



Strategic Statewide Resilience and Risk Reduction Plan

# 1 | INTRODUCTION

## OVERVIEW

The Disaster Relief and Resilience Act (2020) directs the South Carolina Office of Resilience (SCOR) to develop, implement and maintain the Strategic Statewide Resilience and Risk Reduction Plan (Resilience Plan). This plan is intended to serve as a framework to guide state investment in flood mitigation projects and the adoption of programs and policies to protect the people and property of South Carolina from the damage and destruction of extreme weather events.

## CONTENTS

Context/Need .....	3
South Carolina Office of Resilience .....	5
Floodwater Commission .....	5
Creation of the SC Office of Resilience .....	7
Current SCOR Programs .....	7
Resilience Planning Process .....	13
Legislative Guidance.....	13
Planning Scale .....	14
Defining Resilience.....	15
Timeline.....	17
Committees & Working Groups .....	17
Limitations/Constraints.....	23
Acknowledgements.....	24
References .....	29

## CONTEXT/NEED

In recent years South Carolina has experienced repetitive disasters. Beginning in 2015, portions of the state experienced three major storms within four years (2015 to 2018). These storms caused severe property damage and a total of 23 deaths in South Carolina. Water and wind-damaged homes became unlivable. Those without the means to repair their homes were either forced to live in unsafe structures, relocate with relatives, or flee the disaster area. The damage continued to be felt by the local economy as businesses lost customers and local government tax revenues diminished. This strained the fabric of impacted communities – some of which experienced damage from all three storms. The following is a timeline and brief description of the events.

**October 2015:** Portions of South Carolina were devastated by an extreme rainfall event generated from a stalled frontal boundary on the coast, which was worsened by outer circulation of Hurricane Joaquin. The resulting rainfall, with areas receiving over 20 inches of rainfall, caused significant riverine flooding and storm damage throughout large portions the state. During this event, an estimated \$1.5 billion of property, infrastructure, and agricultural damage occurred, 36 regulated dams failed, and 19 fatalities occurred (National Oceanic and Atmospheric Administration, 2016).

**October 2016:** Hurricane Matthew entered the state near McClellanville, South Carolina, as a Category 1 Hurricane, unleashing strong winds, torrential rainfall, significant riverine flooding throughout the eastern part of the state. Wind damage from the storm damaged homes across the coastal counties of the State. Entire neighborhoods were underwater over forty miles inland, and 833,000 homes were without electricity. 400,000 people were evacuated from their homes in advance of the storm. Four South Carolina residents lost their lives, and hundreds more lost their homes.

**September 2018:** Hurricane Florence made landfall just north of South Carolina in Wrightsville Beach, North Carolina. While North Carolina experienced the worst of the storm, South Carolina suffered from heavy rainfall and riverine flooding. Much of the impact was caused by water flowing from North Carolina. The impacts of the hurricane and subsequent flooding is estimated to have caused \$600 million in property damage, evacuation of close to 500,000 people, and major damage to 550 homes (National Oceanic and Atmospheric Association, 2021).

One storm can cause destabilizing damage, but with three in a row, communities are still struggling to recover and thrive years later. Actions need to be taken now to ensure that communities can anticipate, absorb, recover, and thrive when presented with the next storm or other natural hazard.

## SOUTH CAROLINA OFFICE OF RESILIENCE

The [South Carolina Office of Resilience](#) (SCOR) exists to increase resilience to disasters and reduce or eliminate the long-term risk of loss of life, damage to and loss of property, and suffering and hardship, by lessening the impact of future disasters.

SCOR is directed to develop, implement, and maintain the Strategic Statewide Resilience and Risk Reduction Plan (Resilience Plan). This plan is intended to serve as a framework to guide state investment in flood mitigation projects and the adoption of programs and policies to protect the people and property of South Carolina from the damage and destruction of extreme weather events.

## FLOODWATER COMMISSION

The DRRRA states that the Resilience Plan should be developed with the principles recommended in the [South Carolina Floodwater Commission Report](#) (SC Floodwater Commission, 2019). The report was conducted by the SC Floodwater Commission, established by Governor Henry McMaster through [Executive Order 2018-50](#), and chaired by Thomas S. Mullikin. The Commission was charged with developing short- and long-term recommendations to alleviate and mitigate flood impacts to the state with special emphasis on communities located near the coast or rivers. The Commission recommended the following principles be used as the foundation for the design and implementation of a comprehensive and integrated approach to reduce flood risk and increase resilience:

1. Flood management plans and actions should be based on watershed boundaries, recognizing that water flows and floods do not follow jurisdictional or political lines.
2. 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.
3. 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.
4. Success will depend on collaboration. Collaboration must take place between state agencies to bridge boundaries, as well as between 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, National Oceanic and Atmospheric Administration).

5. Ongoing opportunities for public participation and education should be developed to encourage collaboration and build trust.
6. 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 for inclusion in the design of flood control projects whenever possible in order to increase resilience and cost-effectiveness.
7. 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).

[The Floodwater Commission Report](#) also contains an appendix of “Local Floodwater and Drainage Mitigation Projects” which was compiled by the South Carolina Emergency Management Division (SCEMD) from counties and local governments (SC Floodwater Commission, 2019). Table 1.1 shows a breakdown of the identified projects by type. The largest category, by number of projects and cost, are for projects related to the upgrading of stormwater systems and other infrastructure, including increasing the capacity of culverts, pipes, and ponds. The second largest category, by number of projects and cost, are maintenance and cleaning projects, a majority of which involve cleaning debris from culverts and ditches to improve stormwater system function.

Table 1.1: Floodwater Commission Report Projects by Type

Category	Number of Projects	Percent of Projects	Cost	% of All Project Costs
System Upgrades to Infrastructure	97	43%	\$ 141,375,787	46.55%
Stormwater Maintenance/Cleaning	41	18%	\$ 46,047,609	15.16%
Studies/Assessments/Plans	24	11%	\$ 12,720,000	4.19%
Public Education & Outreach	23	10%	\$ 12,100	0.004%
Dredging/Cleaning/Improving Waterways	15	7%	\$ 47,730,000	15.72%
Gages/Technology/Data Collection	16	7%	\$ 3,100,483	1.02%
Buyout (Residential & Floodplain)	4	2%	\$ 27,750,000	9.14%
Public Facility Relocation	3	1%	\$ 3,750,000	1.23%
Beach (Nourishment, Groin & Bulkhead Repair)	3	1%	\$ 21,194,000	6.98%

The Floodwater Commission outlined the above projects that provide a good idea of the needs related to resilience from the local perspective, however, these projects are just a compilation, and do not provide a comprehensive assessment of flood mitigation needs considering issues across jurisdictional boundaries or contain an analysis of their impacts to the overall system.

It is important to note that this first iteration of the Statewide Resilience Plan does not include recommendations for any specific structural mitigation projects like the ones mentioned in the Floodwater Commission Report. In order to develop statewide priority projects, in accordance with the report’s principle regarding flood management plans and actions being based on watershed boundaries, after completing the statewide plan, SCOR will engage in watershed-based resilience planning to identify specific projects that will be included in the second iteration of this plan.

## CREATION OF THE SC OFFICE OF RESILIENCE

The Disaster Recovery Office, established by [Executive Order 2016-13](#), included within the Department of Administration by [Executive Order 2018-59](#), was transferred and incorporated into SCOR by the [Disaster Relief and Resilience Act \(DRRA\)](#) (2020). The Office is governed by Chief Resilience Officer Ben Duncan, who was appointed by Governor Henry McMaster in March 2021, and confirmed by the Senate in April 2021. A timeline of these events is outlined in Figure 1.1.

