

Make dialogue happen! Using the Vulnerability, Consequences, and Adaptation Planning Scenario (VCAPS) Process for flood vulnerability

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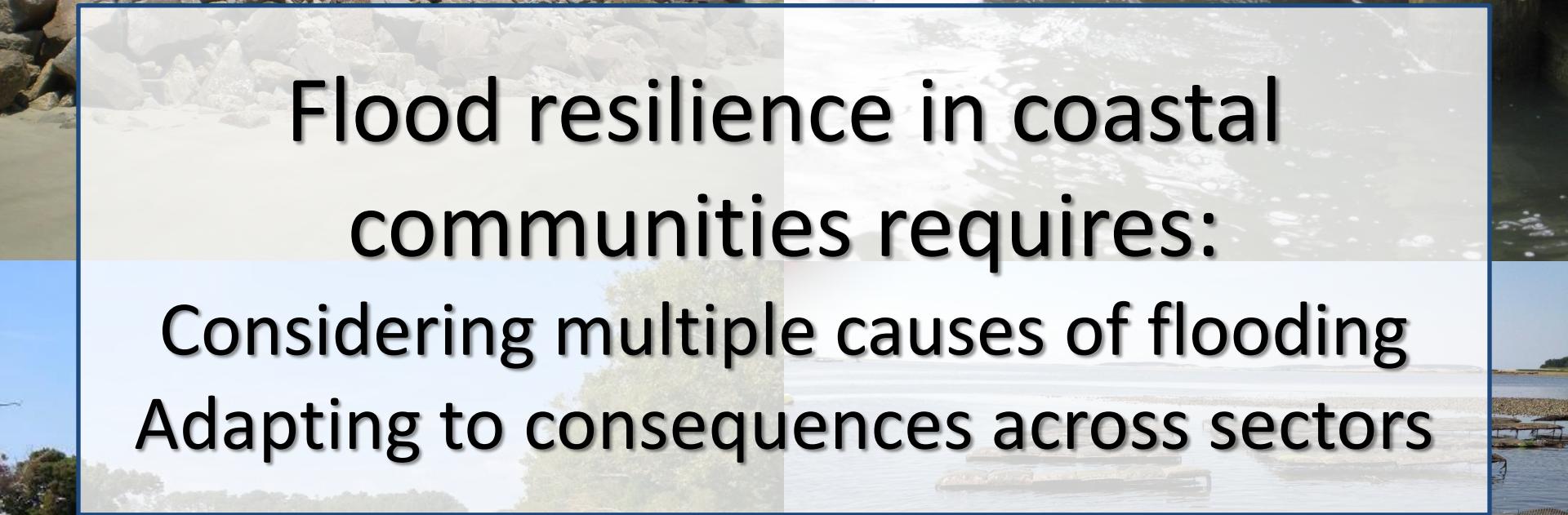
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**Flood resilience in coastal
communities requires:**
Considering multiple causes of flooding
Adapting to consequences across sectors



What VCAPS does

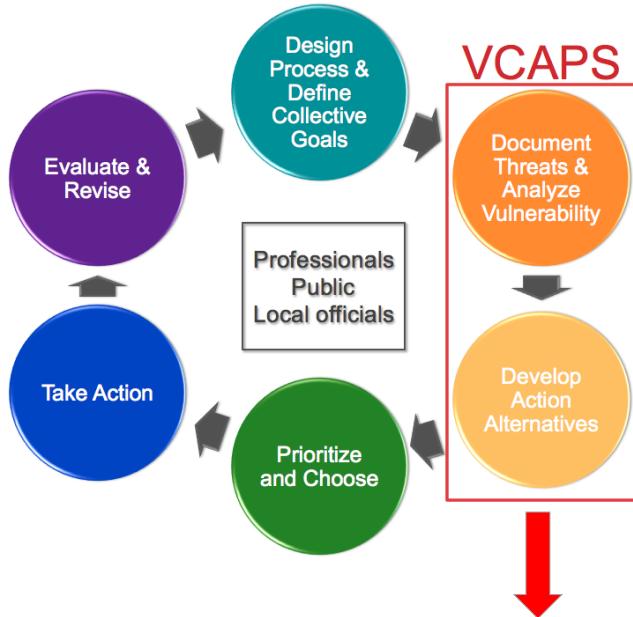
- Help people think about flood hazards...
 - Structure discussions using conceptual frameworks
 - Analytic-deliberative process
 - Causal structure of hazards
 - Vulnerability (sensitivity, adaptive capacity, resilience)
 - Utilize visualization techniques
 - AKA “influence diagrams” or “causal pathway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



