

Using the Vulnerability, Consequences and Adaptation Planning Scenario (VCAPS) Process to Facilitate Community Discussion

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Sponsored by NOAA Climate Program Office Sectoral Applications Research Program (SARP)



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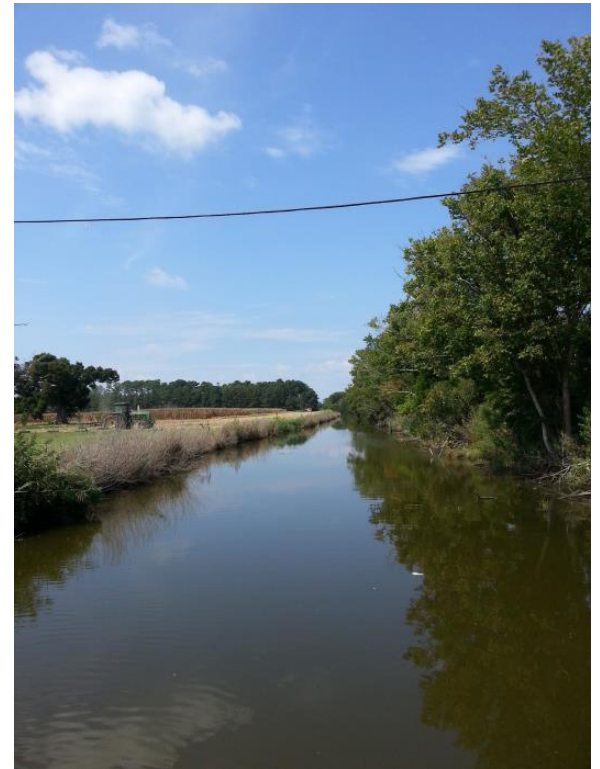
Presentation Agenda

- What does VCAPS do?
- What is involved in conducting VCAPS processes?
- How do VCAPS communities propose adapting to hazards and stressors?
- Discussion: how can GSAA use VCAPS?

