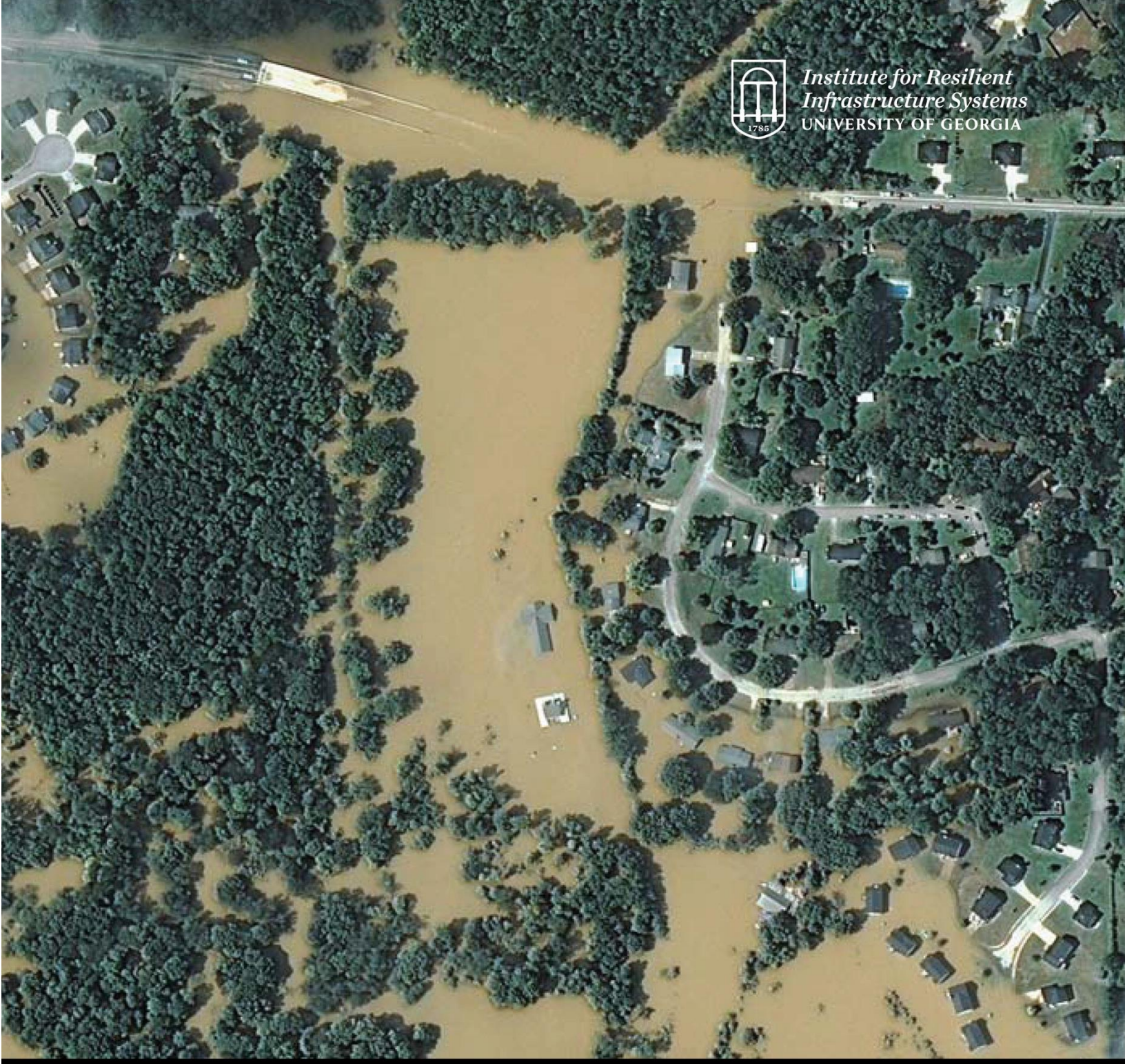


Institute for Resilient Infrastructure Systems
UNIVERSITY OF GEORGIA

REPORT-IN-BRIEF

Georgia Statewide Resilience Assessment

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Overview and Objectives

The University of Georgia's Institute for Resilient Infrastructure Systems (IRIS), in partnership with and support from The Pew Charitable Trusts, is conducting a year-long comprehensive statewide resilience assessment for the state of Georgia, from June 2024 through July 2025. This initiative aims to identify disaster resilience and adaptation needs across the state and compile regional insights and pathways to meet those needs.