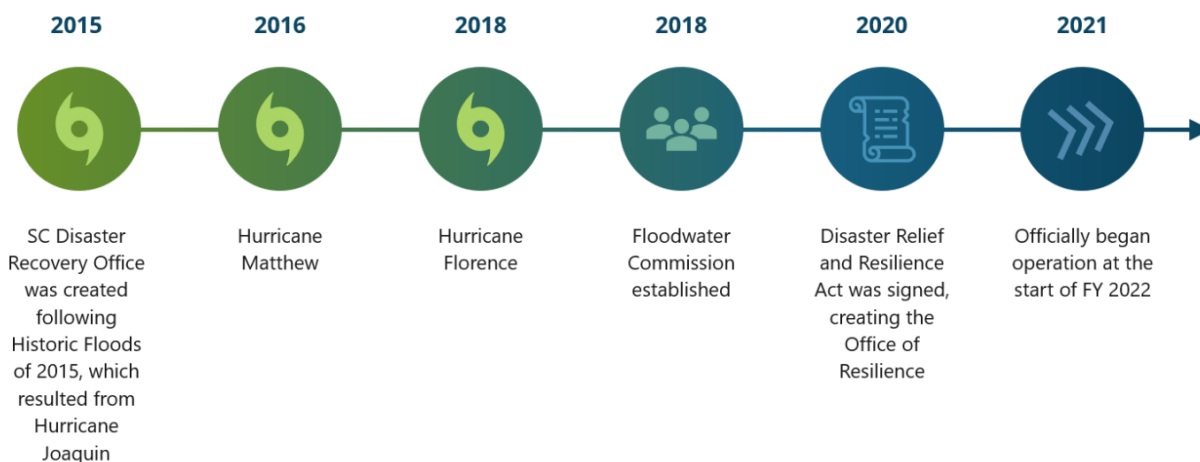


Figure 1.1: South Carolina Office of Resilience developmental timeline

## CURRENT SCOR PROGRAMS

### OPERATIONS DIVISION: DISASTER RECOVERY & MITIGATION

SCOR’s Operations Division provides assistance to low-to-moderate income (LMI) residents and communities by way of the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grants (CDBG) related to Disaster Recovery and Mitigation. Low-to-moderate income (LMI) households are defined as households that do not exceed 80% of the median income for their area, as determined by HUD. This division is currently managing four CDBG programs, three related to recovery from declared disasters (CDBG-DR), and one

dedicated to mitigation (CDBG-MIT). The counties these programs operate in are seen in Table 1.2 and mapped in Figure 1.2.

**Table 1.2 CBBG-DR & CDBG-MIT Program Areas**

County	2015 Flood (DR)	2016 Hurricane Matthew (DR)	2018 Hurricane Florence (DR)	CDBG-MIT
Allendale		x		
Bamberg	x	x		
Barnwell		x		
Beaufort		x		
Berkeley	x	x		x
Calhoun	x	x		x
Charleston	x	x		x
Chesterfield		x	x	x
Clarendon	x	x		x
Colleton	x	x		
Darlington	x	x	x	x
Dillon		x	x	x
Dorchester	x	x		x
Fairfield	x			
Florence	x	x	x	x
Georgetown	x	x	x	x
Greenville	x			
Greenwood	x			
Hampton		x		
Horry	x	x	x	x
Jasper		x		
Kershaw	x			
Lee	x	x		x
Marion	x	x	x	x
Marlboro		x	x	x
Newberry	x			
Orangeburg	x	x		x
Spartanburg	x			
Sumter	x	x		x
Williamsburg	x	x		x



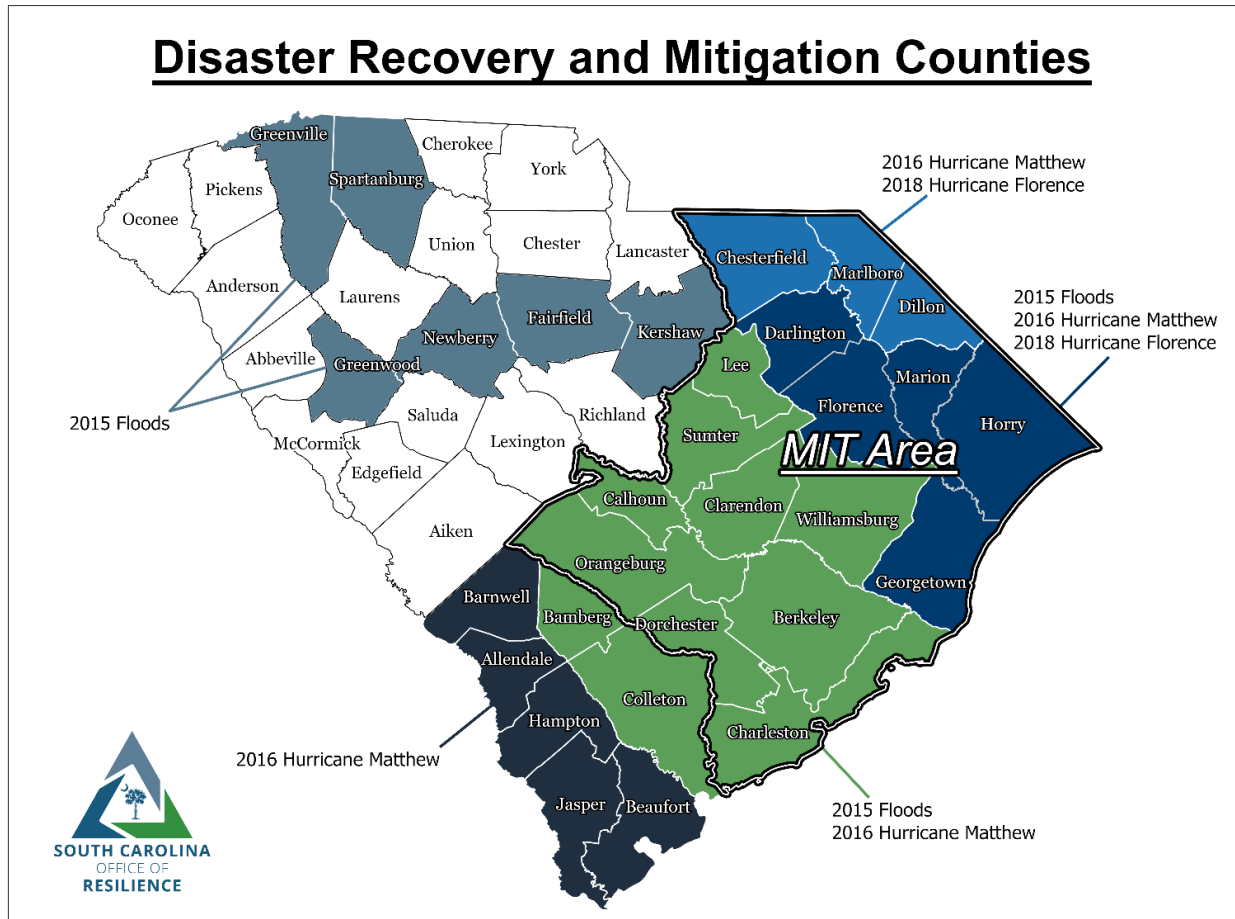


Figure 1.2: Disaster Recovery (CDBG-DR) & Mitigation (CDBG-MIT) Counties

### COMMUNITY DEVELOPMENT BLOCK GRANT – DISASTER RECOVERY (CDBG-DR)

SCOR has received \$293 million in U.S. Department of Housing and Urban Development (HUD) Community Development Block Grants- Disaster Recovery (CDBG-DR) funding to provide housing assistance to South Carolinians whose homes were damaged by a federally declared disaster. SCOR is currently managing three CDBG-DR programs: the 2015 severe storm (flood), Hurricane Matthew (2016) and Hurricane Florence (2018) (Table 1.3). To date, the Disaster Recovery program has rebuilt or repaired 3,252 homes for citizens whose homes were damaged by the 2015 Severe Storm, Hurricane Matthew, or Hurricane Florence (as of 6/13/2023). Construction projects in the 2015 Flood program were completed in September 2021, including repairs and replacement to a total of 1,829 homes. Approximately 98% of the citizens served under the program were earning equal to or less than 30% of the area median income. SCOR closed the 2015 CDBG-DR grant within the 6-year window established by HUD. The last home in the 2016 CDBG-DR program was completed in December 2022. The 2018 CDBG-DR grant is on track to complete its last home by the end of 2023. Additional

programmatic details may be found by viewing the [2015 Severe Storm, Hurricane Matthew](#), and [Hurricane Florence](#) CDBG-DR Action Plans.

