Our Resilience Journey

Vulnerability Assessment

Develop preliminary County resilience strategies based on assessment findings

CSCI Projects

Advance two of the preliminary strategies to more fully actionable frameworks

Accelerator Workshop

Convene regional stakeholders to co-design and catalyze shared resilience goals

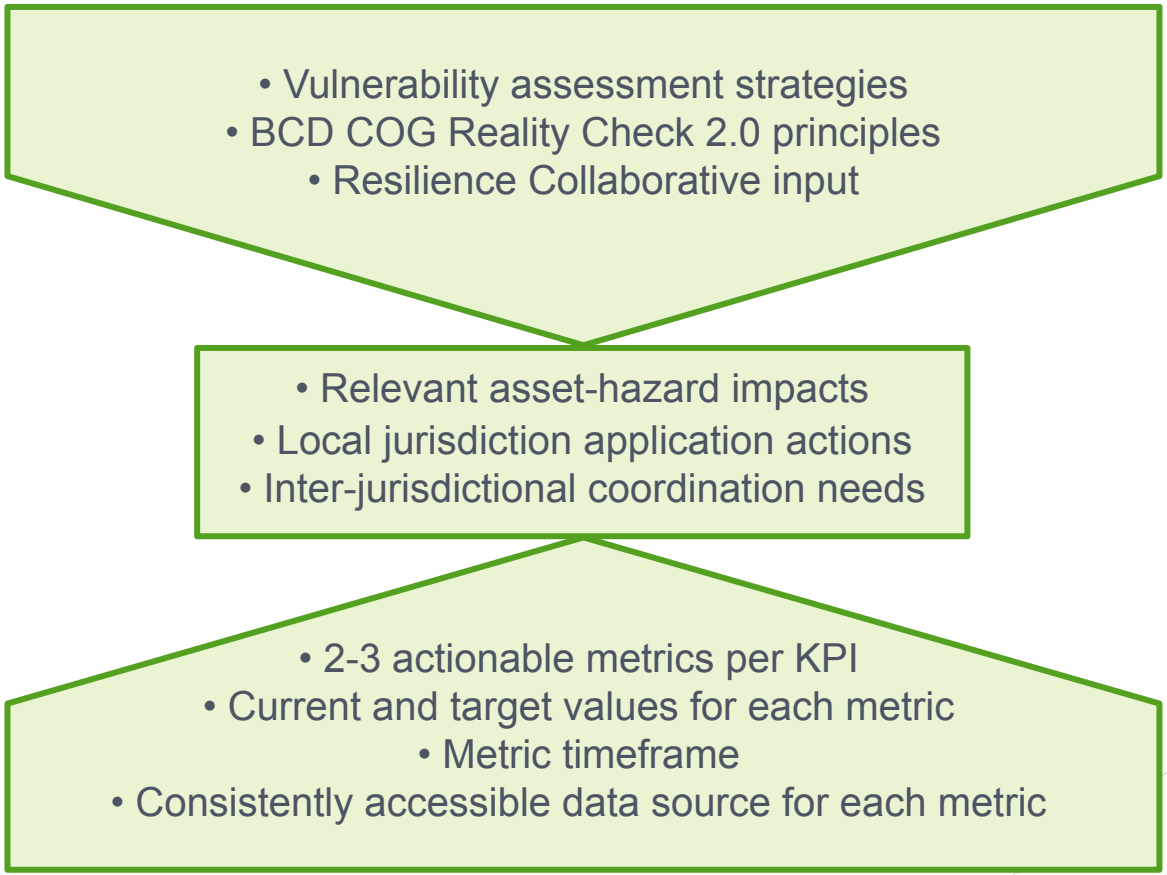
Resilience Collaborative

Refine the strategies through tangible inter-jurisdictional needs and AccelAdapt training

