



South Carolina

Flood risk and mitigation

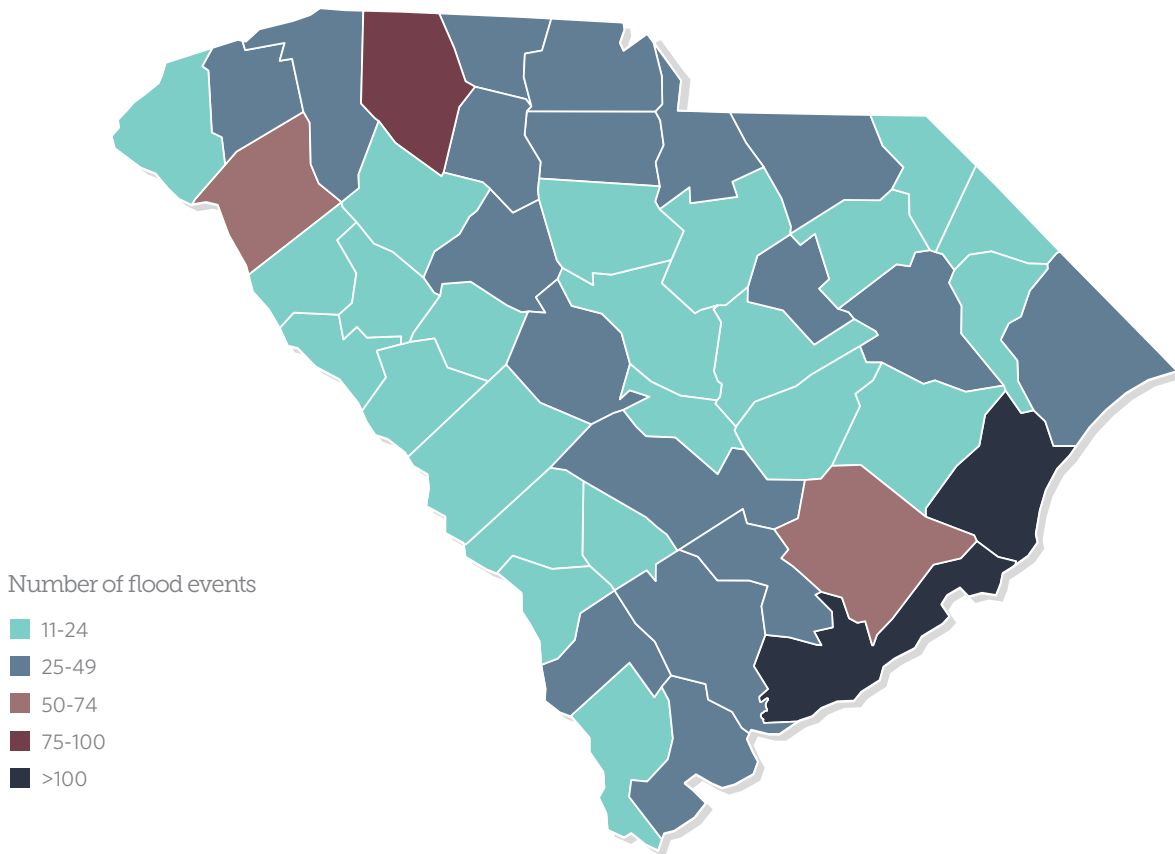
Overview

Floods and hurricanes are becoming more intense in South Carolina, and flooding is the state's second-most common natural hazard.¹ As these events become more serious, the physical and economic damage to communities and the threats to human lives and ecosystems also increase. Between 2000 and 2015, seven federal disasters and emergencies were declared for floods, hurricanes, and severe storms in South Carolina, which exceeded \$36.5 million in total assistance from the U.S. government.²

