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South Carolina Office of
RESILIENCE

Lessening 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



Year	Event
2015	SC Disaster Recovery Office was created following Historic Floods of 2015, which resulted from Hurricane Joaquin
2016	Hurricane Matthew
2018	Hurricane Florence
2018	Floodwater Commission established
2020	Disaster Relief and Resilience Act was signed, creating the Office of Resilience
2021	Officially began operation at the start of FY 2022

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What We Do

DISASTER RECOVERY
Long-term recovery; rebuild and replace homes damaged by hurricanes and flooding in FEMA-declared counties; funded by HUD CDBG-DR

MITIGATION

- **Buyouts:** Voluntary acquisitions of repetitively flooded land and property in order to return it to green space
- **Infrastructure:** Traditional "Gray" and Nature-based "Green" Infrastructure
- **Plans & Studies:** Funding for local governments and state agencies to develop and/or update hazard mitigation plans, stormwater plans, and more.
- **Matching Grants:** Provide the local cost share for other federal flood mitigation programs

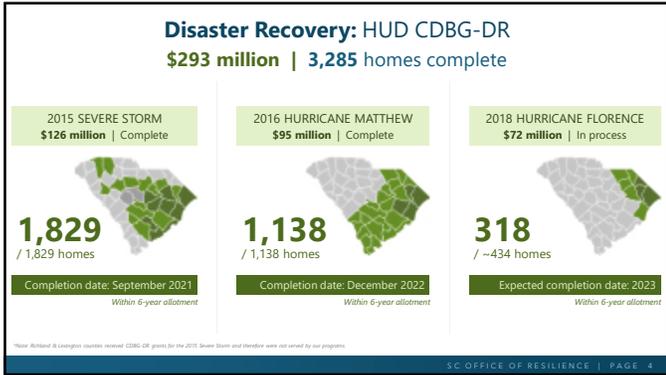
RESILIENCE

- Development and management of the Strategic Statewide Resilience & Risk Reduction Plan
- Management of the Disaster Relief and Resilience Reserve Fund and the SC Resilience Revolving Fund

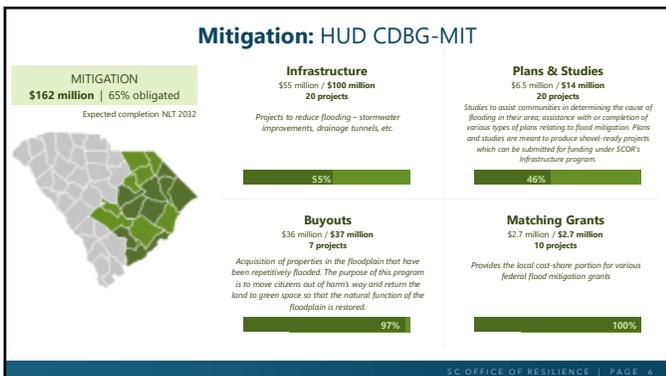


DISASTER CYCLE

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Charleston Medical District: Ehrhardt Tunnel



The proposed design will eliminate the flood conditions depicted in the bottom left image. The map depicts a typical/average combined rainfall and tide event.

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Horry County Buyout



The proposed project will buyout and demolish 61 homes and their associated non-porous surfaces from the community.

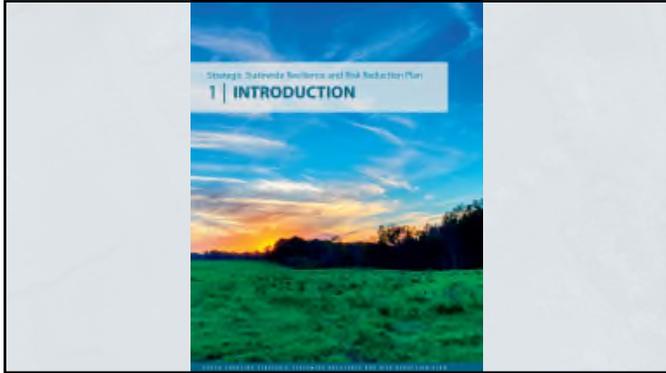
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Resilience Planning

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



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Legislative Guidance

- The Act stated that the plan should be developed with the principles recommended in the South Carolina Floodwater Commission Report.
- Intended to serve as a framework to guide state investment in flood mitigation projects, adopts programs and policies to protect the people and property of South Carolina from damage and destruction of extreme weather events.
- The Act directed that the initial version of the plan be completed by July 1, 2022. * (Extended to July 1, 2023)

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Floodwater Commission Principals

- Flood management plans and actions should be based on watershed boundaries, recognizing that water flows and floods do not follow jurisdictional or political lines.
- Decisions and actions should be based on high-quality, shared and integrated hydrologic and hydrographic models that are derived from increased data collection; the data and models should be transparent and freely accessible to all stakeholders.
- Building the capacity of local governments to develop science-based and actionable flood management plans and hazard mitigation plans should be a priority, especially for under-resourced communities. It does little good for one local jurisdiction to have high-quality plans if the upstream jurisdiction does not.
- Success will depend on collaboration. Collaboration must take place between state agencies to bridge boundaries, as well as between the state and local governments. Collaboration is essential to build trust among all stakeholders, which leads to partnerships, coordination and more effective programs. Collaboration should also be explicitly encouraged with key federal agencies (i.e. US Army Corps of Engineers, US Geological Survey, NOAA).

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Floodwater Commission Principals

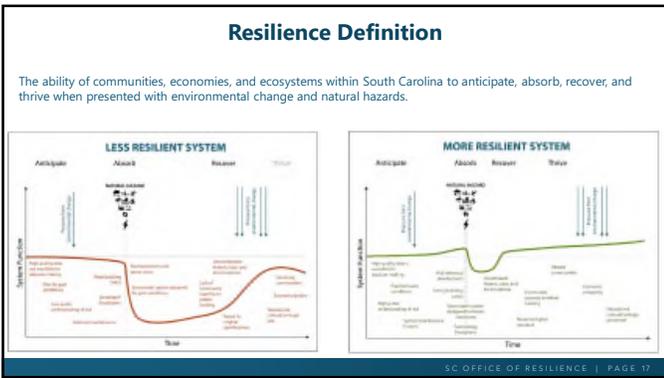
- Ongoing opportunities for public participation and education should be developed to encourage collaboration and build trust.
- Flood management programs should recognize the beneficial functions of natural floodplains, salt marshes, beach dunes, forests, living shorelines and other natural features to reduce flood risk, as well as the co-benefits they deliver for recreation, forestry, tourism, fisheries, and wildlife. "Nature-based solutions" should be considered included in the design of flood control projects whenever possible in order to increase resilience and be cost-effectiveness.
- Post-disaster funding coming to South Carolina from congressional appropriations should be managed in a unified state plan as much as federal rules and guidelines will permit, and coordinated across the multiple sources (i.e. FEMA, HUD).

