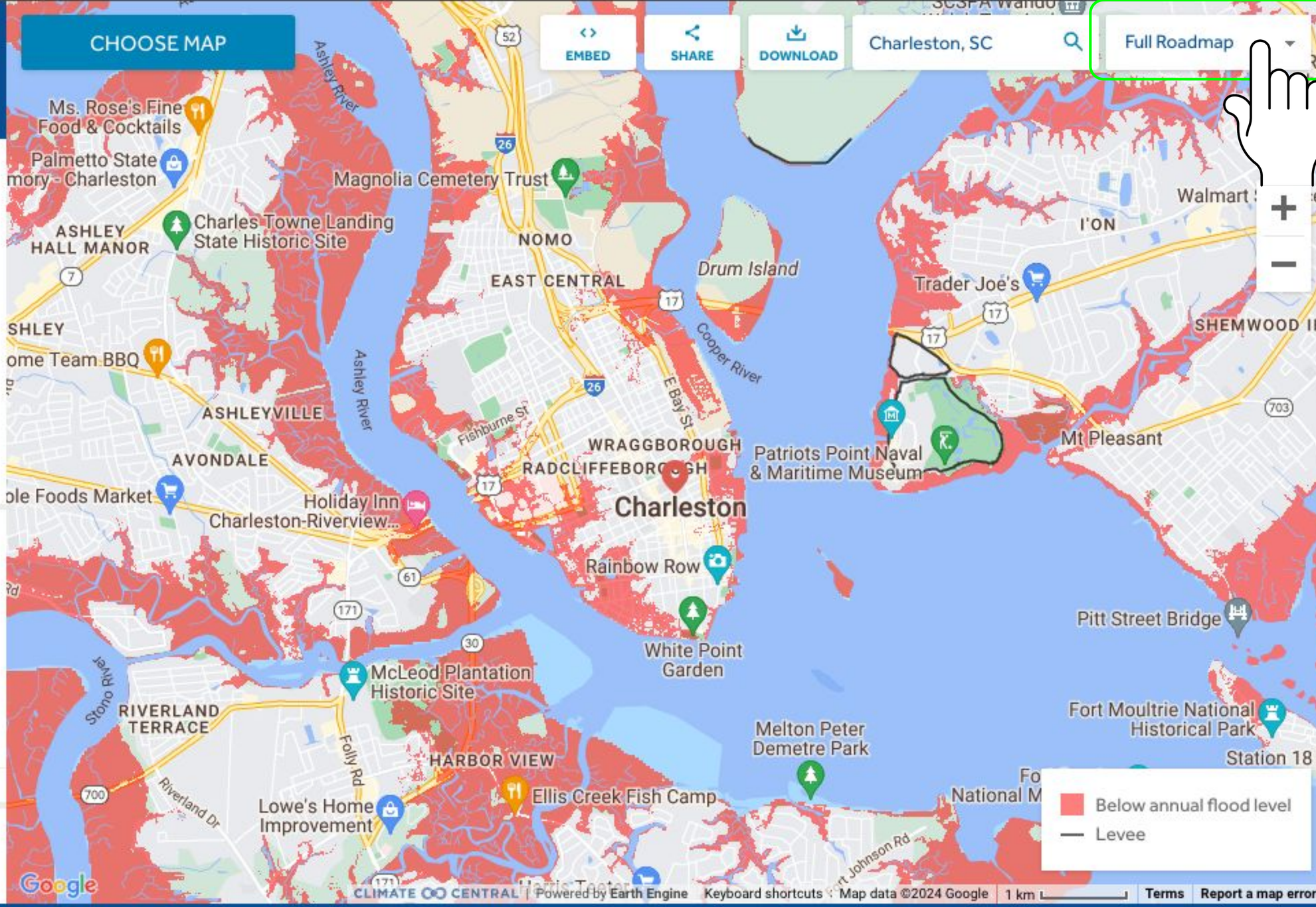
DETAILS AND LIMITATIONS

YEAR

2050

CHANGE OTHER SETTINGS

Video Tutorial



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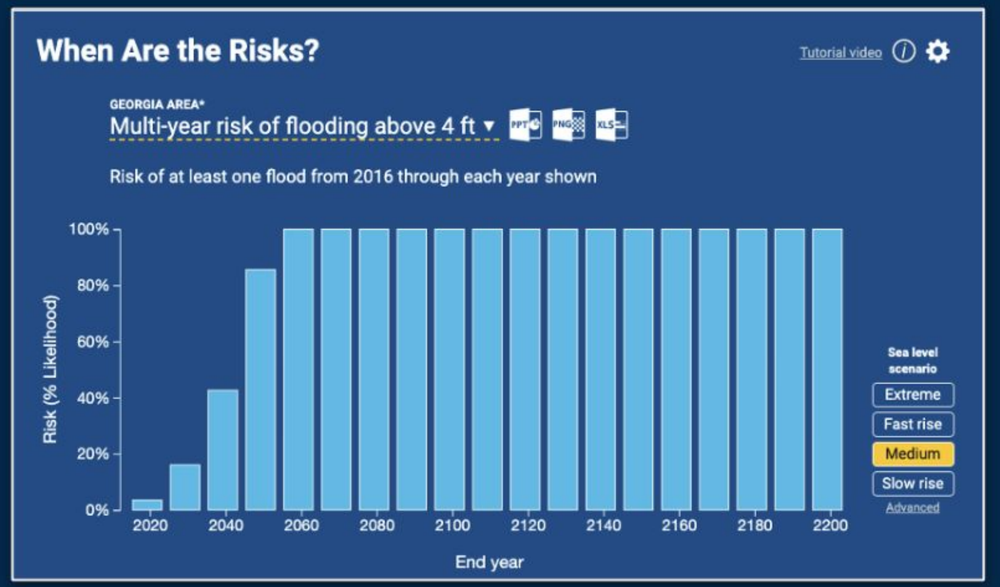
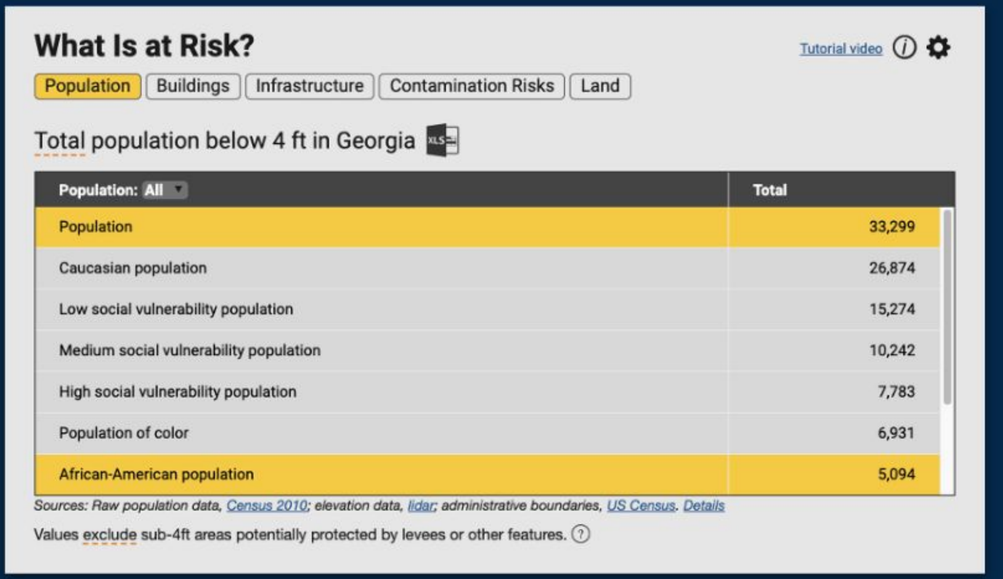
Risk Finder