KPI Development

Establish consistent metrics that support regional resilience

KPI Development Process



11 Vulnerability Assessment Strategies

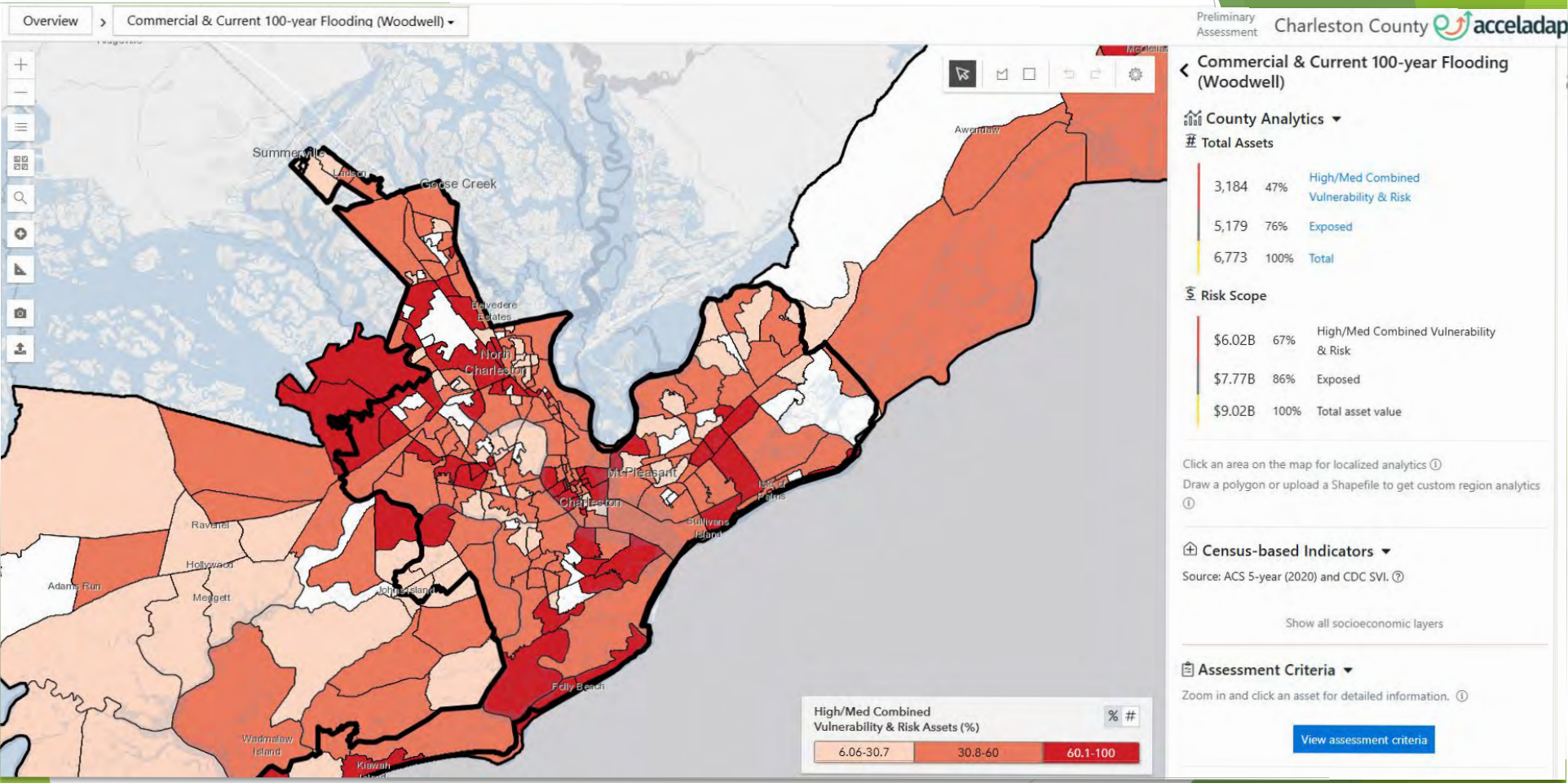
- Programmatic approach to flood mitigation
- Collaborative easement acquisition process
- Drainage system maintenance
- Emergency services planning
- Extreme heat planning
- Resilience of County-owned or managed properties
- Climate resilient brownfields redevelopment
- Local resilience fund
- Structured resilience governance
- Resilience in codes and guidance
- Stormwater special protection areas