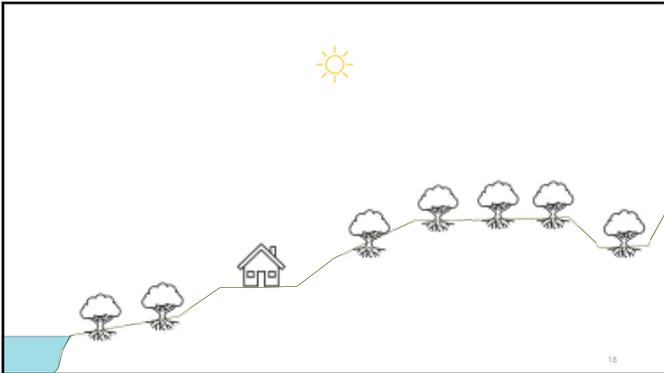
Resilience Planning Assumptions

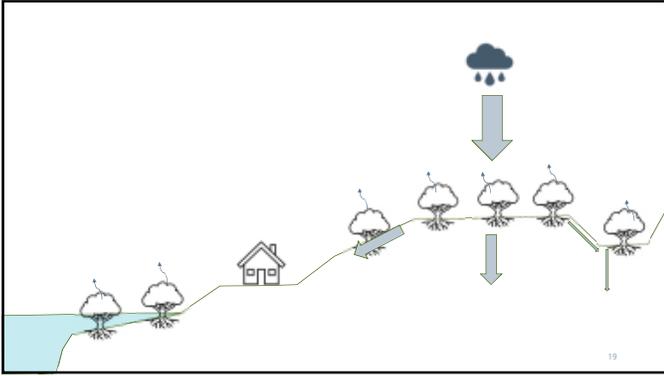
- The plan will not try to provide solutions to prevent changes to the climate but will offer recommendations for how the state may minimize the impacts that are expected to occur.
- Resilience Planning utilizes an adaptive management approach so that it can adjust to changing conditions and integrate new data sources as they become available.
- Initial Plan recommendations focuses flooding.
 - Other extreme weather events /disasters to be addressed in more detail in subsequent versions of the plan

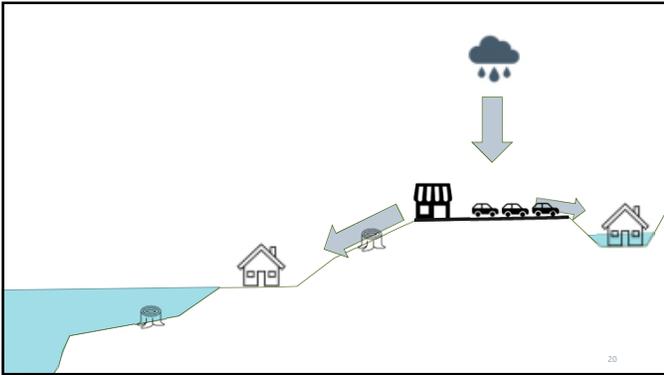
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|-------------------------------------------------------------|-------------------------------------------------------------------------------|
| Able South Carolina | Historic Charleston Foundation |
| American Flood Coalition | Kershaw County |
| Audubon South Carolina | Longleaf Alliance |
| Beaufort County | Lowcountry Council of Governments |
| Buckeye Community Hope Foundation | Lowcountry Land Trust |
| Building Officials Association of South Carolina | Municipal Association of South Carolina |
| Catawba Indian Nation (Tribal Historic Preservation Office) | Muscogee Nation |
| Charleston County | National Oceanic & Atmospheric Administration |
| Citadel | Pew Charitable Trust |
| Citizen Center for Public Life | Preservation Society |
| City of Charleston Office of Resilience and Sustainability | Resilient Lands Matter |
| Clemson University | Santee Lynches Council of Governments |
| Coastal Carolina University | South Carolina Army National Guard |
| College of Charleston | South Carolina Association of Counties |
| Congaree Land Trust | South Carolina Battleground Trust |
| Conservation Voters of South Carolina | South Carolina Beach Advocates |
| Dominion Energy | South Carolina Coastal Conservation League |
| Edisto Natchez Kusso Tribe of South Carolina | South Carolina Conservation Bank |
| FEMA Heritage Emergency Task Force | South Carolina Department of Agriculture |
| Francis Marion University | South Carolina Department of Archives and History (State Preservation Office) |
| Gullah Geechee Cultural Heritage Corridor | South Carolina Department of Commerce |
| Gullah/Geechee Nation | South Carolina Dept. of Health and Environmental Control |

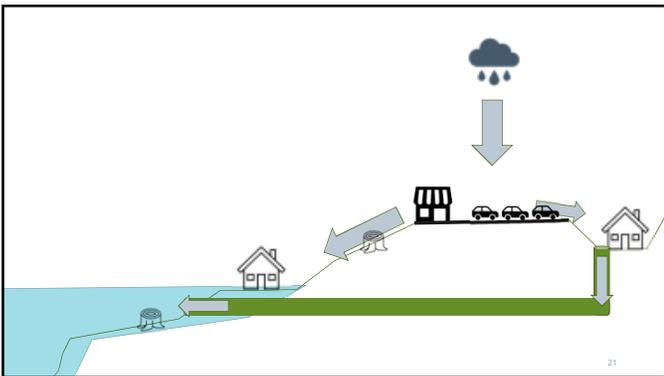
South Carolina Dept. of Health and Human Services	Sustain SC
South Carolina Department of Insurance	The Nature Conservancy
South Carolina Dept. of Labor Licensing and Regulation	The South Carolina Association for Hazard Mitigation
South Carolina Department of Mental Health	The Wassamasaw Tribe of Varnertown Indians
South Carolina Department of Natural Resources	Town of Hilton Head Island
South Carolina Department of Parks, Recreation & Tourism	Trident Association of Realtors
South Carolina Department of Social Services	United States Geological Survey
South Carolina Department of Transportation	University of South Carolina
South Carolina Department of Veterans Affairs	Upstate Forever
South Carolina Emergency Management Division	US Army Corps of Engineers
South Carolina Environmental Law Project	Waccamaw Indian People
South Carolina Forestry Commission	White & Smith Planning Law
South Carolina Institute of Archeology and Anthropology	
South Carolina Law Enforcement Division	
South Carolina Office of Regulatory Staff	
South Carolina Ports Authority	
South Carolina Revenue & Fiscal Affairs Office	
South Carolina Rural Water Association	
South Carolina Sea Grant Consortium	
SC State Housing Finance and Development Authority	
South Carolina State Library	
Southern Environmental Law Center	