- Web tool for assessing sea level rise and coastal flood risk
- Hyper-localized information
- Incorporates 100+ GIS datasets - mainly from federal sources including NOAA, the Census, DOE, DOI, EPA, FCC, FEMA, and USGS
- Downloadable fact sheets, spreadsheets, and more



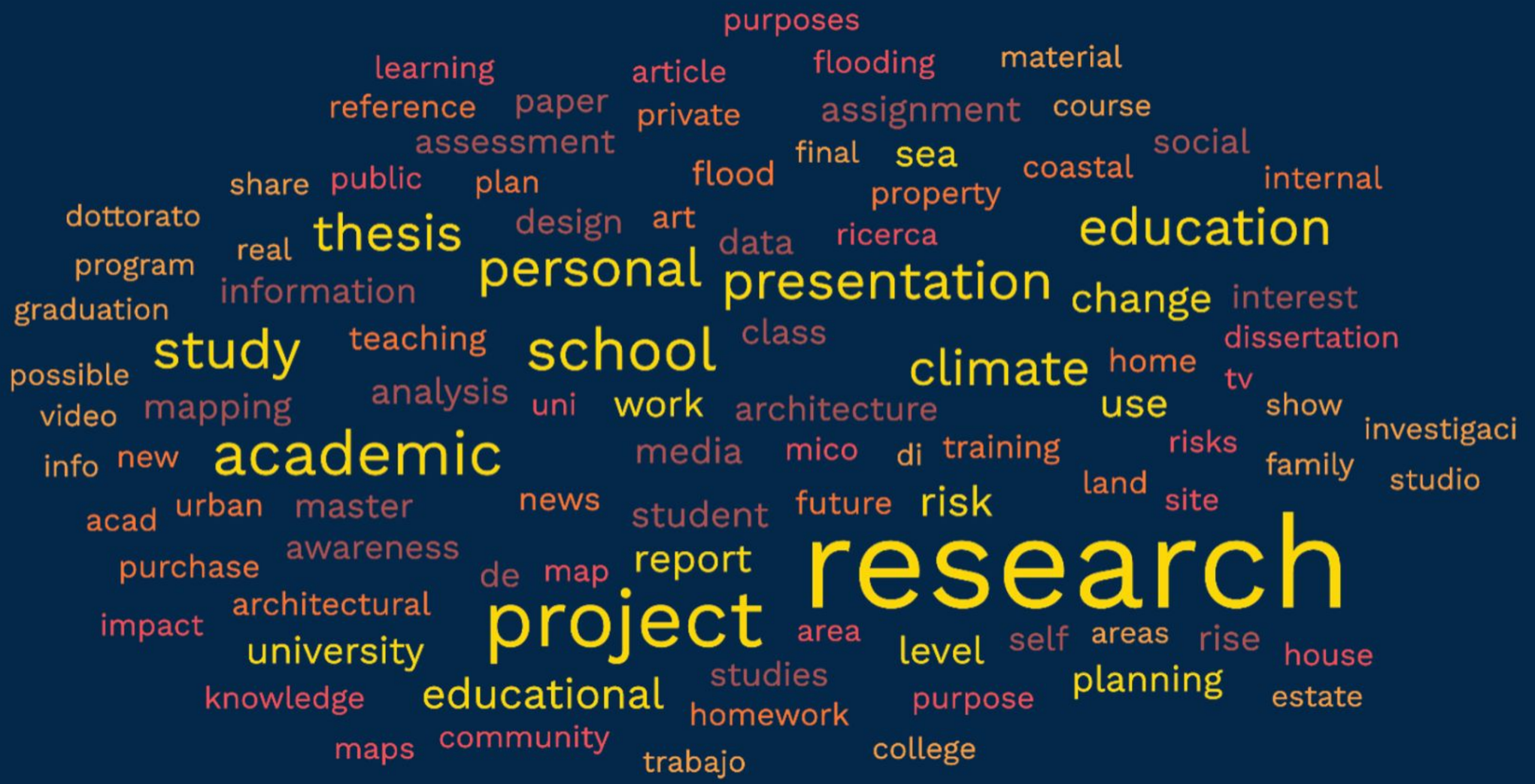


CLIMATE CENTRAL

Governments use Climate Central tools for…

CLIMATE CENTRAL

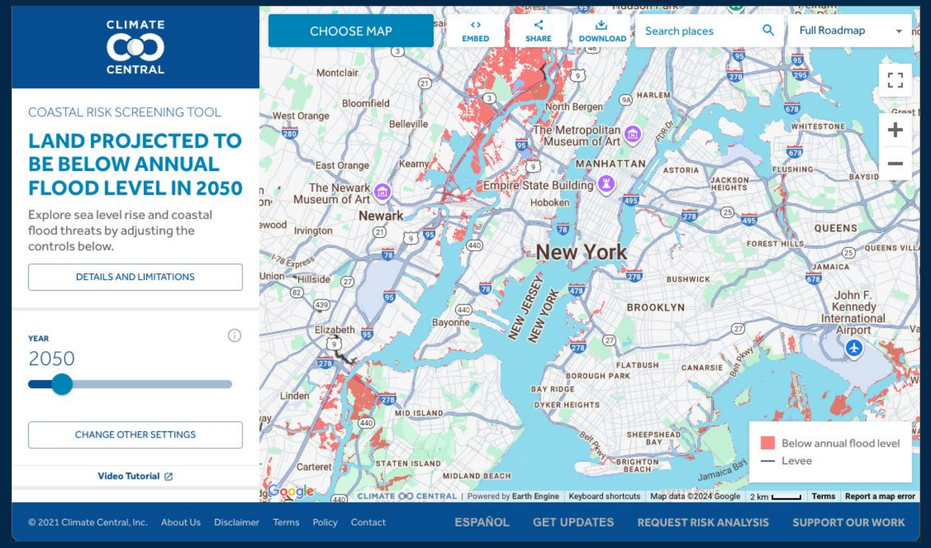
Coastal practitioners use Climate Central tools for…