Table 1.3: CDBG-DR Grants Administered by SCOR

Program	Grant Authority	Grant Amount
2015 Severe Storm	HUD CDBG-DR	\$126 Million
2016 Hurricane Matthew	HUD CDBG-DR	\$95 Million
2018 Hurricane Florence	HUD CDBG-DR	\$72 Million

### PALMETTO DISASTER RECOVERY (PDR)

[Palmetto Disaster Recovery \(PDR\)](#) is a disaster case-management effort that identifies applicants and monitors cases as they progress through the residential recovery (CDBG-DR) program. Disaster Case Management (DCM) is a process that involves a partnership between a disaster case manager and a citizen to develop and carry out an Individualized Recovery Plan that assists eligible citizens with their disaster-caused unmet needs. Case managers connect citizens with available resources and support services and follow up to monitor progress throughout the recovery process. Case managers average 300 client contacts a week. Between all three of the above disasters, PDR has served over 2,000 cases.

### DISASTER RECOVERY RESERVE CORPS

In 2022, SCOR initiated the [Disaster Recovery Reserve Corps \(DRRC\)](#) to increase South Carolina's readiness and greatly reduce the time it takes to provide post-disaster assistance to residents impacted by disasters. The DRRC is comprised of a statewide trained team on standby to fill positions in the Disaster Case Management department in various areas including case management, construction, operations, development, outreach, eligibility, advocacy, and other various support positions. A DRRC team will be identified in each of the 46 counties in South Carolina. DRRC members will be activated based on the location of the disaster and the specific disaster response and recovery activities the State decides to deploy.

During Hurricane Ian, DRRC members were called upon to work in a temporary status for three weeks at Federal Emergency Management Agency (FEMA) Disaster Recovery Centers in Horry, Georgetown, and Charleston counties. Since they had already received training, the DRRC members were able to deploy rapidly to connect residents to available resources. Unlike in previous disasters, this new initiative not only accelerated the delivery of services, but it also reduced the time it took for impacted residents to recover from Hurricane Ian.

### COMMUNITY DEVELOPMENT BLOCK GRANT – MITIGATION (CDBG-MIT)

HUD announced the allocation of Community Development Block Grant – Mitigation (CDBG-MIT) funds on April 10, 2018, but did not grant the funds until 2020. While South Carolina was

originally allocated \$157,590,000, in January 2020 HUD notified the State that it would receive \$4,598,000 in supplemental CDBG-MIT grant funds, bringing the total State of South Carolina CDBG-MIT allocation to \$162,188,000. The [Mitigation](#) program at SCOR uses CDBG-MIT funds for mitigation activities that will increase resilience to future disasters and reduce or eliminate long-term risk of loss of life, injury, damage to and loss of property, and suffering and hardship in 17 Most Impacted and Distressed (MID) counties (Figure 1.2) through four program areas: Infrastructure, Buyouts, Funds Match, and Plans & Studies (Table 1.4). South Carolina will spend a minimum of 50% of program funds on activities that benefit the LMI population. LMI status is determined by evaluating income as a percentage of the Area Median Income (AMI) in the county in which the person lives. To date, 66% of obligated funds meet this requirement. All funded activities in the program will meet a HUD national objective related to be benefitting LMI persons or meeting urgent mitigation needs. The program must be completed no later than May 2032. Additional programmatic details may be found in the [South Carolina CDBG-MIT Action Plan](#).

Table 1.4 CDBG-MIT Program Areas

CDBG-MIT Program Area	Allocation
<a href="#">Infrastructure</a>	\$100 Million
<a href="#">Buyouts</a>	\$37.3 Million
<a href="#">Funds Match</a>	\$2.7 Million
<a href="#">Plans &amp; Studies</a>	\$14 Million

---

## AMERICAN RESCUE PLAN ACT FUNDS

The South Carolina General Assembly has allocated \$100 million in American Rescue Plan Act (ARPA) State and Local Fiscal Recovery Funds (SLFRF) to SCOR. The funds must be used to complete stormwater infrastructure projects and acquisitions of property in the floodplain throughout the State to lessen the impacts of future flood events. In March 2023, SCOR selected 17 projects across 12 counties to receive funding totaling \$45.8 million.

---

## DISASTER RELIEF AND RESILIENCE RESERVE FUND

SCOR is responsible for managing the Disaster Relief and Resilience Reserve Fund (Reserve Fund). These funds may be used to develop, implement, and maintain the Strategic Statewide Resilience and Risk Reduction Plan, to provide disaster relief assistance, hazard mitigation, and infrastructure improvements as set forth in the statute (S.C. Code Ann. § 48-62-50 *et seq.*). The current fund value is approximately \$244 million. This includes \$200 million recently added to the Reserve Fund by the 2022-2023 state budget.

---

## **SOUTH CAROLINA RESILIENCE REVOLVING FUND**

The South Carolina Resilience Revolving Fund (RRF) can be used for loans and grants to eligible recipients to purchase flooded properties, including structures and land, to complete floodplain restorations. The fund was initially capitalized with \$6 million by the DRRRA. Eligible recipients are limited to the State, local governments (or any agency, commission, or instrumentality thereof), and land trusts accredited by the Land Trust Accreditation Commission.

## RESILIENCE PLANNING PROCESS

### LEGISLATIVE GUIDANCE

The Disaster Relief and Resilience Act (DRRA) directs SCOR to develop, implement and maintain the Strategic Statewide Resilience and Risk Reduction Plan (Resilience Plan) and to coordinate statewide resilience and disaster recovery efforts including coordination with federal, state, and local governmental agencies, stakeholders, and nongovernmental entities. The Resilience Plan is intended to serve as a framework to guide state investment in flood mitigation projects. Additionally, the Resilience Plan recommends programs and policies to protect the people and property of South Carolina from damage and destruction of extreme weather events. The DRRA directed that the initial version of the plan be completed by July 1, 2022. During the 2022 legislative session, the deadline was extended to July 1, 2023 by budget proviso.

The DRRA outlines the minimum provisions which must be included in the Strategic Statewide Resilience and Risk Reduction Plan. The planning process for this initial plan focused on how to meet the following required provisions most efficiently:

1. Describe known flood risks for each of the eight major watersheds of the State.
2. Examine present and potential losses associated with the occurrence of extreme weather events and other natural catastrophes, and land management practices that potentiate extreme weather events, resulting in increased flooding, wildfires, and drought conditions.
3. Identify data and information gaps that affect the capacity of state agencies and local governments to adequately evaluate and address the factors that increase flood risk and recommend strategies to overcome such gaps.
4. Develop recommendations, at appropriate scale, including sub watershed or local government levels, to decrease vulnerabilities and adverse impacts associated with flooding. In developing these recommendations, the office shall, at a minimum, consider the following:
  - a. Economic impact of best available projections related to the current and future risk or extreme weather events in this State.
  - b. The long-term costs of specific projects or suites of flood mitigation projects or approaches.
  - c. Opportunities to prioritize the role of nature-based solutions and other methods to restore the natural function of the floodplain.
  - d. Possible benefits that may be achieved beyond flood reduction.
  - e. Statutory or regulatory remedies for consideration by the General Assembly.
  - f. Necessary state policies or responses, including alterations to state building codes and land use management, creation of additional programs or offices and

directions for the provision of clear and coordinated services and support to reduce impacts and increase resiliency.

- g. Potential financial resources available for increasing resiliency throughout this State.
5. Estimates of the number and cost of residential properties within the State for which floodplain buyout may be appropriate.
6. A strategy for providing resources, technical assistance, and other support to local governments for flood risk reduction action.
7. Plans for integrating recommended approaches to risk reduction into existing state strategies for hazard mitigation, environmental protection, and economic opportunity and development.
8. Opportunities for stakeholder input from citizens around the State.
9. Coordination of statewide disaster recovery efforts and activities and collaboration between federal, state, and local stakeholders.
10. Technical planning assistance for state and local governmental entities.
11. Grants to institutions of higher education and other state and local governmental entities to conduct research related to resilience concerns specific to South Carolina.

## PLANNING SCALE

The DRRRA dictates that SCOR assess risk within the eight major SCDHEC watersheds (Figure 1.3). SCOR recognizes that floods and other natural hazards do not coincide with political boundaries, including state boundaries, and as such this plan seeks to operate by hydrological boundaries.