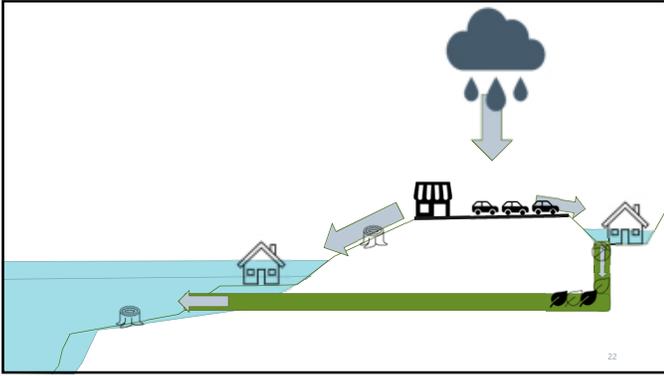


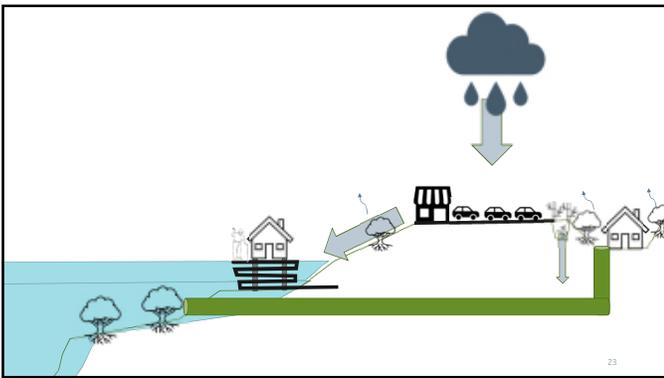


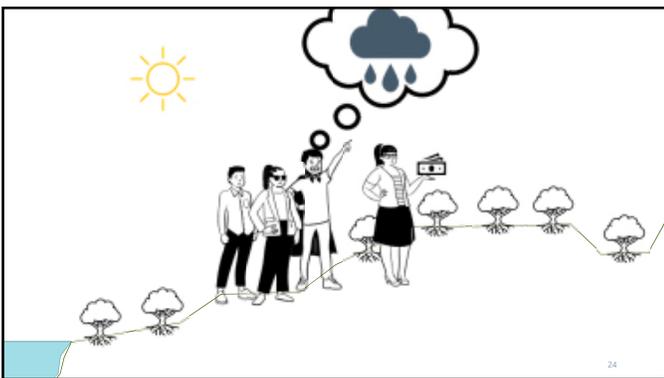


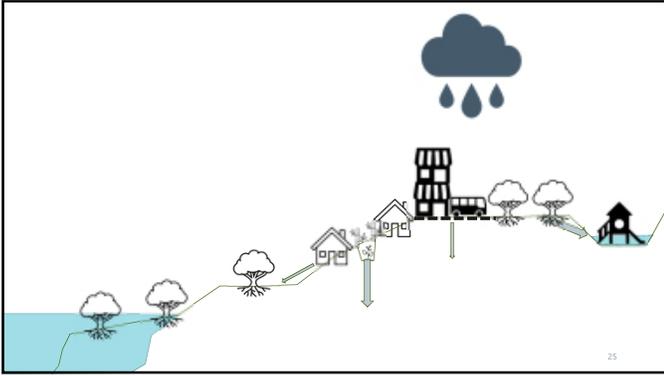




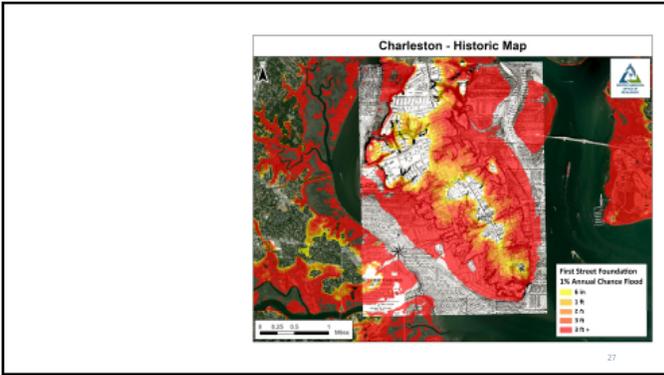




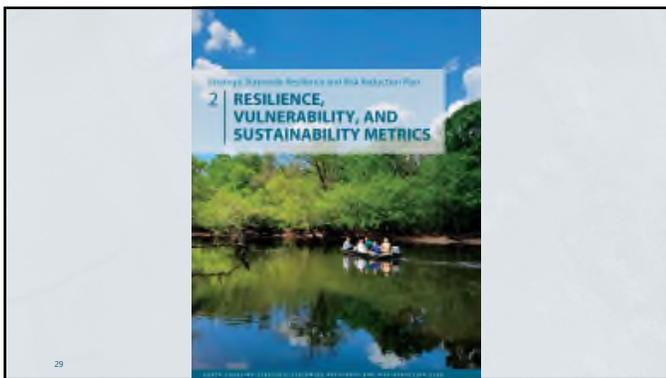




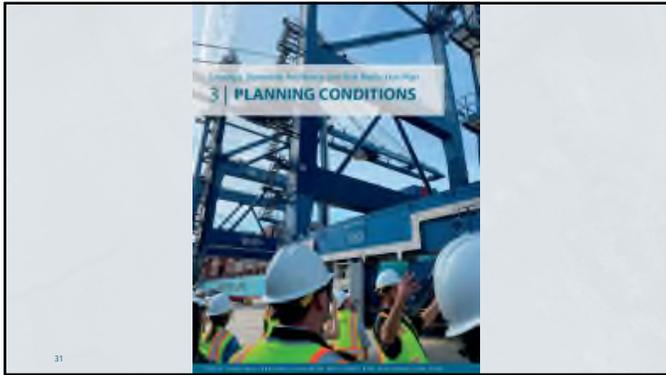


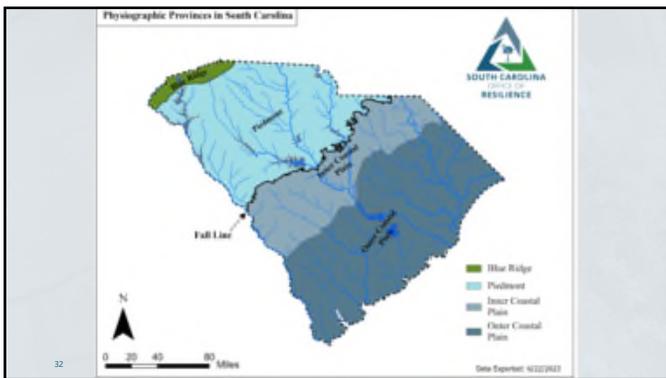


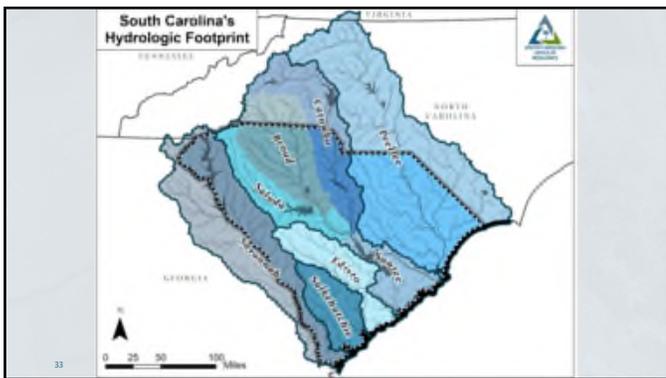


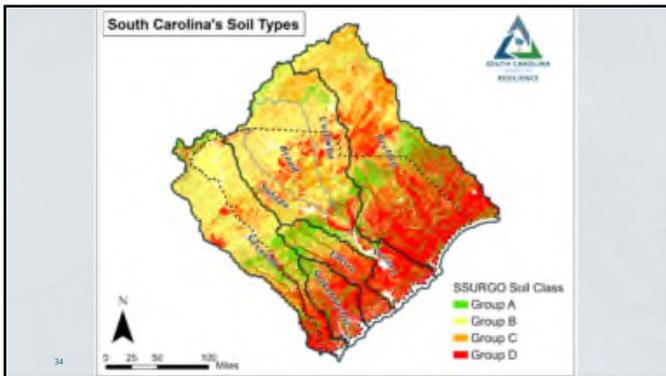


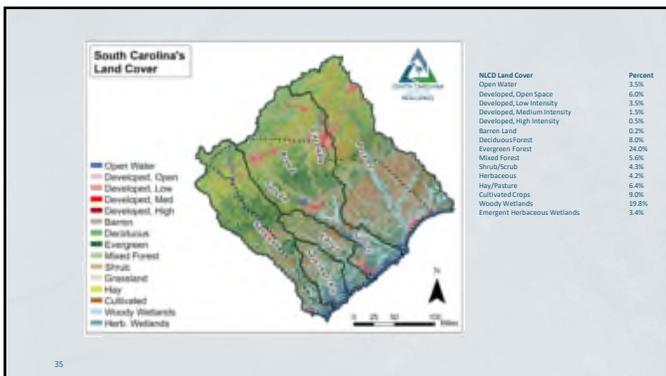
- **Human Well-Being/Cultural/Social**—physical attributes of populations, values and belief systems
- **Economic/Financial**—economic assets and livelihoods
- **Infrastructure/Built Environment/Housing**—buildings and infrastructure