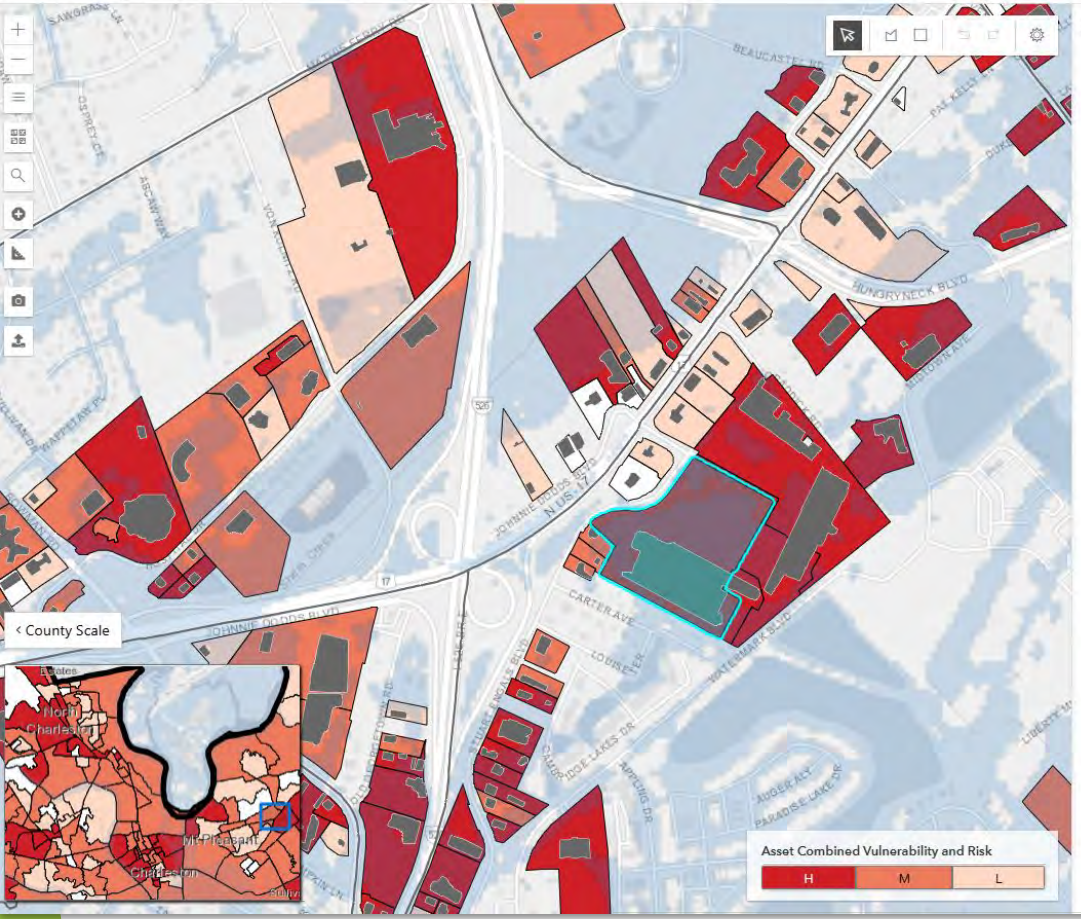
5 Reality Check 2.0 Principles

- Plan infrastructure and growth for long-term resilience
- Expand transportation choices and connectivity
- Preserve natural landscapes and community character
- Support housing choice in connected, mixed-use communities
- Coordinate across jurisdictions and invest in shared understanding

3 Resilience Collaborative Themes

- Transportation network access and connectivity
- Future impacts to existing assets and infrastructure
- Data-driven smart growth and development

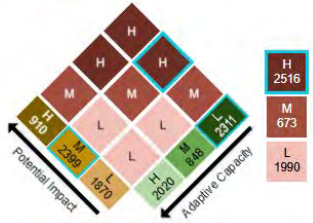

Overview
Commercial & Current 100-year Flooding (Woodwell)
Preliminary Assessment
Charleston County
acceladap
Commercial & Current 100-year Flooding (Woodwell)
County Analytics
Total Assets
3,184 47% High/Med Combined Vulnerability & Risk
5,179 76% Exposed
6,773 100% Total
Risk Scope
$6.02B 67% High/Med Combined Vulnerability & Risk
$7.77B 86% Exposed
$9.02B 100% Total asset value
Click an area on the map for localized analytics
Draw a polygon or upload a Shapefile to get custom region analytics
Census-based Indicators
Source: ACS 5-year (2020) and CDC SVI.
Show all socioeconomic layers
Assessment Criteria
Zoom in and click an asset for detailed information.
View assessment criteria
High/Med Combined Vulnerability & Risk Assets (%)
6.06-30.7
30.8-60
60.1-100
Summerville
Goose Creek
Awendaw
Belvedere Estates
North Charleston
Mt Pleasant
Charleston
Isle of Palms
Sullivans Island
Ravenel
Hollywood
Adams Run
Meggett
John's Island
Folly Beach
Wadmalaw Island



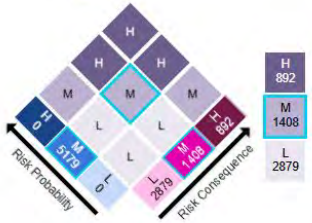
Commercial & Current 100-year Flooding (Woodwell)



