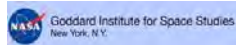


Coastal Resilience (coastalresilience.org)

helping to adapt Connecticut's communities to hazards



Adam Whelchel, Ph.D.
awhelchel@tnc.org
(860) 970-8442



Coastal Resilience in Connecticut



Objective: To help protect People and Nature through hazard mitigation and preparedness.



Awareness



Risk



Choices



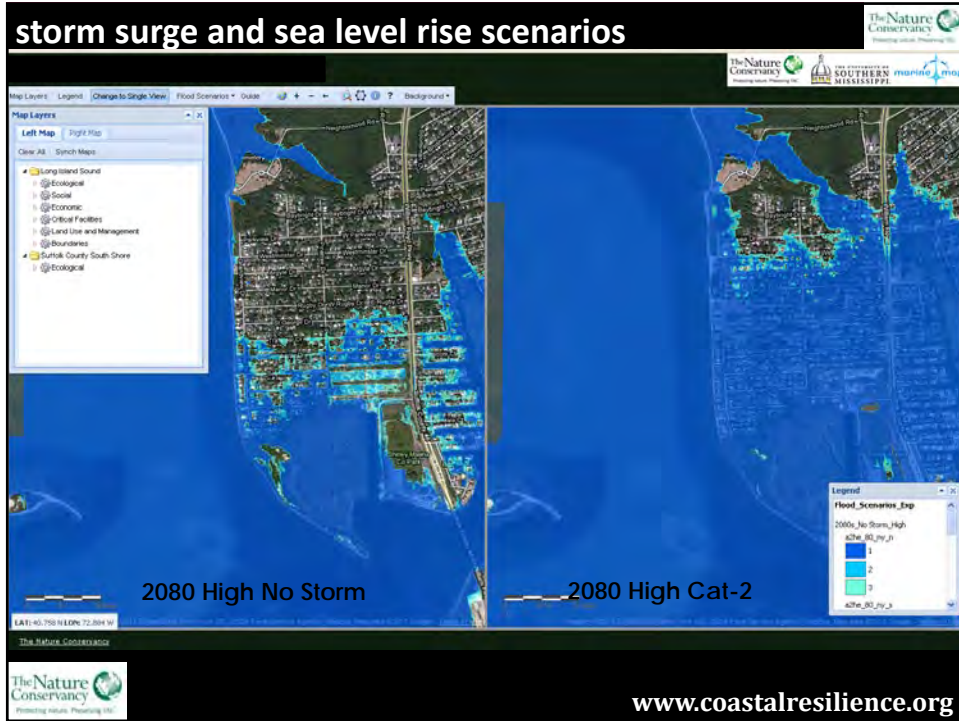
Action

Towns and RPOs:

Guilford, Old Saybrook, Stonington, Waterford, East Lyme, Old Lyme, Bridgeport, Fairfield

SCRCOG, SECCOG, CREPA, GBRC, SWPRA

storm surge and sea level rise scenarios



www.coastalresilience.org

Visualizing impacts, planning wisely for the future, making smart choices today

Adam Whelchel, Ph.D.
 awhelchel@tnc.org
 (860) 970-8442

www.coastalresilience.org



Geography

Click on Geography then New York & Connecticut



Visualization Tool



Solutions





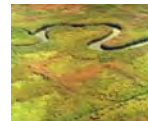
Determine Risk

Vulnerability

- Infrastructure: Age & Capacity
- Evacuation: “at-risk” communities
- Social Services: medical, shelters, elderly
- Natural Resources/Recreation losses

Strengths

- Interdepartmental coordination
- Social networks & services
- Natural resources (protection)
- Building codes & Infrastructure investments



Choices to Actions

Infrastructure

- Risk planning: re/development & infrastructure
- Water systems: retention, infiltration, separation
- Policy: building codes, zoning, incentives

Environmental

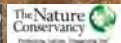
- Low Impact Development/Green Infra.
- Preserve Open Space, Wetlands, Buffers

Social

- Sheltering capacity & preparedness
- Resources: power, food/water, healthcare



Guilford's Coastal Resilience Planning



Guilford's Coastal Resilience Planning

Steps:

