

South Carolina Office of Resilience

Agency Overview

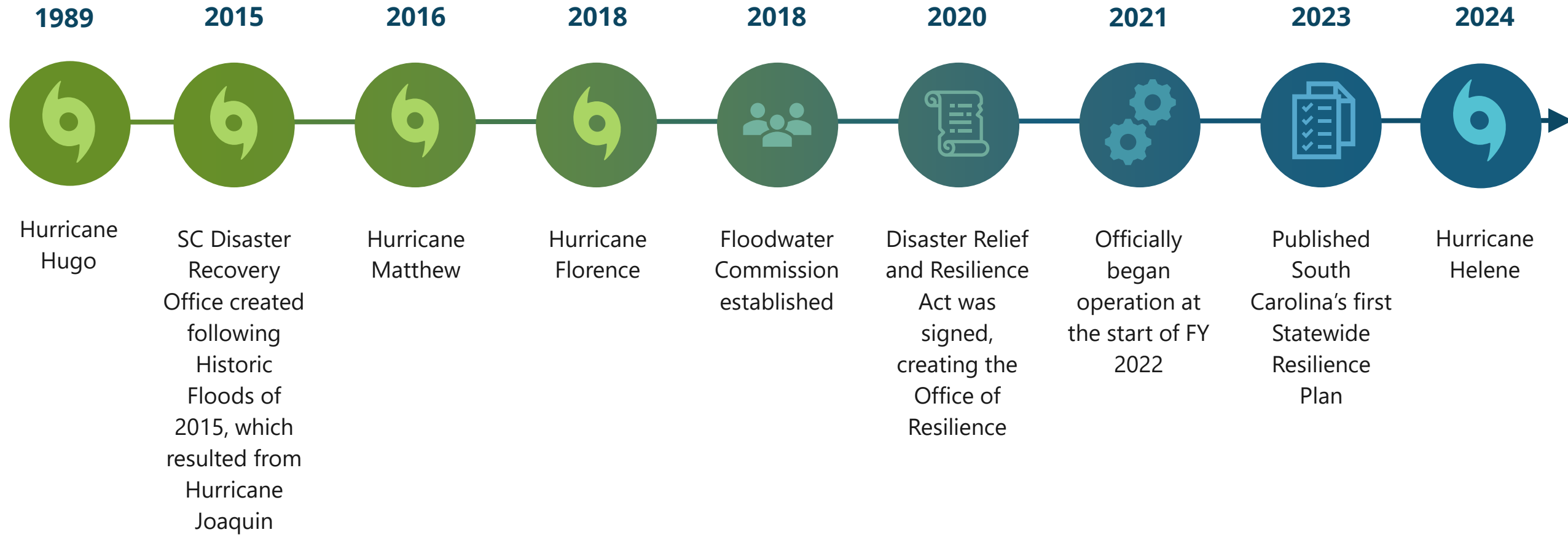


Mission

SCOR lessens the impact of disasters on the communities and citizens of South Carolina by planning and coordinating statewide **resilience, long-term recovery** and **hazard mitigation**.

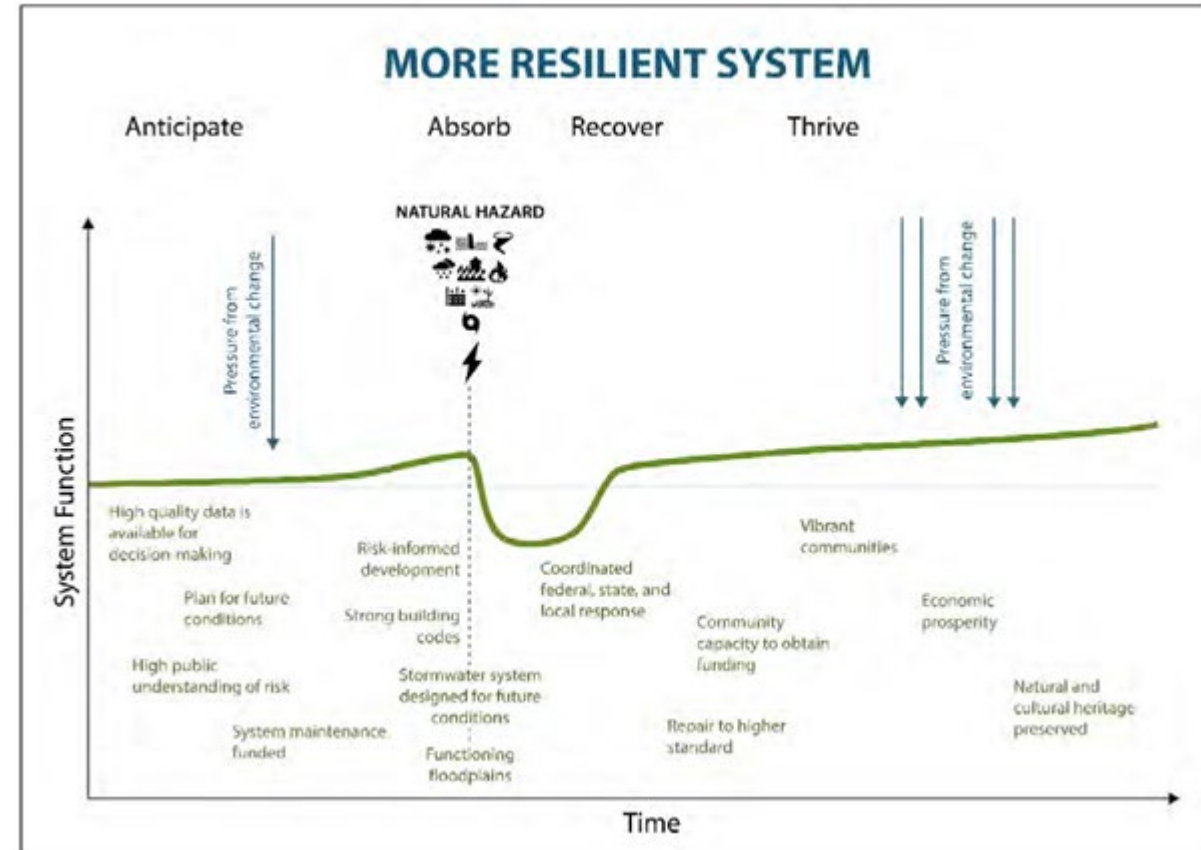
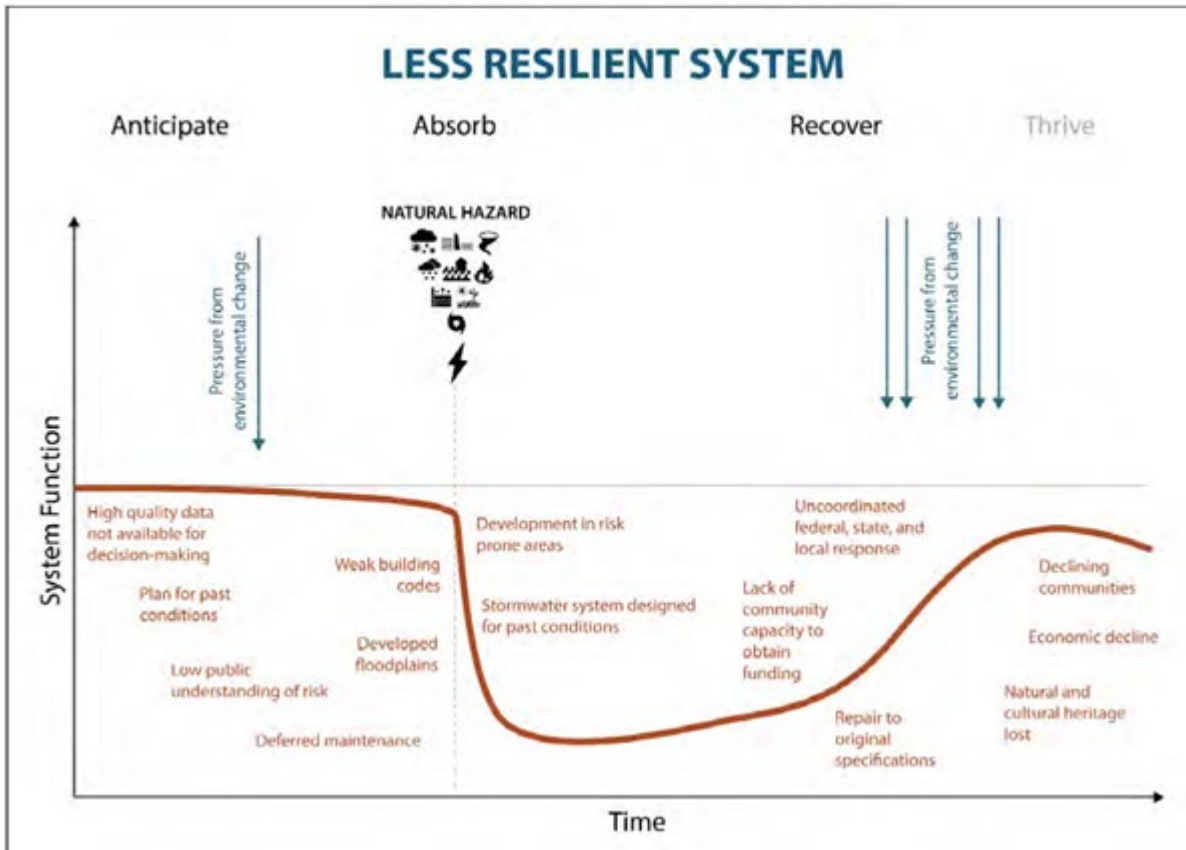