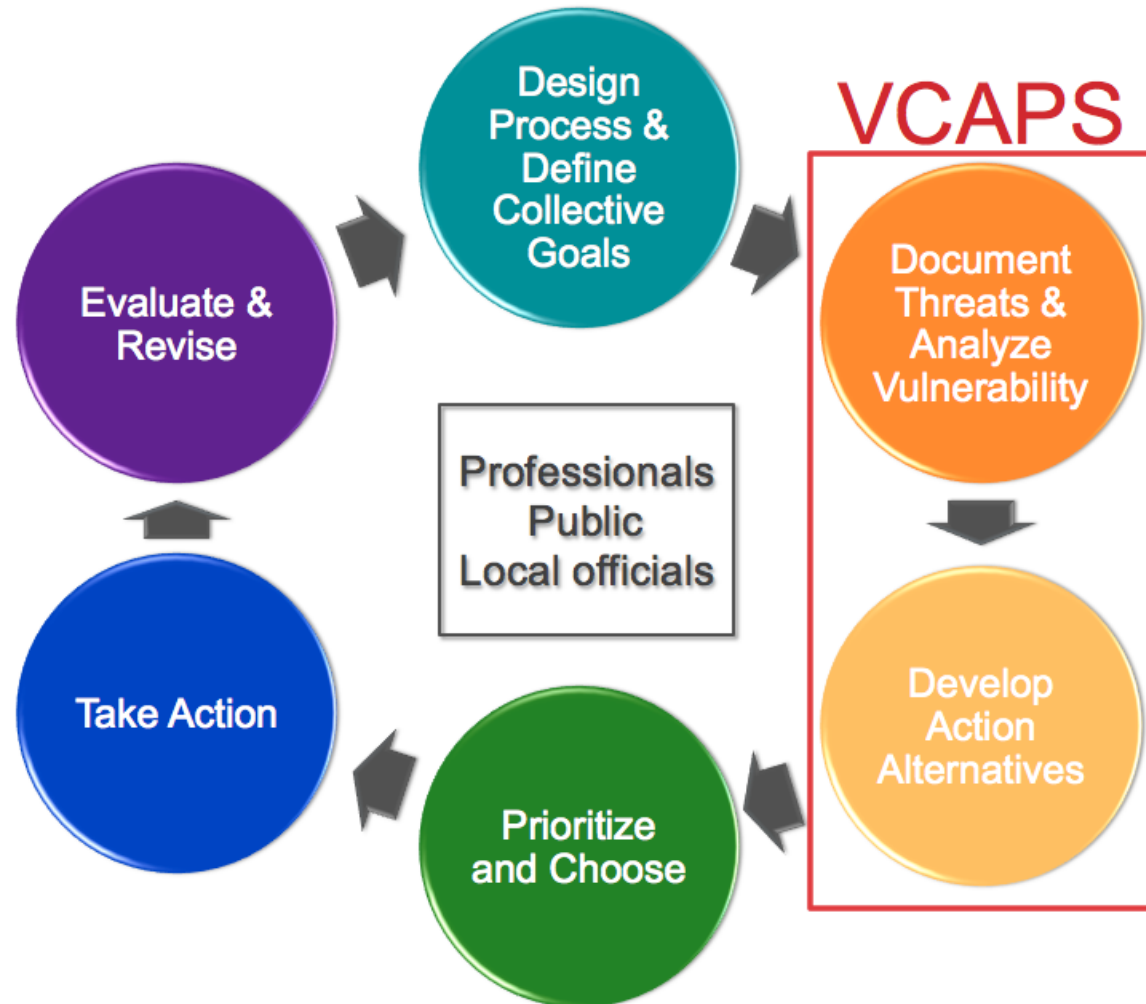
“Scientific” (decontextualized) knowledge	Local (contextualized) knowledge
SLR and storm surge estimates	Local topography
Temperature estimates	Construction materials, grid and HVAC loadings
Planning processes Organizational DM	Local personalities and dynamics Local bylaws
Conflict management and public participation	Legacy of past conflicts, related issues
Climate and risk communication	Credible sources, appropriate media, etc.
Provision of social services, behaviors of marginalized and vulnerable populations	Local experiences and knowledge of local facilities and staff

VCAPS answers calls for better decision support

- Help local decision makers make sense of all those maps and models
- Facilitate local assessments that engage stakeholders
- Adopt risk-based approaches
- Integrate earth science and local knowledge



VCAPS Role in Adaptive Management



What VCAPS does

- Help people think about hazards...
 - Structure discussions using conceptual frameworks
 - Analytic-deliberative process
 - Causal structure of hazards
 - Vulnerability (sensitivity, adaptive capacity, resilience)
 - Utilize visualization techniques
 - AKA “influence diagrams” or “causal pathway diagrams”