CLIMATE CENTRAL

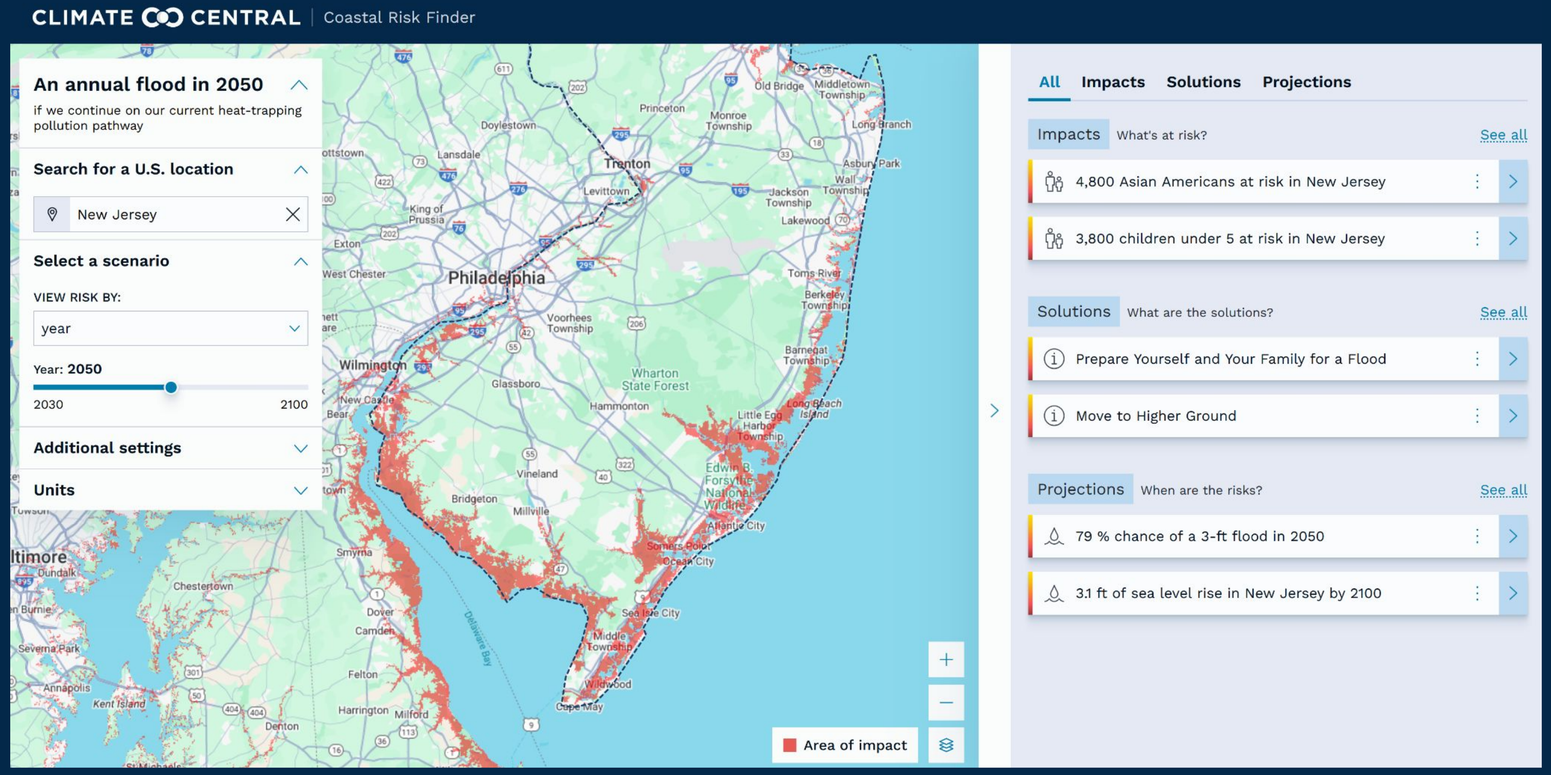
More Use Cases

Organization	Climate Central Resource	Intended Use as provided by organization during download of materials from online tools
County officials in Dept. of Planning & Zoning	Map	planning
State Lands Commission	Map	granted lands vulnerability assessment
Federal agency	Risk Finder	environmental planning & risk analysis
County/State Office of planning	Scenario 2100 data	research and long-range planning
County Utilities Authority	Map	resiliency planning
Federal agency	Map	NEPA environmental assessments
County Board of County Commissioners	Guide on using Climate Central tools within NFIP CRS	CRS planning
State Department of Conservation and Recreation	Map	relocation of facilities
City in Maryland	Risk Finder	data collection for comprehensive plan update
City in New Hampshire - Planning Department	Scenario 2100	planning & zoning
City in California	Risk Finder Fact Sheet	FEMA Grant
State Department of Transportation	Risk Finder Forecast Data	Grant application


CLIMATE CENTRAL
COASTAL RISK SCREENING TOOL
LAND PROJECTED TO BE BELOW ANNUAL FLOOD LEVEL IN 2050
Explore sea level rise and coastal flood threats by adjusting the controls below.
DETAILS AND LIMITATIONS
YEAR
2050
CHANGE OTHER SETTINGS
Video Tutorial
CHOOSE MAP
EMBED
SHARE
DOWNLOAD
Search places
Full Roadmap
New York
Below annual flood level
Levee
© 2021 Climate Central, Inc. About Us Disclaimer Terms Policy Contact
ESPAÑOL
GET UPDATES
REQUEST RISK ANALYSIS
SUPPORT OUR WORK