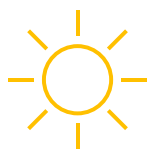
History

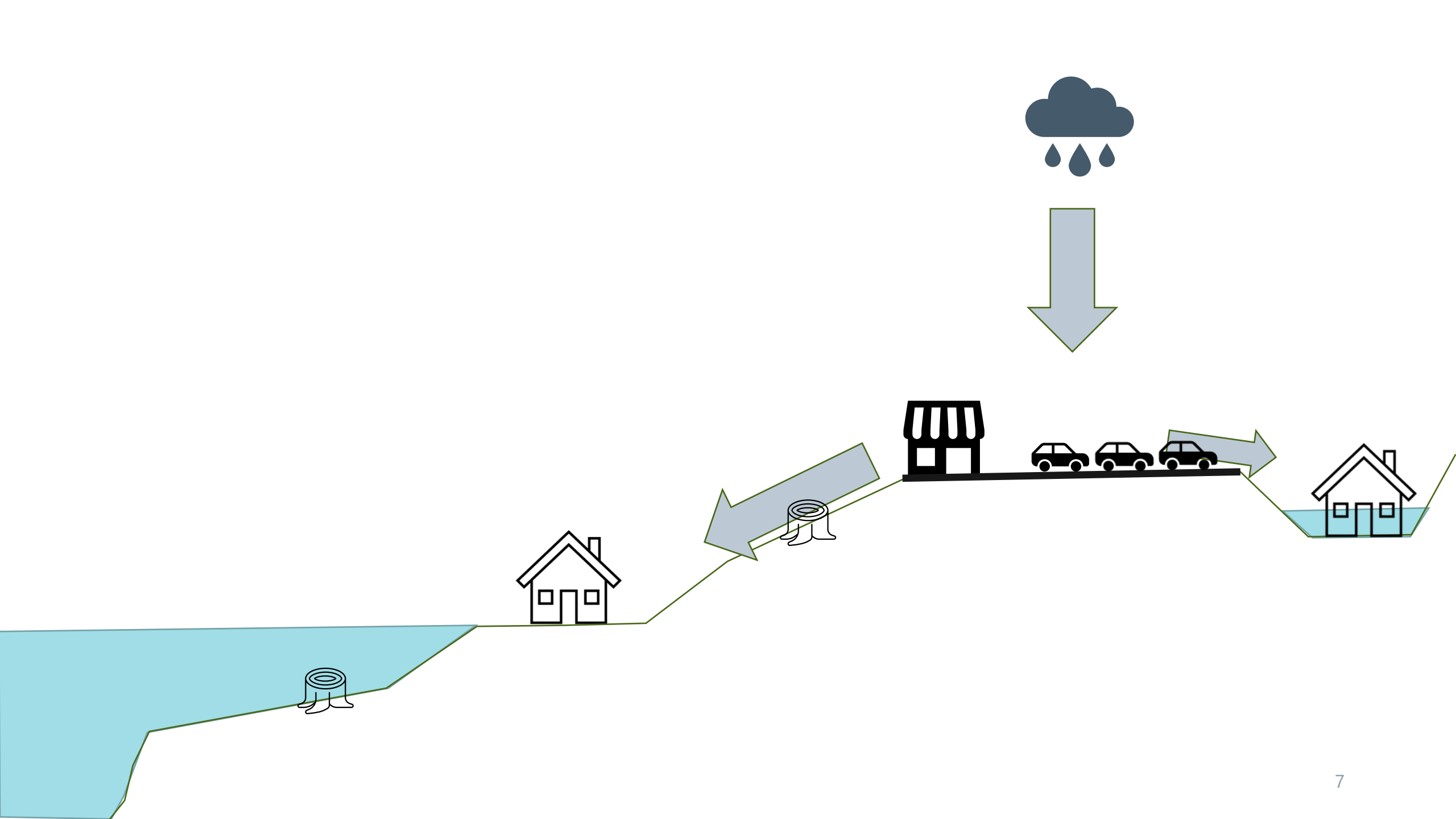


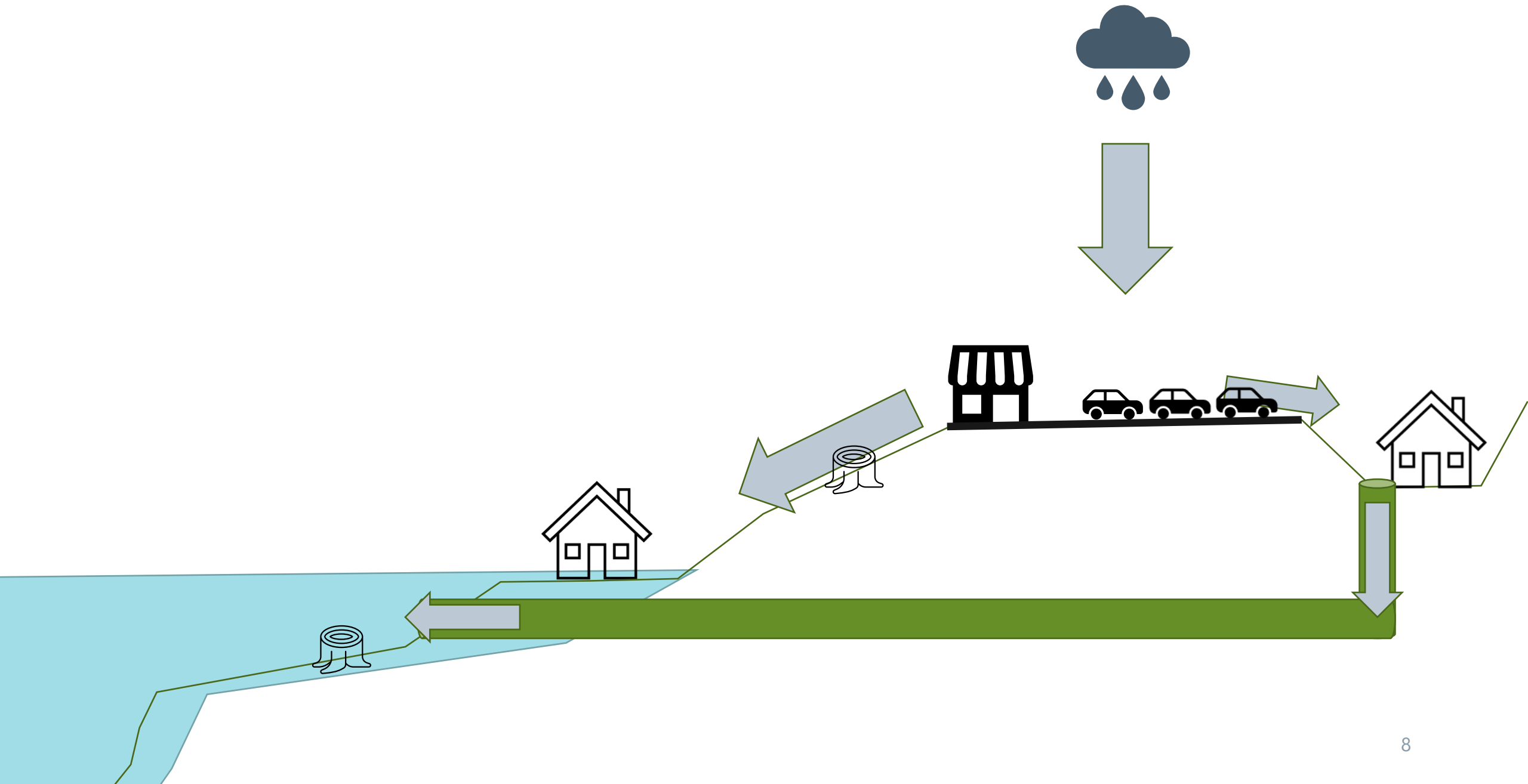
Resilience Definition

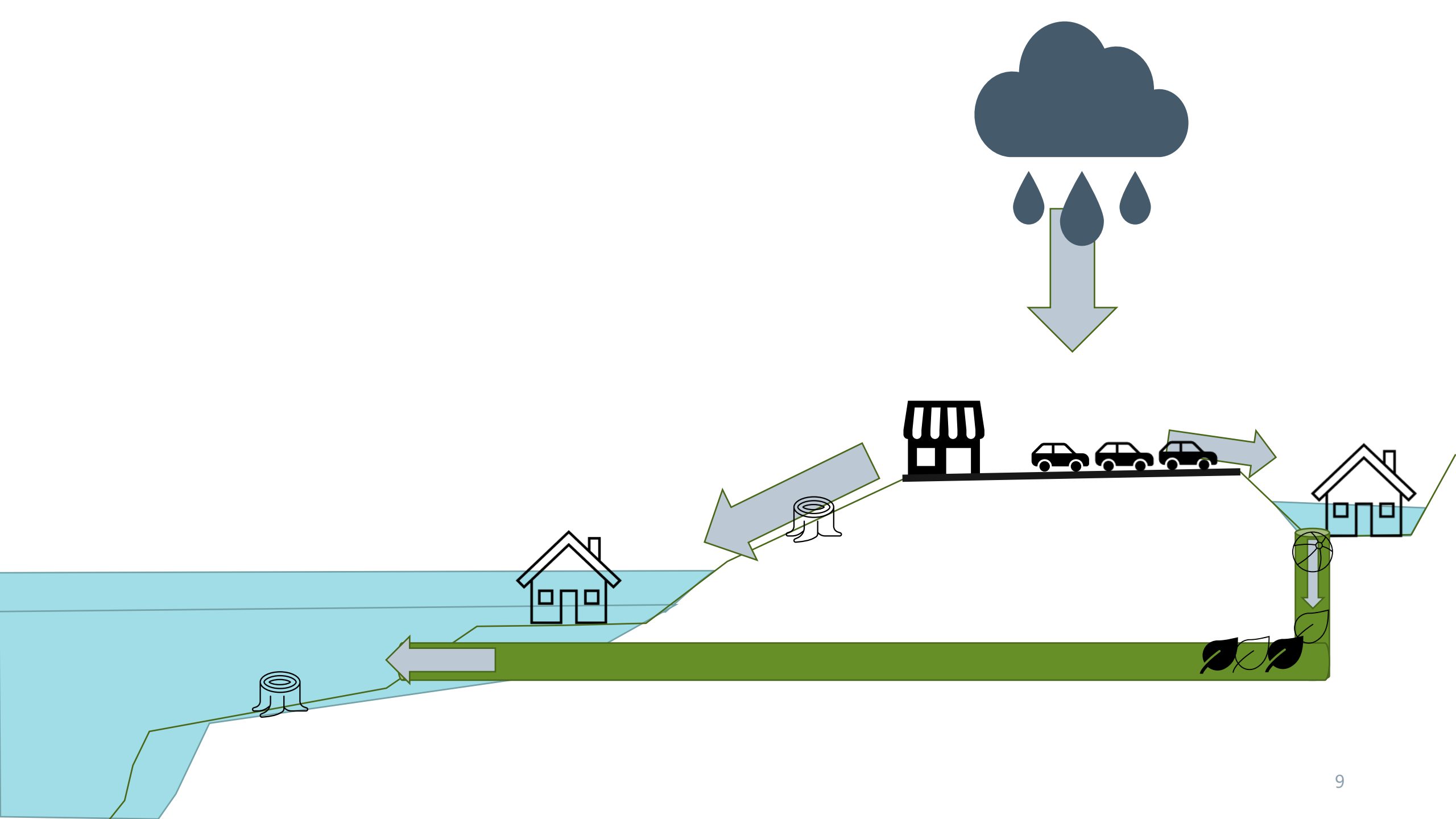
The ability of communities, economies, and ecosystems within South Carolina to anticipate, absorb, recover, and thrive when presented with environmental change and natural hazards.