2010-11: Natural Hazard Mitigation Plan Development

2010-12: Coastal Resilience Plan

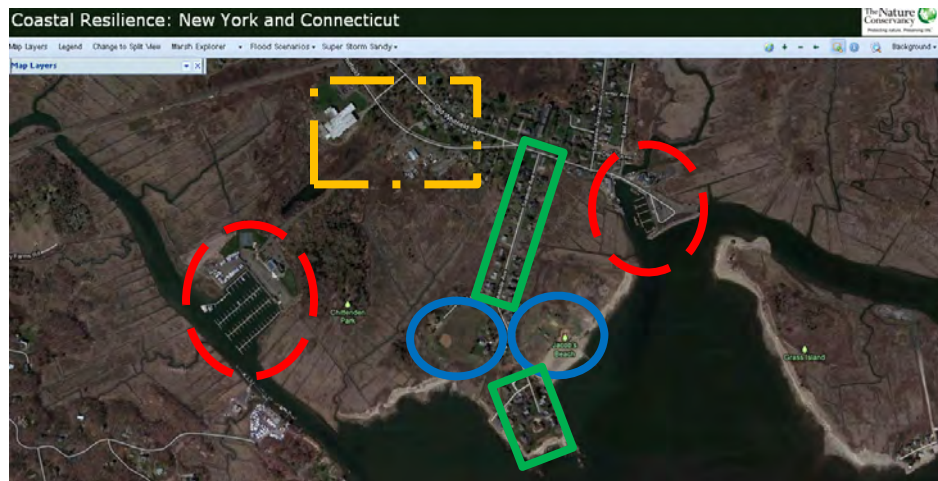
2013-14: Plan of Conservation and Development

Coastal Resilience Plan: Choices to Action Step

- Shoreline protection and management of lands
- Management of coastal real estate and structures
- Roadway alterations
- Water supply wells and septic systems



Seaside Avenue, Guilford, CT

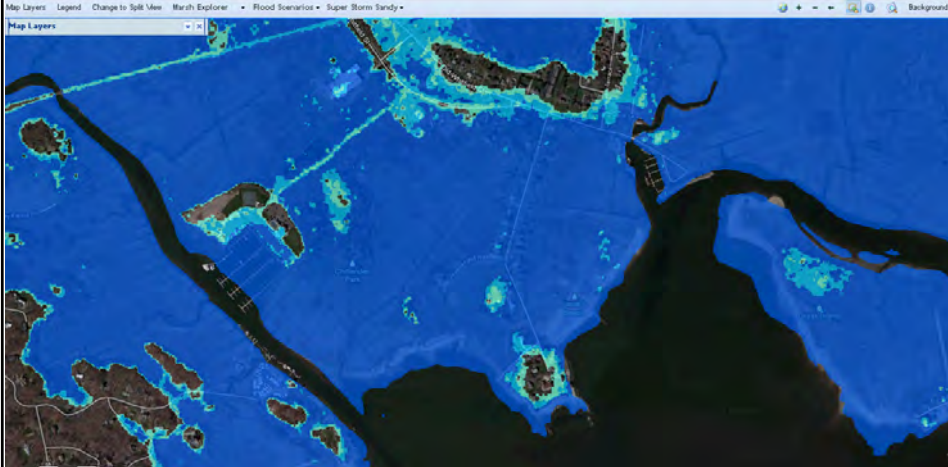


Community Elements

Seaside Avenue, Guilford, CT



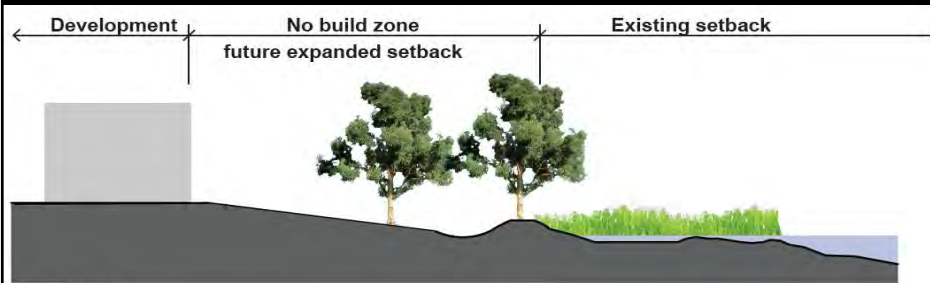
Coastal Resilience: New York and Connecticut