- **Institutional/Governance**—access to resources and the power to influence their distribution
- **Community Capacity**—social networks and connectivity among individuals and groups
- **Environmental/Natural**—natural resource base and environmental conditions

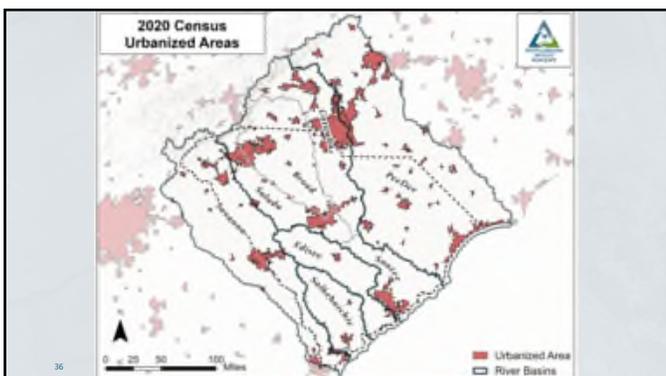


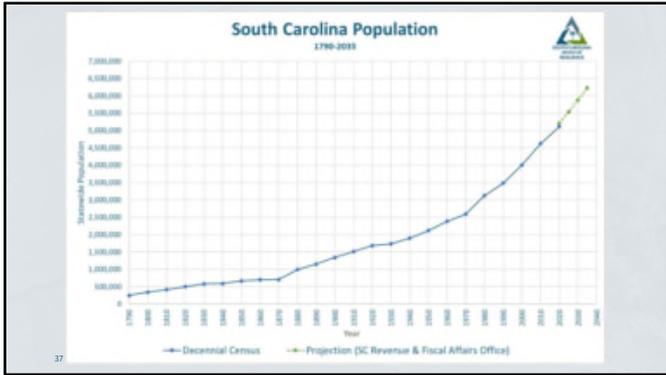


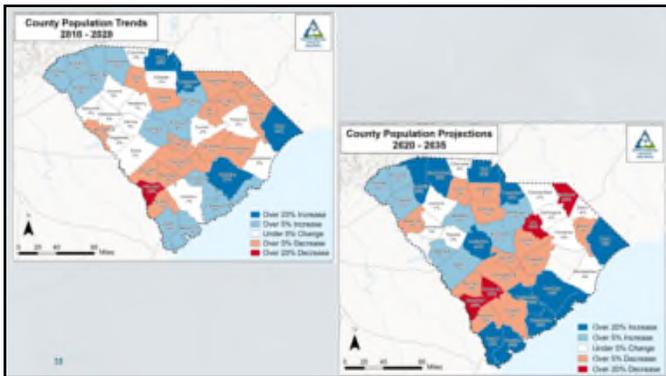






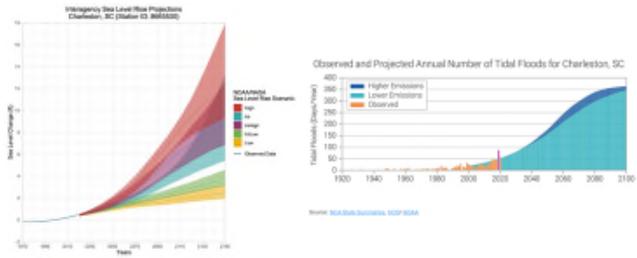






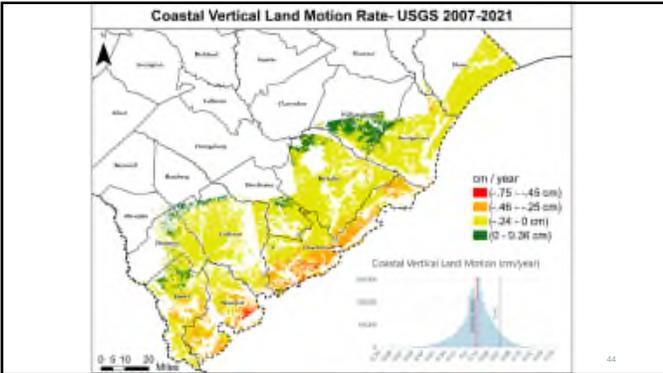


Sea Level Rise Projections



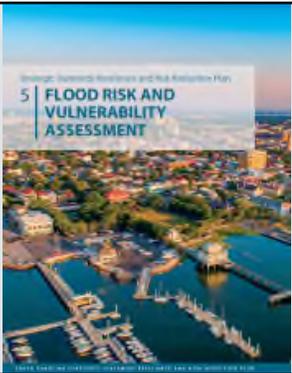
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Coastal Vertical Land Motion Rate- USGS 2007-2021