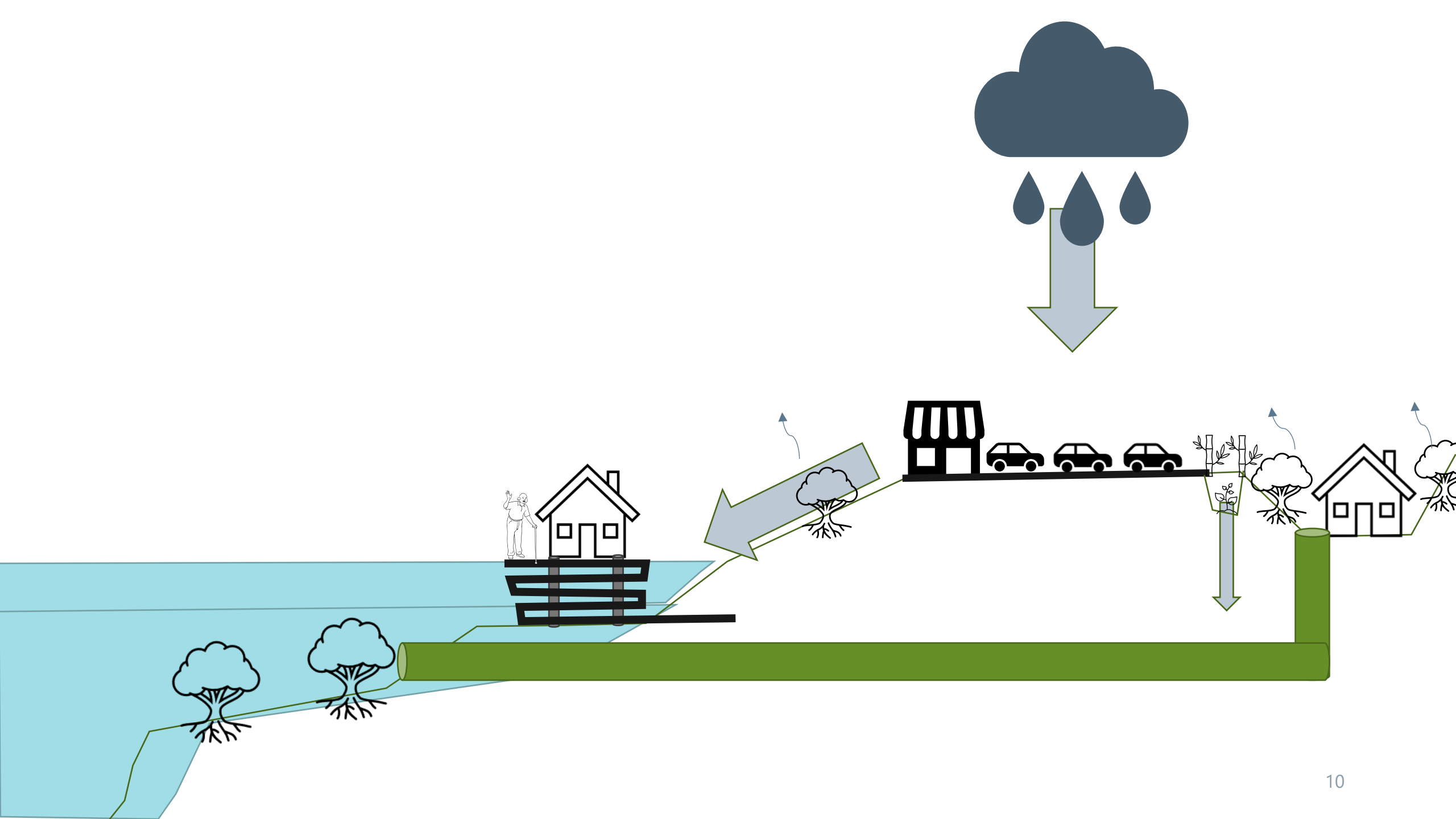


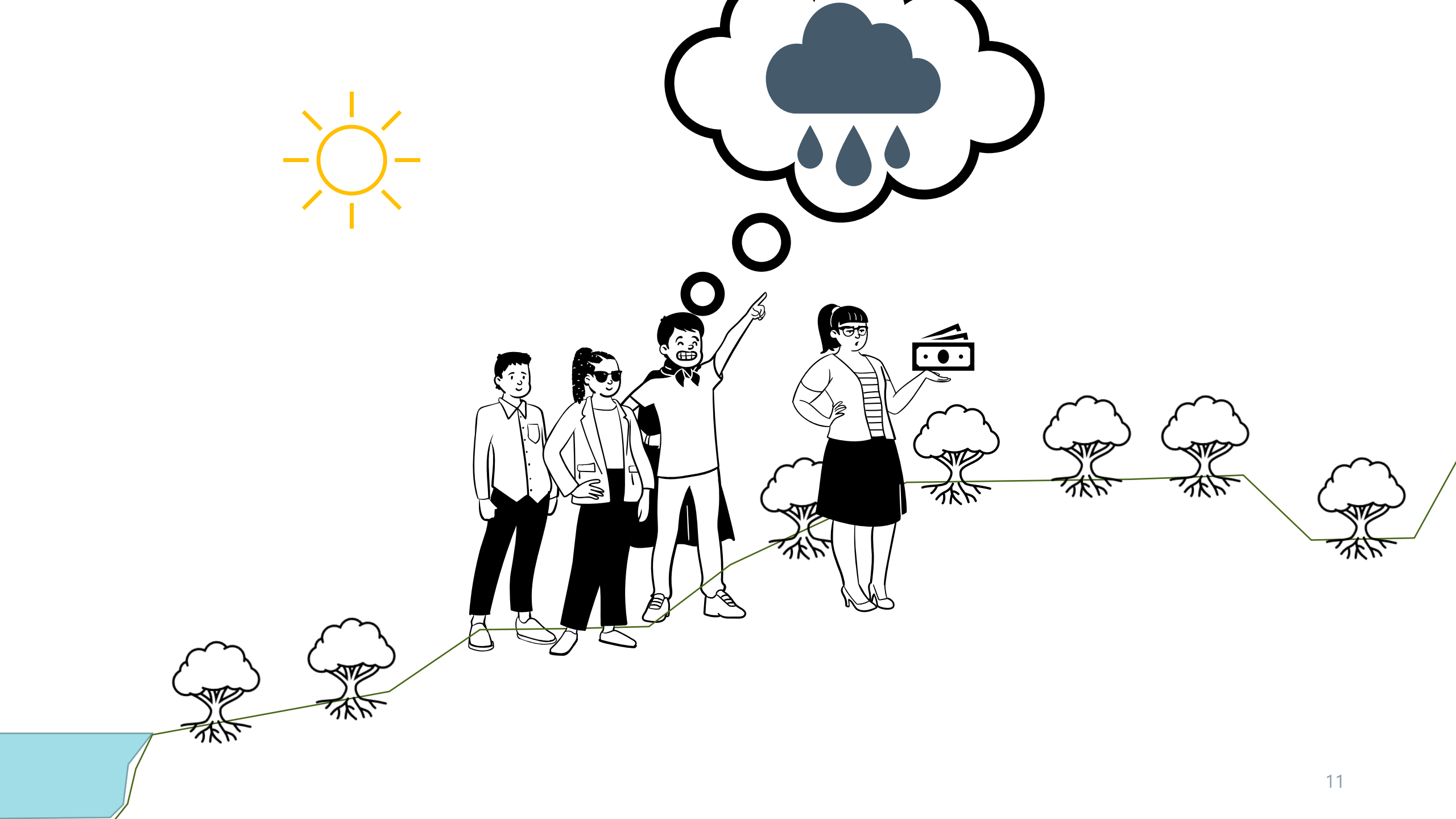






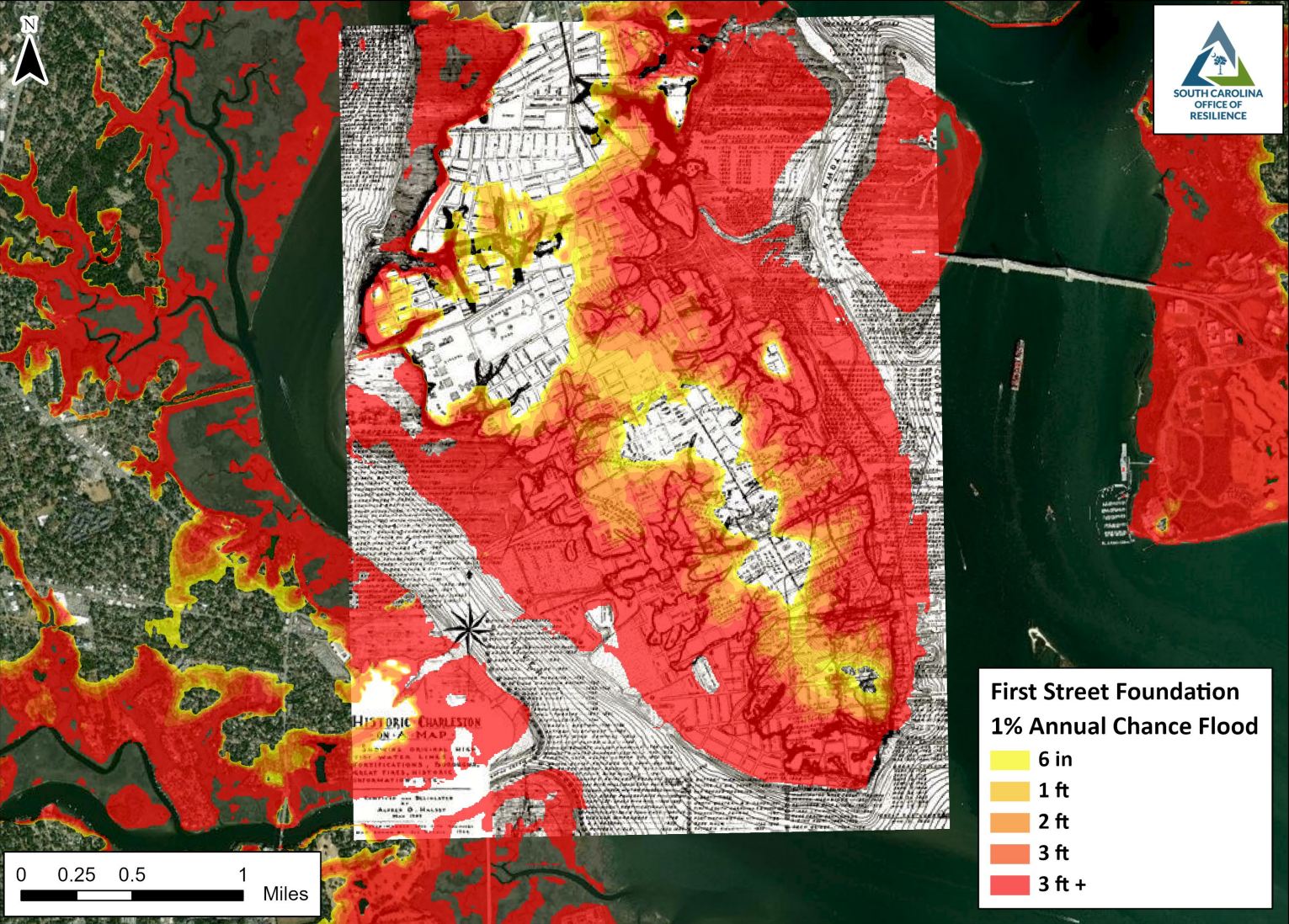








Charleston - Historic Map

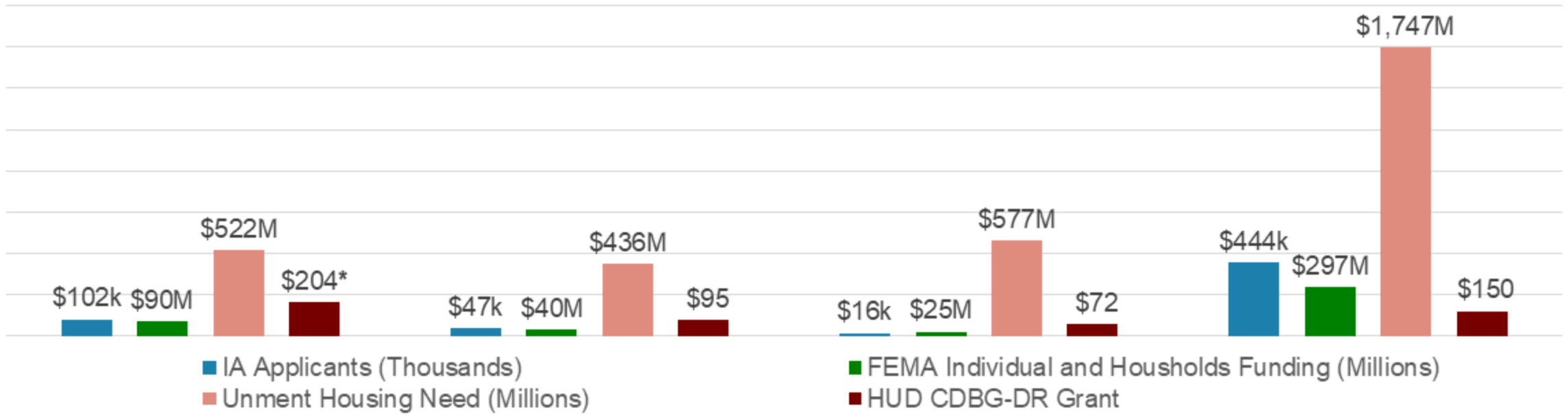
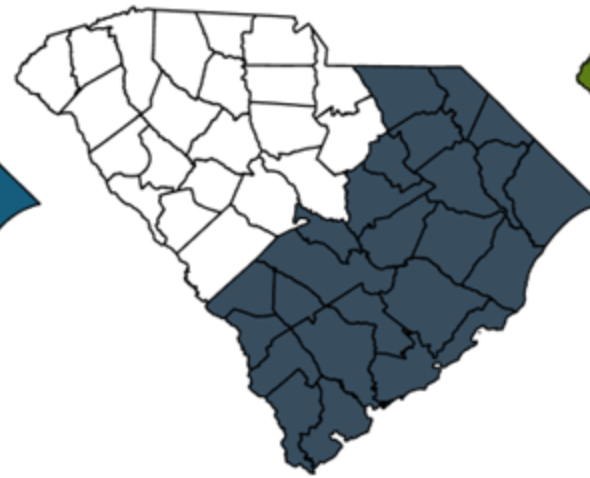
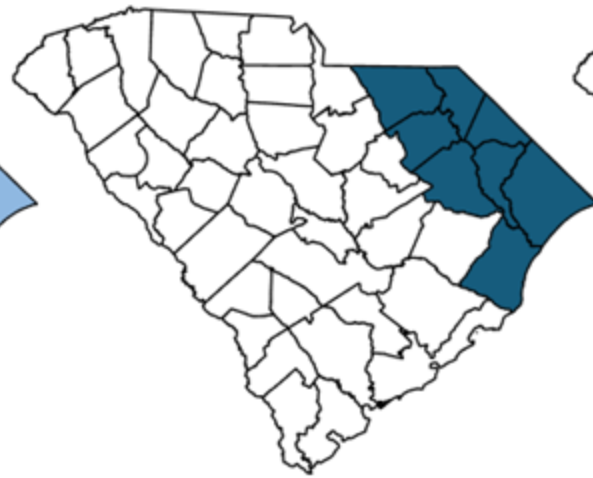
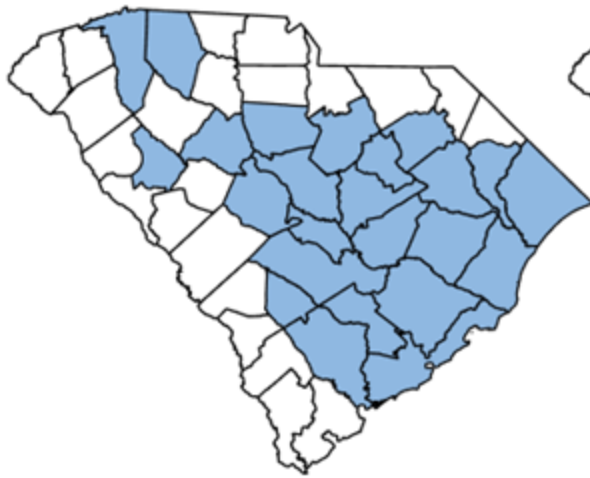


2015 Floods

2016 Hurricane Matthew

2018 Hurricane Florence

2024 Hurricane Helene

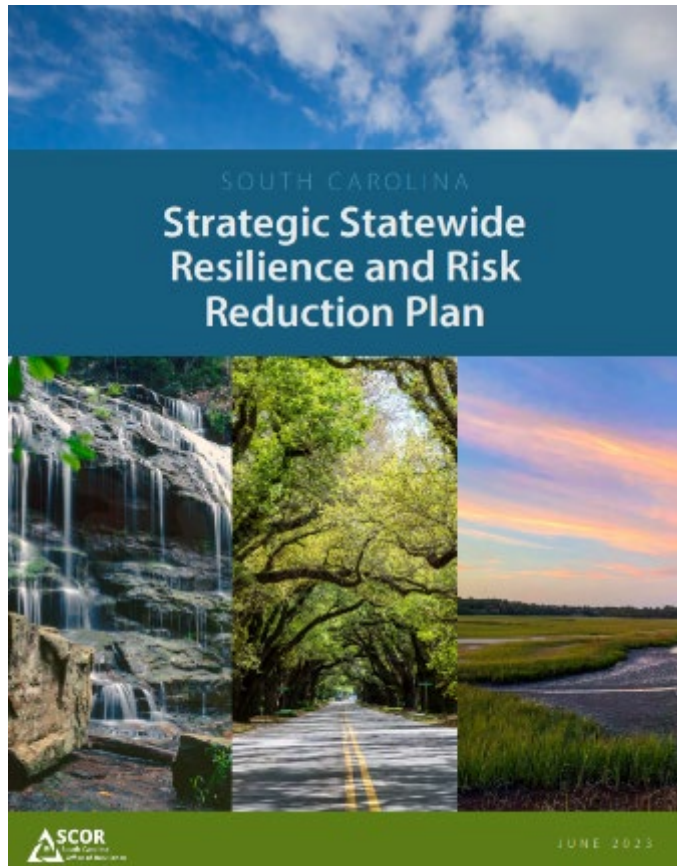


*Includes the sum of CDBG-DR Funds allocated to City of Columbia, Lexington County, and Richland County



Statewide Resilience Plan

The South Carolina Office of Resilience released the **Strategic Statewide Resilience and Risk Reduction Plan** (Resilience Plan) in June 2023. The Plan identifies major flood risks around the state and potential losses that could occur as a result of extreme weather events. The Plan guides state investment in flood mitigation and provides strategies for local governments to implement resilience into their communities in order to mitigate potential flood risks.



Planning Principles

Use **high-quality data** to assess risk and vulnerability, and make that data accessible

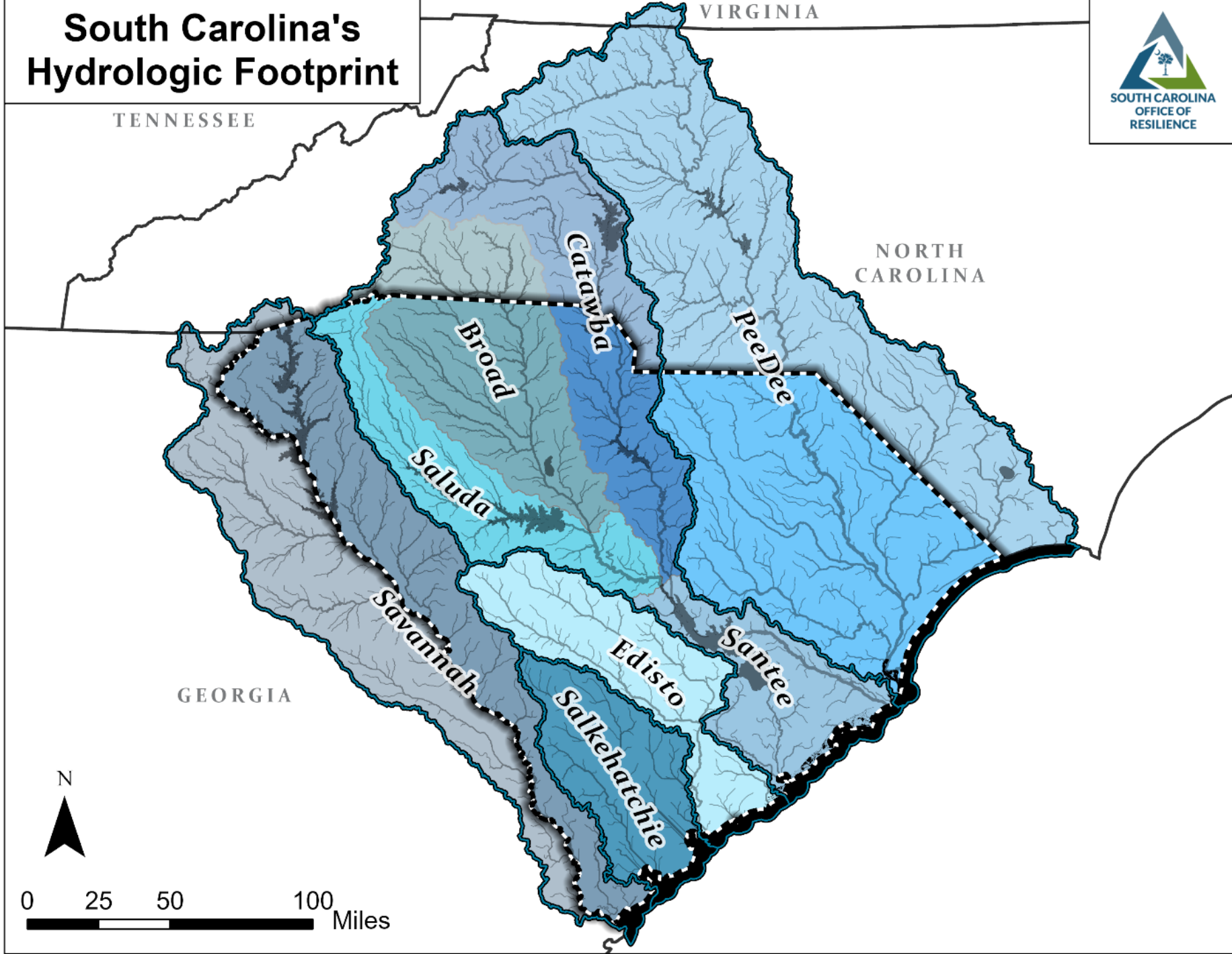
Coordinate at the federal, state, regional and local level

Recognize beneficial function of **natural systems**

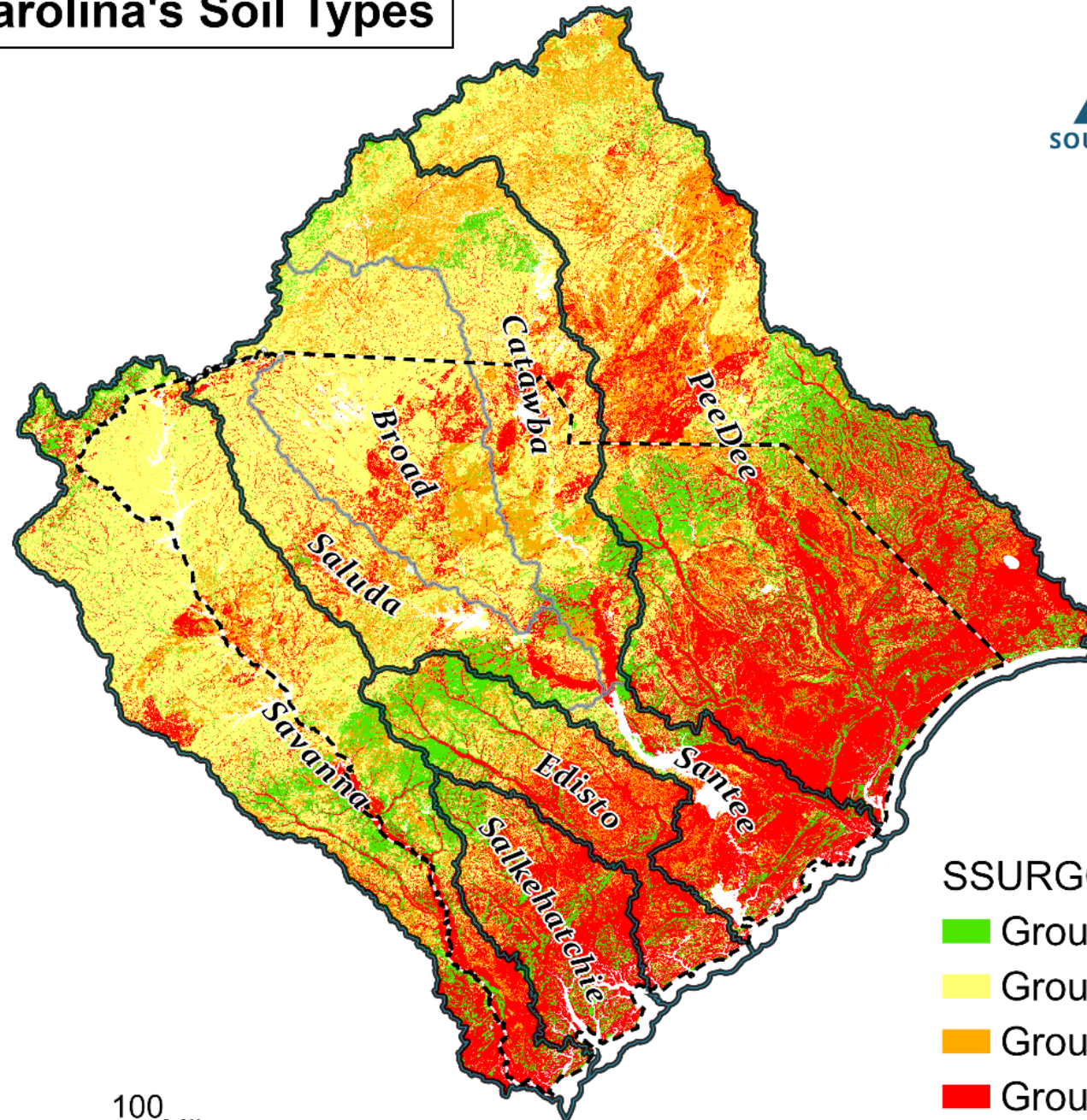
Plan and develop solutions based on **watershed boundaries**, not just jurisdictional