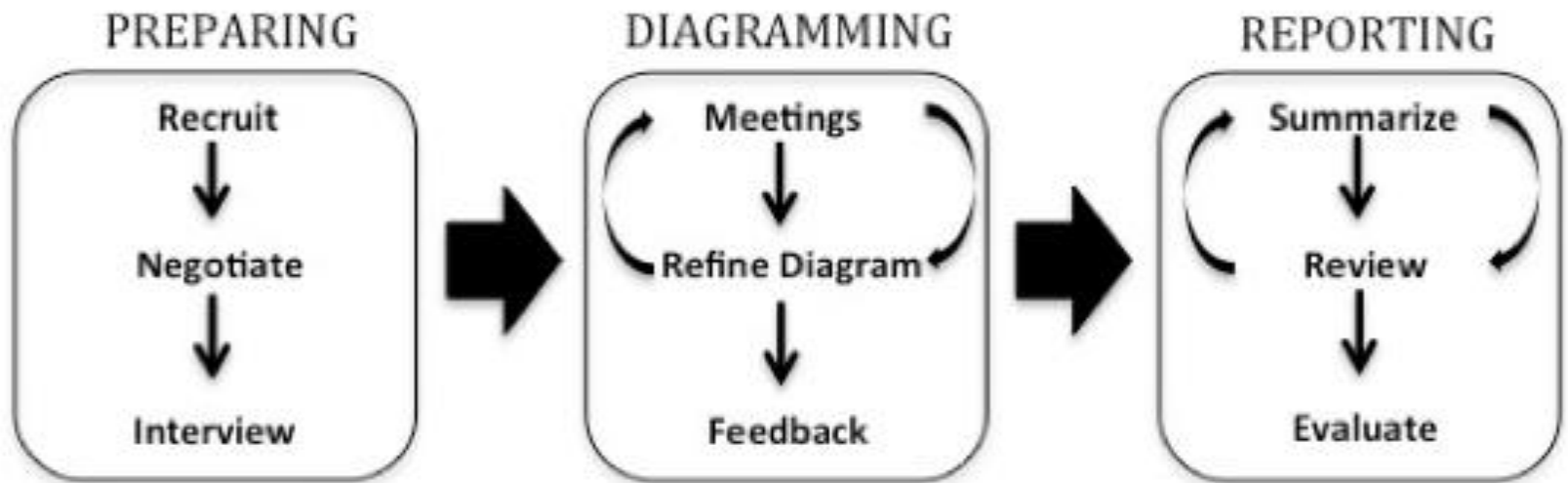


What VCAPS does

- Efficiently...
 - Reasonable (and flexible) demands on time and resources
- To produce “useable knowledge.”
 - Focus on what is relevant to participants and decisions
 - Co-construction of scenarios
 - Allow exploration of (local) complexities and uncertainties