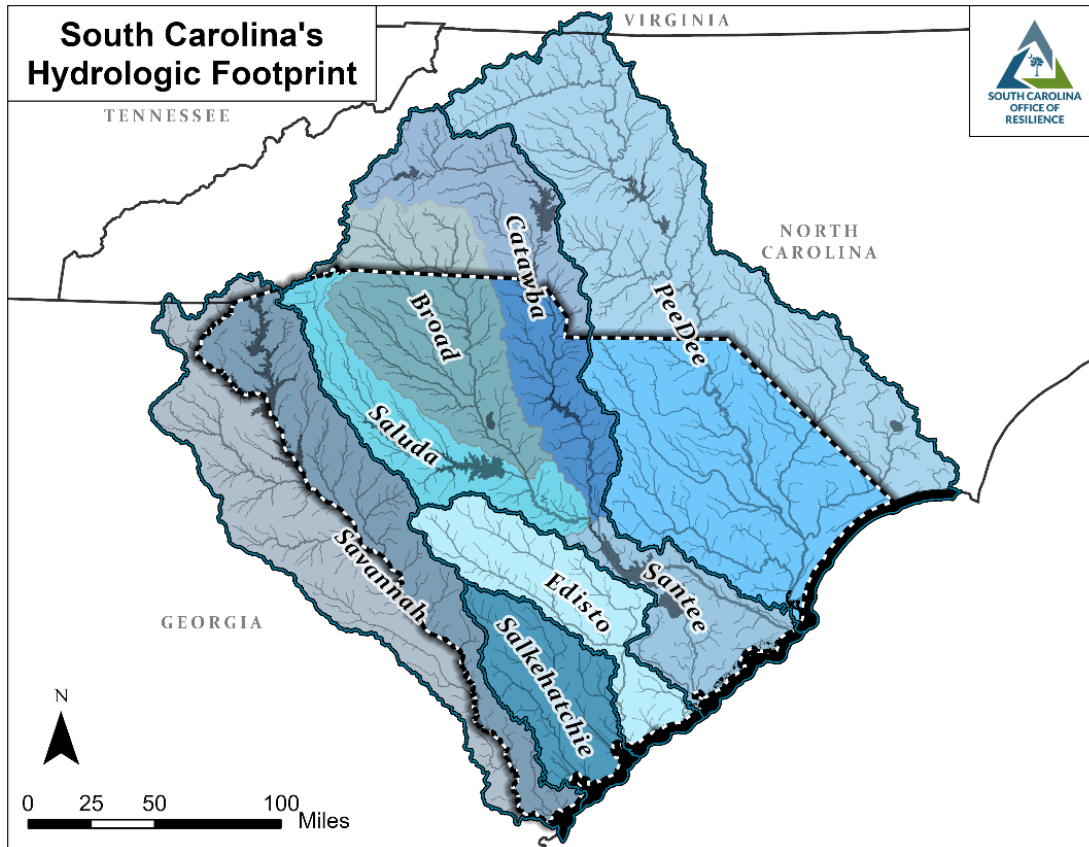


Figure 1.3: Hydrologic Footprint

## DEFINING RESILIENCE

Resilience is a complex term, capturing multiple theories and concepts depending on who is giving the definition. Working with the Advisory Committee, SCOR has adopted the following definition of resilience, guiding our work on this plan:

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

Figure 1.4 and Figure 1.5 compare the difference in system function over time for a more resilient system and a less resilient system when face with environmental changes and natural hazards. Figure 1.5 show the more resilient system. Before an event, a resilient system is “anticipating,” heading into an event with a higher function than the less resilient system. When the event starts, the resilient system function decreases, but does not decrease as much as the less resilient system as it “absorbs’ the event. The resilient system then regains system function faster after the event ends, recovering to previous function and going beyond, reaching a level of system function higher than it had before, resulting in a “thriving” system.

## LESS RESILIENT SYSTEM

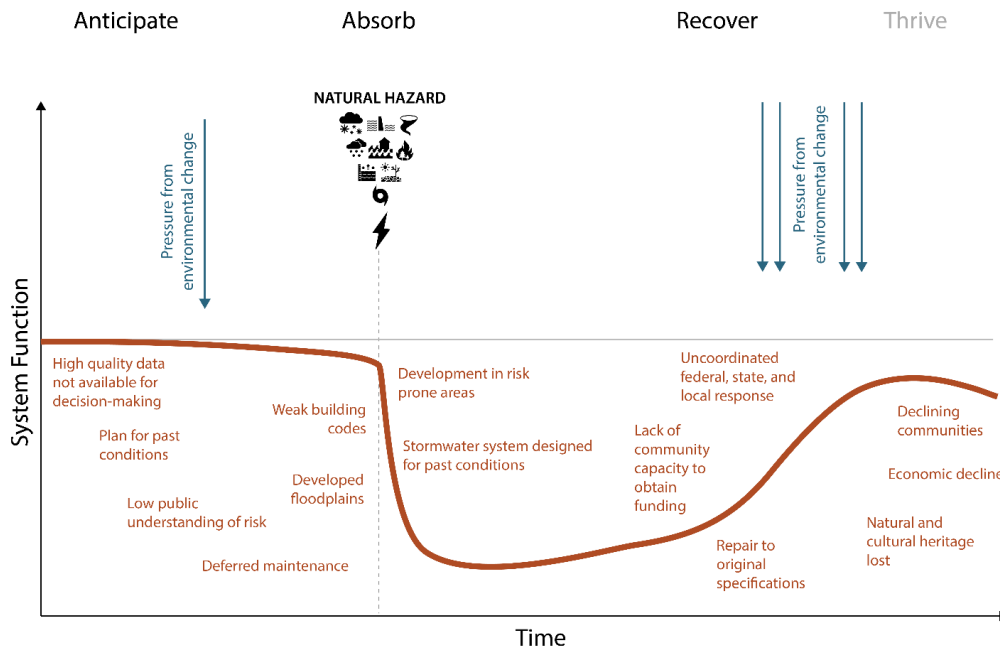


Figure 1.4: Less Resilient System Function

## MORE RESILIENT SYSTEM

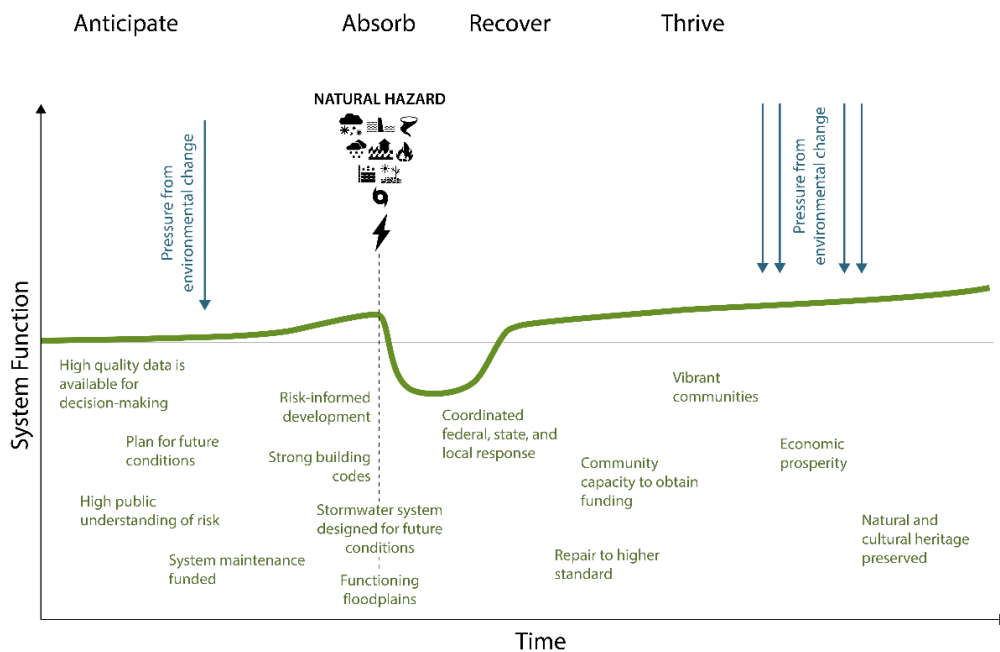


Figure 1.5: More Resilient System Function



## TIMELINE

Below is the timeline of major activities completed in the planning process.