+

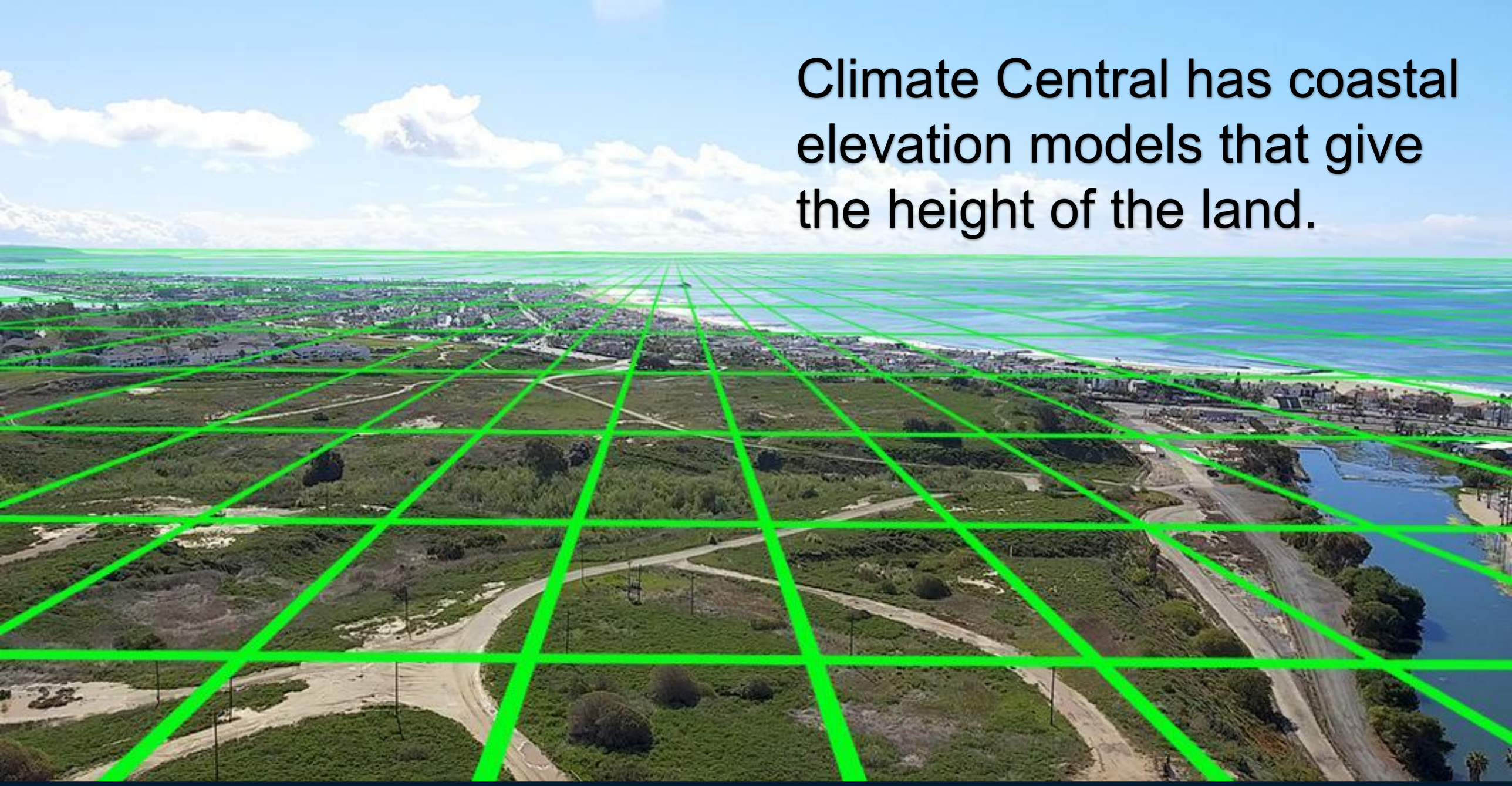

Surging Seas RISK FINDER
Explore sea level and coastal flood risks
Enter a U.S. coastal place
Video tutorial
English
Sea level tools and analysis by CLIMATE CENTRAL
About Us | Disclaimer | Terms | Privacy | Contact

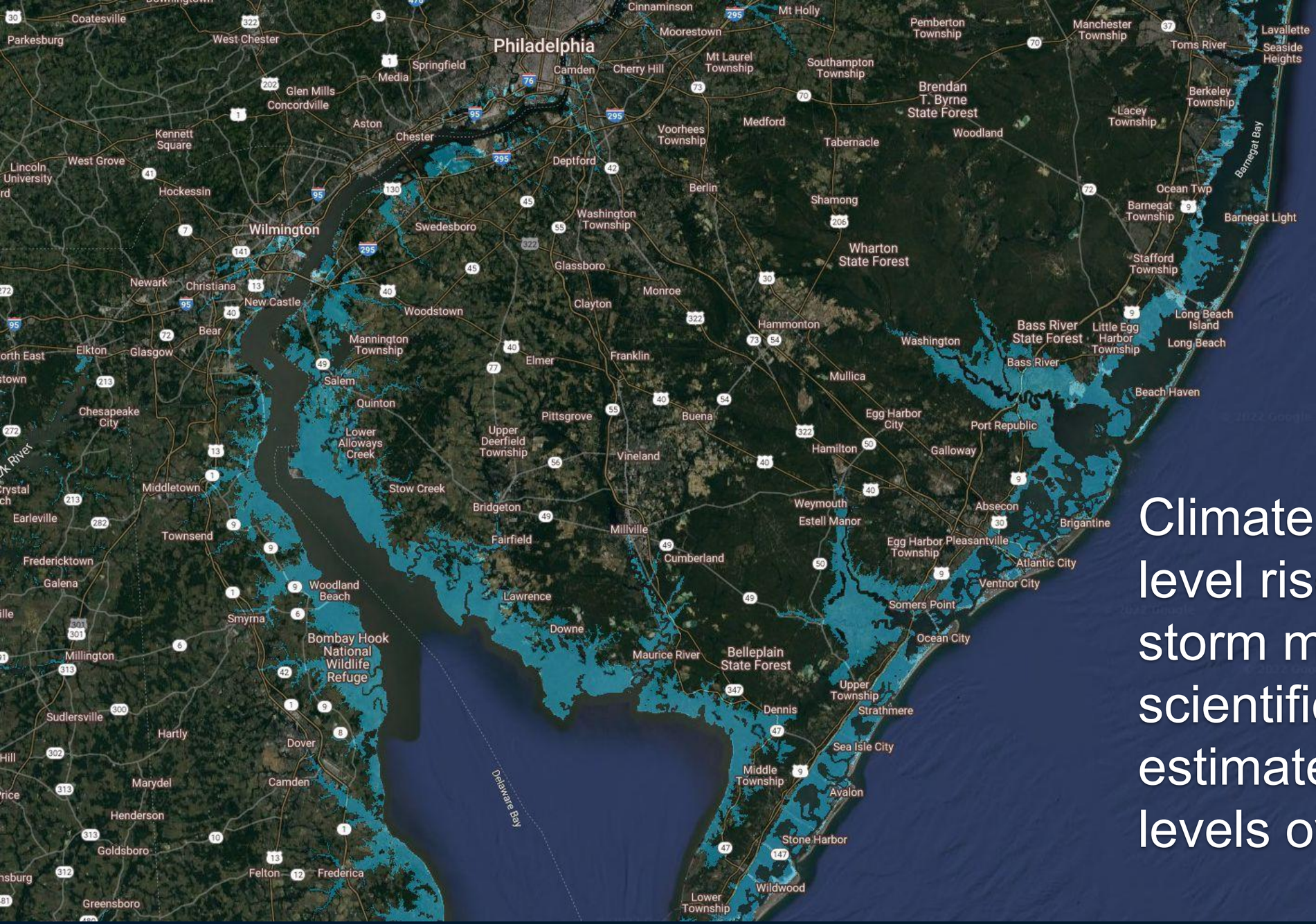

CLIMATE CENTRAL | Coastal Risk Finder
An annual flood in 2050
if we continue on our current heat-trapping pollution pathway
Search for a U.S. location
New Jersey
Select a scenario
VIEW RISK BY:
year
Year: 2050
2030
2100
Additional settings
Units
Philadelphia
Trenton
Wilmington
Area of impact
All
Impacts
Solutions
Projections
Impacts What's at risk? See all
4,800 Asian Americans at risk in New Jersey
3,800 children under 5 at risk in New Jersey
Solutions What are the solutions? See all
Prepare Yourself and Your Family for a Flood
Move to Higher Ground
Projections When are the risks? See all
79 % chance of a 3-ft flood in 2050
3.1 ft of sea level rise in New Jersey by 2100