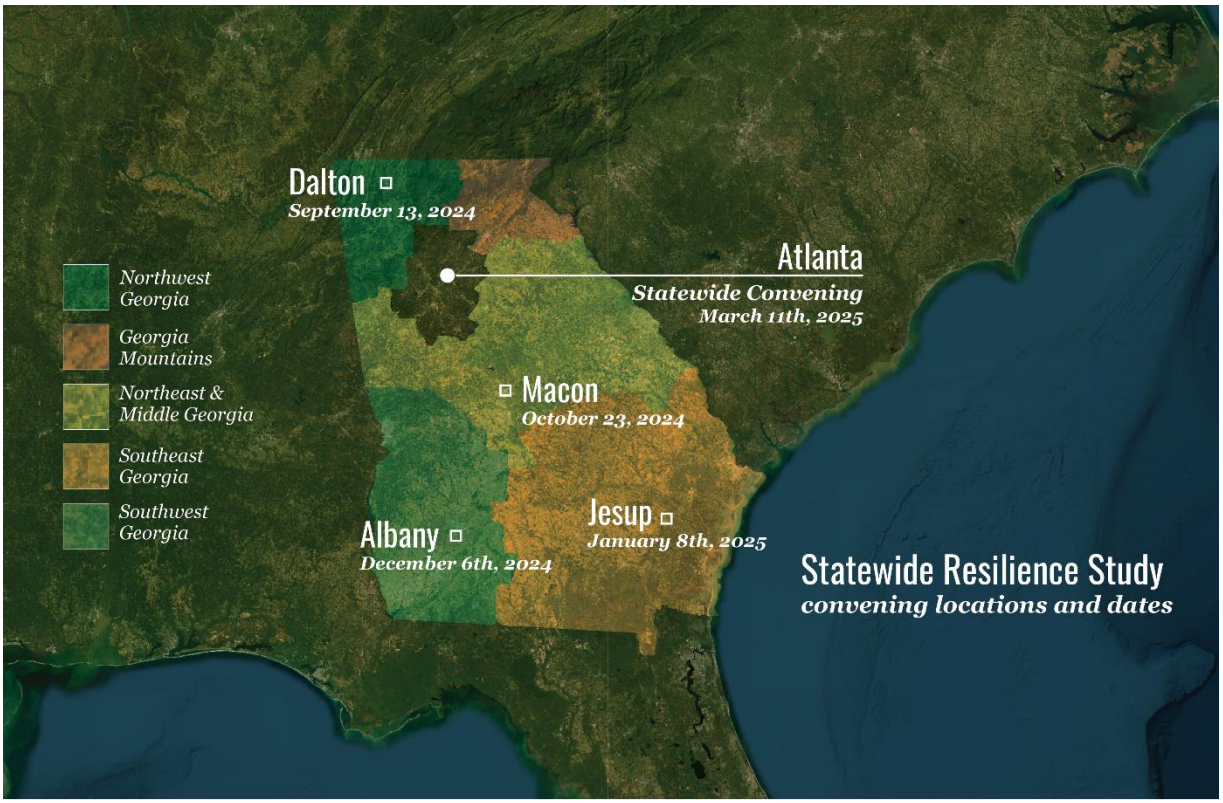
This project has two primary objectives:

1. Collect input from cross-functional and cross-sectoral stakeholders (including local governments, utilities, planners, agriculture, and industry) through regional convenings to gather local insights (Northeast, Northwest, Middle, Southwest, and Southeast Georgia), and one statewide convening to workshop actionable next steps for statewide resilience.
2. Publish a final report by June 2025 that summarizes findings into actionable insights to inform and coordinate resilience efforts.