Vulnerability



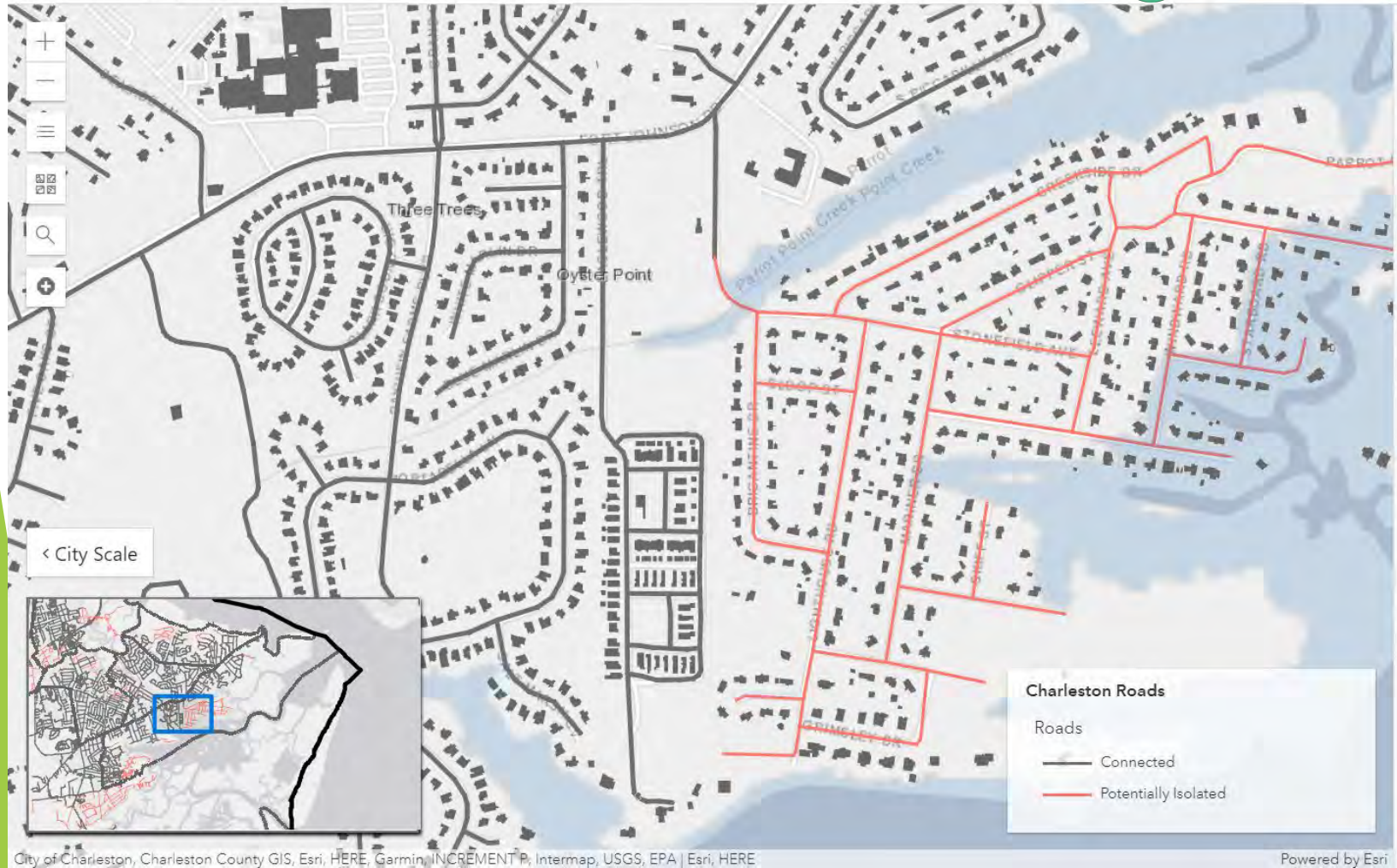
Risk*



	Potential Impact	Adaptive Capacity
H	Structure in inundation extent and clinic_med daycare supermarket	Structure outside the flood extent or built after BFE requirements were raised to 1ft
M	Structure in inundation extent	Structure in flood extent built after BFE requirements were put in place
L	No structure in inundation extent (land only)	Structure in flood extent built before BFE requirements were in place

	Risk Probability	Risk Consequence
H	-	Structure exposed to potential flood depth of 3ft+
M	In flood extent	Structure exposed to potential depth between 1 and 3ft
L	-	Structure exposed to flood depth less than 1ft OR no structure exposed (land only)

* Risk values denote the scope of the risk, but are not probabilistic loss estimates.