Recognize **Co-benefits** beyond flood mitigation to communities, economies, and ecosystems

South Carolina's Hydrologic Footprint



South Carolina's Soil Types



SSURGO Soil Class

- Group A
- Group B
- Group C
- Group D

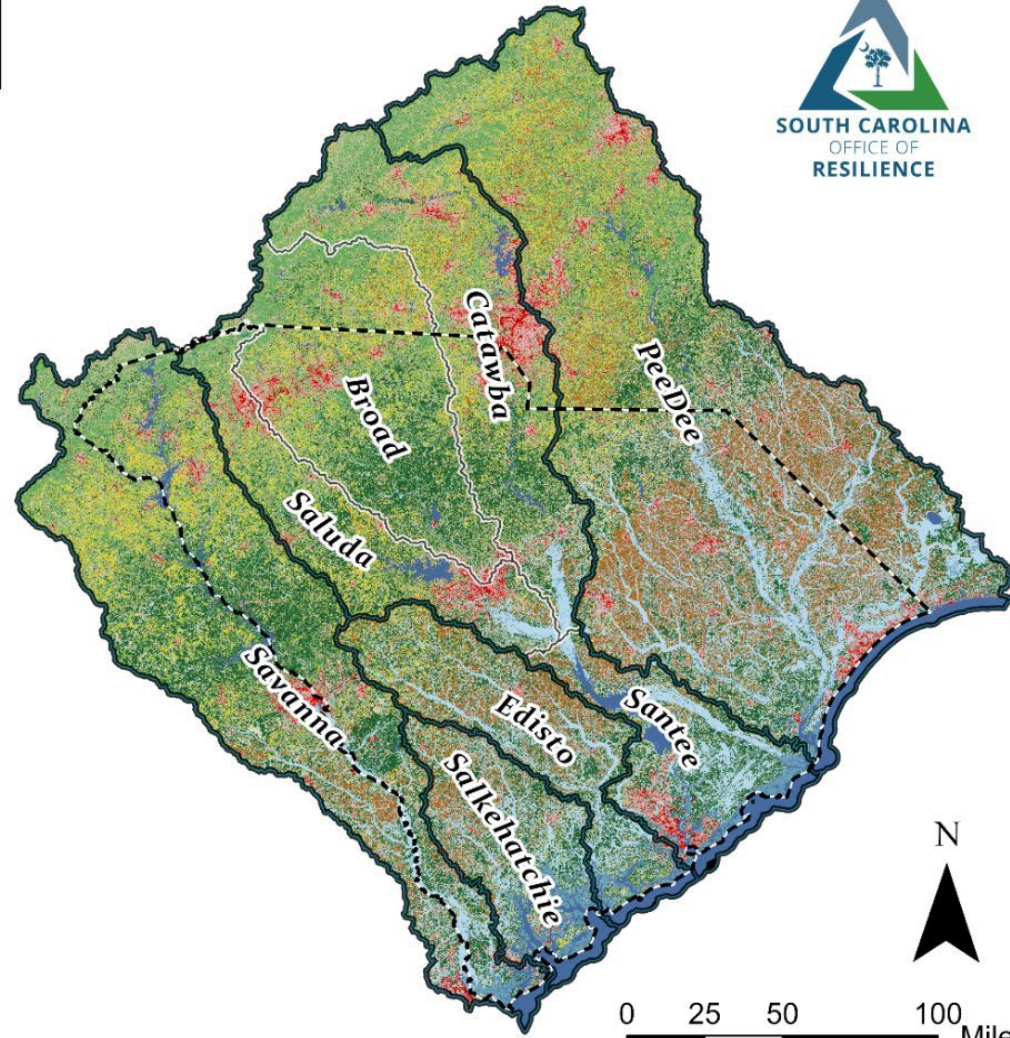


0 25 50 100 Miles

South Carolina's Land Cover

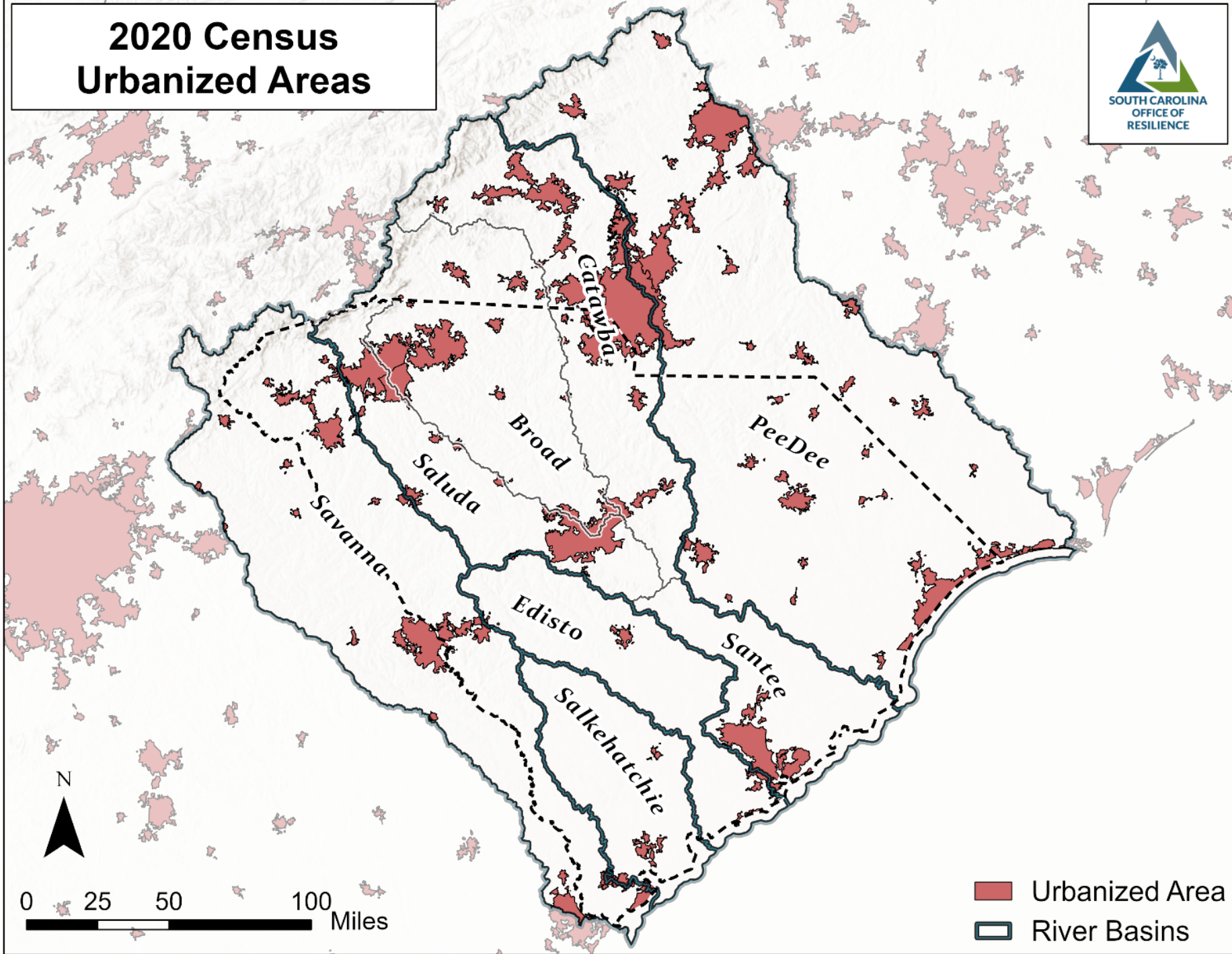


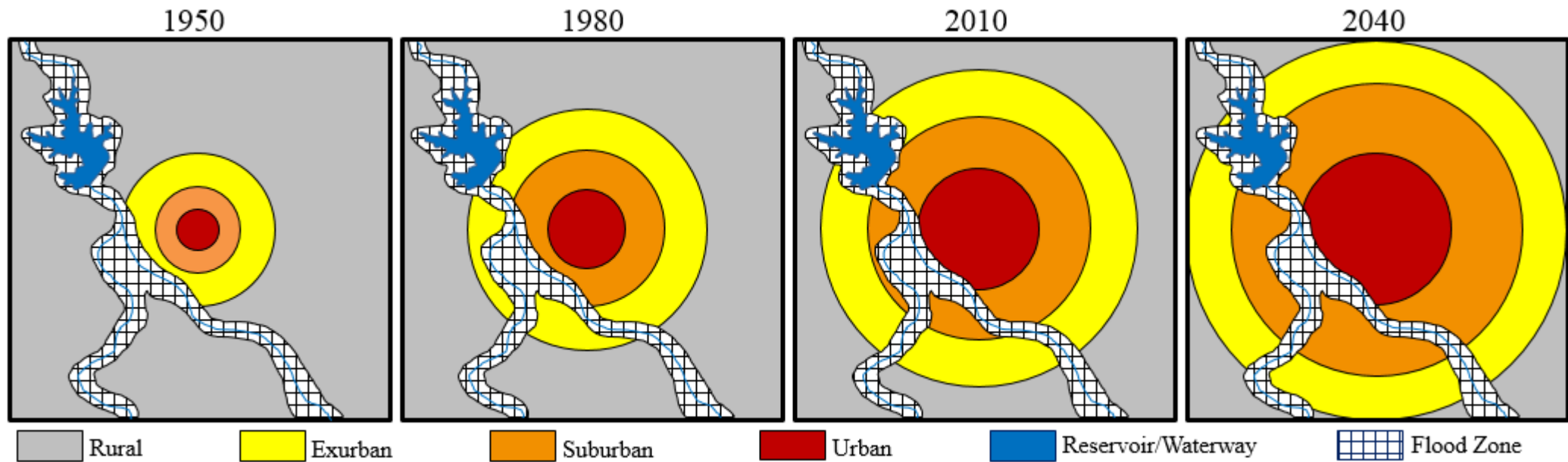
- Open Water
- Developed, Open
- Developed, Low
- Developed, Med
- Developed, High
- Barren
- Deciduous
- Evergreen
- Mixed Forest
- Shrub
- Grassland
- Hay
- Cultivated
- Woody Wetlands
- Herb. Wetlands



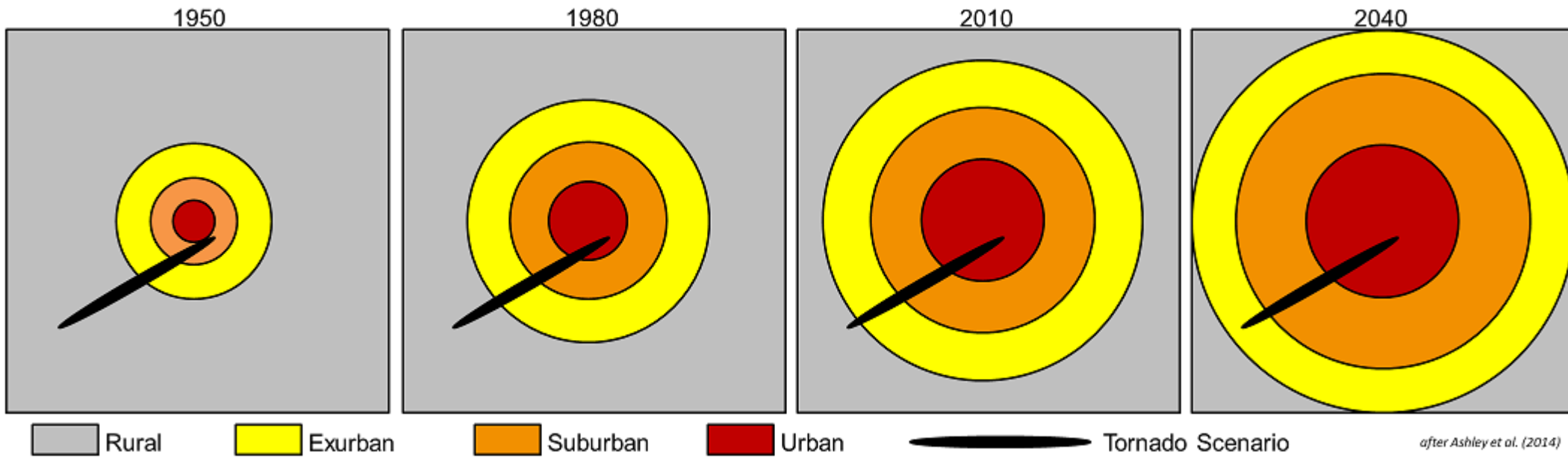
NLCD Land Cover	Percent
Open Water	3.5%
Developed, Open Space	6.0%
Developed, Low Intensity	3.5%
Developed, Medium Intensity	1.5%
Developed, High Intensity	0.5%
Barren Land	0.2%
Deciduous Forest	8.0%
Evergreen Forest	24.0%
Mixed Forest	5.6%
Shrub/Scrub	4.3%
Herbaceous	4.2%
Hay/Pasture	6.4%
Cultivated Crops	9.0%
Woody Wetlands	19.8%
Emergent Herbaceous Wetlands	3.4%

2020 Census Urbanized Areas



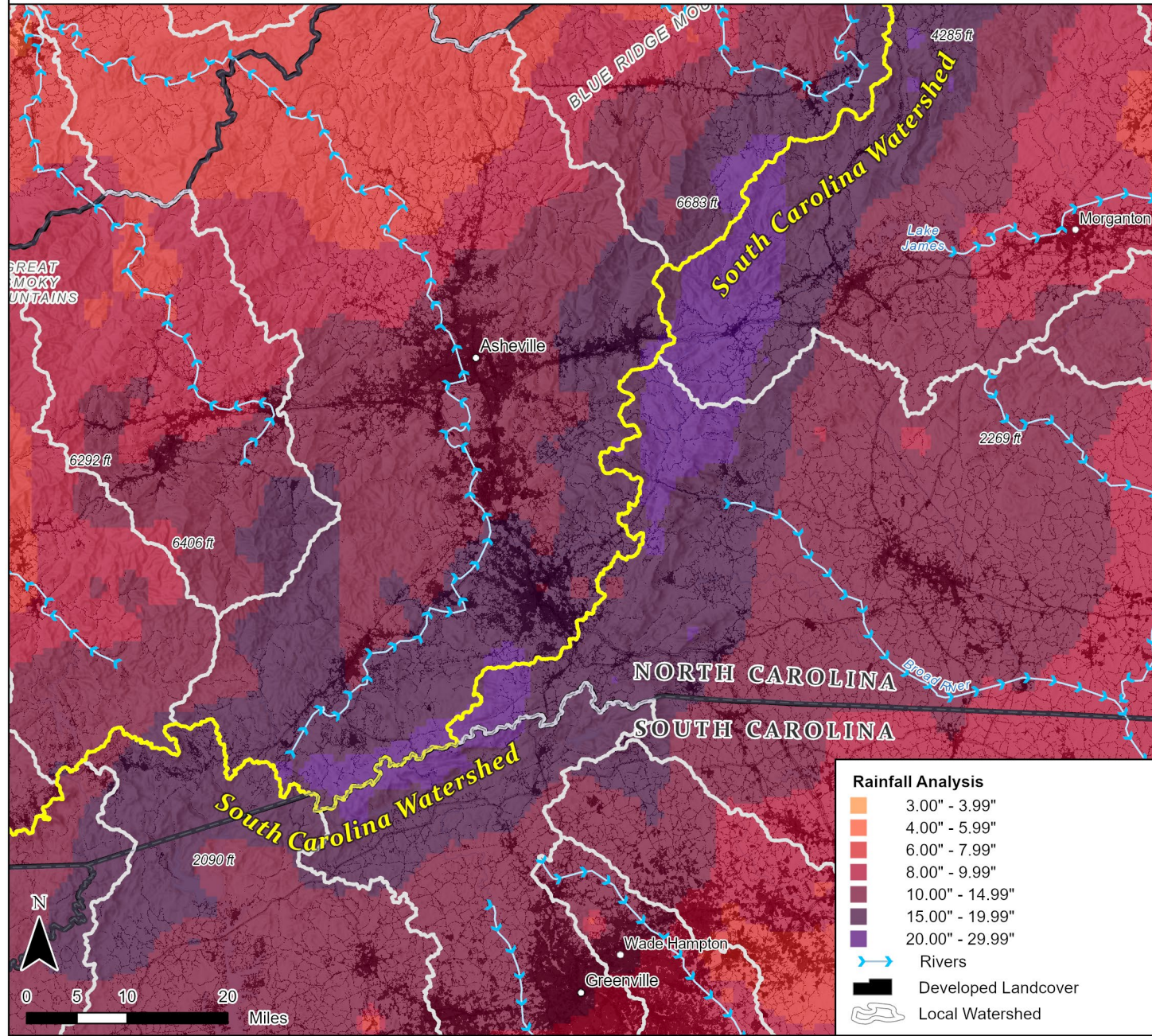


after Ashley et al. (2014)