This report-in-brief is a preliminary summary of findings and recommendations thus far leading up to the statewide convening to be held on Tuesday March 11th, 2025.

The points outlined in this report reflect insights and recommendations from regional convening stakeholders. The Institute's role is to facilitate the connection of these insights to actionable strategies.

This report-in-brief, the regional and upcoming statewide convenings, and the forthcoming final report are meant to complement the on-going process in the GA legislative session. Most recently in December 2024, the House Disaster Mitigation and Resilience Study Committee recommended a new state Office of Resilience to help Georgia prepare for and recover from disasters. This work is continuing through the current legislative session.



This brief begins with an overview of key hazards and associated impacts communities and livelihoods, followed by a snapshot of gaps and opportunities to build resilience. It highlights exemplars of initiatives that can be scaled up and concludes with a summary roadmap of next steps to advance resilience efforts in Georgia.

Key Hazard Insights

- **Flooding is recognized as the most widespread and persistent hazard statewide, but its impacts vary by geography.** In Southeast Georgia, coastal and low-lying areas face storm surge, tidal, and riverine flooding during periods of heavy rain, exacerbated by rising sea levels. Without adequate flood hazard maps, property development in floodplains increases the potential impacts of these risks. Southwest Georgia experiences frequent inland flooding because of heavy rain events that overwhelm drainage systems. In Northwest and Northeast Georgia, urbanization and steep terrain contribute to flash flooding, affecting roads, homes, and businesses. Across all regions, aging stormwater infrastructure and increasing development pressures are intensifying flood risks.
- **Drought has become a growing concern for water supply and agriculture/food security.** In Southwest and Southeast Georgia, which rely on groundwater and river-based irrigation, extended dry spells affect crop production

and rural economies, increasing dependency on irrigation systems. Northwest and Northeast Georgia face drought-driven wildfire risks and stress on drinking water supplies. Fragmentation in regional water management planning further complicates the situation, with many municipalities still relying on single-source water supplies or wells that are vulnerable to prolonged dry periods.

- **Extreme temperature events, such as extreme heatwaves and cold spells, are posing increased risks statewide.** Southeast and Southwest Georgia are experiencing longer and more intense heatwaves, straining energy grids, water supplies, and vulnerable populations. Rural areas, particularly those with older housing stock, struggle with high energy costs and inefficient cooling systems. Northwest and Northeast Georgia, while less impacted by extreme heat, face unexpected cold snaps, leading to burst pipes, road hazards, and increased heating costs. Across all regions, energy demand surges during extreme temperatures, sometimes leading to rolling blackouts and system failures in areas with vulnerable infrastructure.

- **Wind hazards, including hurricanes, tornadoes, and severe thunderstorms, are resulting in more frequent and intense impacts and infrastructure disruptions**. Coastal areas of Southeast Georgia face the most significant risks from hurricane-force winds, which can result in devastating impacts on communities, livelihoods, infrastructure, housing, and emergency services. Georgia is vulnerable to tornado outbreaks, which can destroy homes, disrupt critical infrastructure, and cause widespread power outages. Southwest Georgia, with its rural landscapes, experiences both straight-line winds and hurricane remnants, often leading to tree-related power failures and communication disruptions. Across all regions, above-ground power lines, mobile homes, and warehouses remain highly susceptible to wind damage.

- **Compound risks resulting from combinations of these hazards occurring simultaneously are becoming a prevalent threat.** For example, drought, extreme heat, and wind hazards can combine to create ideal conditions for wildfires to start and spread. Heavy rain, coastal storm surge, and river flooding can combine to overwhelm coastal communities and infrastructure.