Figure 1

Flooding Affects Every County in South Carolina

Total events, 1960-2011



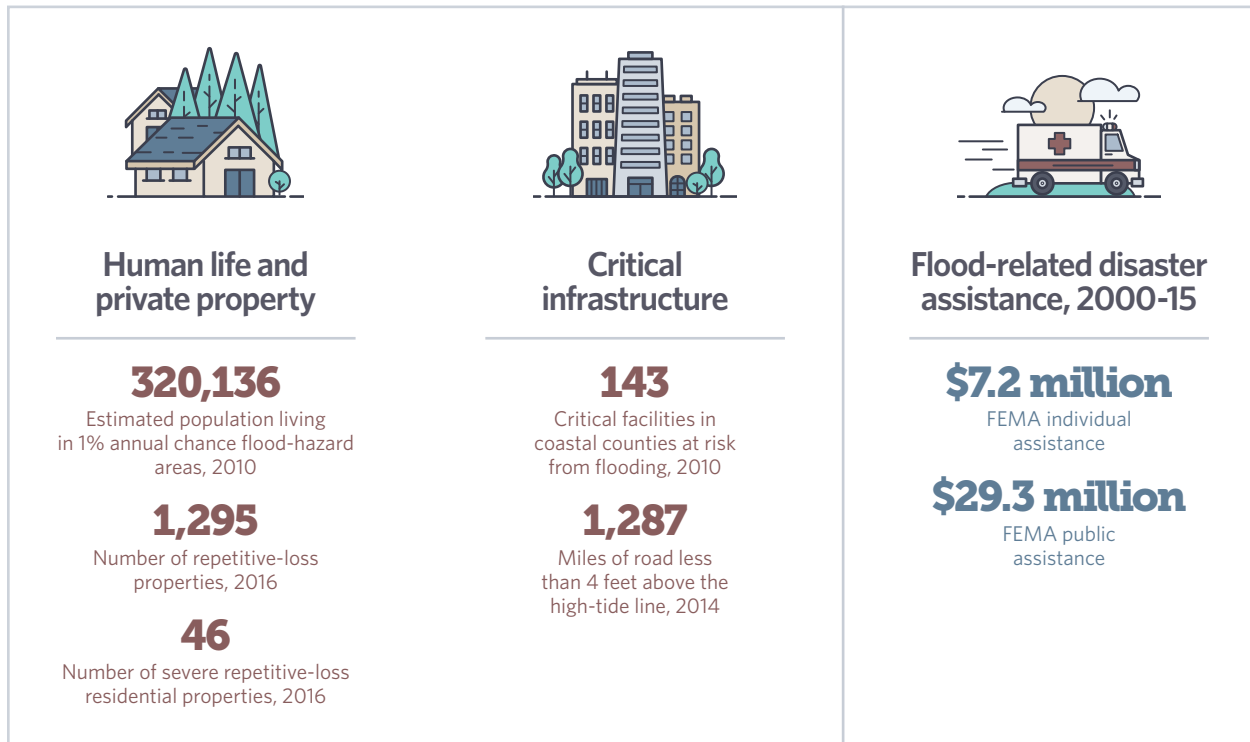
Source: South Carolina Emergency Management Division

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Figure 2

Over 320,000 South Carolinians Live in Flood-Risk Areas

Life, property, and public infrastructure at risk from flooding, and past federal government aid



Notes: One percent annual chance flood-hazard areas are locations subject to flooding that have a 1 percent chance of being equaled or exceeded in any year. Repetitive-loss properties are National Flood Insurance Program-insured buildings and/or contents for which the program paid at least two claims of more than \$1,000 in any 10-year period since 1978. Severe repetitive-loss properties are those for which the program has either made at least four claim payments for buildings and/or contents of more than \$5,000 or at least two building-only claim payments for which the total amount exceeds the current value of the property. Critical facilities include schools, police stations, fire stations, and medical facilities from FEMA's Hazus database, and the figures shown represent those at risk of flooding from 2000 to 2001 according to FEMA's 2001 flood plain maps. Disaster assistance figures are as of Aug. 16, 2016.