VCAPS Workflow

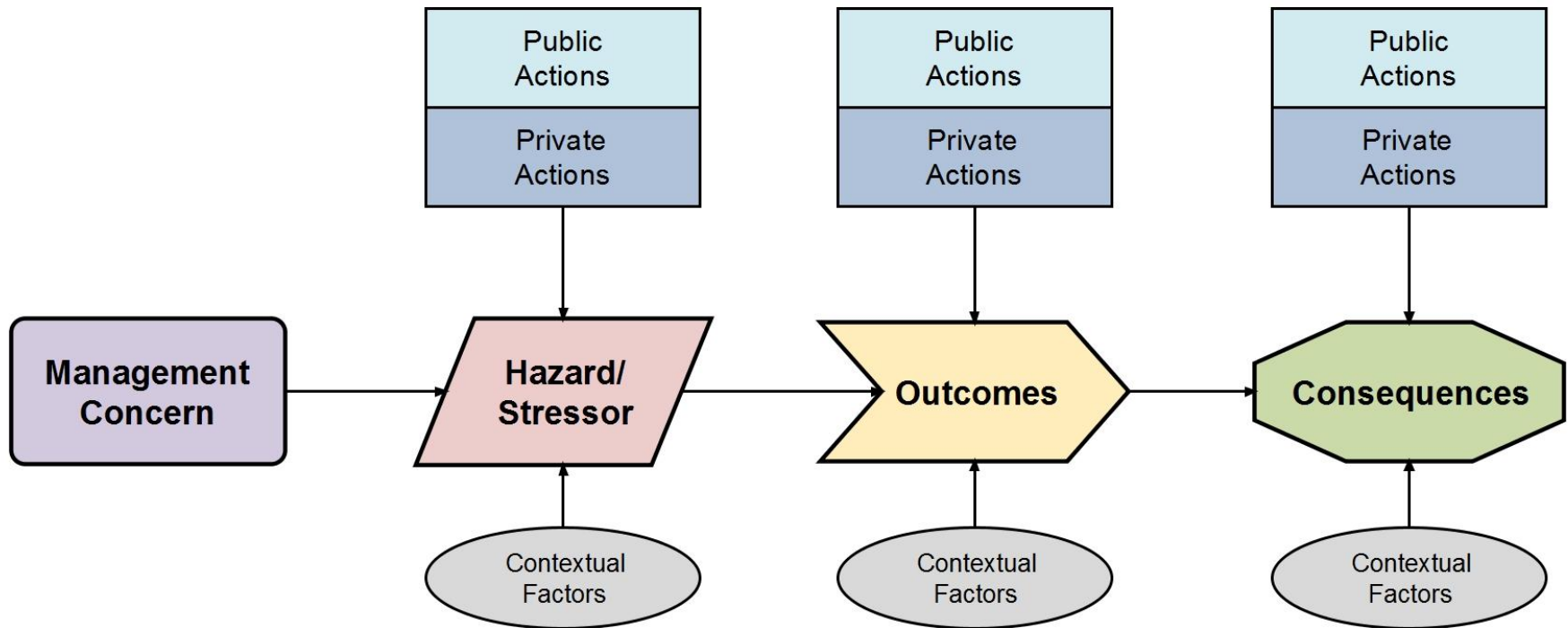


Probing questions, integrative discussion

- What impacts do hazards have in your community?
- Why do you care about the impacts? What is the result?
- What makes these impacts better, worse, larger, smaller?
- What can you do to prevent or mitigate this?