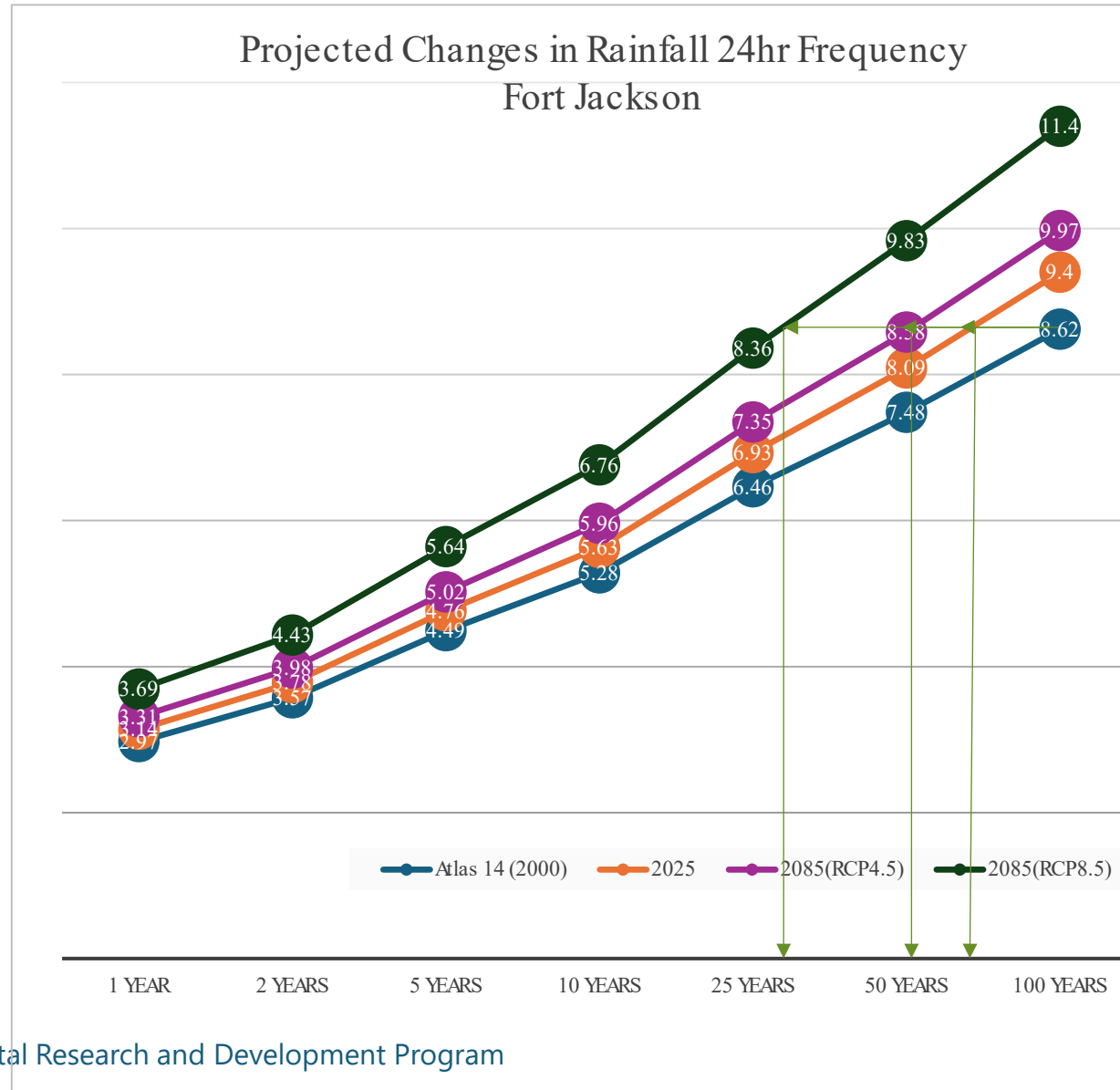


after Ashley et al. (2014)

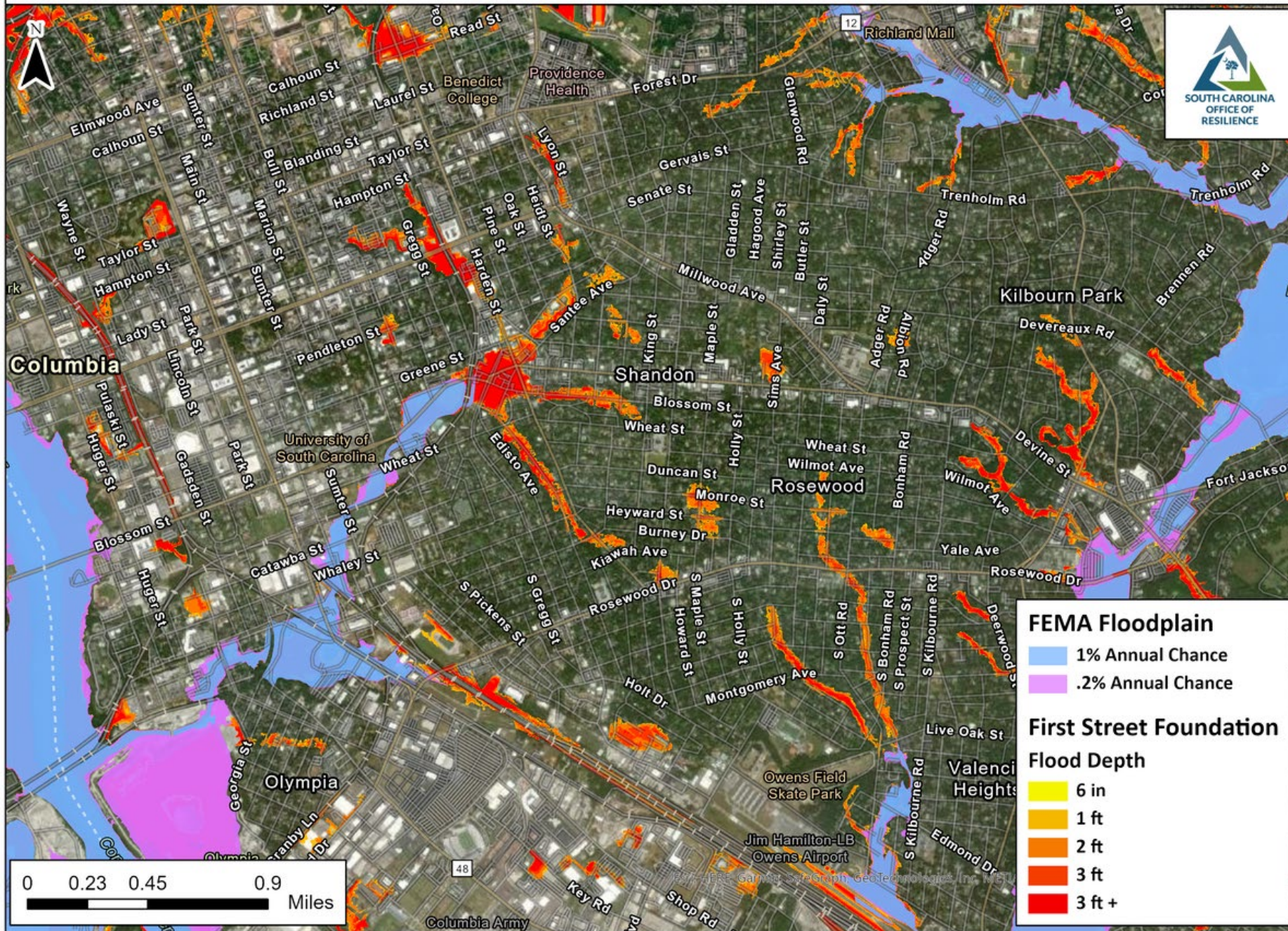
Rainfall from Hurricane Helene (NWS Preliminary)



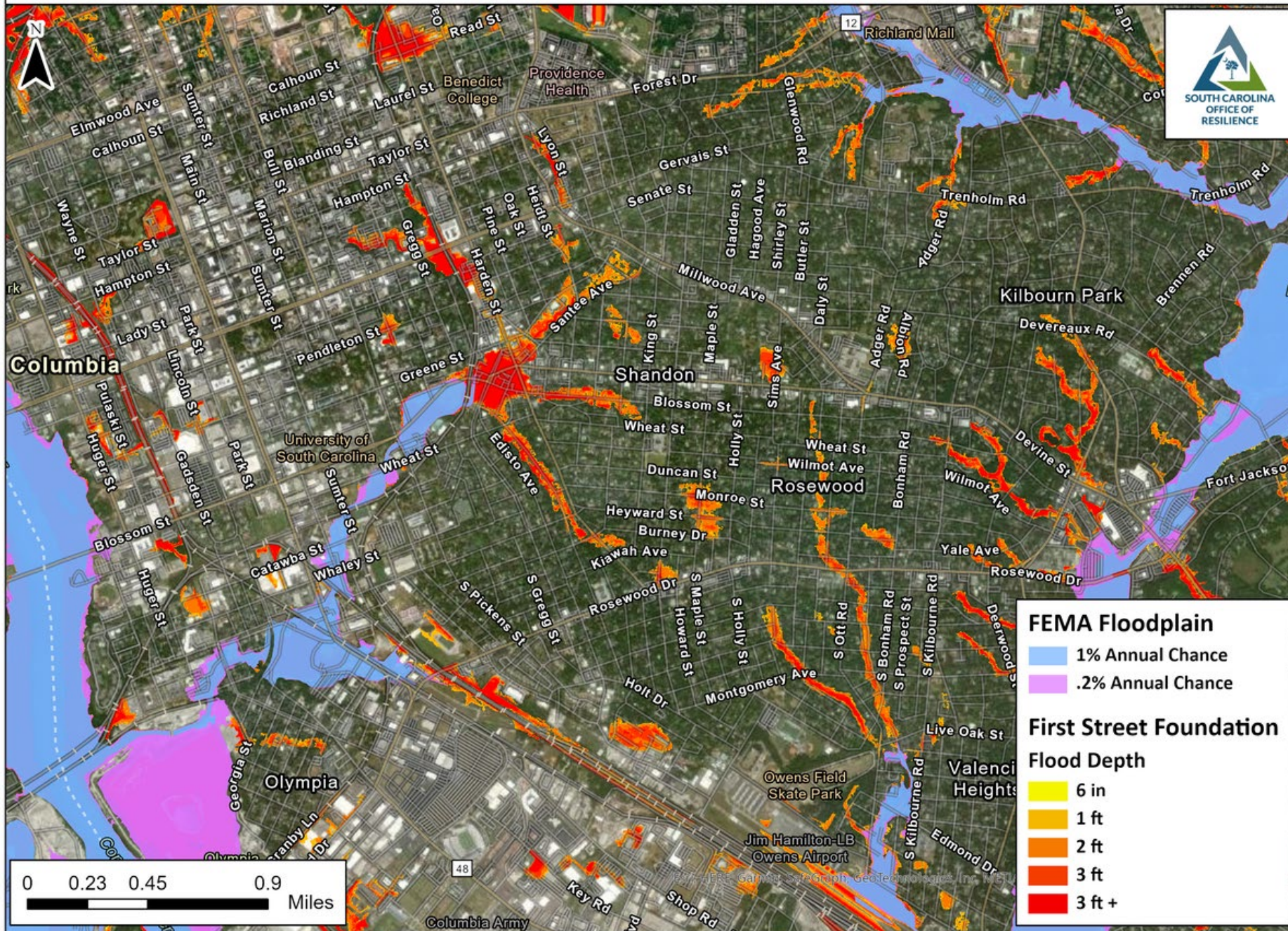
Planning Conditions



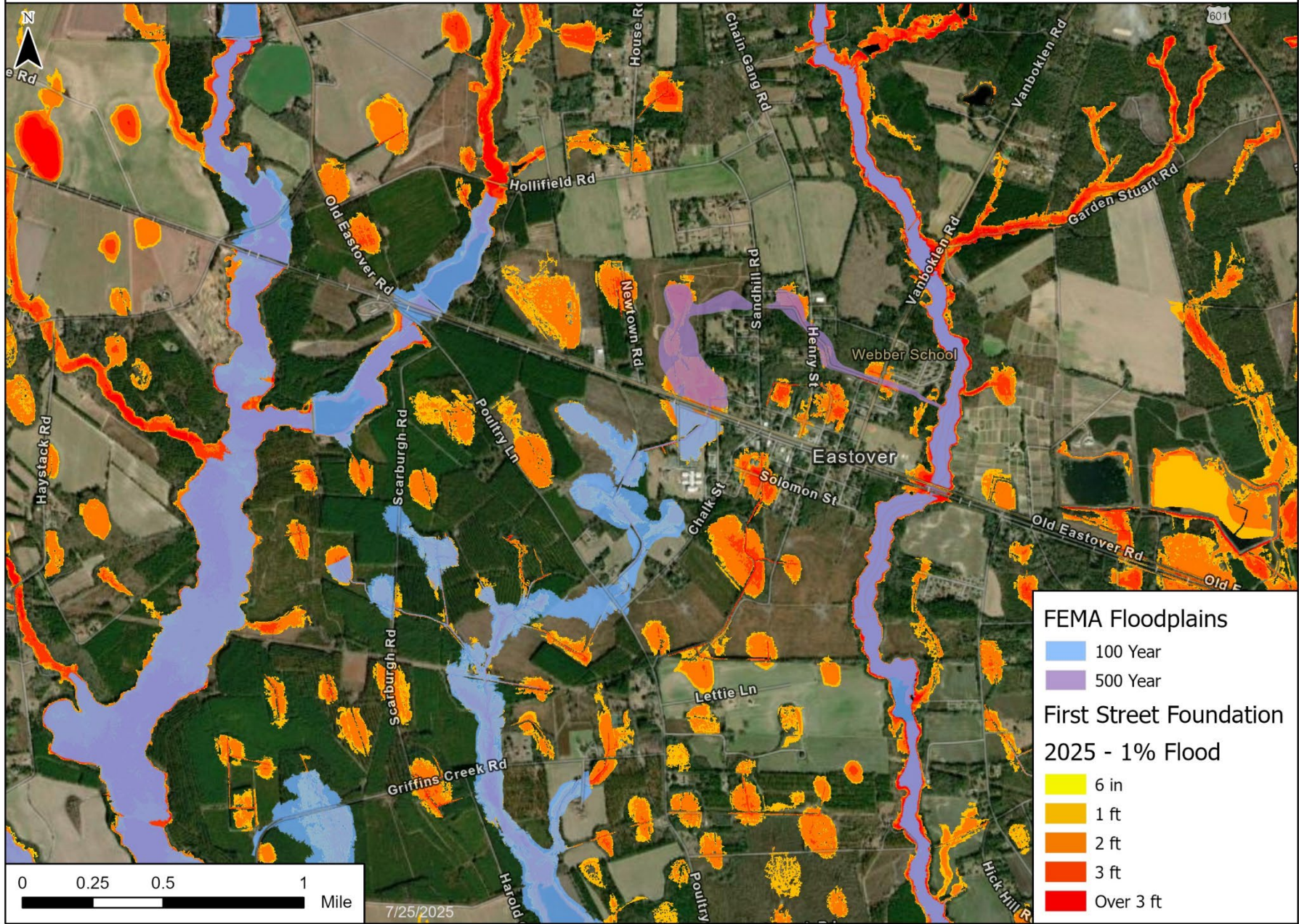
Columbia - 2022 - 1% Annual Chance Flood Event