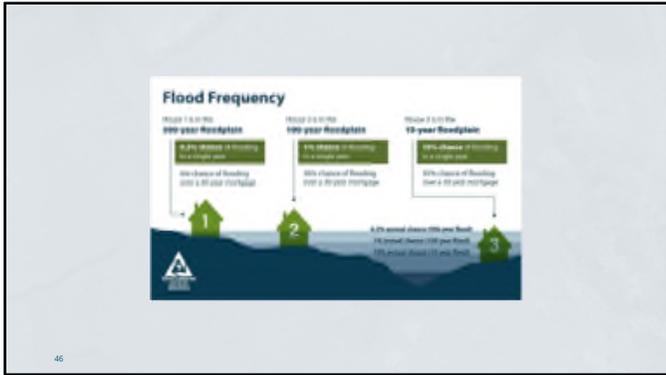


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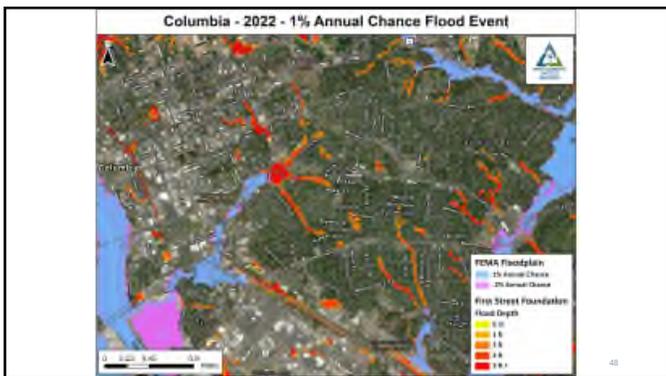
5 | FLOOD RISK AND VULNERABILITY ASSESSMENT

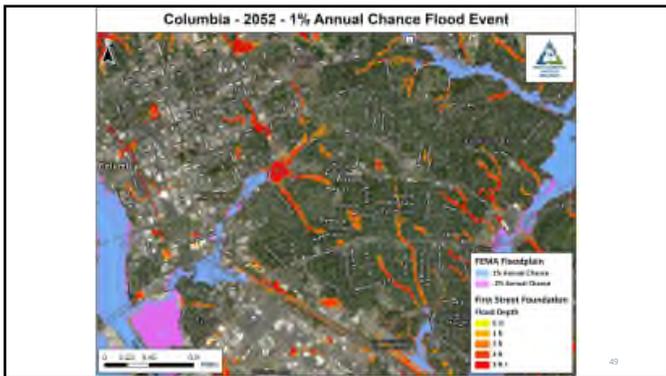


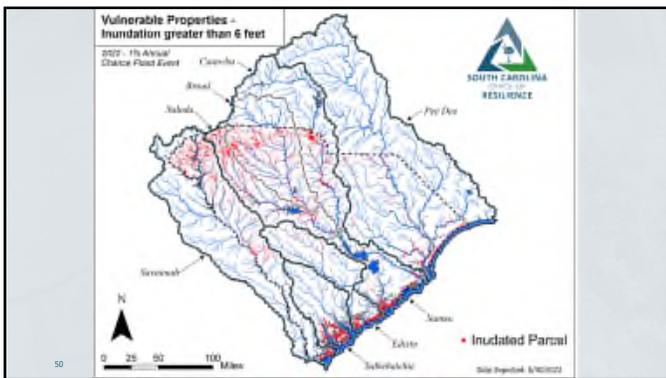
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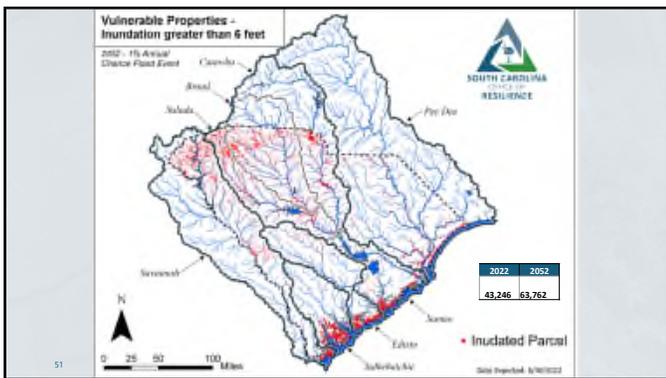