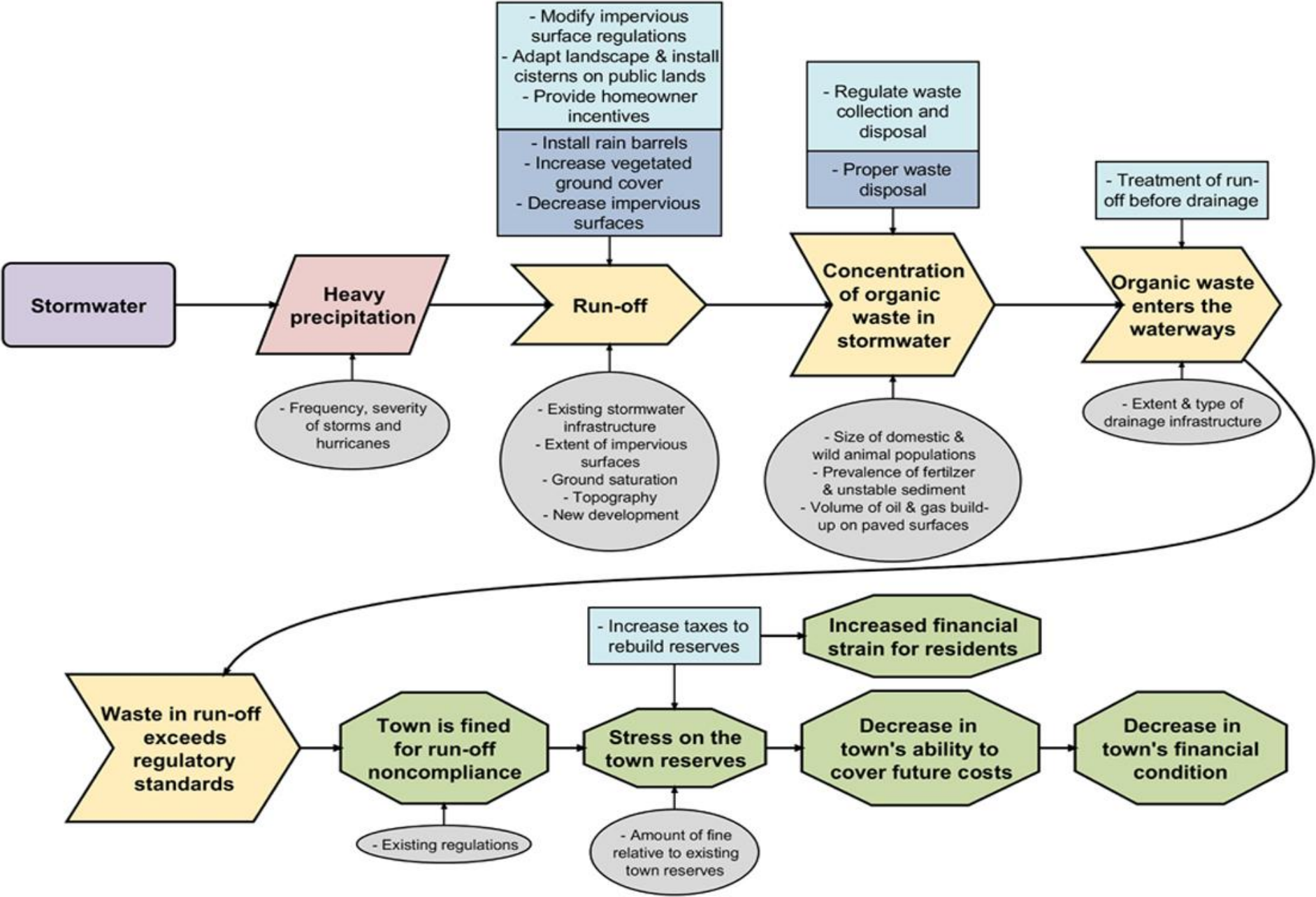
VCAPS diagrams: Building blocks





How to create a diagram

- Start simple; make the diagram more complex gradually.
- Begin with a **management category** and a **hazard stressor**.
- Start with the **outcome** that follows most immediately from the **stressor**.
- Focus on **outcomes** and **consequences** that can be modified by **management actions** or **individual actions**.





ATTENTION SHELLFISHERMEN

A BACTERIA KNOWN AS
VIBRIO PARAHEAMOLYTICUS
IS PRESENT IN MANY FISH
AND SHELLFISH BUT
PARTICULARLY THRIVES IN
OYSTERS DURING THE SUMMER
MONTHS. TO BEST PROTECT
YOURSELF FROM ILLNESS
OYSTERS SHOULD BE ICED
DOWN IMMEDIATELY AFTER
LANDING FROM MAY THOUGH
OCTOBER.

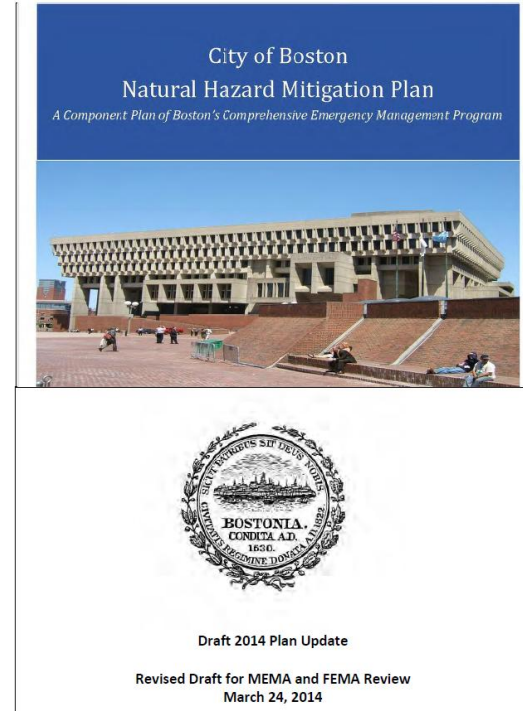
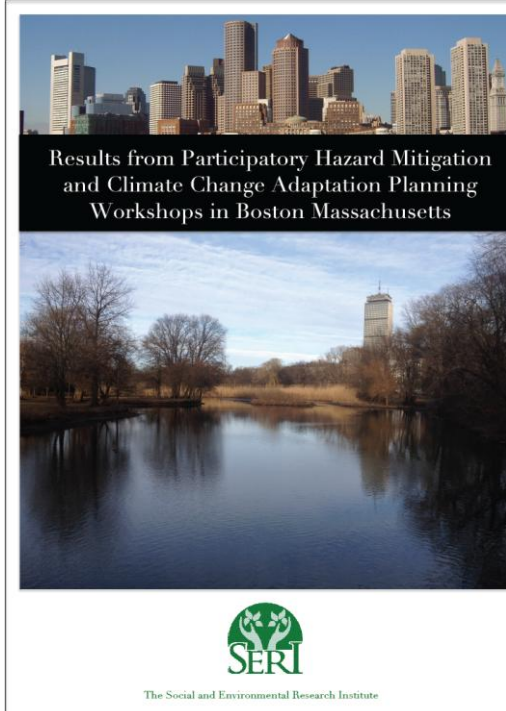
WELLFLEET SHELLFISH DEPT.