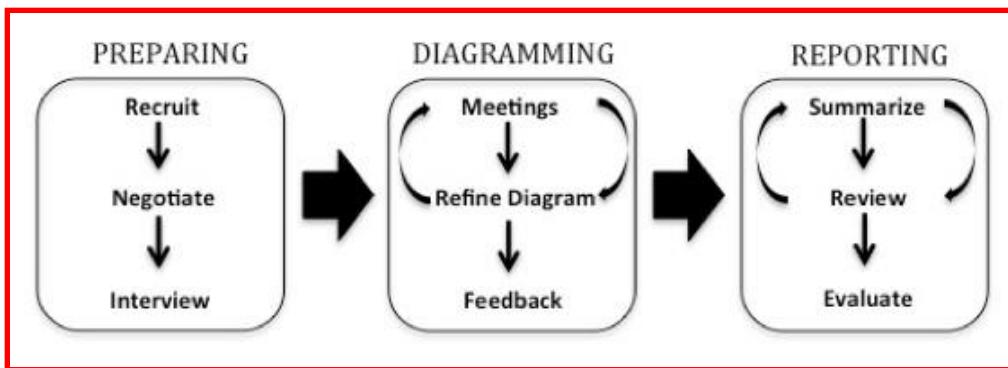
What VCAPS does

- 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



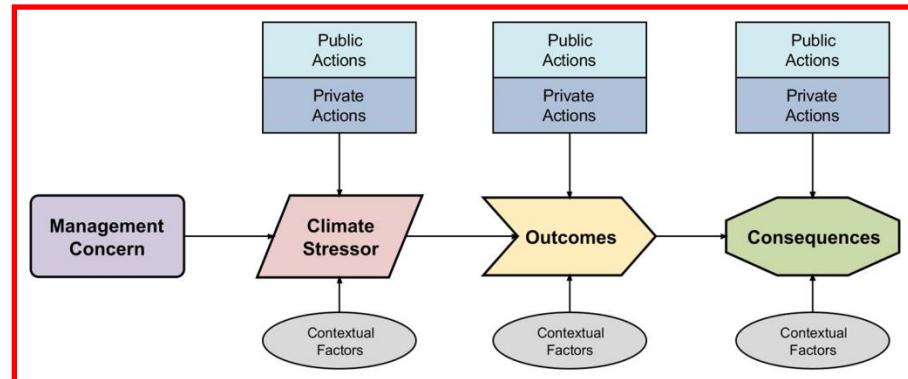


VCAPS supports initial phases of hazard and climate change planning and implementation...



...through group discussion and learning...

...supported by real-time diagramming.