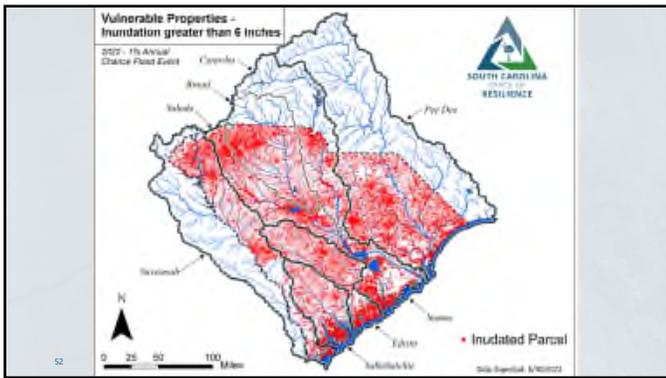


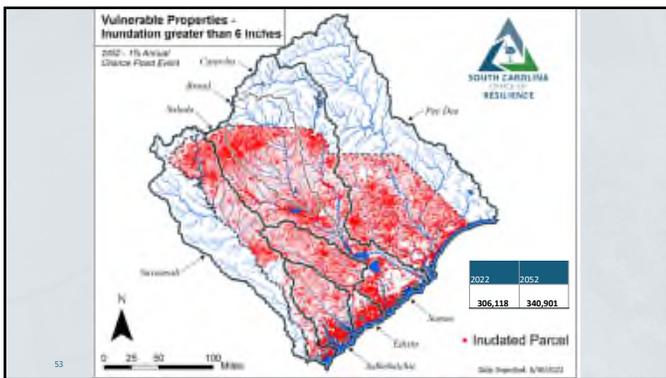


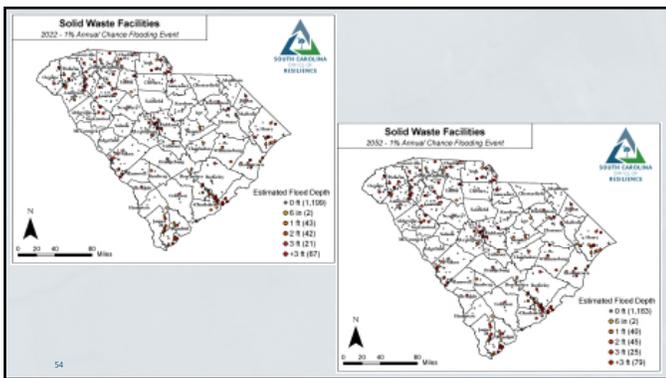


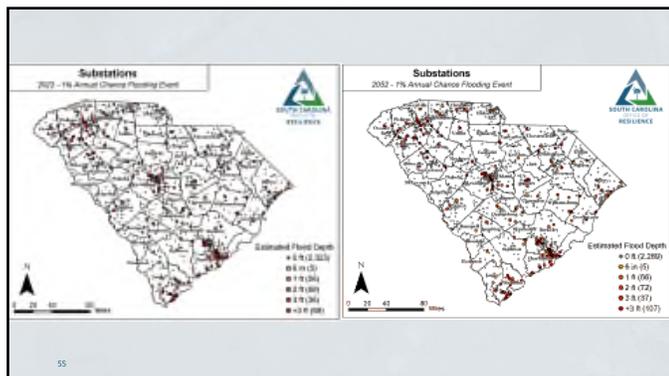


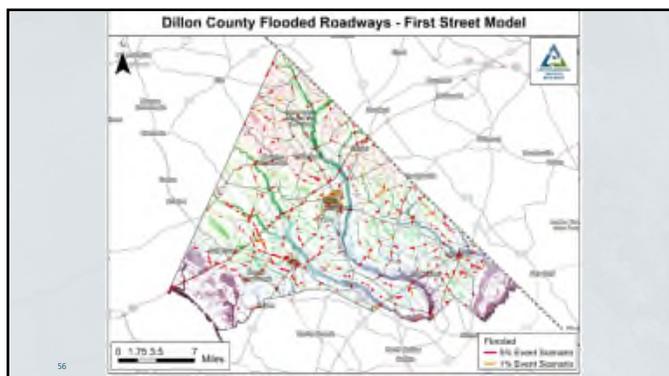


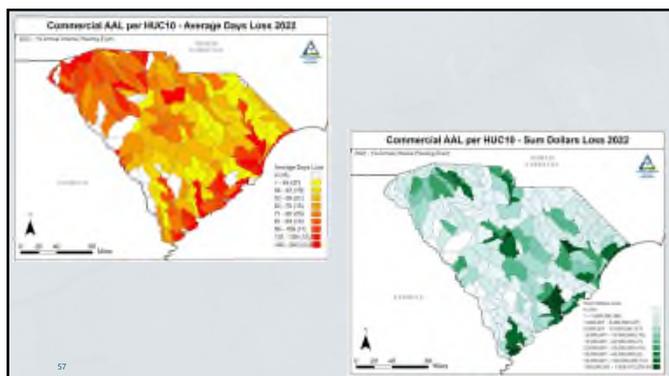


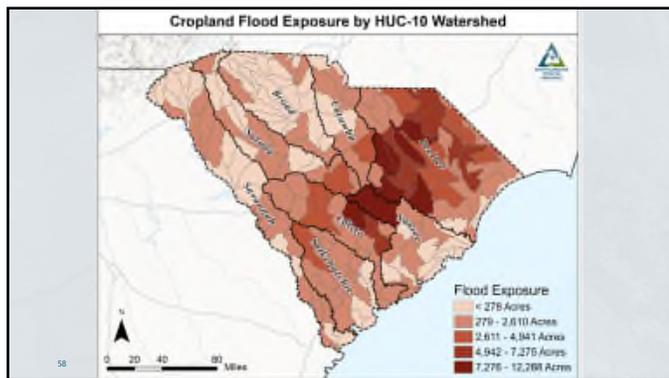


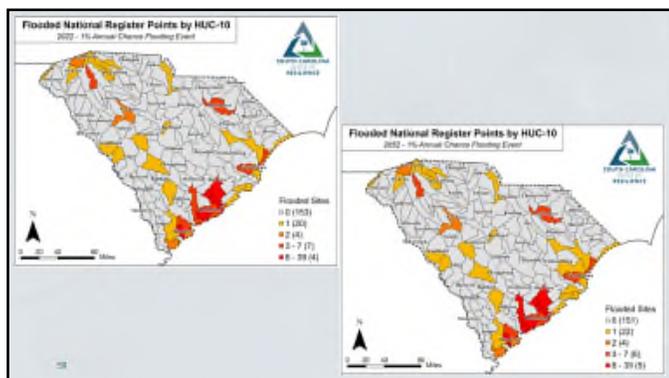


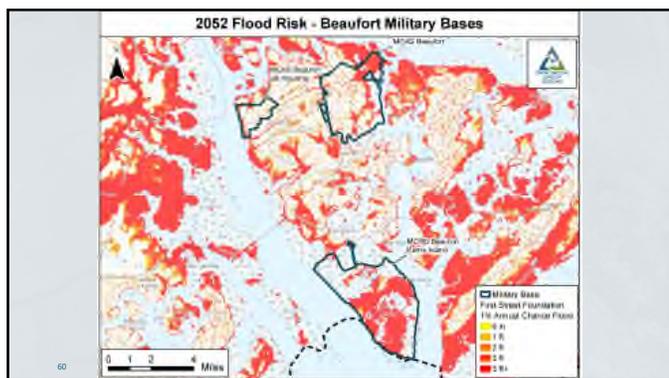


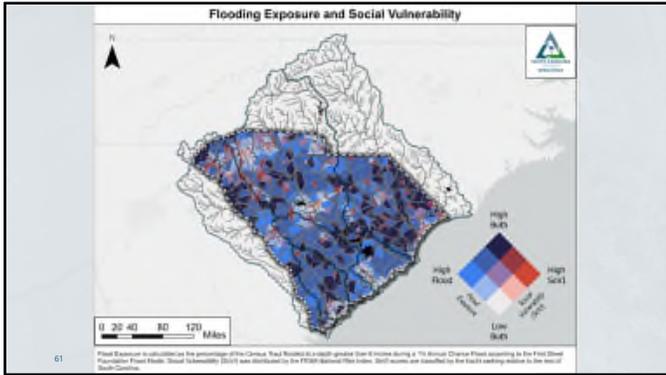


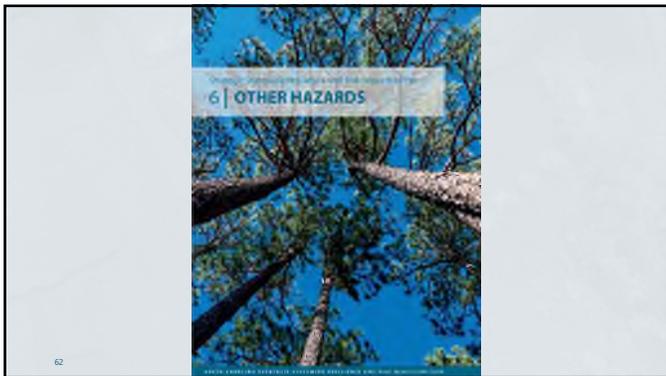


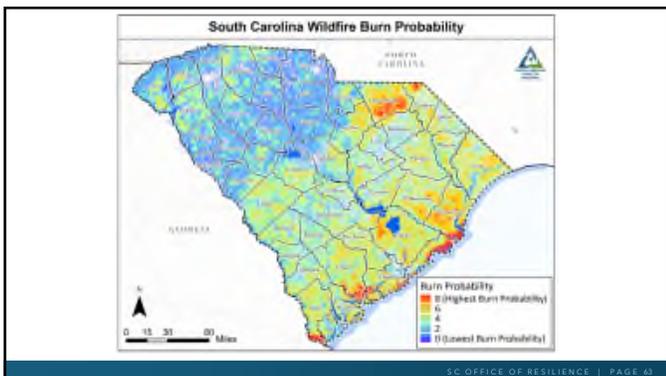


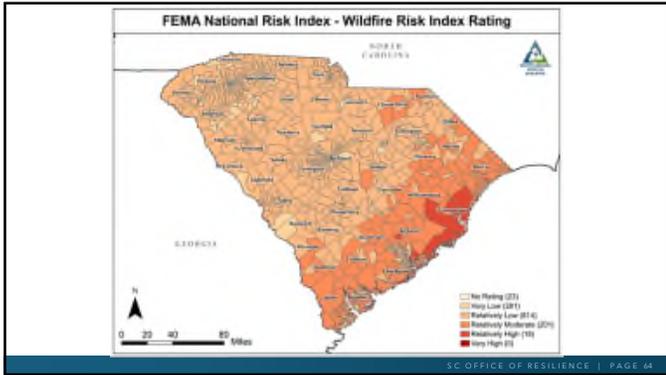


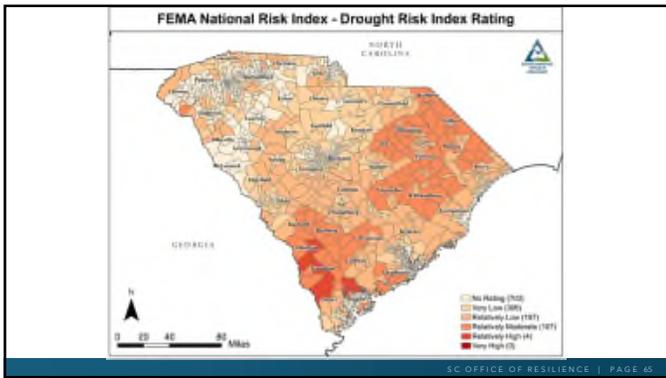


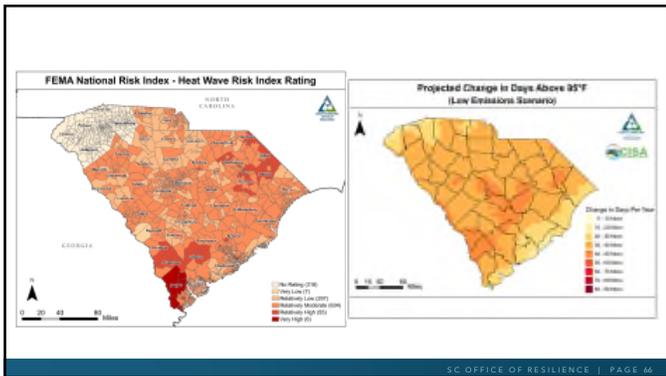


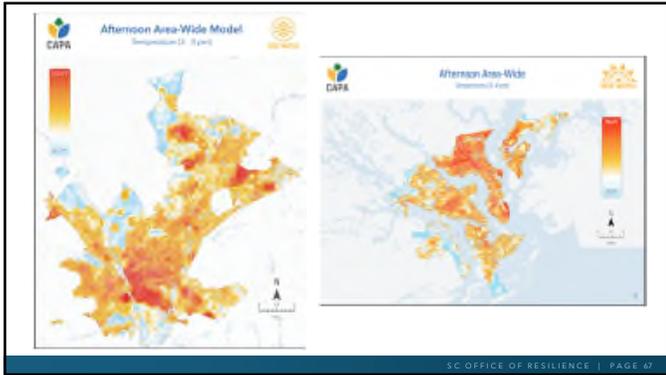


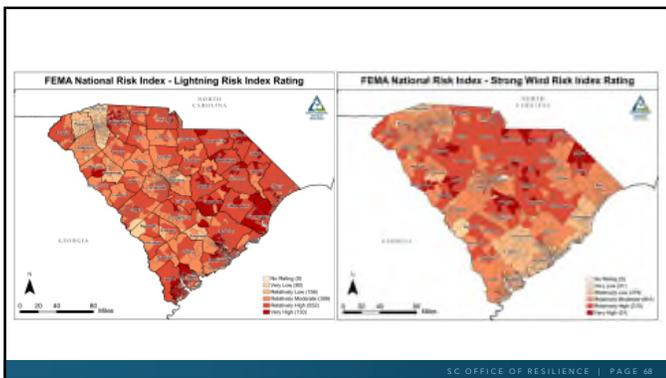