Updating the City of Boston Hazard Mitigation Plan using VCAPS

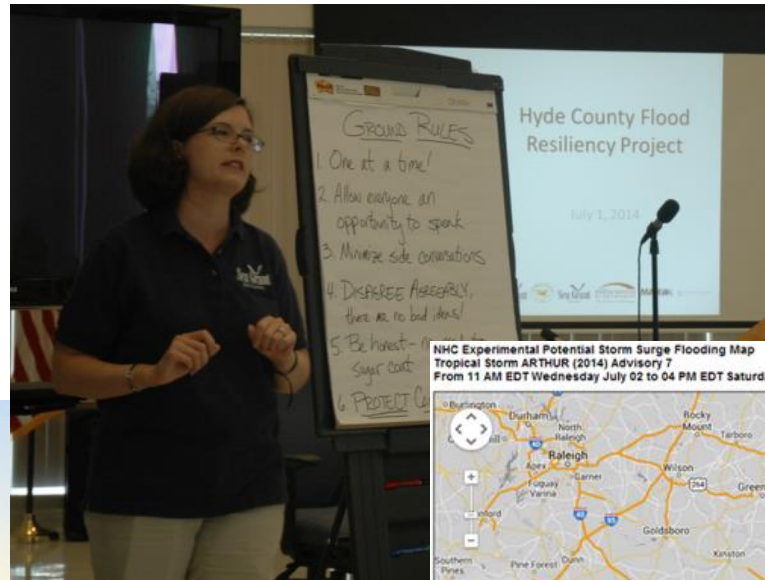
- Flooding from storm surges, sea level rise
 - Raising roadways
 - Installing pumps
 - Continue separating stormwater, sewer
- Winter storms
 - Improve communication systems
 - Treat roads
- Extreme heat
 - Support cooling centers
 - Plant trees and encourage cool roofs*

*not in VCAPS report but in NHMP

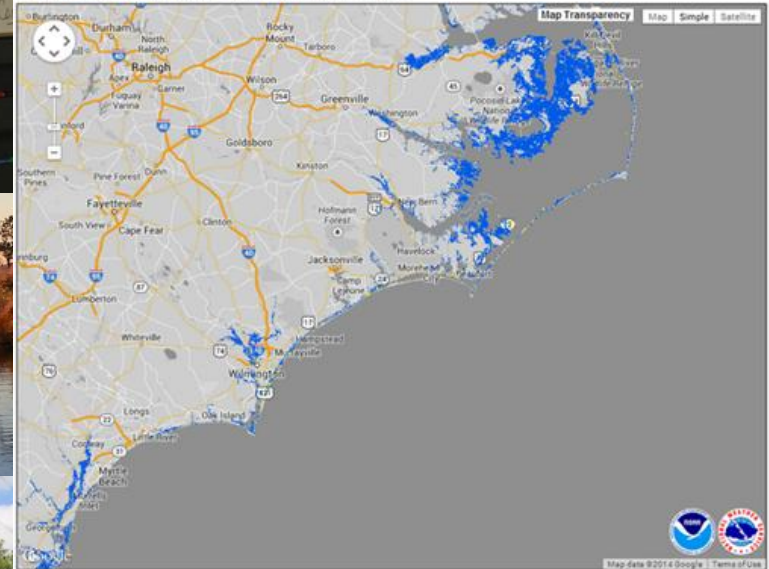


Hyde County, NC storm surges and flooding – in advance of Hurricane Arthur

- Reduce CRS score
- Elevate structures
- Locally tailored residents' guide to flood response and recovery
- Explore regulatory flexibility
- Improve grant applications for wastewater engineering assistance