- **Advisory Committee Meetings (Fall 2021-Spring 2023):** Meetings of the legislatively created Resilience Plan Advisory Committee, made up of state agencies and other members added by SCOR to aid in the development of the plan.
- **Data Identification & Collection (Fall 2021-Spring 2022):** SCOR and partners coordinated for the identification and collection of data related to vulnerabilities and resilience from a variety of sectors.
- **Public Engagement Survey (Winter 2021-Present):** SCOR sought input from citizens around the state about their flooding experiences to inform this planning process through an online survey.
- **Subcommittee Meetings (January 2022-April 2022):** Stakeholders from a variety of sectors met to discuss available data & gaps, vulnerabilities, and recommendations on how to make their sector more resilient.
- **Virtual Office Hours and Video Q&A (Spring 2022):** To answer questions about resilience, a web form and email address were created to allow citizens to submit questions, which were then answered in a series of short video responses. In addition to this Q&A, the Resilience team held weekly office hours, accessible by Zoom and phone, which allowed for more in-depth discussion with the public.
- **Draft Flood Vulnerability Assessment (Released Fall 2022):** A preliminary assessment of the current and future flood vulnerability of a variety of sectors in South Carolina.
- **Development of Recommendations/Strategies (Summer 2022-Spring 2023):** Considering the data collected and vulnerabilities described, the Advisory Committee and ad hoc subcommittees worked with SCOR to determine what strategies should be recommended by the plan to decrease these vulnerabilities and make South Carolina more resilient.

## COMMITTEES & WORKING GROUPS

### ADVISORY COMMITTEE

To aid in the development of the Resilience Plan and coordinate efforts on a statewide level, the legislation created the Resilience Plan Advisory Committee, made up of state agencies, and directed SCOR to add members to the advisory committee as deemed necessary and proper, noting that all governmental agencies must cooperate with the Advisory Committee to fulfill its mission.

Section 48-62-40(A) of the legislation stated that the committee must be composed of the following agencies:

- [South Carolina Department of Natural Resources \(SCDNR\)](#) (**Robert Boyles Jr, Director**): SCDNR serves as the principal advocate for and steward of South Carolina’s natural resources. The department’s vision for South Carolina is an enhanced quality of life for present and future generations through improved understanding, wise use, and safe enjoyment of healthy, diverse, sustainable, and accessible natural resources (SC Department of Natural Resources, n.d.).
- [South Carolina Department of Insurance \(DOI\)](#) (**Michael Wise, Acting Director**): The department’s mission is to protect the insurance consumers, the public interest, and the insurance marketplace by ensuring the solvency of insurers; by enforcing and implementing the insurance laws of this State; and by regulating the insurance in an efficient, courteous, responsive, fair, and equitable manner (SC Department of Insurance , n.d.).
- [South Carolina Department of Agriculture \(SCDA\)](#) (**Hugh Weathers, Commissioner of Agriculture**): The department promotes the growth and development of South Carolina’s agriculture industry and its related businesses while assuring the safety and security of the buying public (SC Department of Agriculture, n.d.).
- [South Carolina Emergency Management Division \(SCEMD\)](#) (**Kim Stenson, Director**): The mission of this division is to lead the state emergency management program by supporting local authorities to minimize the loss of life and property from all-hazard events, with a vision to be an accomplished and innovate leader in emergency management that is ready, relevant, resilient, and responsive (SC Emergency Management Division , n.d.).
- [South Carolina Sea Grant Consortium](#) (**Susan Lovelace, Executive Director**): The consortium is an independent state agency whose purpose is to generate and provide science-based information on issues and opportunities to improve the social and economic well-being of our coastal residents while ensuring the optimal use and conservation of our marine coastal natural resources (South Carolina Sea Grant Consortium, n.d.).
- [South Carolina Department of Commerce](#) (**Harry M. Lightsey III, Secretary of Commerce**): From assisting with the location of new sites and buildings to offering grants for community development and infrastructure improvement, the South Carolina Department of Commerce helps grow new and existing businesses. Commerce also promotes economic opportunity for individuals and businesses through initiatives like workforce training (SC Department of Commerce, n.d.).

The legislation also states that in addition to the above, the Chief Resilience Officer may add members to the committee as deemed necessary and proper. The following organizations and agencies participated in the Advisory Committee:

- [\*\*Center of Resilience Excellence SC \(CORE SC\)\*\*](#): CORE SC is a consortium founded by the College of Charleston, the South Carolina Aquarium, and Charleston County Government. CORE SC focuses on implementing resilience best practices, feasible and deployable research and development, and economic development through innovative business strategies. CORE SC provides connections to resources and professional services to organizations and institutions who are developing solutions to resilience issues across the state (Center of Resilience Excellence South Carolina, n.d.).
- [\*\*City of Charleston Office of Resilience & Sustainability\*\*](#): This office manages projects that advance the resilience of Charleston, defining resilience as the capacity of a community, business, or natural system to prevent, withstand, respond to, and recover from a disruption. Efforts to increase resilience to climate and non-climate impacts in Charleston are built on the foundation of understanding and reducing vulnerability (City of Charleston South Carolina, n.d.).
- [\*\*Municipal Association of South Carolina\*\*](#): The association represents and serves the state's 271 incorporated municipalities and is dedicated to the principle of its founding members: to offer the services, programs, and tools that will give municipal officials the knowledge, experience, and tools for enabling the most efficient and effective operation of their municipalities in the complex world of municipal government (Municipal Association of South Carolina, n.d.).
- [\*\*The Pew Charitable Trusts\*\*](#): The Flood-Prepared Communities Project works to modernize flood insurance, mitigate disasters, prioritize flood ready infrastructure, and promote nature-based solutions (The Pew Charitable Trusts, n.d.).
- [\*\*South Carolina Association of Counties\*\*](#): A nonprofit statewide organization that represents county government in South Carolina. It works to empower county officials through advocacy, education, and collaboration. Membership includes all 46 counties (SC Association of Counties, n.d.).
- [\*\*South Carolina Department of Archives and History \(W. Eric Emerson, Director\)\*\*](#): The mission of the Department of Archives and History is to preserve and promote the documentary and cultural heritage of the state through archival care and preservation, records management, public access, historic preservation, and education (SC Department of Archives and History, n.d.).
- [\*\*South Carolina Department of Health and Environmental Control \(DHEC\) \(Dr. Edward Simmer, Director\)\*\*](#): DHEC is charged with promoting and protecting the health of the public and the environment in South Carolina. The department consists of four divisions: environmental affairs, healthcare quality, public health, and operations (SC Department of Health and Environmental Control, n.d.).
- [\*\*South Carolina Department of Labor, Licensing and Regulation \(LLR\) \(Emily Farr, Director\)\*\*](#): The mission of the Department of Labor, Licensing and Regulation is to

promote the health, safety, and economic well-being of the public through regulation, licensing, enforcement, training, and education (SC Department of Labor, Licensing and Regulation, n.d.).