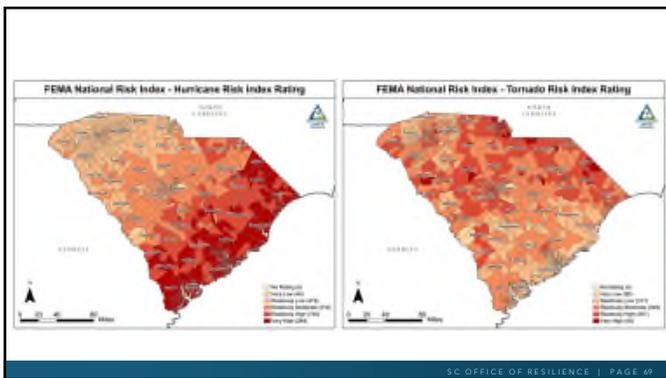


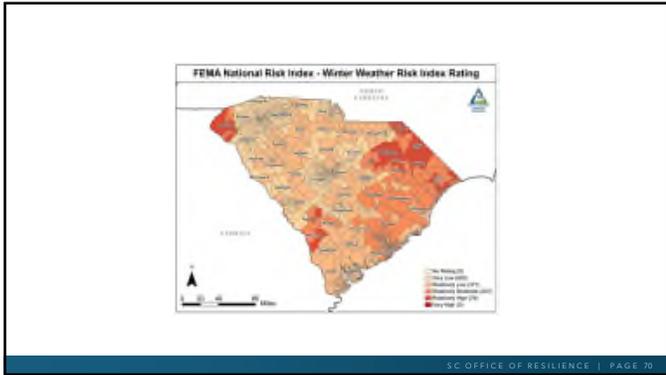


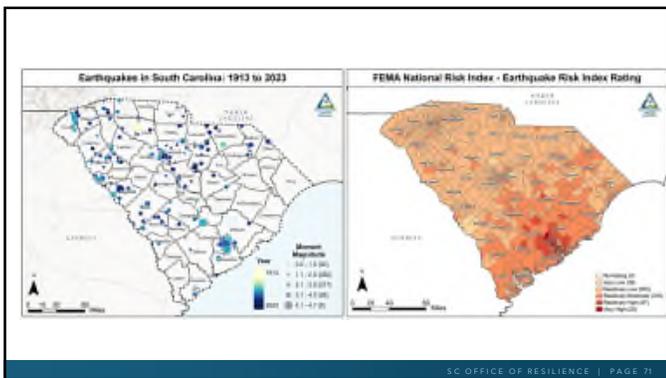


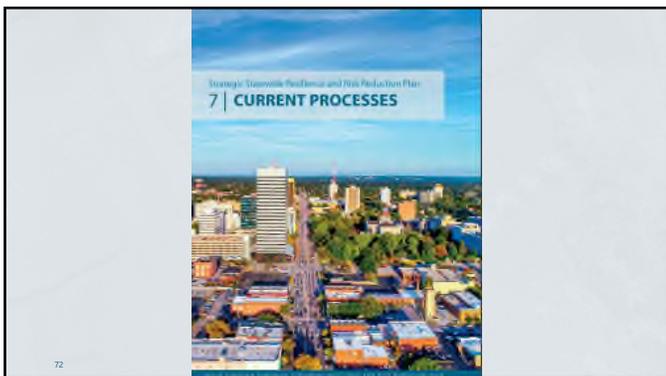


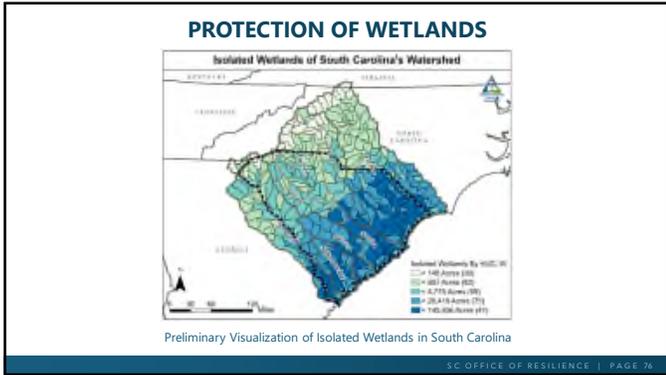




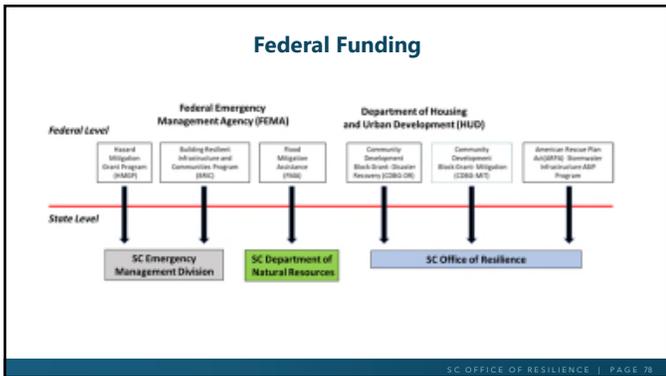












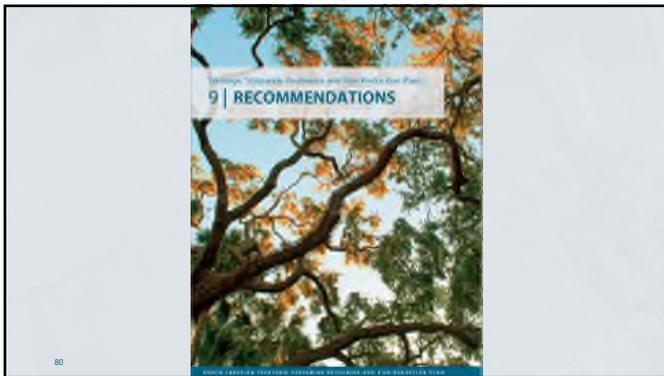
Reserve and Revolving Funds

Reserve Fund

- \$44M Initial (\$200M added in FY2024)
- Pre-disaster programs
 - Hazard mitigation infrastructure projects
 - Buyouts and acquisitions
- Post-disaster programs
 - Provide nonfederal share for federal disaster assistance programs
 - Infrastructure repairs for non-CDBG-DR eligible homeowners and communities
 - Local government loans and grants for immediate assistance
 - Support Disaster Case Management efforts jump starting the disaster recovery

Revolving Fund

- \$6M for low interest loan for voluntary home buyouts and floodplain restoration projects



Recommendation Themes

- Improve Data Collection and Coordination
- Increase Education, Outreach, and Disclosure
- Coordinate Watershed-Based Resilience Planning and Projects
- Incorporate Resilience into Planning, Land Use and Other Regulatory Processes
- Maintain and Strengthen Building Codes
- Incorporate Resilience into Infrastructure Design
- Maintain Natural Flood Protection Through Conservation
- Incorporate Resilience into Housing Recovery
- Establish a Voluntary Pre-Disaster Buyout Program
- Identify and Maximize All Available Funding Sources For Resilience Activities