NHC Experimental Potential Storm Surge Flooding Map
Tropical Storm ARTHUR (2014) Advisory 7
From 11 AM EDT Wednesday July 02 to 04 PM EDT Saturday July 05

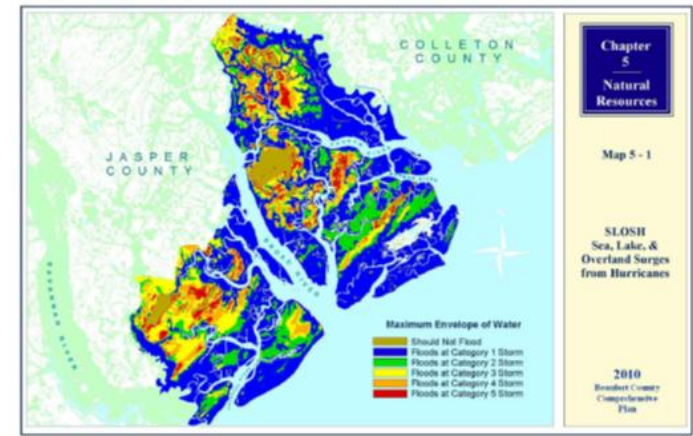


(NC Dept. of Agriculture & Consumer Services 2014)

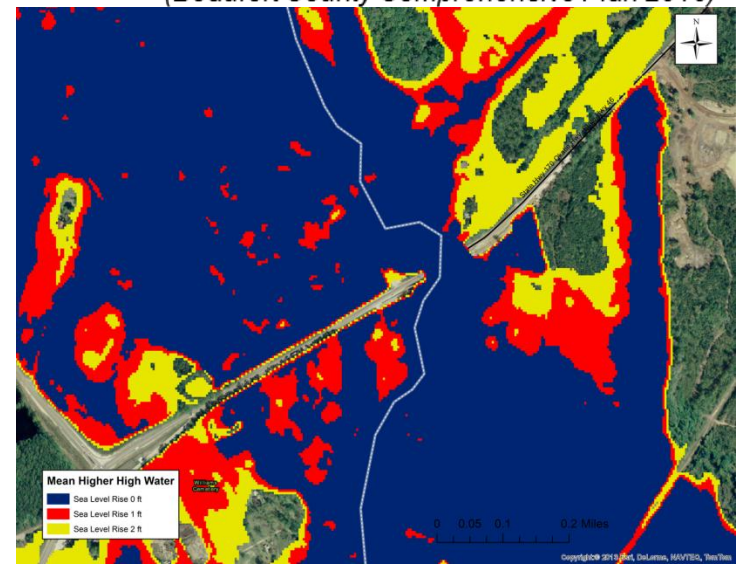


Sea level rise adaptation planning in Beaufort County, SC

- Rainfall, development, and stormwater management
 - Public education
 - Retrofit infrastructure
 - Strategic, efficient low impact development
- Sea level rise: permanent inundation and higher storm surges
 - Identify vulnerable causeways, school transportation routes
 - Expand existing programs
 - Real estate disclosure about County service maintenance under SLR
- Public workshops Aug. 25-26, 2014



(Beaufort County Comprehensive Plan 2010)





Discussion questions

- How might the VCAPS process be used by the GSAA?
 - Can HVA results inform VCAPS discussions to kick off planning in communities?
- Would technical team members be interested in VCAPS facilitation training?



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