“I didn’t know it was going to happen to me.”

“It never flooded like this before.”

“I had no idea it would be this bad.”


Climate Central has coastal elevation models that give the height of the land.



Climate Central has sea level rise and coastal storm models that give scientifically true estimates of future water levels over time.

Climate Central (and everyone else) uses this information to give a satellite view of the future.

But humans don't live on satellites and this view doesn't doesn't connect with people.

Shock and surprise in coastal communities after a flood event

Gualtieri said survivors told them they didn’t believe the warnings after other residents told them the surge wouldn’t be that bad. He said people wound up hiding in their attics to get away from the water.

“We made our case, we told people what they needed to do and they chose otherwise,” Gualtieri said. He added that his deputies tried overnight to reach those who had been trapped, but it just wasn’t safe.

"I'm just in shock," a homeowner told CBS News. "It's just such a beautiful house, and to see it like this, it's like, ***what could have happened?"***

"I mean everybody is just kind of in shock and just trying to pick up the pieces," he told WUSF the morning after the storm. "***I mean nobody really expected it like this."***

Shock and surprise in coastal communities after a flood event

The Washington Post

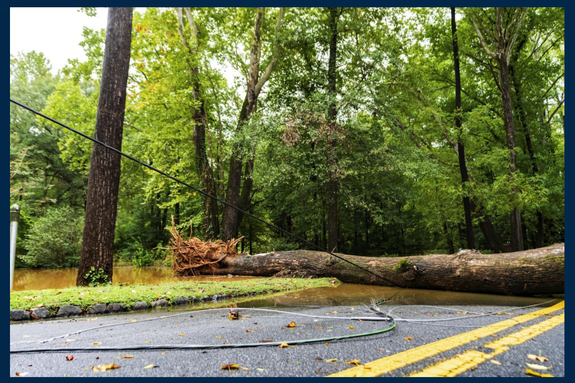
“Water damage is like a silent threat,” she said.
“I don’t know what I’m going to do about this because it’s never happened before.”

The New York Times

“They’ll forget about this storm in a few weeks,” one resident said. “As fast as they can put it up, people are moving in.”

AP Associated Press

“I knew it would be bad, but I had no idea it was going to be this bad,” she said. “This is unbelievable.”



PEER-REVIEWED ARTICLE · Oct 31, 2024

Sea-level rise maps can decrease risk perceptions in coastal communities

By Matto Mildenberger, Jennifer Marlon, Alexander Sahn, Michelle A. Hummel, Chris Miljanich and Mark Lubell
Filed under: Behaviors & Actions, Climate Impacts and Messaging

We are pleased to announce the publication of a new article, "Unintended consequences of using maps

MATE CENTRAL

Pictures tell a story.


CLIMATE
CENTRAL
ALEXANDRIA:
If we keep our current path

WASHINGTON D.C.

If we cut pollution sharply

FloodVision:
If you can see the future, you can shape the future.

FloodRover I

CLIMATE CENTRAL

FloodRover II

FloodVision®

- High quality entry-floor elevation data for quantitative flood risk assessments
- Photorealistic flood visualizations for effective risk communication

CLIMATE CENTRAL


Andrews Av
OR LEASE
orm Adams
954 331 1776


OR LEASE


Andrews Av
SIMULATION


Entry floor elevation measurement
Measurements of buildings

Metadata includes:
- **Address**
- **EFE (Entry Floor Elevation)**
- **Road Elevation**
- **Latitude**
- **Longitude**

Metadata includes:
- **Address**
- **EFE (Entry Floor Elevation)**
- **Road Elevation**
- **Latitude**
- **Longitude**

MODELED VISUALIZATION

5 ft. above road level
Water height: 6' 2" above MHHW
© 2024 Climate Central

Metadata includes:
- **Address**
- **EFE (Entry Floor Elevation)**
- **Road Elevation**
- **Latitude**
- **Longitude**

MODELED VISUALIZATION

NOAA 2022 intermediate-high sea level rise scenario for 2070

1' 11" above road level

Water height: 3' 1" above MHHW

© 2024 Climate Central

FloodVision:
What the visualizations can show


CHRYSLER
MACON & JOAN
BROCK BUILDING
PLEASE
Keep Off
The Vine

MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2100 + 1% annual chance flood
6' 11" above road level, Water height: 9' 4" above local high tide line © 2024 Climate Central


Since 1916
Nathan's
FAMOUS
Since 1916
Nathan's
FAMOUS
More than just the best HOT DOG
LICATESSEN
Buffet Catering
Nathan's
OLD FASHIONED LEMONADE
Serving
FRANKFURTERS
Since 1916.
ICE COLD
BEER
FOLLOW THE CROWD
FRESH CUT
FRIES
Coca-Cola
ROOT BEER
Nathan's
ENJOY the Original!
NO STANDING
Anytime
2

MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2050 + 1% annual chance flood
3' 4" above road level, Water height: 7' 0" above local high tide line © 2024 Climate Central

MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2100 + 1% annual chance flood
5' 11" above road level, Water height: 9' 7" above local high tide line © 2024 Climate Central

MODELED VISUALIZATION

4' 4" above road level, Water height: 8' 0" above local high tide line © 2024 Climate Central


STATION 171
SMOKE ALARMS
Make Them WORK For You!
SANIBEL
FIRE RESCUE
DISTRICT
2351

MODELED VISUALIZATION

0' 11" above road level, Water height: 6' 0" above local high tide line © 2024 Climate Central

MODELED VISUALIZATION

1' 11" above road level, Water height: 7' 0" above local high tide line © 2024 Climate Central

MODELED VISUALIZATION

2' 11" above road level, Water height: 8' 0" above local high tide line © 2024 Climate Central

MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2050 + 1% annual chance flood
2' 5" above road level, Water height: 5' 9" above local high tide line © 2024 Climate Central