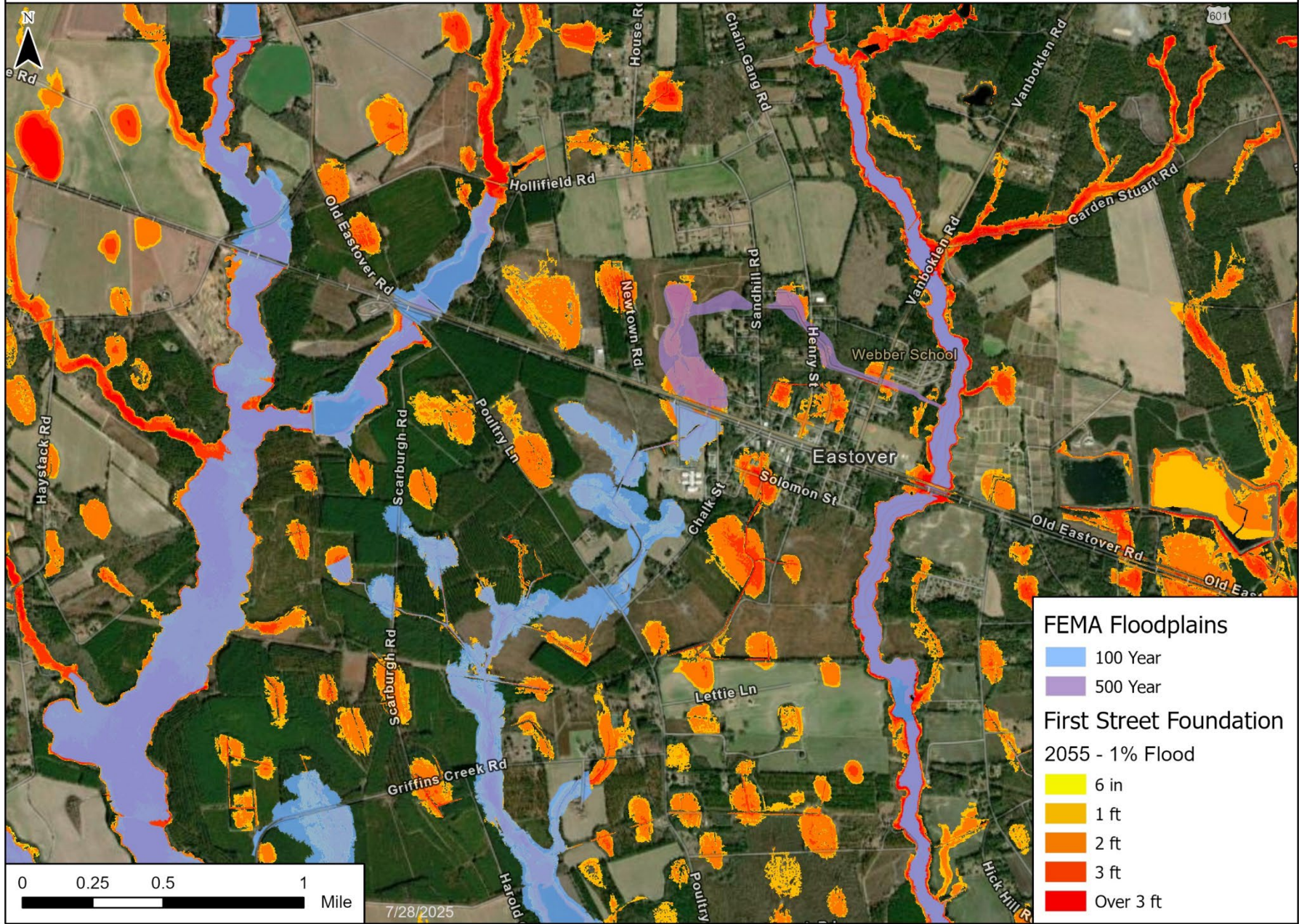
Columbia - 2052 - 1% Annual Chance Flood Event



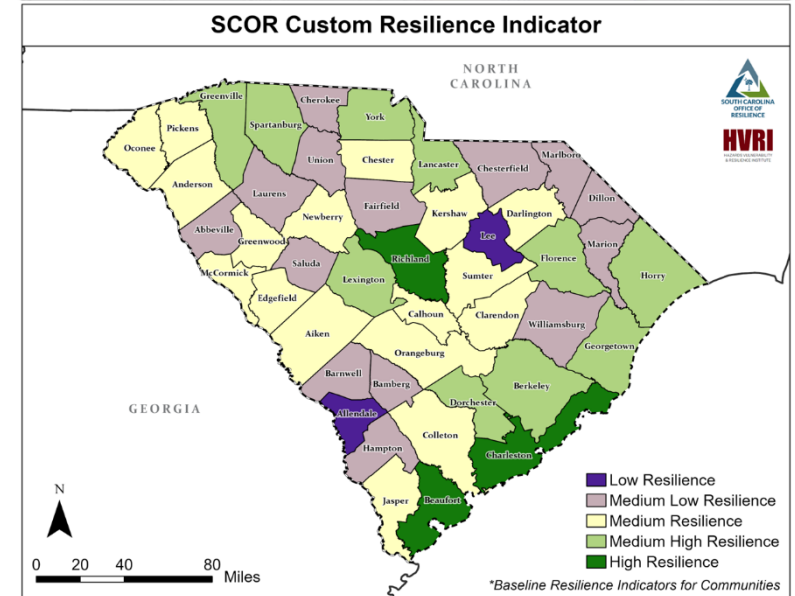
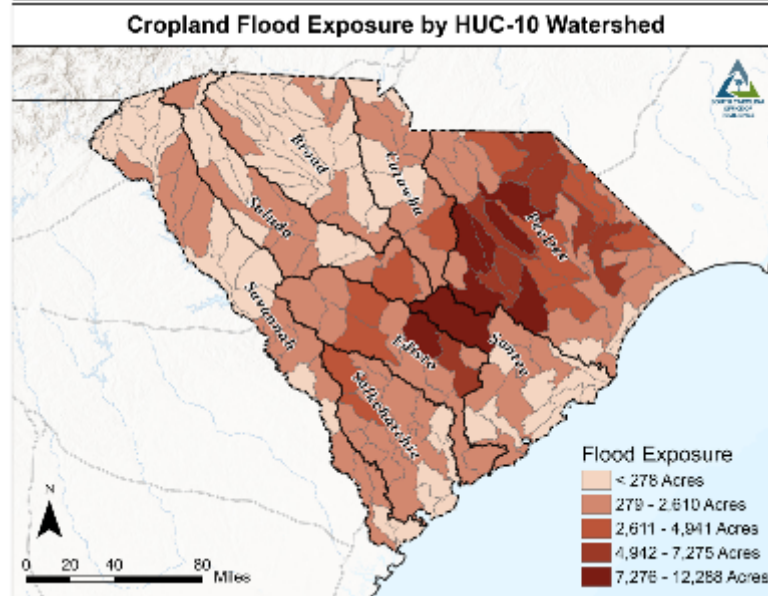
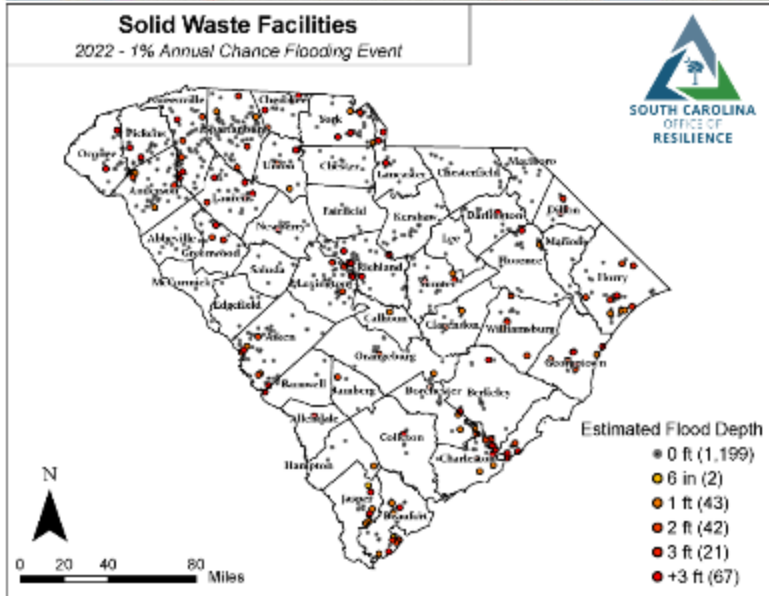
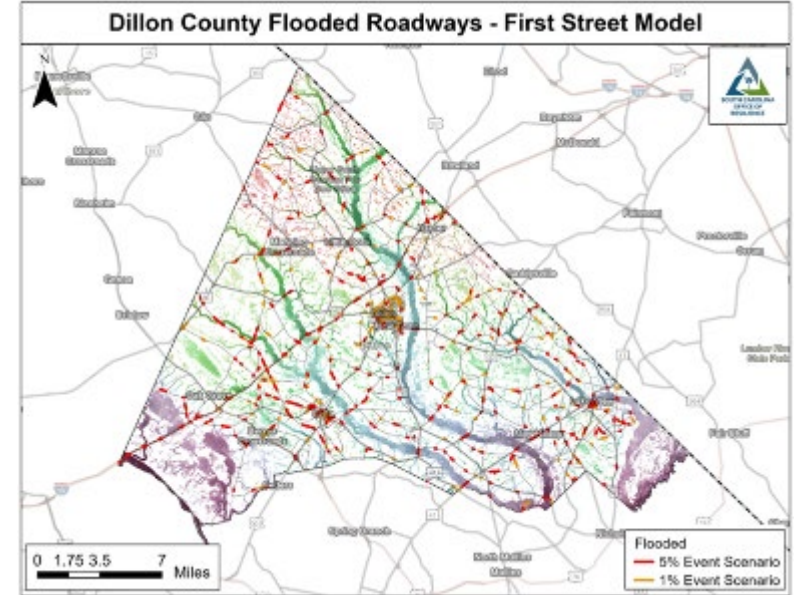
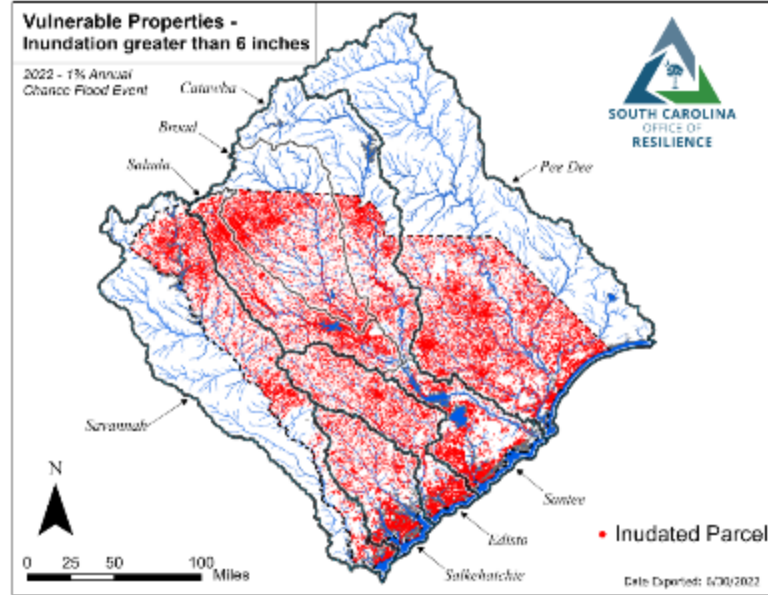
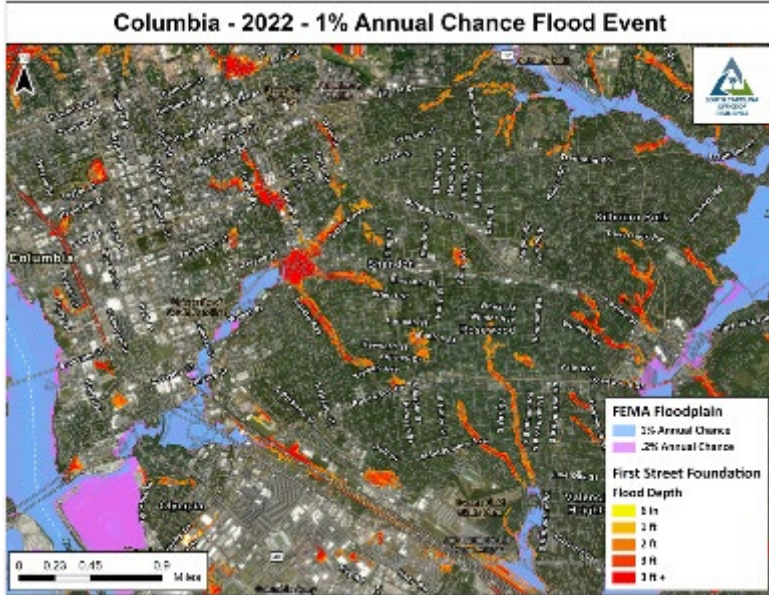
Flood Prone Areas of Lower Richland County