Roads and Isolate Level Rise (3ft + M

City Analytics

Total Assets

11,525	16.67%	
69,153	100%	

Risk Scope

5.6B	17.27%	Expo
21B	100%	Tota valu

Select an area on the map analytics

Socioeconomics

Use these socioeconomic lay and prioritizing actions to bu

Population Density

Percent of Population Unemployed (Ages 16+)

Show all socioecon

Economics

Use these economic layers w

KPI Building Blocks

- Countywide resilience goal
- BCD COG Reality Check 2.0 principles
- Resilience Collaborative themes
- Impact (Asset-Hazard pairs)
- Impact Indicators (Vulnerability Assessment findings)
- Local application of strategy
- Inter-jurisdictional coordination needs

Emergency Services Planning

Transportation network access and connectivity

Countywide Resilience Goal	Reality Check 2.0 Principle(s)	Resilience Collaborative Workshop Theme(s)	Impact (Asset-Hazard Pairs)	Indicator of Impact (VA findings)	Local Application	Inter-jurisdictional Coordination Needs
Incorporate vulnerability and risk data into emergency management plans and decisions	Plan infrastructure and growth for long-term resilience Coordinate across jurisdictions and invest in shared understanding	Transportation network access and connectivity Future impacts to existing assets and infrastructure Data-driven smart growth and development	• Current flooding • Future flooding • Extreme heat • Wildfire **X** • Critical facilities • Transportation network • Emergency response zones (e.g. fire districts)	Sites with low vulnerability/risk and undisrupted access are best for critical facilities Emergency response decisions may be supported by vulnerability/risk and road disconnection data within the response area	Identify critical facilities, emergency management facilities, and emergency response zones Review vulnerability/risk data for these sites, their operational response areas, and the road networks for access within these areas Use vulnerability and risk data to support decisions for operations and resource staging that reflect the hazard conditions for individual response areas	Share vulnerability/risk data, operations plans, and staging resources across jurisdictions Identify gaps and support opportunities for responsiveness and resources

Drainage System Maintenance

Future impacts to existing assets and infrastructure

Countywide Resilience Goal	Reality Check 2.0 Principle(s)	Resilience Collaborative Workshop Theme(s)	Impact (Asset-Hazard Pairs)	Indicator of Impact (VA findings)	Local Application	Inter-jurisdictional Coordination Needs
Establish a coordinated framework for maintenance of all drainage assets to promote efficient and effective system performance	Coordinate across jurisdictions and invest in shared understanding	Future impacts to existing assets and infrastructure	• Current flooding • Future flooding **X** • Existing stormwater management assets	Drainage system assets in areas of high vulnerability/risk may need prioritized or more regular maintenance to ensure performance, especially in preparation for forecasted storm events	Upload spatial layer of drainage system assets Identify priorities for system maintenance in significant events Develop a maintenance schedule based on asset type and performance prioritization Maintain records of drainage system maintenance for Community Rating System documentation	Shared review of drainage systems that function across jurisdictions Coordinate on a shared framework/schedule for drainage system maintenance that maximizes efficiency, cost-effectiveness, and system function, especially in preparation for storm events

Stormwater Special Protection Areas

Data-driven smart growth and development

Countywide Resilience Goal	Reality Check 2.0 Principle(s)	Resilience Collaborative Workshop Theme(s)	Impact (Asset-Hazard Pairs)	Indicator of Impact (VA findings)	Local Application	Inter-jurisdictional Coordination Needs
Leverage stormwater special protection areas as a tool to guide development intensity and mitigate increasing flooding hazards	Plan infrastructure and growth for long-term resilience Coordinate across jurisdictions and invest in shared understanding	Future impacts to existing assets and infrastructure Smart growth and development	• Current flooding • Future flooding **X** • All non-residential parcels	Stormwater special protection areas reduce off-site runoff through higher design standards for new non-residential development and redevelopment; Consistent and comprehensive data for vulnerabilities to both current and projected flood hazards may help refine needs and opportunities for special protection areas	Identify highest flood vulnerabilities in areas with primarily non-residential development; Define, map, and develop specific higher standards for special protection areas; Align special protection areas with higher design and development standards in other plans and codes to collectively guide smart development in highly vulnerable areas	Collaboratively identify potential special protection areas that cross jurisdictions; Coordinate shared higher standards that align with existing plans and codes across jurisdictions; Enforce and evaluate higher standards in technical review and inspections

Next Steps

Metric Refinement

Collaborative refinement of metrics that are actionable and functional for all jurisdictions.

Metric Tracking

Development of platform and accountability for tracking metrics over time.

Metric Tools

Future external-facing regional resilience tools:

- Dashboard for tracking metrics
- Project resilience evaluation scorecard
- Outreach and socialization of regional strategies