- [South Carolina Department of Parks, Recreation and Tourism \(PRT\)](#) (**Duane Parrish, Director**): This department is tasked with growing South Carolina's economy by fostering sustainable tourism economic development and effectively marketing our state to increase visitation and improve the quality of life for all South Carolinians. This is done by fostering and promoting the state's emerging tourism industry, protecting & promoting South Carolina state parks, and helping communities plan and develop recreational opportunities for residents (SC Department of Parks, Recreation & Tourism, n.d.).
- [South Carolina Department of Social Services \(DSS\)](#) (**Michael Leach, State Director**): The department serves the state by promoting the safety, permanency, and well-being of children and vulnerable adults, helping individuals achieve stability and strengthening families (SC Department of Social Services, n.d.).
- [South Carolina Department of Transportation \(SCDOT\)](#) (**Christy Hall, Secretary of Transportation**): SCDOT connects communities and drives our economy through the systematic planning, construction, maintenance and operation of the state highway system and the statewide intermodal transportation and freight system. It is SCDOT's vision to rebuild our transportation system over the next decade in order to provide adequate, safe and efficient transportation services for the movement of people and goods in the Palmetto state (South Carolina Department of Transportation, n.d.)
- [South Carolina Forestry Commission \(SCFC\)](#) (**Scott Phillips, State Forester & Executive Director**): The commission exists to protect, promote, enhance, and nurture the forest lands of South Carolina in a manner consistent with achieving the greatest good for its citizens (SC Forestry Commission, n.d.).
- [South Carolina Law Enforcement Division \(SLED\)](#) (**Mark Keel, Chief**): SLED provides manpower and technical assistance to law enforcement agencies and conducts investigations on behalf of the state as directed by the Governor and Attorney General (SC State Law Enforcement Division , n.d.).
- [South Carolina Office of Regulatory Staff, State Energy Office](#) (**Sara Bazemore, Director**): The State Energy Office provides a broad range of resources designed to help citizens, businesses, and public entities save energy through greater efficiency, better information, and enhanced environmental quality (State of South Carolina Office of Regulatory Staff, n.d.).
- [South Carolina Ports Authority](#) (**Barbara Melvin, President & CEO**): The South Carolina Ports Authority promotes, develops and facilitates waterborne commerce to meet the current and future needs of its customers, and for the economic benefit of the citizens

and businesses of South Carolina. SC Ports owns and operates numerous maritime terminals within the Charleston Harbor, the Port of Georgetown, Inland Port Greer and Inland Port Dillon. As a top 10 U.S. container port, SC Ports is known for efficiently run terminals, ample capacity, reliable service, and customer-centric operations (SC Ports Authority, n.d.).

- **[State Housing Finance and Development Authority](#)**: The State Housing Finance and Development Authority finances and supports affordable housing opportunities for South Carolina with a vision that all South Carolinians have the opportunity to live in safe, decent, and affordable housing. The agency provides financing through the sale of tax-exempt bonds and management of federally funded programs such as Housing Tax Credit (LIHTC), HOME Investment Partnerships (HOME) and State and National Housing Trust Funds (SC State Housing Finance and Development Authority, n.d.).
- **[United States Army Corps of Engineers, Charleston District Office](#)**: The Corps of Engineers delivers vital engineering solutions, in collaboration with partners, to secure our nation, energize the economy, and reduce disaster risk (US Army Corps of Engineers, n.d.).
- **[University of South Carolina Hazards Vulnerability & Resilience Institute \(HVRI\)](#)**: HVRI is an interdisciplinary research and training center focused on the development of spatial analytical information, data, methods, and application for integrating hazard and climate information to advance equitable planning and management and adaptive capacity in communities (University of South Carolina, n.d.).

Table 1.5 shows the dates of the Advisory Committee meets from fall of 2021 to just before this plan was completed.

Table 1.5: Advisory Committee Meetings

August 12, 2021	March 10, 2022
September 9, 2021	April 14, 2022
September 30, 2021	May 12, 2022
October 21, 2021	July 19, 2022
November 10, 2021	October 26, 2022
December 2, 2021	January 25, 2023
January 13, 2022	April 19, 2023
February 10, 2022	June 7, 2023

---

## SUBCOMMITTEES

To get broader statewide input on a variety of resilience related issues, six subcommittees of the Advisory Committee were created to focus on identifying data gaps, vulnerabilities, and risk

reduction strategies in different sectors. Each subcommittee consists of representatives from the larger advisory committee as well as additional stakeholders from specific sectors.

- Environmental Systems Subcommittee
- Economic Systems Subcommittee
- Community Services Subcommittee
- Infrastructure Systems Subcommittee
- Building Codes and Zoning Subcommittee
- Cultural Resources Subcommittee

---

### **AD HOC COMMITTEES**

Based on the work of the above subcommittees, new ad hoc committees were formed to further develop specific recommendations in identified areas. These groups focus on the following recommendation areas:

- Data Collection and Coordination
- Education, Outreach, and Property Disclosure
- Planning
- Zoning and Land Use
- Building Codes
- Community Services
- Critical Infrastructure Design
- Stormwater Design and Maintenance
- Recovery Coordination

---

### **CONSERVATION WORKING GROUP**

The purpose of the workgroup is to identify conservation opportunities that would increase resilience to natural disasters in the state, prioritize areas for conservation, and identify potential funding to carry out those opportunities.

---

### **CLIMATE WORKING GROUP**

SCOR worked with the SC State Climatology Office, the University of South Carolina, Carolinas Integrated Sciences and Assessments (CISA), and SC Sea Grant Consortium to develop a climate report specific to South Carolina that considers past, present, and future conditions. The resulting report can be found in Chapter 4 of this plan, Climate Trends.

---

## MODELING TECHNICAL WORKGROUP

The Modeling Technical Workgroup has been created and tasked with inventorying existing models, identifying data gaps, making recommendations on modeling needs, and evaluating proposals for modeling improvements. SCOR is working with SCEMD, SCDNR Flood Mitigation Program, University of South Carolina, Clemson, Coastal Carolina University, Furman University, College of Charleston, NOAA, USGS, and others to better coordinate and complete the task of the workgroup.

## LIMITATIONS/CONSTRAINTS

It should be noted that this initial plan was drafted in less than two years, with the first meeting of the Advisory Committee and the hiring of a Planning Director in August 2021. The timeline for completing this plan also coincided with the ongoing COVID-19 pandemic that limited SCOR's ability to engage the public in the planning process. Efforts were made to reach people electronically, and SCOR relied on partner agencies and organizations across the state to provide information through their networks.

SCOR also recognizes that this plan is not the sole authority on resilience planning. This plan builds on national, regional, state, and local work from public and private partners. S.C. Sea Grant Consortium has worked to compile a comprehensive survey of resilience-related planning efforts across South Carolina, including state agencies, counties, municipalities, non-governmental organizations, and colleges and universities. The data upon which our recommendations are based cannot guarantee exact future scenarios, and there is inherent uncertainty due to environmental and socioeconomic change. Information and recommendations in this plan need to be periodically reviewed to allow the plan to adapt to future conditions.

## ACKNOWLEDGEMENTS

Below is a list of partners who participated in the above groups or in other supportive roles during the planning process. (\* agency head)

### **Able South Carolina**

- Mandy Halloran

### **American Flood Coalition**

- Gian Tavares
- Jack Krolikowski
- Melissa Roberts\*
- Tony McEwen

### **Audubon South Carolina**

- Julia Dietz
- Nolan Schillerstrom
- Sam "Trip" King III

### **Beaufort County**

- Juliana Smith
- Katie Herrera
- Rob Merchant

### **Buckeye Community Hope Foundation**

- Aaron Bowman

### **Building Officials Association of South Carolina**

- Shawn Brashear

### **Catawba Indian Nation (Tribal Historic Preservation Office)**

- Dr. Wenonah Haire

### **Charleston County**

- Jim Armstrong
- Kevin Limehouse (Center of Resilience Excellence SC)
- Luz Agudelo

### **Trident Association of Realtors**

- Josh Dix

### **Citadel**

- Scott Curtis

### **Citizen Center for Public Life**

- Renee Chewing

### **City of Charleston Office of Resilience and Sustainability**

- Dale Morris

### **Clemson University**

- Cal Sawyer
- Christopher Post
- Dan Hitchcock
- Debabrata Sahoo
- Derrick Phinney
- Kim Morganello (Clemson Extension)
- Kim Roche (Warren Lasch Conservation Center)
- Jeff Allen
- Jeremy Pike
- Jon Marcoux
- Matt Smith
- Nathan Smith (Clemson Extension)
- Prakash Khedun
- Ravi Ravichandran
- Vidya Samadi