CAT-3 Hurricane

www.coastalresilience.org

Shoreline protection and management of lands

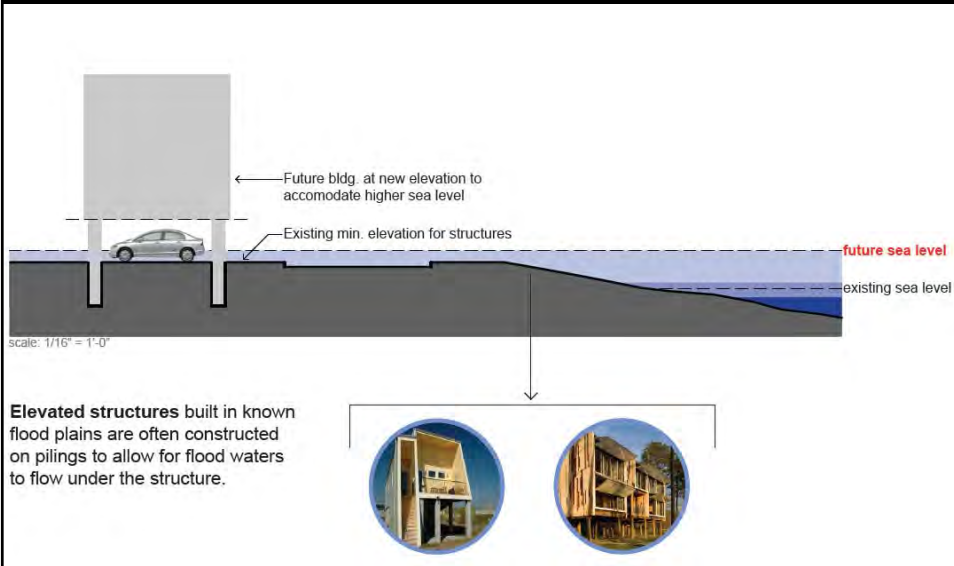


Buffers and setbacks are land permanently dedicated to remain undeveloped and vegetated to protect adjacent land from flooding or other impacts. Setbacks from the water's edges are achieved through zoning, overlay zones, and land use restrictions. Buffers and setbacks are most effective when they are determined in conjunction with specific conditions, such as susceptibility to erosion or wave action, or capacity to provide valuable habitat. They may be established through regulation or land acquisition.



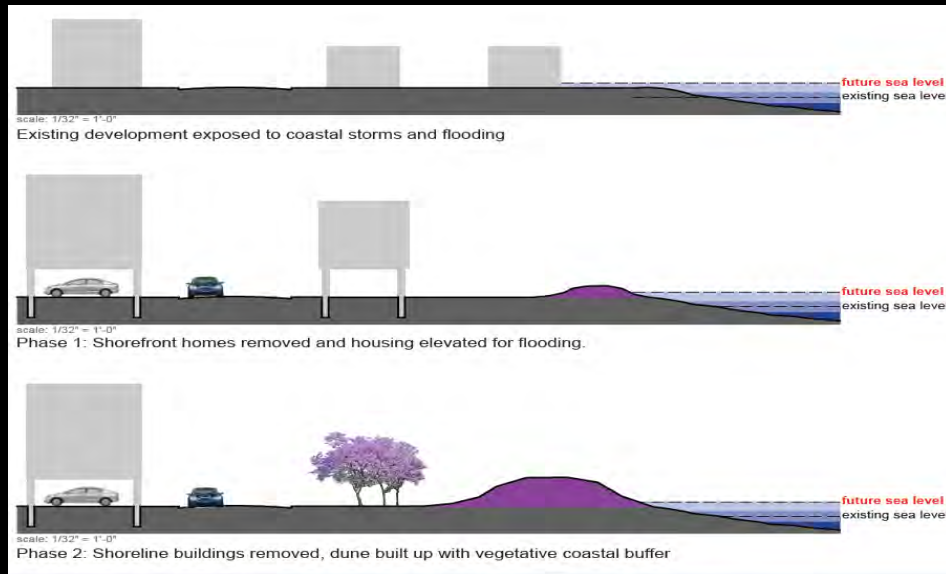
Source: ICLEI-Local Governments for Sustainability

Management of coastal real estate and structures



Source: ICLEI-Local Governments for Sustainability

Combinations over time...



Source: ICLEI-Local Governments for Sustainability

Options for Adaptation in Guilford

Shoreline protection and management of lands

- Hard shoreline protections, living shorelines,
- Land acquisition/conservation practices for tidal marsh advancement
- Wetland buffers for flood protection.

Management of coastal real estate and structures

- Phasing coastal realignment strategies - zoning overlay districts or amendments
- Strengthening building codes to require freeboard
- V zone standards in A zones
- Acquisition of property damaged by coastal and riverine hazards.



Options for Adaptation in Guilford

Roadway alterations

- Elevation of roadways
- Abandonment of some roads
- Re-analysis of emergency access
- Developing alternative egress for some areas



Water supply wells and septic systems

- On-site retrofits
- Development of community systems
- Extension of sewer and water systems
- Vacating property when none of the above are feasible

Visualizing impacts, planning wisely for
the future, making smart choices today

Adam Whelchel, Ph.D.
awhelchel@tnc.org
(860) 970-8442

www.coastalresilience.org



Geography

Click on Geography
then New York & Connecticut



Visualization Tool



Solutions

