

Climate Adaptation in Charleston County



Charleston County, South Carolina

Project Team: Fernleaf, Adaapta, Lowcountry Alliance for Model Communities

Funding Amount: \$121,000



Project Summary

The project implemented a two-part approach to enhance flood resilience and advance community-centered solutions throughout Charleston County. A framework for flood mitigation decision making was developed through a process of geospatial analysis to support expanded flood insurance coverage in high vulnerability areas, workshops with key County staff to shape strategy recommendations, and an exploration of sustained local funding options. In parallel, the brownfields redevelopment effort identified potential brownfield sites in pilot neighborhoods through a second spatial analysis using environmental and hazard data, followed by community engagement through interviews, tours, and a workshop to build local capacity. The final phase produced both a Brownfields Strategic Plan that identified areas of potential redevelopment that could build community-centered resilience and a Programmatic Framework for Flood Mitigation that guides context-focused project selection that aligns with countywide flood loss reduction priorities.

Project Goals



Establish a structured framework to guide flood resilience actions and build support for a dedicated local resilience fund to sustain long-term action.

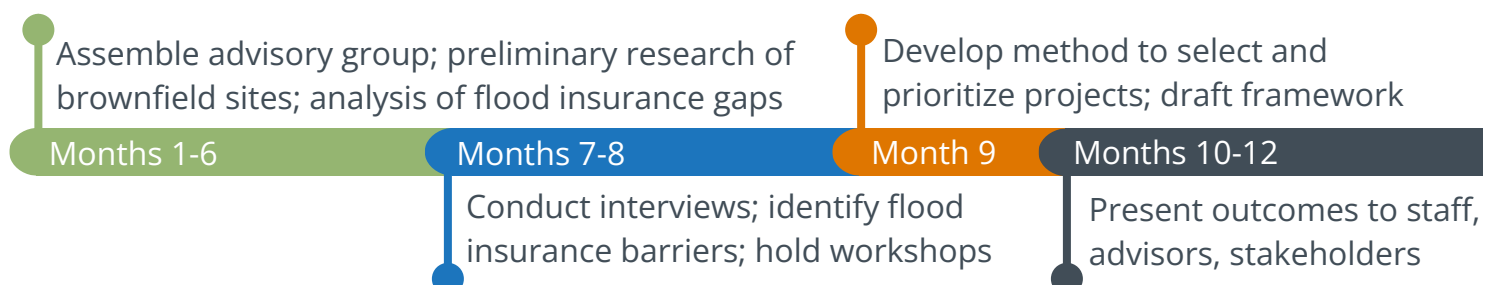


Advance opportunities for community-led brownfields redevelopment in Charleston County that invest in resilience and address the impacts of past actions.



Create a detailed spatial analyses of both concentrations of potential brownfield sites and areas with low rates of flood insurance policy coverage with high hazard vulnerabilities.

Project Timeline



Community Challenges



Legacy of Disinvestment

Historically discriminatory zoning and industrial siting have left certain neighborhoods under-resourced and overburdened by environmental hazards.



Brownfields

Contaminated or underutilized properties pose health risks and hinder economic revitalization in key neighborhoods.



High Flood Vulnerability

Increased flood risk threats to homes and infrastructure, with limited access to insurance or mitigation resources.



Funding Gaps

Lack of sustained, local investment limits the ability to implement large-scale, long term resilience strategies.

Project Approach

This multi-phase initiative integrates stakeholder engagement, spatial analysis, and strategic planning to build a resilient future through flood mitigation and equitable redevelopment. This approach included:

- ★ Establishing internal project team and an external advisory group to guide priorities and input.
- ★ Analyzing flood insurance gaps and brownfield vulnerabilities using spatial data and community insights.
- ★ Engaging with stakeholders through workshops, interviews, and site visits to shape goals and strategies.
- ★ Developing and finalizing an actionable framework and inventories, while identifying funding options for implementation.

Additional Collaborators

City of North Charleston

Town of Hollywood

Red Top Community Association

Union Heights Neighborhood Association

Impact

This project increased community resilience by identifying critical needs in both flood loss protection and impactful local redevelopment, engaging local voices to shape targeted solutions, and delivering actionable frameworks grounded in data and aligned with funding strategies. Through collaborative planning, data-driven tools, and a framework to guide future resilience efforts, actionable strategies were developed to protect vulnerable populations and support inclusive redevelopment.

Next Steps

- Integrate redevelopment and mitigation frameworks into existing County programs with defined leadership
- Identify and pursue funding opportunities for implementation guided by the framework's strategies and prioritization criteria
- Develop more detailed analyses for specific areas within the county to further support decision-making
- Engage and collaborate with jurisdictional neighbors to drive consistent momentum for multi-benefit resilience programming