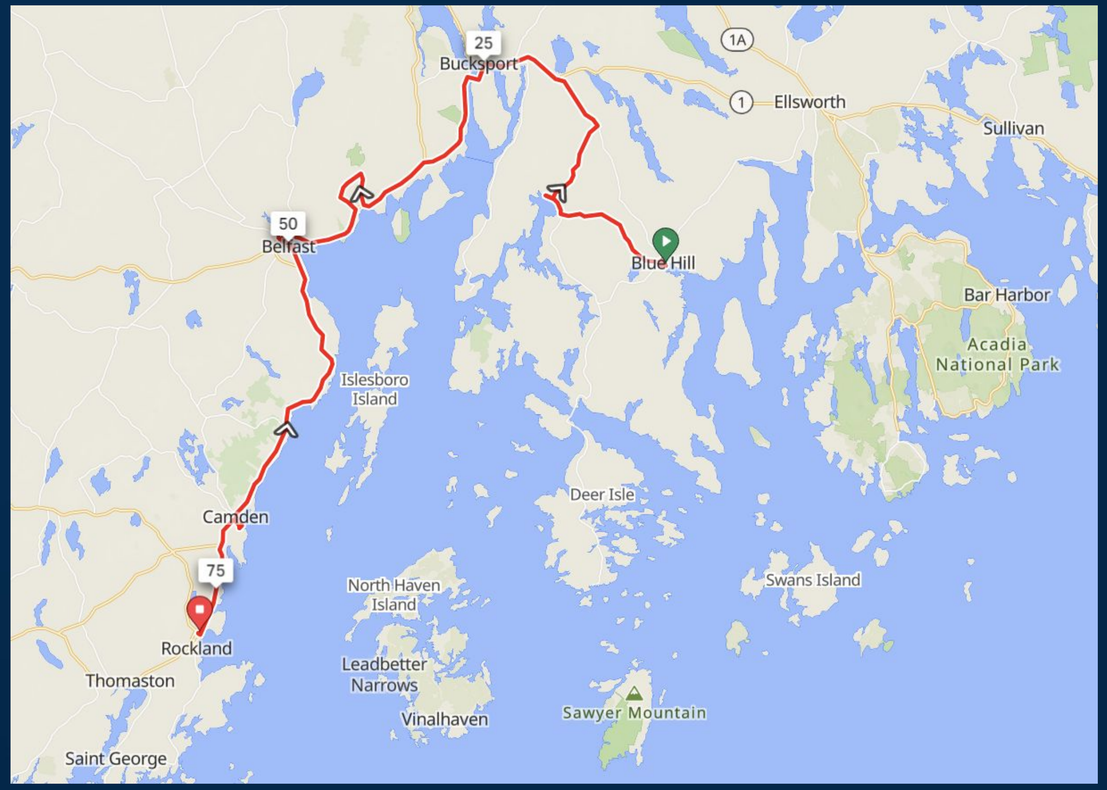
MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2050 + 1% annual chance flood
2' 4" above road level, Water height: 5' 4" above local high tide line © 2024 Climate Central

The Edge of America Tour:

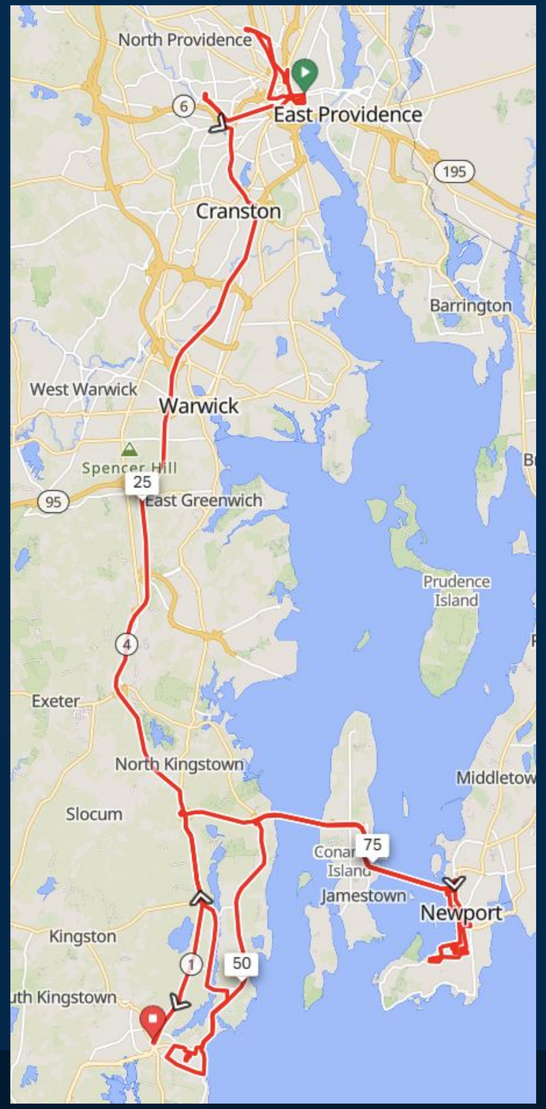
FloodVision hits the road.

First meetup: Blue Hill, Maine - Peninsula Tomorrow



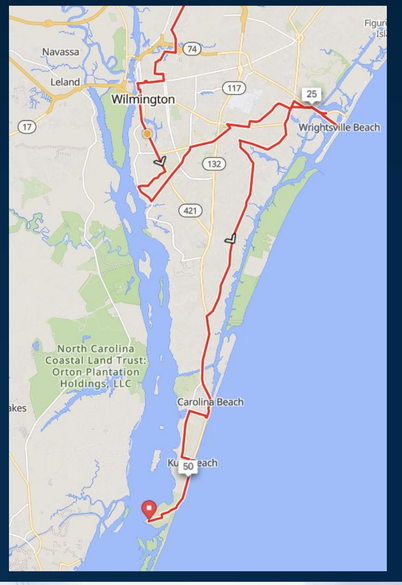
Allen Kratz, community organizer: *Sea level rise, storm surge, astronomically high tides, flooding of our waterfront properties and damage, loss of income to people whose livelihoods depend on the water. Blue Hill is one town, but a lot of surrounding towns depend on this town, for its hospital, supermarket, pharmacies. I've seen an increasing awareness among people that the climate is changing and we need to work collaboratively to get the funding to adapt to storms and flooding. This winter's storms were a real wake up call for people, they saw flooding they've never seen before.*

Providence, Rhode Island - Providence Resilience



St. Michael’s, Maryland - Resilience Tailgate **Tailgate**

Wilmington, NC - Resilience Tailgate



CLIMATE CENTRAL

CRS Workshop, Mobile, AL

EOA Tour: What We've Learned Along the Way

- **Meet people where they are.** What are they experiencing? What do they want to save?