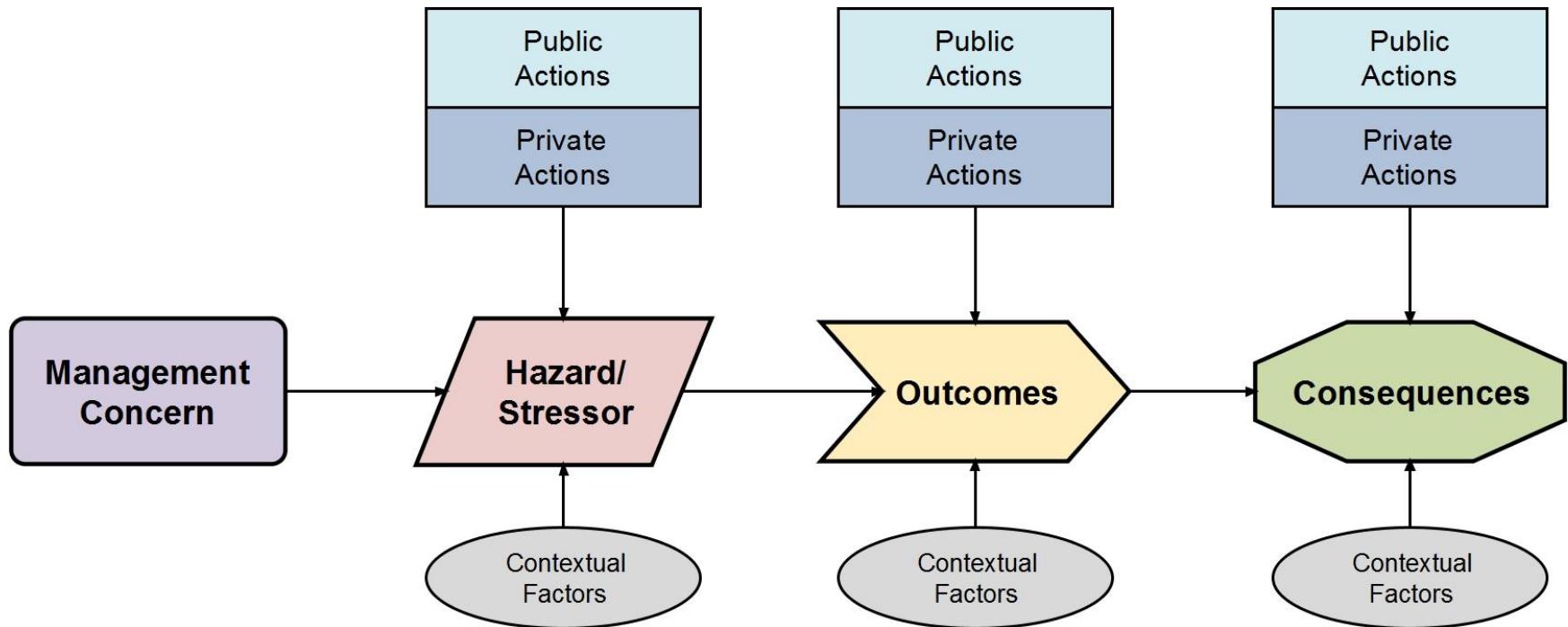


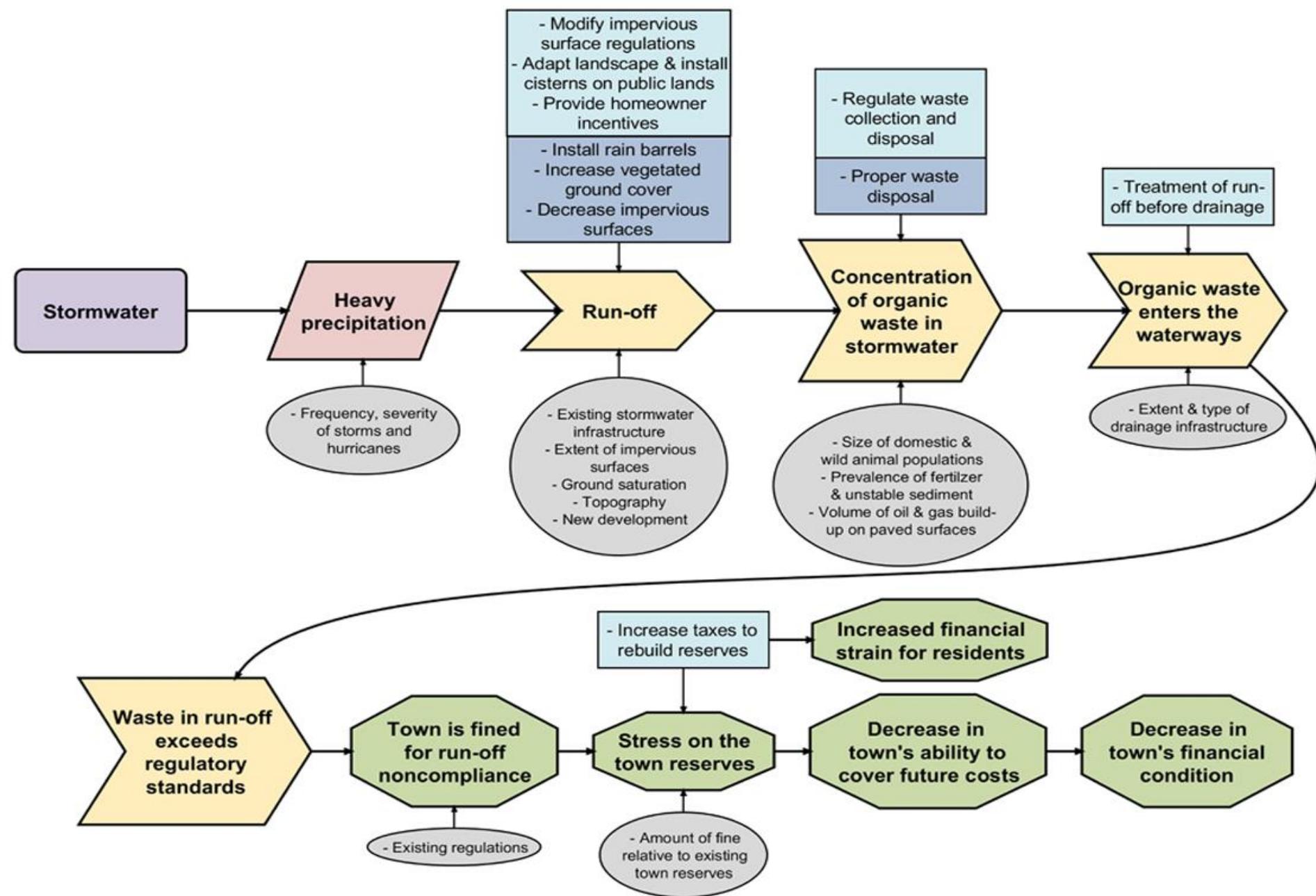
Probing questions, integrative discussion