Flood Prone Areas of Lower Richland County

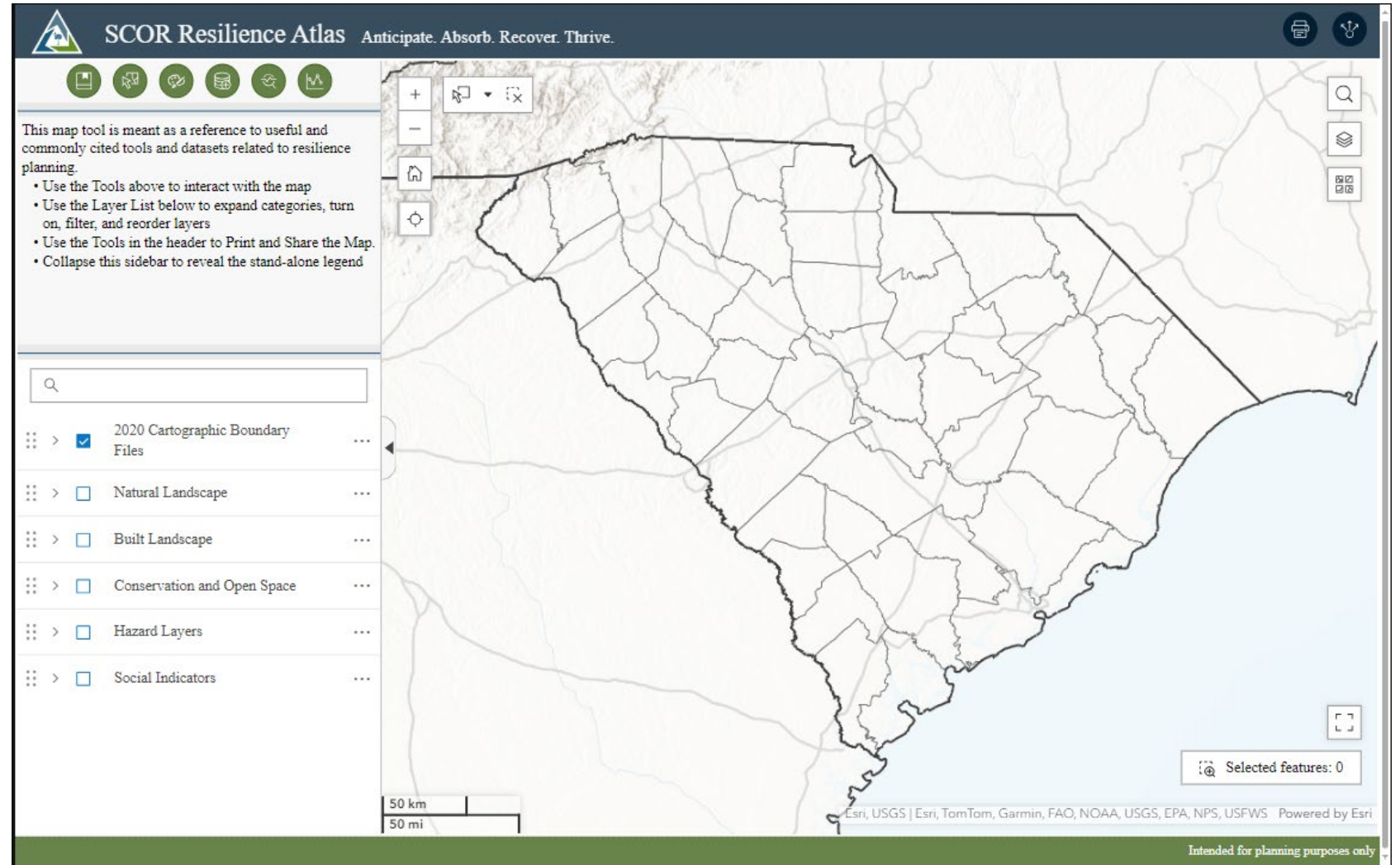


Risk and Vulnerability Assessment



Resilience Atlas

- GIS Tool to interact with our most-used GIS layers
 - Boundaries
 - Natural Landscapes
 - Built Landscapes
 - Conservation/Open Spaces
 - Hazard Layers
 - Social Indicators
- scor.sc.gov/atlas



Resilience Plan Implementation

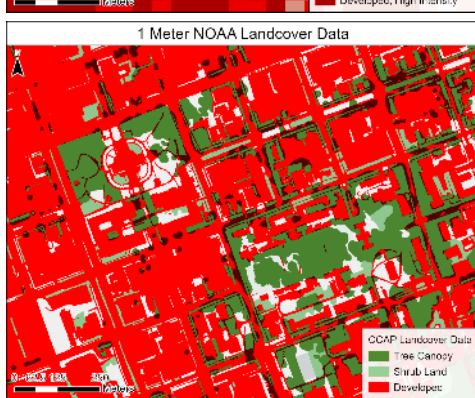
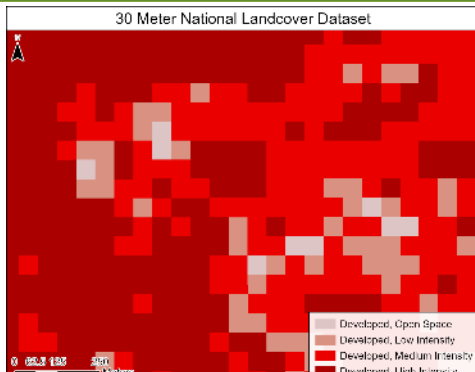
54 Individual Recommendations

Watershed –Based
Planning and
Coordination



Photo Credit- Use permitted by the Gullah/Geechee Sea Island Coalition

Data Collection
and Coordination



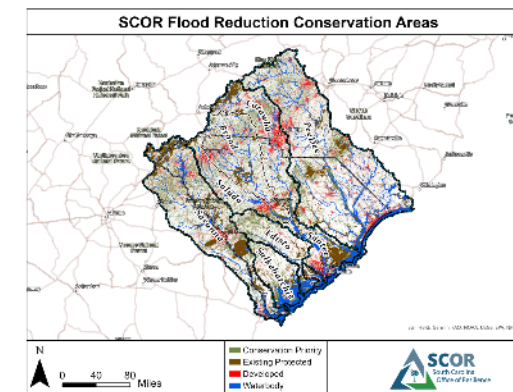
Grants

2 NFWF-National Coastal Resilience Fund projects (\$1.1M)

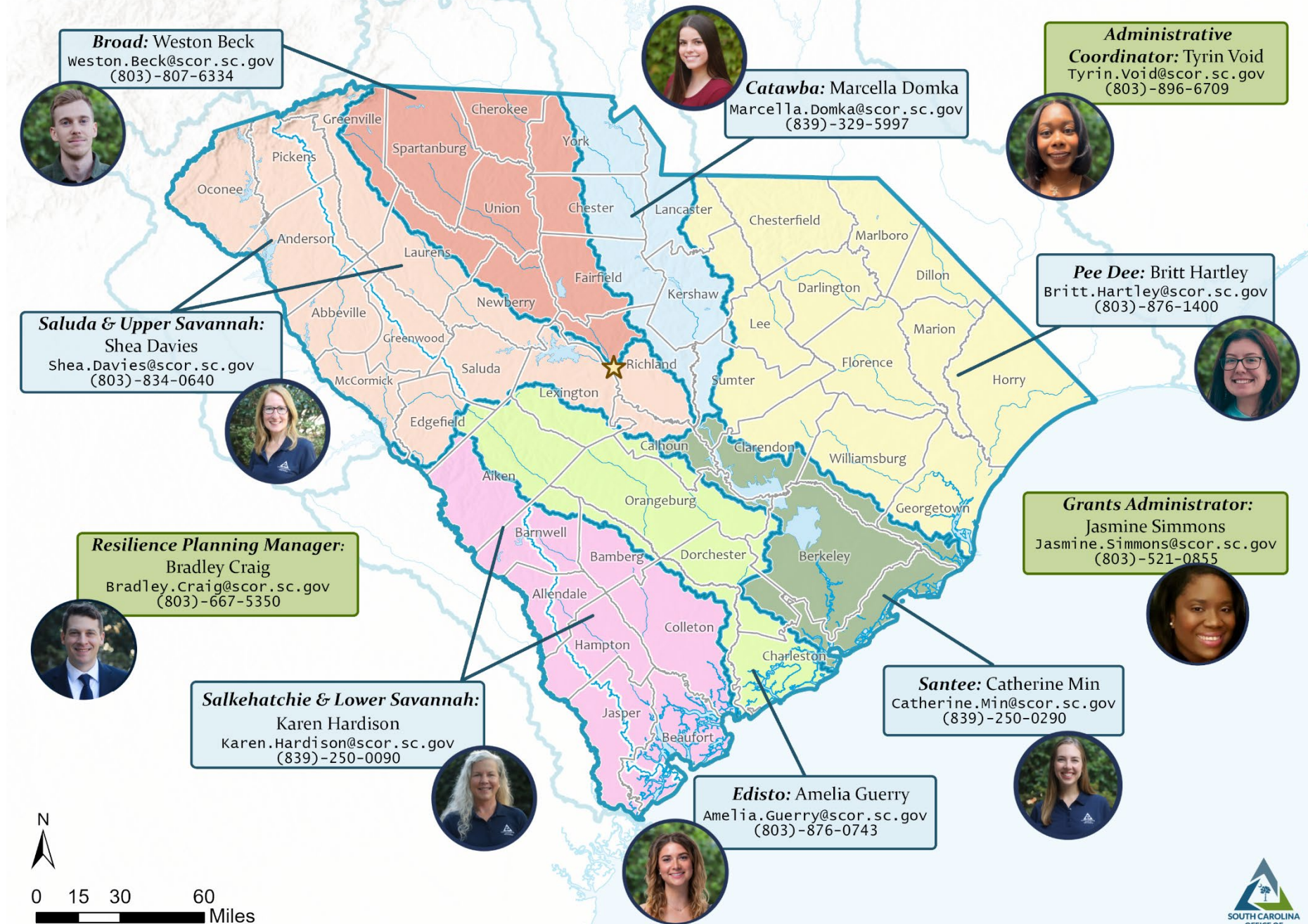
EPA - CPRG Planning (\$3M)

EPA - CPRG – Regional Conservation Coalition (\$421M, \$89M to SC)

Coordinated Land
Conservation

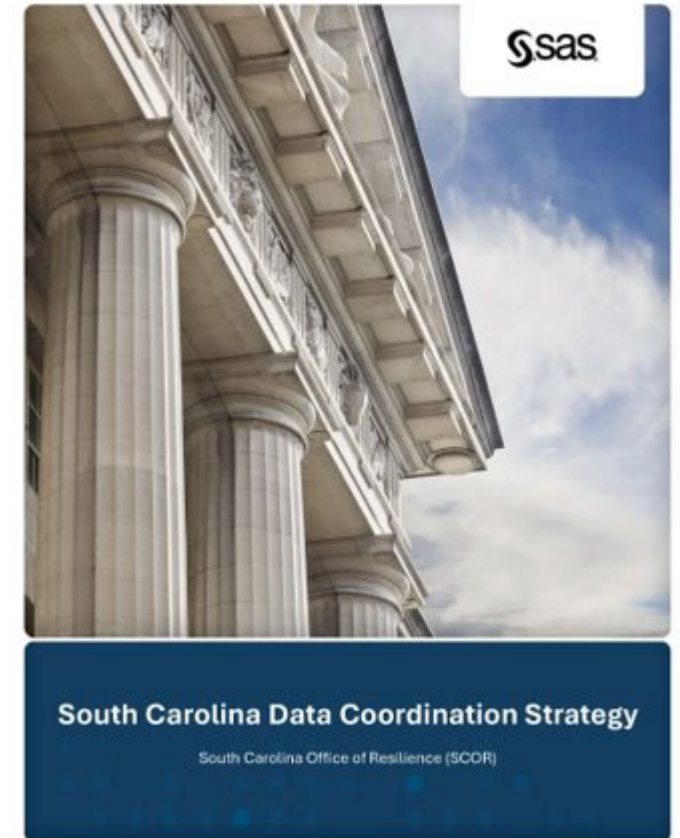


Watershed Coordination Team Contact Information

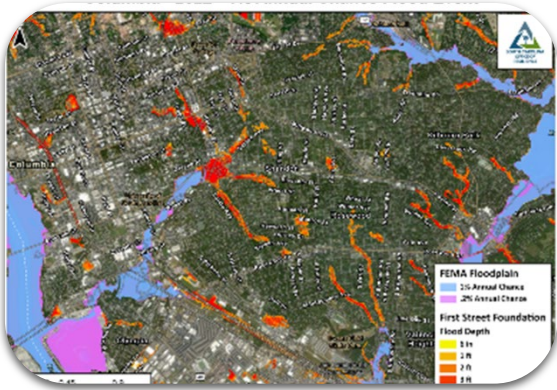


Statewide Data Coordination Initiative

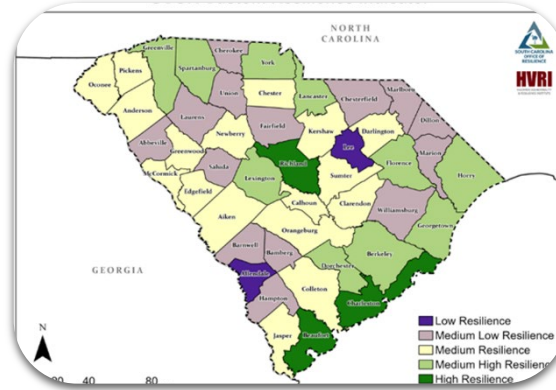
- Using funds allocated in the FY24 budget, SCOR initiated a contract with SAS to evaluate how the state currently manages its data and make recommendations on how to make improvements to maximize efficacy and ensure data is available and usable for developing data tools.
- SCOR and SAS coordinated with a cross section of state agencies to get a clear picture of the current state of data management within South Carolina.
- SCOR does not seek to become the holder of all state data. Rather, SCOR recommends that the state's data be catalogued and organized.
- SCOR has coordinated with other State agencies to develop an implementation strategy. Based on those conversations the Department of Administration will be seeking funds to establish a statewide Chief Data Officer to work with state agencies to improve data quality and accessibility.



Data Acquisition



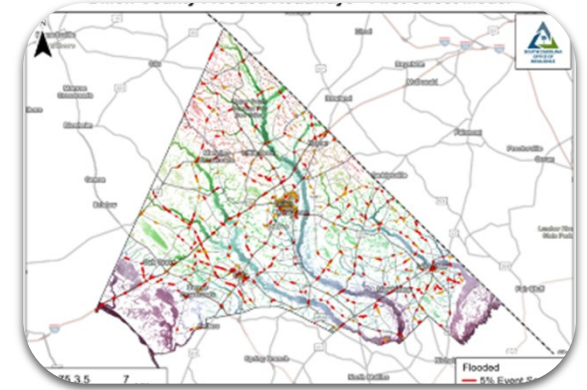
First Street Hazard Data



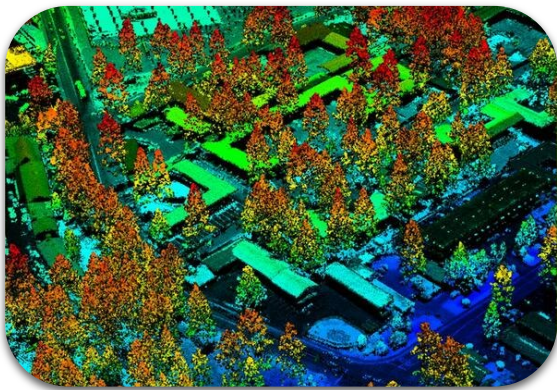
Resilience Indicators (USC HVRI)