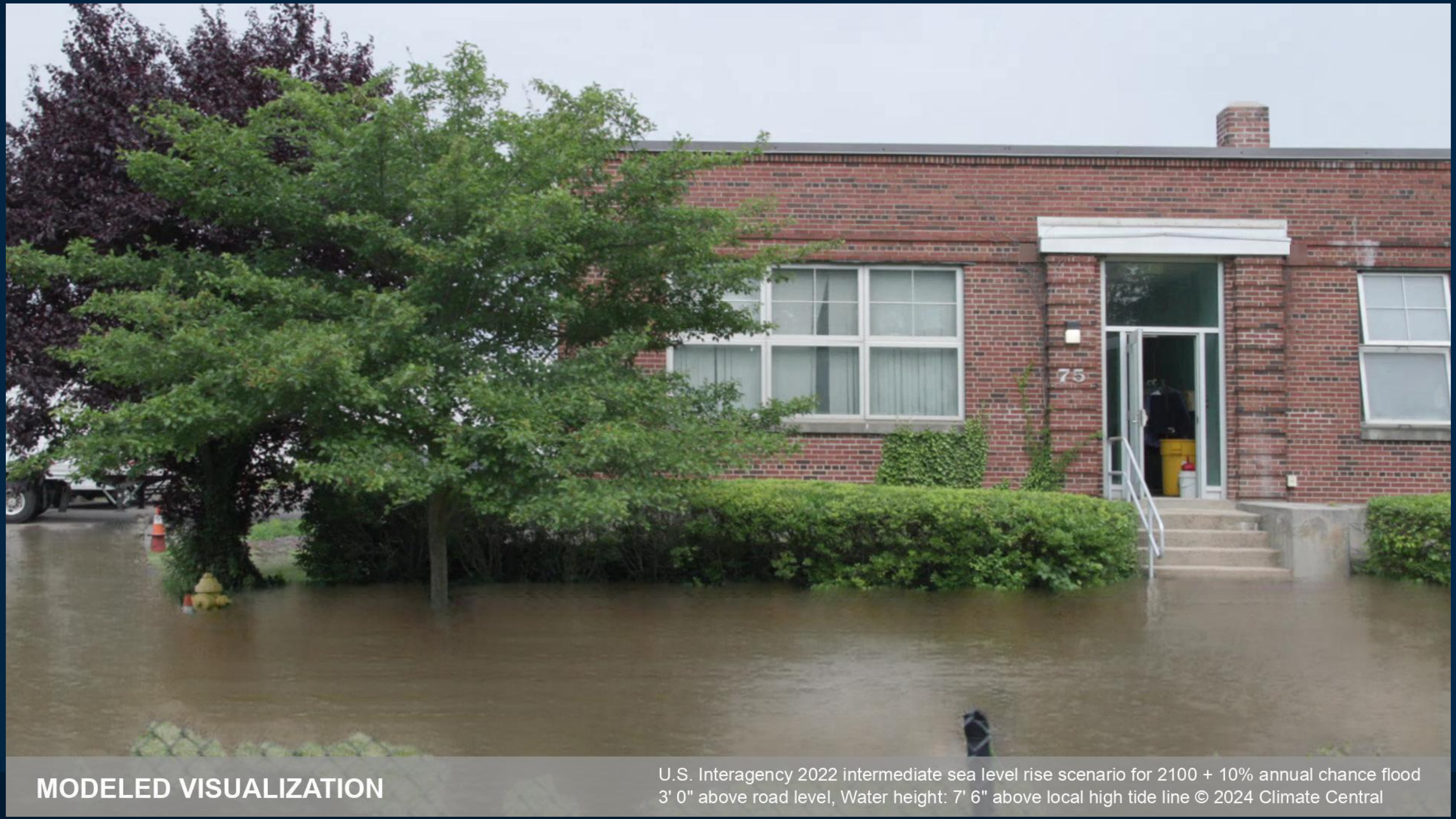
- More **connects us** than divides us

- Everyone needs **accessible visualizations to communicate flood risk**

- The FloodRover vehicle itself is **a powerful communications tool**

FloodVision in Use: Branford, CT


75



MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2100 + 10% annual chance flood
3' 0" above road level, Water height: 7' 6" above local high tide line © 2024 Climate Central

MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2100 + 1% annual chance flood
4' 12" above road level, Water height: 9' 5" above local high tide line © 2024 Climate Central

FloodVision in use: Oceanport, NJ


Port-Au-Peck Chemical Hose No. 1
OCEANSPORT

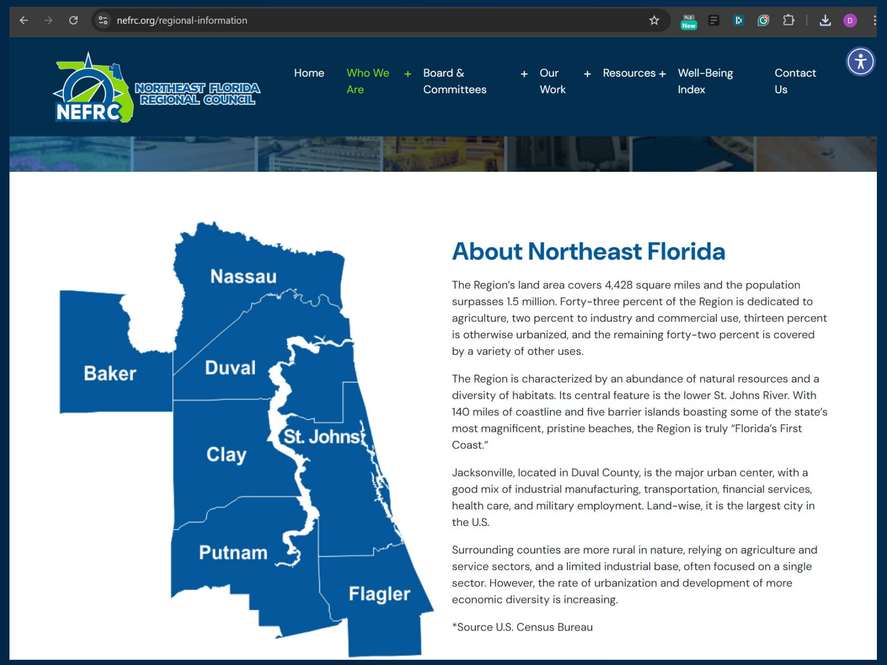
MODELED VISUALIZATION

0' 1" above road level, Water height: 5' 0" above local high tide line © 2024 Climate Central

MODELED VISUALIZATION

U.S. Interagency 2022 intermediate sea level rise scenario for 2050 + 1% annual chance flood
1' 10" above road level, Water height: 6' 8" above local high tide line © 2024 Climate Central