- What impacts do floods 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

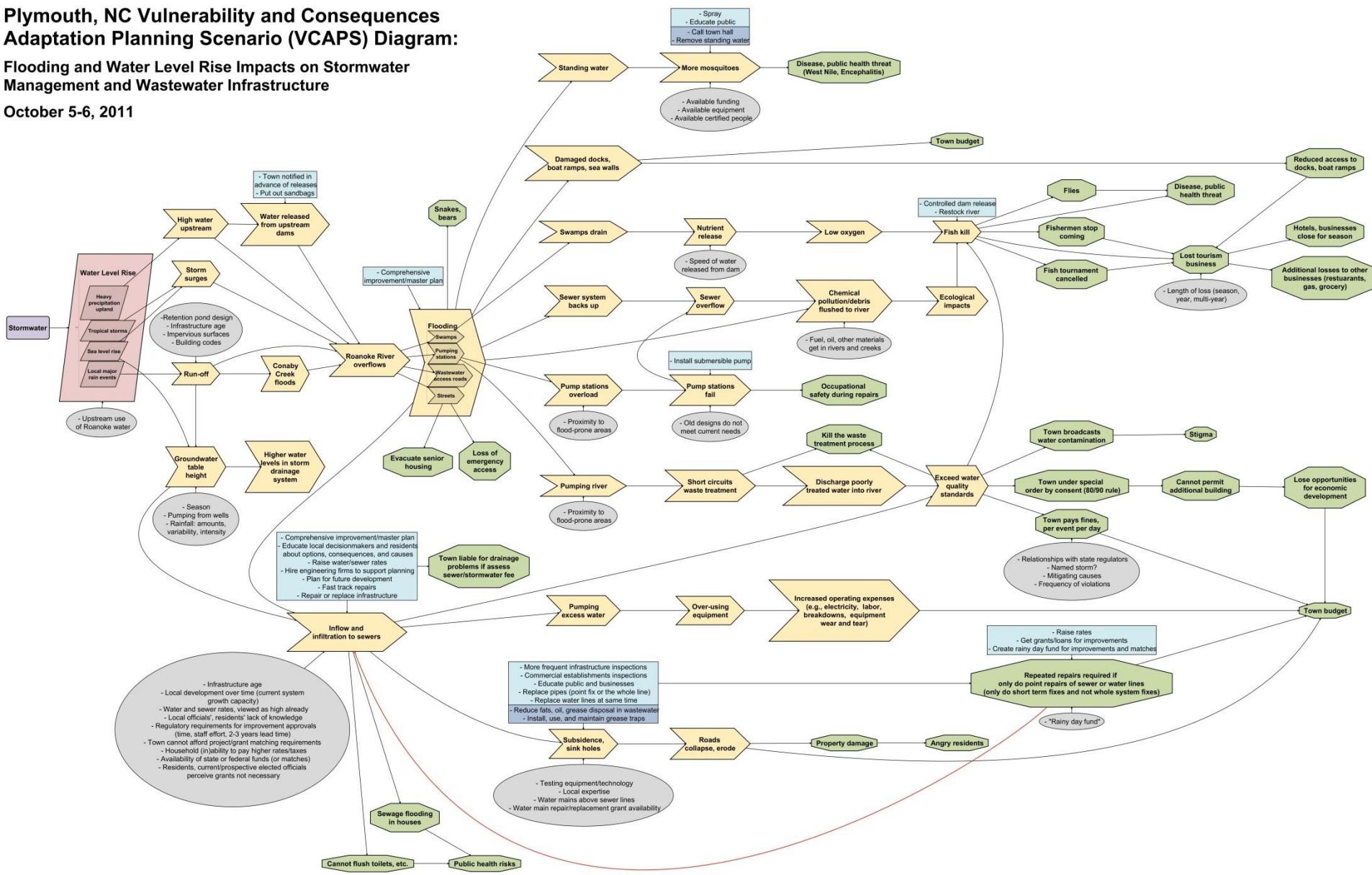




Plymouth, NC Vulnerability and Consequences Adaptation Planning Scenario (VCAPS) Diagram:

Flooding and Water Level Rise Impacts on Stormwater Management and Wastewater Infrastructure

October 5-6, 2011



Episodic flooding and long-term conditions in St. Marys, GA

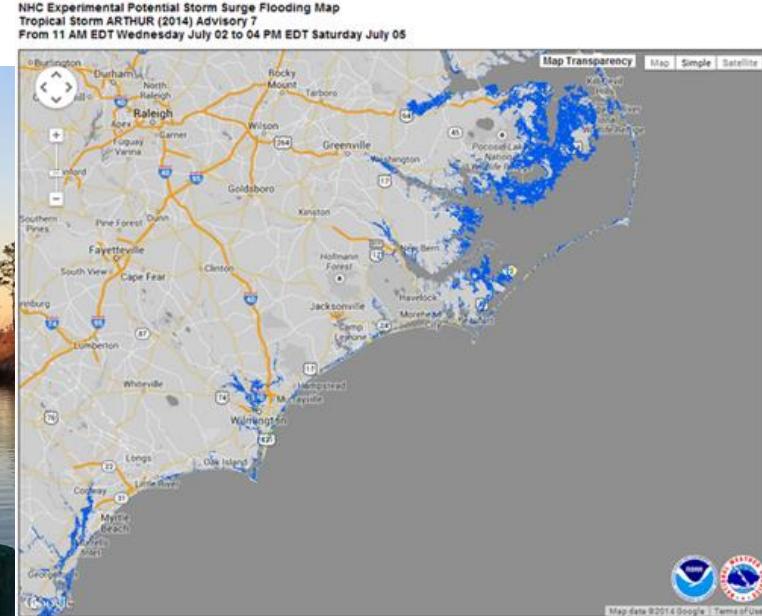
- Degraded water quality from floodwaters, runoff, sewage spills
- Erosion
 - Sediment helps maintain marshes
 - Adaptations to reduce accelerates marsh loss
- Inundation and salt water intrusion kill yards
- Hard structures contribute to ecosystem loss, loss of quality of life



(Georgia Sea Grant 2013)

Hyde County, NC Flood Resiliency Project

- Mainly focused on structures
- Ecosystem issues integrated
 - Agriculture and salinity intrusion
 - Seafood industry
- Adaptations require transformation
 - Tailwater recovery
 - Improve grant applications for wastewater engineering assistance
 - Regulatory flexibility and coordination



- VCAPS conceptual framework structures integrative thinking, discussions
- Real-time diagramming supports understanding, information-sharing
- Self-generated scenarios more credible to local decision-makers
- Results informing hazards and climate adaptation decisions

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Discussion Questions

- How are the people who have the most knowledge in your community about flood occurrence and severity involved in the decision-making process?
- How can you better integrate the knowledge held by different entities have into plans and implementable actions that reduce flooding?