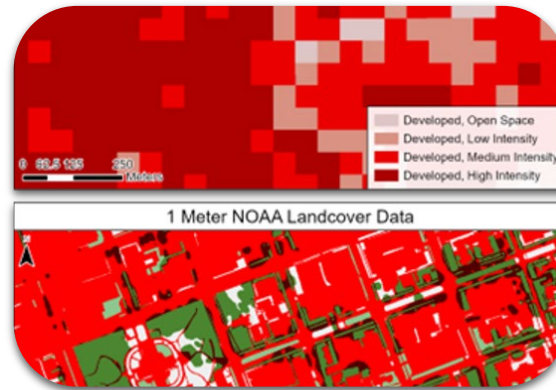
Bridge Box



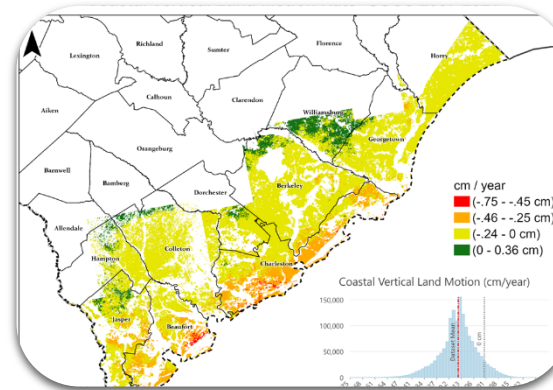
Roadway Elevations



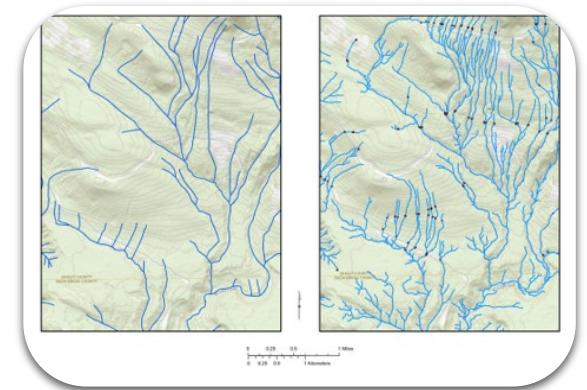
Coastal Lidar Update



High Resolution Land Cover



Extensometers

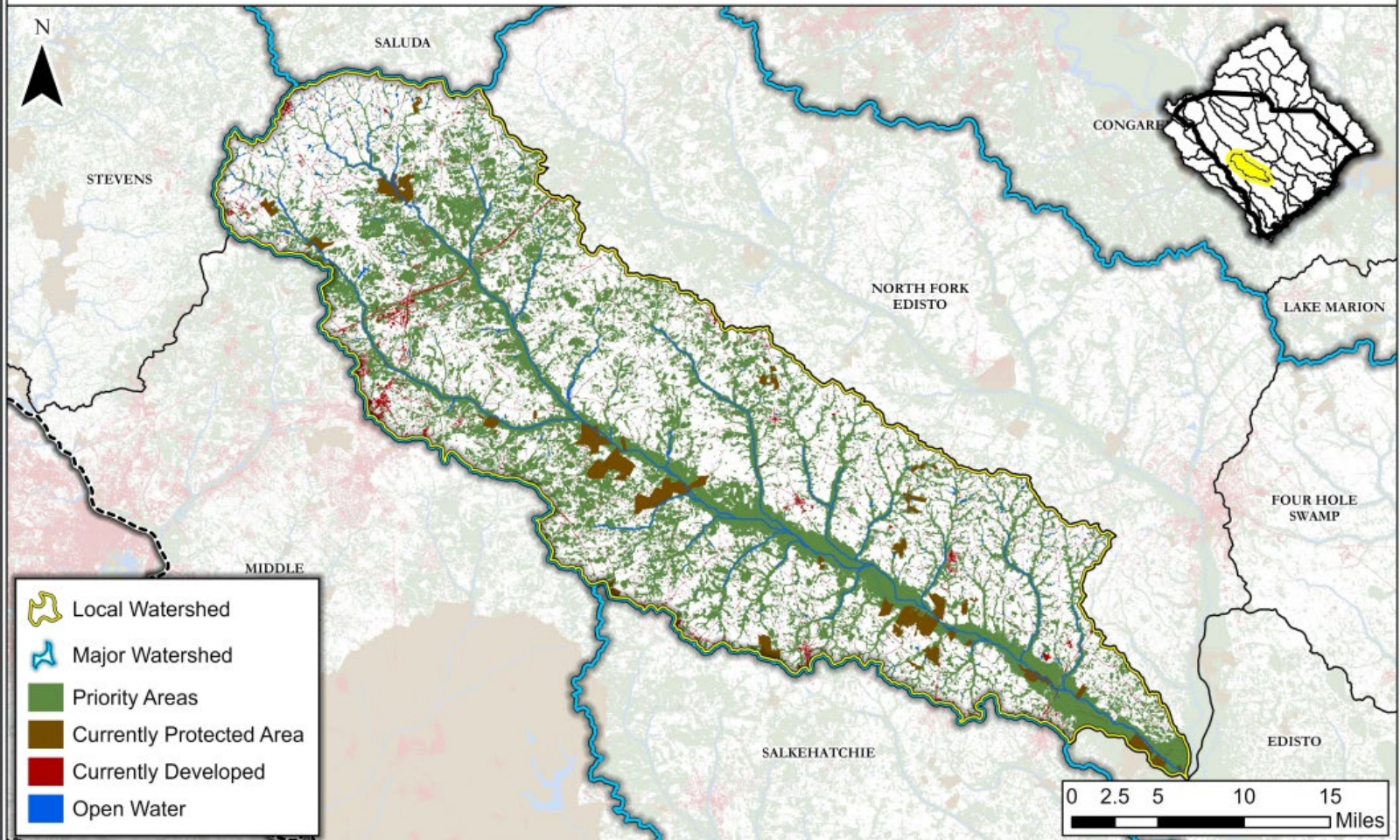


3D Hydrography

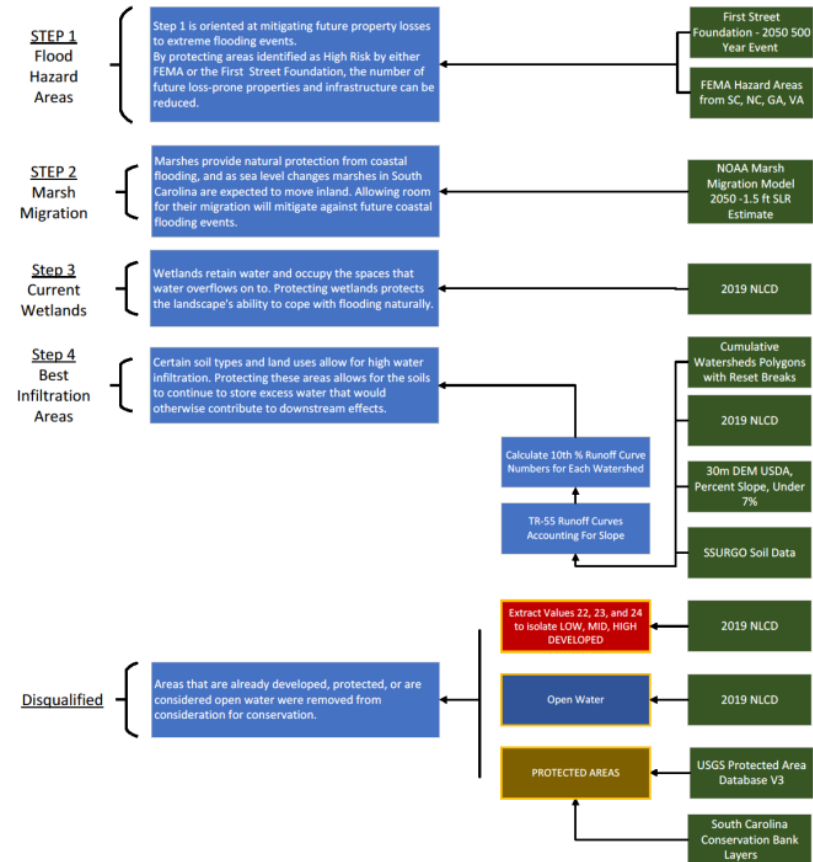
Maintain Natural Flood Protection Through Conservation

Prioritized Flood Mitigation Areas

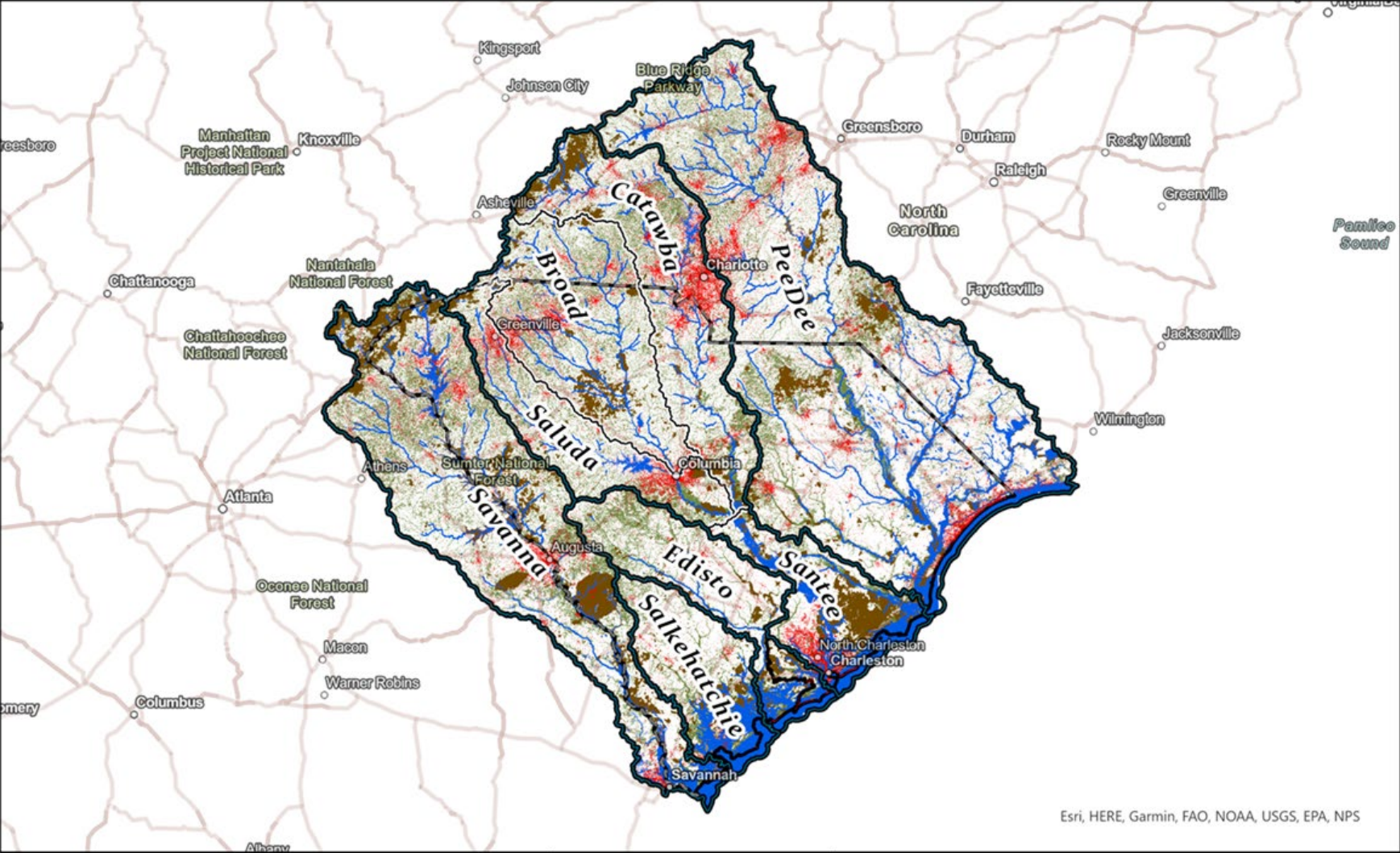
South Fork Edisto Watershed



SCOR's Prioritized Flood Mitigation Areas are the outcome of a data driven approach to identifying areas that will reduce severity and exposure to flooding in South Carolina's watersheds. Priority Areas incorporate inputs from the 2019 National Land Cover Dataset, NRCS SSURGO, NOAA's Marsh Migration model, future high-risk flood areas from the First Street Foundation, and FEMA's Special Flood Hazard Areas.



SCOR Flood Reduction Conservation Areas



<p>N</p>  <p>0 40 80 Miles</p> 	<ul style="list-style-type: none">Conservation PriorityExisting ProtectedDevelopedWaterbody	
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Existing Mitigation Programs Overview

Over \$286M Awarded to Mitigation Projects

65

CDBG-MIT Projects (Infrastructure, Buyout, Plans and Studies, and Match) **29 Complete Projects + 144 Closed Voluntary Buyouts**

17

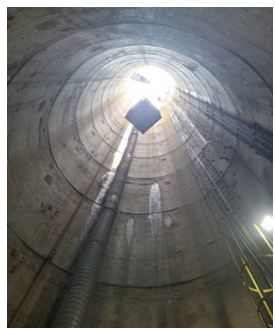
ARPA-funded Projects (Stormwater Infrastructure & USS Yorktown) **5 Complete Infrastructure Projects + USS Yorktown**

4

Reserve Fund Mitigation Projects (Stormwater Infrastructure, Hazard Mitigation Infrastructure, and Match)

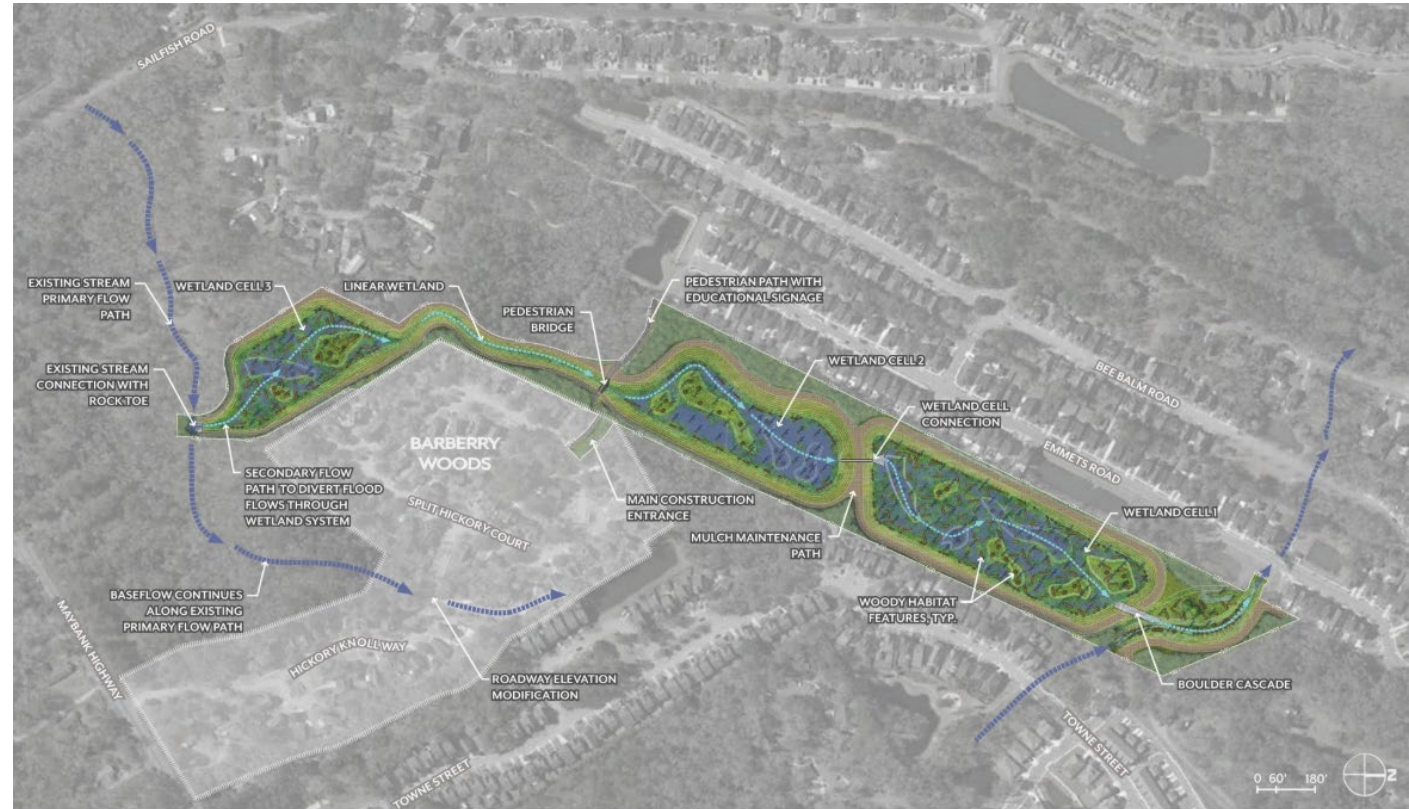
TBD

Hurricane Helene CDBG-DR Mitigation Set-Aside Program (Applications open through January 30th; \$19 million available)



Green Infrastructure Example: Barberry Woods Restoration

- Flooding in the Barberry Woods neighborhood often blocked access due to a single entryway, cutting off residents from emergency services and causing prolonged impacts.
- The completed project is one of the largest green infrastructure ecological parks in the state, and reduces flooding of nearby residences during major storm events.
- Improvements included a flood bypass channel, wetland storage cells, maintenance berms, and features for passive recreation such as a pedestrian walkway and bridge.
- For more information, visit the City of Charleston's project website at: <https://www.charleston-sc.gov/2482/Barberry-Woods-Drainage-Improvement-Proj>



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South Carolina Office of Resilience



scor.sc.gov

General Inquiries

contact@scor.sc.gov

(803) 896-4215

Resilience Team

resilience@scor.sc.gov