FloodVision in use: NE Florida Regional Council

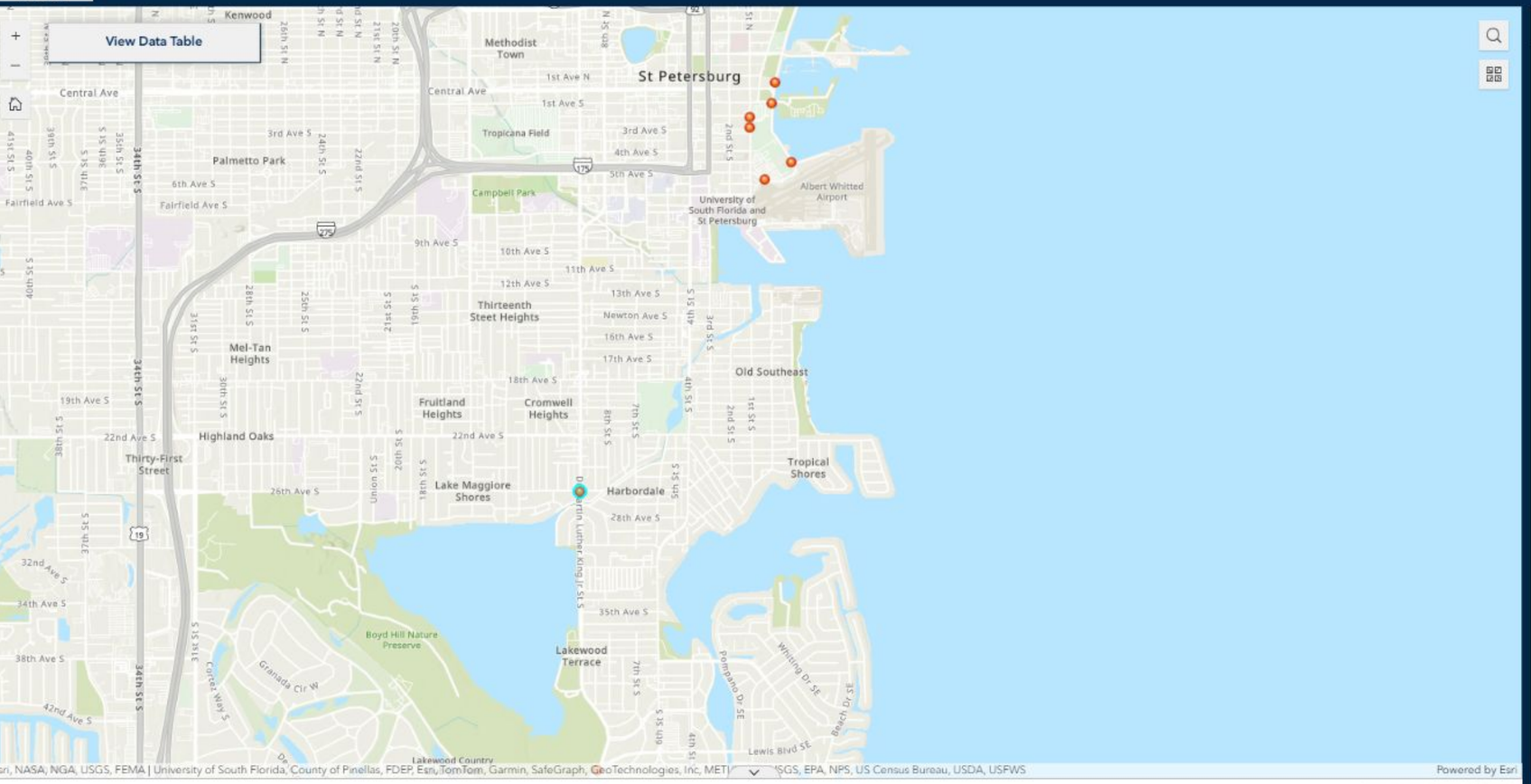


Fara Ilami
Regional Resiliency Manager
Northeast Florida Regional Council

Flood Vision Viewer

gis.climatecentral.org/portal/apps/experiencebuilder/experience/?id=bf4faf2236fc4f29b8c8d892e34f8e65#data_s=id%3AdataSource_1-194b8ca0aaf-layer-5%3A51%2Cid%3AdataSource_1-194b8f98038-layer-8~dataSource_1-195060457d0-layer-4%3A105%2B106%2B107%2B108%2B109

FloodVision Risk Viewer



Available Visuals

Addres	City	Download Link	Latitude	Longit...	Original	Road Elevati...	Scenario
7386 Back St, Easton, MD ...	Easton	Click to Download	38.75	-76.18	MD_Easton_20240820-Easton-MD_2_p_0009625.jpg	4.64	U.S. Interagency :
7386 Back St, Easton, MD ...	Easton	Click to Download	38.75	-76.18	MD_Easton_20240820-Easton-MD_2_p_0009625.jpg	4.64	
7386 Back St, Easton, MD ...	Easton	Click to Download	38.75	-76.18	MD_Easton_20240820-Easton-MD_2_p_0009625.jpg	4.64	U.S. Interagency :
7386 Back St, Easton, MD ...	Easton	Click to Download	38.75	-76.18	MD_Easton_20240820-Easton-MD_2_p_0009625.jpg	4.64	U.S. Interagency :
7386 Back St, Easton, MD ...	Easton	Click to Download	38.75	-76.18	MD_Easton_20240820-Easton-MD_2_p_0009625.jpg	4.64	U.S. Interagency :
7386 Back St, Easton, MD ...	Easton	Click to Download	38.75	-76.18	MD_Easton_20240820-Easton-MD_2_p_0009625.jpg	4.64	U.S. Interagency :
7386 Back St, Easton, MD ...	Easton	Click to Download	38.75	-76.18	MD_Easton_20240820-Easton-MD_2_p_0009625.jpg	4.64	U.S. Interagency :

< 2 of 5 >

2601 Dr. M.L.K. Jr St S, St. Petersburg, FL 33705, USA

U.S. Interagency 2022 intermediate sea level rise scenario for 2100 + Annual flood

Click image to download

See how FloodVision is being used

Have Questions?
Contact our team at floodvision@climatecentral.org

Learn about licensing FloodVision

Where should we drive?

Are you interested in having FloodVision visit and collect data near you?

Please tell us your thoughts via the form found at https://bit.ly/floodvision

Dan Rizza
drizza@climatecentral.org

Allison Kopicki
akopicki@climatecentral.org

Agenda

1 Introduction
2 The Road to Resilience
3 Q&A

FORERUNNER
Summit 2025

Smart solutions for stronger, safer communities.

May 1st, 2025
12–4pm EST

SIGN UP

FORERUNNER

Thank you!

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Allison Kopicki
akopicki@climatecentral.org