### **Coastal Carolina University**

- Pam Martin
- Paul Gayes
- Till Hanebuth

### **College of Charleston**

- Norman Levine

### **Congaree Land Trust**

- Stuart White



**Conservation Voters of South Carolina**

- Rebecca Haynes
- Zachary Bjur

**Dominion Energy**

- Raymond Ammarell

**Edisto Natchez Kusso Tribe of South Carolina**

- Chief Andy Spell

**FEMA Heritage Emergency Task Force**

- Lori Foley

**Francis Marion University**

- Jeff Steinmetz

**Furman University**

- Geoffrey Habron

**Gullah/Geechee Nation**

- Queen Quet, Chieftess

**Gullah Geechee Cultural Heritage Corridor**

- Victoria Smalls

**Historic Charleston Foundation**

- Cashion Drolet

**Individuals**

- Carson Witte
- David Johnston
- Sarah Watson
- Lisa McQueen-Starling

**Insurance Institute for Business & Home Safety**

- Jada Charley
- Milad Shabanian

**International Code Council**

- Stephen Jones

**Katawba Valley Land Trust**

- Barry Beasley

**Kershaw County**

- Michael Conley

**Longleaf Alliance**

- Lisa Lord

**Lowcountry Council of Governments**

- Maleena Parkey
- Stephanie Rossi

**Lowcountry Land Trust**

- Ashley Demosthenes
- David Ray

**Municipal Association of South Carolina**

- Jenny Boulware
- Todd Glover

**Muscogee Nation**

- LeeAnne Wendt
- RaeLynn Butler

**National Oceanic & Atmospheric Administration**

- Jeffrey Dobur
- John Quagliariello
- John Schmidt
- Leonard Vaughan
- Richard Neuherz
- Richard Okulski
- Tashya Allen

**Pew Charitable Trusts**

- Kristane Huber
- Lora Clarke
- Mat Sanders

**Preservation Society**

- Brian Turner

**Resilient Lands Matter**

- Sharon Richardson

**Santee Lynches Council of Governments**

- Jeff Parkey

**South Carolina Army National Guard**

- Bryan Hall

**South Carolina Association of Counties**

- John Wienges
- Timothy Winslow

**South Carolina Battleground Trust**

- Doug Bostick
- Mike Yionopoulos

**South Carolina Beach Advocates**

- Nicole Elko

**South Carolina Coastal Conservation League**

- Emily Cedzo
- Jason Crowley
- Merrill McGregor
- Rachel Hawes

**South Carolina Conservation Bank**

- Amber J. Larck
- Margaret Pennebaker
- Megan James
- Raleigh West

**South Carolina Department of Agriculture**

- Cristina Key
- Derek Underwood
- Hugh Weathers\*

**South Carolina Department of Archives and History  
(State Historic Preservation Office)**

- Elizabeth Johnson
- John Sylvest
- W. Eric Emerson\*

**South Carolina Department of Commerce**

- Chuck Bundy
- Daniel Young
- Harry M. Lightsey\*
- Rebecca Gunnlaugsson

**South Carolina Department of Health &  
Environmental Control**

- Courtney Kemmer
- Edward Simmer\*
- Myra Reece
- Rob Devlin

**South Carolina Department of Health and Human  
Services**

- Nicole Mitchell Threatt

**South Carolina Department of Insurance**

- Ann Roberson
- Melissa Manning
- Michael Wise\*
- Ray Farmer

**South Carolina Department of Labor, Licensing and  
Regulation**

- Emily Farr\*
- Jonathan Jones
- Maggie Smith
- Molly Price

**South Carolina Department of Mental Health**

- William Wells

**South Carolina Department of Natural Resources**

- Abigail Locatis Prochaska (ACE Basin NERR)
- Anna Smith (SWAP and Forest Legacy)
- Elliot Wickham (Climatology Office)
- Hope Mizzell (Climatology Office)
- Jessica Kinsella (ACE Basin NERR)
- Maria Cox (Flood Mitigation)
- Meg Gaillard (Heritage Trust Program)
- Melissa Griffin (Climatology Office)
- Robert Clark
- Robert Boyles, Jr\*
- Tanner Arrington

### **South Carolina Department of Parks, Recreation & Tourism**

- Al Hester
- Amy Duffy
- Duane Parrish\*
- Daniel Gambrell
- Kevin Kibler
- Stacey Young

### **South Carolina Department of Social Services**

- Jim Casserly
- Michael Leach\*
- Robert Burress

### **South Carolina Department of Transportation**

- Christy Hall\*
- Rob Bedenbaugh
- Roberto Ruiz

### **South Carolina Department of Veterans Affairs**

- David Rozelle
- Ed Bell
- Jason Fowler
- Jeffery Young

### **South Carolina Emergency Management Division**

- Addie Roberson
- Andrew Phillips
- David Thachik
- Emily Bentley
- Kim Stenson\*
- Melissa Potter
- Rachel McCaster
- Steven Batson

### **South Carolina Environmental Law Project**

- Amy Armstrong

### **South Carolina Forestry Commission**

- Darryl Jones
- Russell Hubright
- Scott Phillips\*
- Tim Adams

### **South Carolina Institute of Archeology and Anthropology**

- Athena Van Overschelde
- Jim Spirek
- Jon Leader

### **South Carolina Law Enforcement Division**

- Bob Connell
- Brandon Landrum
- Mark Keel\*

### **South Carolina Office of Regulatory Staff**

- Dawn Hipp
- Chenille Williams
- Michael Garner
- Nanette Edwards\*
- Richelle Tolton
- Rick Campana
- Stacey Washington