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Planning Gaps and Opportunities

KEY IDENTIFIED GAPS

Infrastructure Vulnerabilities

- Aging stormwater infrastructure, not sized for present-day flooding and stormwater flows
- Outdated and inadequate building codes for the prevalence, frequency, and intensity of hazards today
- Power grid vulnerabilities and reliance on above-ground lines

Lack of Coordination

- Disconnects among state, regional, and local planning
- Rigid and inconsistent land use and zoning policies
- Unenforced resilience recommendations for land use and infrastructure planning
- Limited regional/multi-county collaboration on watershed and stormwater management

Funding & Capacity Issues

- Challenges in obtaining federal and state grants due to complexity in the application process, stringent eligibility criteria, which incurs difficulties matching fund requirements
- Limited grant-writing and administrative staff in local governments
- Lack of public-private partnerships in resilience efforts

Data & Public Awareness Gaps

- Outdated floodplain maps not reflected current climate and hazard risks
- Difficulty accessing and interpreting authoritative and updated data
- Limited access to technical expertise and tools
- Lack of public education on resilience measures

KEY OPPORTUNITIES

Infrastructure & Development

- Strengthen building codes for flood- and wind-resistant structures, including special layers of support for low-income residents especially consideration for financial burden homeowners and business owners
- Expand investment in underground power lines and smart grids where feasible
- Develop a statewide water management strategy to improve drought resilience

Statewide & Regional Coordination

- Establish a Georgia Office of Resilience to coordinate efforts and provide guidance, resources, and technical support
- Develop regional task forces for multi-county resilience planning
- Encourage cooperation between cities and counties through resilience coalitions

Funding & Public Awareness

- Create state-level resilience funding programs to assist with matching funds for priority projectsn obtaining federal and state grants due to complexity in the application process, stringent eligibility criteria, which incurs difficulties matching fund requirements
- Improve measurement, transparency, and awareness of resilience investments and long-term cost savings. This would include the production of up-to-date authoritative hazard maps and resilience metrics.
- Develop a centralized statewide hazard and resilience framework to assist with data-based decision-making and fill expertise gaps

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Selected Exemplars of Successful Resilience Applications

Resilience Exemplar	What Worked	Why It Is Worth Scaling
Chatham County Comprehensive Resilience Program (Southeast GA)	• Integrated housing, infrastructure, and emergency planning • Established cross-sector collaboration across agencies • Creates a sustained channel and center of operations for long-term funding for resilience projects	• Demonstrates the effectiveness of a collaborative multi-sectoral/multi-agency resilience plan • Includes a comprehensive code and ordinance evaluation • Scalable to other urban and sub-urban counties
South Carolina Conservation Bank Model (Potential for GA)	• Dedicated state funding for land conservation • Incentives for developers to avoid high-risk areas • Successful in balancing growth and resilience	• Georgia could replicate this to protect flood-prone areas • Offers a sustainable funding mechanism for resilience
Albany Resilience Playbook (Southwest GA)	• Structured framework for local resilience assessment • Guidance for funding applications and implementation • Data-driven prioritization of projects	• Provides a structured playbook for local governments to follow • Helps smaller communities with limited staff access funding
Smart Grids & Automated Switch Pilots (Northwest & Northeast GA)	• Use of automated switches to prevent large-scale outages • Pilot smart grids in key high-risk areas • Improved redundancy and faster power restoration	• Proven to reduce and localize outage durations and improve grid stability • Could be expanded across Georgia to improve power reliability
Savannah's City Resilience Hubs (Southeast GA)	• Piloted resilience with wraparound services 24/7 such as water distribution, library, GED prep, cooling and warming center, food distribution, tornado and hurricane shelter etc.	• Is a scalable model that achieves several goals simultaneously • Could be a cost-effective way to provide an array of pressing services year round
Second Harvest Food Bank Resilience Project (Southeast GA)	• Secured $18 million in federal funding to expand food distribution infrastructure. • Direct response to food insecurity during hurricanes & COVID-19.	• Shows how targeted grants can improve resilience without requiring local matching funds. • Demonstrates the power of regional partnerships—multiple