Sources: Mark English, "Special Flood Hazard Area Exposure Resource Map v2.0," accessed Aug. 6, 2016, <http://www.arcgis.com/home/webmap/viewer.html?webmap=5767b4c3ac164e54916bc7ebc20d25d6>; Federal Emergency Management Agency, "Repetitive Loss State/Community Drilldown Non-mitigated Records Only," Jan. 31, 2016; Federal Emergency Management Agency, "Severe Repetitive Loss State Summary/Residential (Validated) Properties Only," Jan. 31, 2016; National Oceanic and Atmospheric Administration, "Coastal County Snapshots," <https://coast.noaa.gov/snapshots>; Ben Strauss et al., *South Carolina and the Surging Sea: A Vulnerability Assessment With Projections for Sea Level Rise and Coastal Flood Risk*, Climate Central, research report (July 2014), <http://sealevel.climatecentral.org/uploads/ssrf/SC-Report.pdf>; and Federal Emergency Management Agency, "Disaster Declarations," accessed Aug. 16, 2016, <https://www.fema.gov/disasters>

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Federal flood insurance helps communities prepare

Forty-four communities in South Carolina participate in the National Flood Insurance Program's Community Rating System. The voluntary program provides reduced insurance premiums in communities that proactively implement flood plain management practices—such as acquisition and relocation of flood-prone structures, elevation of structures, and flood proofing—that exceed the program's minimum requirements.³ The highest-rated community in the state is Charleston County, which earns a 30 percent discount for eligible properties.⁴

Figure 3

State and Federal Investment Supports South Carolina's Mitigation Efforts

Risk-reduction expenditures by program and level of government

Program	Federal share	State share
Pre-disaster and other mitigation grants	\$25.3 million	\$41.2 million
Hazard Mitigation Grants made after flood-related disasters	\$766,119	\$107,479

Sources: Federal Emergency Management Agency, "FEMA Hazard Mitigation Program Summary - Open Government Dataset," Aug. 31, 2016, <https://www.fema.gov/media-library/assets/documents/28323>; Federal Emergency Management Agency, "Hazard Mitigation Assistance Pre-Disaster Mitigation Data," Aug. 25, 2016, <https://www.fema.gov/media-library/assets/documents/103341>; Federal Emergency Management Agency, "Hazard Mitigation Assistance Flood Mitigation Assistance (FMA) Data," Aug. 25, 2016, <https://www.fema.gov/media-library/assets/documents/103339>; Federal Emergency Management Agency, "Repetitive Flood Claims (RFC) Data - FEMA Hazard Mitigation Assistance (HMA) grant programs," Aug. 13, 2016, <https://www.fema.gov/media-library/assets/documents/103321>; and Federal Emergency Management Agency, "Severe Repetitive Loss (SRL) Data - FEMA Hazard Mitigation Assistance (HMA) grant programs," Aug. 18, 2016, <https://www.fema.gov/media-library/assets/documents/103337>

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Importance of policy

Communities must prepare for weather-related catastrophes such as floods and hurricanes, and U.S. policymakers should consider reforms that improve protection and preparation, minimize disruptions to the economy, and reduce costs to the federal government and taxpayers by:

- Increasing federal investment in proactive mitigation programs that help communities prepare for and reduce risk of floods.
- Improving resilience and durability requirements for infrastructure that is rebuilt after disasters.
- Protecting ecosystems, such as wetlands, salt marshes, and dunes, which can absorb storm impacts and help shield property.
- Reforming the National Flood Insurance Program to better communicate actual risk, break the cycle of repeated loss and rebuilding in the most flood-prone areas, and provide incentives to compel communities and homeowners to prepare in advance of floods.

Endnotes

- 1 U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, "State of South Carolina Energy Sector Risk Profile" (2015), http://www.energy.gov/sites/prod/files/2015/06/f22/SC_Energy%20Sector%20Risk%20Profile.pdf.
- 2 Federal Emergency Management Agency, "Disaster Declarations," accessed May 26, 2016, <https://www.fema.gov/disasters>. Sum of individual assistance and public assistance for South Carolina flood-related major disaster and emergency declarations from 2000 to 2015.
- 3 National Flood Insurance Program, "Community Rating System (CRS)," https://www.floodsmart.gov/floodsmart/pages/crs/community_rating_system.jsp.
- 4 Federal Emergency Management Agency, "Community Rating System" (2016), https://www.fema.gov/media-library-data/1476294162726-4795edc7fe5cde0c997bc4389d1265bd/CRS_List_of_Communities_10_01_2016.pdf.

For further information, please visit:

pewtrusts.org/flood-prepared-communities

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