### **South Carolina Ports Authority**

- Barbara Melvin\*
- James Newsome III
- Mark Messersmith

### **South Carolina Revenue & Fiscal Affairs Office**

- Adam DeMars
- Rachel Passer

### **South Carolina Rural Water Association**

- Devin Orr
- James Kilgo
- Nick Rubin

### **South Carolina Sea Grant Consortium**

- Amanda Guthrie
- Landon Knapp
- Matt Gorstein
- Susan Lovelace\*

### **South Carolina State Housing Finance and Development Authority**

- Bonita Shropshire\*
- John Tyler

**South Carolina State Library**

- Hannah Majewski

**Southern Environmental Law Center**

- Chris DeScherer
- Jenny Brennan

**Sustain SC**

- Ethel Bunch

**The Nature Conservancy**

- April Donnelly
- David Bishop
- Joy Brown
- Liz Fly

**The South Carolina Association for Hazard Mitigation**

- Patrick Brown

**Town of Hilton Head Island**

- Jeffrey Buckalew

**United States Geological Survey**

- Whitney Smith

**University of South Carolina**

- Erfan Goharian
- Jon Leader
- Jean Taylor Ellis
- Susan Cutter
- Margot Habets

**Upstate Forever**

- Lisa Hallo
- Megan Chase

**US Army Corps of Engineers**

- Colt Bowles

**Waccamaw Indian People**

- Cheryl Sievers

**The Wassamasaw Tribe of Varnertown Indians**

- Lisa M. Collins
- Joshua Shumak

**White & Smith Planning Law**

- Sean Scoopmire

## REFERENCES

- Center of Resilience Excellence South Carolina (CORE SC). (n.d.). *Mission*. Retrieved from CORE SC: <https://www.coresc.net/#:~:text=The%20Center%20of%20Resilience%20Excellence,Aquarium%2C%20and%20Charleston%20County%20Government.>
- City of Charleston South Carolina. (n.d.). *Resilience*. Retrieved from Mayor's Office of Resilience and Sustainability: <https://www.charleston-sc.gov/1971/Resilience>
- Disaster Relief and Resilience Act, SC Code §48-62*. (2020). Retrieved from [https://www.scstatehouse.gov/sess123\\_2019-2020/bills/259.htm](https://www.scstatehouse.gov/sess123_2019-2020/bills/259.htm)
- Federal Emergency Management Agency. (2021, December 31). *Flood Insurance Data and Analytics*. Retrieved from National Flood Insurance Program: <https://nfipservices.floodsmart.gov/reports-flood-insurance-data>
- Konrad, C. P. (2003). *Effects of Urban Development on Floods*. USGS.
- Municipal Association of South Carolina. (n.d.). *The Association*. Retrieved from Municipal Association of South Carolina: <https://www.masc.sc/about/the-association/mission>
- National Oceanic and Atmospheric Administration (NOAA). (2016, May 9). *NOAA Shoreline*. Retrieved from <https://coast.noaa.gov/data/docs/states/shorelines.pdf>
- National Oceanic and Atmospheric Association (NOAA). (2021). *Storm Events Database*. Retrieved from <https://www.ncdc.noaa.gov/stormevents/>
- National Oceanic and Atmospheric Association. (2016). *The Historic South Carolina Floods of October 1–5, 2015*. Silver Spring, Maryland: National Weather Service. Retrieved from [https://www.dnr.sc.gov/climate/sco/Publications/NOAA\\_2015\\_FLOOD\\_ASSESSMENT.pdf](https://www.dnr.sc.gov/climate/sco/Publications/NOAA_2015_FLOOD_ASSESSMENT.pdf)
- National Oceanic and Atmospheric Association. (2021). *Storm Events Database*. Retrieved from <https://www.ncdc.noaa.gov/stormevents/>
- National Oceanic and Atmospheric Association. (2022). *Storm Data FAQ Page*. Retrieved from <https://www.ncdc.noaa.gov/stormevents/faq.jsp>
- Natural Resources Conservation Service. (2009). Ch. 7; Hydrologic Soil Groups. In N. R. Service, *Part 630 Hydrology National Engineering Handbook* (p. Ch. 7). Washington, DC: U.S. Department of Agriculture. Retrieved from <https://directives.sc.egov.usda.gov/22526.wba>
- SC Association of Counties. (n.d.). *About SCAC*. Retrieved from SC Association of Counties: [https://www.sccounties.org/about-scac#:~:text=The%20South%20Carolina%20Association%20of%20Counties%20\(SCAC\)%20is%20the%20only,advocacy%2C%20education%2C%20and%20collaboration.](https://www.sccounties.org/about-scac#:~:text=The%20South%20Carolina%20Association%20of%20Counties%20(SCAC)%20is%20the%20only,advocacy%2C%20education%2C%20and%20collaboration.)
- SC Department of Agriculture (SCDA). (n.d.). *About*. Retrieved from SCDA: <https://agriculture.sc.gov/about/>
- SC Department of Archives and History. (n.d.). *About Us*. Retrieved from SC Department of Archives and History: <https://scdah.sc.gov/about-us>

- SC Department of Commerce. (n.d.). *About*. Retrieved from SC Department of Commerce:  
<https://www.sccommerce.com/about>
- SC Department of Education. (2022, April). *Active Student Headcounts*. Retrieved from SC Department of Education: <https://ed.sc.gov/data/other/student-counts/active-student-headcounts/>
- SC Department of Health and Environmental Control (DHEC). (n.d.). *About Us*. Retrieved from SC DHEC:  
<https://scdhec.gov/about-dhec/about-us>
- SC Department of Insurance (DOI). (n.d.). *About SCDOI*. Retrieved from SC DOI: <https://www.doi.sc.gov/27/About-Us>
- SC Department of Labor, Licensing and Regulation (LLR). (n.d.). Retrieved from SC LLR:  
<https://llr.sc.gov/#:~:text=The%20mission%20of%20the%20Department,%2C%20enforcement%2C%20training%20and%20education.>
- SC Department of Natural Resources . (n.d.). *Publications Map*. Retrieved from SCDNR Geological Survey:  
<https://www.dnr.sc.gov/geology/publications-map.html>
- SC Department of Natural Resources (DNR) State Climate Office. (2019). Retrieved from  
<http://www.scdrought.com/index.html>
- SC Department of Natural Resources (DNR). (n.d.). *State Climatology Office*. Retrieved from SC DNR:  
<https://www.dnr.sc.gov/climate/sco/>
- SC Department of Natural Resources. (2013). *An Overview of the Eight Major River Basins of South Carolina*. Retrieved from [https://www.dnr.sc.gov/water/waterplan/pdf/Major\\_Basins\\_of\\_South\\_Carolina.pdf](https://www.dnr.sc.gov/water/waterplan/pdf/Major_Basins_of_South_Carolina.pdf)
- SC Department of Natural Resources. (2020). *Scenic Rivers - Map*. Retrieved from  
<https://www.dnr.sc.gov/water/river/riversmarked.html>
- SC Department of Natural Resources. (n.d.). *History and Purpose of the Dept. of Natural Resources*. Retrieved from SC DNR: <https://www.dnr.sc.gov/admin/history.html>
- SC Department of Parks, Recreation & Tourism (PRT). (n.d.). *About SCPRT*. Retrieved from SC PRT:  
<https://www.scprt.com/about>
- SC Department of Social Services (DSS). (n.d.). *About DSS*. Retrieved from SC DSS: <https://dss.sc.gov/about/>
- SC Emergency Management Division (SCEMD). (n.d.). *Our Vision and Mission*. Retrieved from SCEMD:  
<https://www.scemd.org/who-we-are/our-vision-and-mission/>
- SC Floodwater Commission. (2019, November 8). *South Carolina Floodwater Commission Report*. Retrieved from  
<https://governor.sc.gov/sites/default/files/Documents/Floodwater%20Commission/SCFWC%20Report.pdf>
- SC Forestry Commission (SCFC). (n.d.). *About Us*. Retrieved from SC Forestry Commission:  
<https://www.scfc.gov/about-us/>
- SC Ports Authority. (n.d.). *About the Port*. Retrieved from South Carolina Ports: <http://scspa.com/about/>

- SC Revenue and Fiscal Affairs Office. (2019). *Populaion projections 2000-2035*. Retrieved from SC Revenue and Fiscal Affairs Office: <https://rfa.sc.gov/data-research/population-demographics/census-state-data-center/population-projections-2000-2035-rev2019>
- SC State Housing Finance and Development Authority. (n.d.). Retrieved from SC Housing: <https://www.schousing.com/>
- SC State Law Enforcement Division (SLED). (n.d.). Retrieved from SC State State Law Enforcement Division: <https://www.sled.sc.gov/>
- South Carolina Department of Transportation (SC DOT). (n.d.). *Strategic Plan 2018-2020*. Retrieved from SC DOT: [https://www.scdot.org/performance/pdf/Strategic\\_Plan\\_2018-2020.pdf](https://www.scdot.org/performance/pdf/Strategic_Plan_2018-2020.pdf)
- South Carolina Sea Grant Consortium. (n.d.). *About the S.C. Sea Grant Consortium*. Retrieved from S.C. Sea Grant Consortium: <https://www.scseagrant.org/about-us/>
- State of South Carolina Office of Regulatory Staff. (n.d.). *State Energy Office*. Retrieved from SC ORS: <https://ors.sc.gov/consumers/electric-natural-gas/state-energy-office>
- The Pew Charitable Trusts. (2017). *Flooding Threatens Public Schools Across the Country: Infrastructure Analysis evaluates county-level flood risk*. Retrieved from The Pew Charitable Trusts: [https://www.pewtrusts.org/-/media/assets/2017/08/fpc\\_flooding\\_threatens\\_public\\_schools\\_across\\_the\\_country.pdf](https://www.pewtrusts.org/-/media/assets/2017/08/fpc_flooding_threatens_public_schools_across_the_country.pdf)
- The Pew Charitable Trusts. (n.d.). *Project: Flood-Prepared Communities*. Retrieved from PEW: <https://www.pewtrusts.org/en/projects/flood-prepared-communities/about>
- U.S. Census Bureau. (2021). *Redistricting data, 2020 decennial census*. Retrieved from U.S. Census Bureau: <https://data.census.gov/cedsci/>
- University of South Carolina. (n.d.). *Hazards Vulnerability & Resilience Institute*. Retrieved from University of South Carolina College of Arts and Sciences : [https://www.sc.edu/study/colleges\\_schools/artsandsciences/centers\\_and\\_institutes/hvri/index.php/front-page#:~:text=The%20Hazards%20Vulnerability%20%26%20Resilience%20Institute,management%20and%20adaptive%20capacity%20in](https://www.sc.edu/study/colleges_schools/artsandsciences/centers_and_institutes/hvri/index.php/front-page#:~:text=The%20Hazards%20Vulnerability%20%26%20Resilience%20Institute,management%20and%20adaptive%20capacity%20in)
- US Army Corps of Engineers. (n.d.). *Mission and Vision*. Retrieved from US Army Corps of Engineers Headquarters: <https://www.usace.army.mil/About/Mission-and-Vision/>
- US Census Bureau. (2021). *QuickFacts South Caroline*. Retrieved from US Census Bureau: <https://www.census.gov/quickfacts/SC>
- US Geological Survey. (2019). *National Land Cover Database*. Retrieved from <https://www.usgs.gov/centers/eros/science/national-land-cover-database>