counties collaborated to secure funding

Statewide Resilience Road Map

Building a resilience effort across the state requires collaboration across all sectors (utilities and public works departments, hazard mitigation, planning and zoning, agriculture, and conservation), and levels of government (regional/county/local). In all regional convenings, there was an overwhelming support for a robust state-led resilience effort combined with a strong local presence to ensure long-term preparedness for future hazards. Below we identify a few steps that could operationalize resilience beyond the policy space:

1. **Mapping and Structuring a Resilience Network.** The regional convenings revealed the need for a coordinated team structure to prioritize resilience efforts both on the state and local levels. Identifying key architects of the work – including local government, researchers and practitioners, and non-governmental organizations – is essential. This effort should both map existing statewide capabilities and explore how to best connect them through alternative structures like taskforces, recurring regional and state planning meetings etc. The network should alternate between establishing embedded dedicated positions and liaisons with existing architects who are already researching, designing and implementing resilience efforts. This step would instill the much-needed inter-jurisdictional coordination and regional partnerships at the core of Georgia's resilience efforts. By leveraging shared insights and exemplars, the network would enable effective and coordinated responses to prioritized infrastructure challenges, ultimately strengthening the state's resilience.

2. **Allocating resources to help communities secure funding for the implementation of resilience initiatives.** While grants are available for communities to recover from hazard impacts, the mismatch between funding criteria and on-the-ground realities is evident. Even municipalities that meet the metrics set by disaster recovery agencies still find it difficult to obtain funding. This is due to inconsistencies in how different agencies define communities in need and a lack of coordination between funding sources. This mismatch leaves vulnerable communities without resources to plan for and recover from hazards. State agencies responsible for funding disaster recovery should work to align their criteria with the realities of impacted communities. If funding is sourced from

federal agencies, technical knowledge should be readily available to help local governments obtain the support they need.

3. **Creating a centralized knowledge hub.** Stakeholders from all regional convenings indicated a need to access relevant, authoritative, and up-to-date data and best practices to effectively plan for resilience and recovery. Data standardization and geospatial products (maps, geolocated information) are essential for guiding decision-making and prioritizing investments. Access to data alone is not enough, as many communities lack the technical expertise needed to interpret data into actionable findings. Actionable findings could be related to planning and governance approaches, prioritization of most pressing vulnerabilities to address, or standardized construction approaches to strengthen the infrastructure and the built environment. The roadmap to resilience should establish local or regional staff positions with technical know-how or, alternatively, formalize relationships with academic or research institutions that already have this technical infrastructure. This will also greatly streamline the design of a statewide resilience framework with clear benchmarks and criteria of core capabilities.

4. **Codifying resilience enforcement.** Conservation organizations and regional planning committees play a key role in identifying resilience priorities and developing pathways to large-scale resilience. While these groups shape the vision, the implementation of resilience measures typically depends on regulatory authority. To streamline the adoption of technical and governance best management practices, integrating elements such as comprehensive plans, construction standards, and zoning ordinances can ensure that resilience principles are upheld in practice.

5. **Engaging local knowledge.** While there is a consensus statewide on most significant hazards, impacts and priorities often vary at the local level. Infusing local knowledge into resilience planning can build upon existing efforts, prevent duplication of work, and ensure that implementation is both efficient and context-specific.

6. **Watershed-based planning.** The natural boundaries of a watershed can determine geographic extents for regional resilience planning and infrastructural interventions. This approach can generate cohesive planning units for stormwater management and land use development to mitigate future flood hazards impact and enhance the efficiency of these measures. Furthermore, using watersheds as

planning units fosters inter-jurisdictional collaboration and expertise sharing, in turn aligning efforts to maximize funding impact.