

# Preservation Meets Resiliency

## Municipal and State Planning for the Future

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CRCOG Hazard Mitigation Plan Update | March 27, 2018

# Impetus: Superstorm Sandy



***“Each year, disasters caused by natural- and human-induced hazards cause enormous damage to historic buildings, urban areas, museums, libraries, and archives, depriving communities of their irreplaceable cultural assets.”***

**— Rohit Jigyasu, president, International Scientific Committee on Risk Preparedness, ICOMOS**

# Impetus: Climate Change



***“Climate change presents new risks for cultural resources as environmental factors become more extreme, recombine, and change. ... Cultural resources are also in large part non-living and non-reproducing; once lost, they are lost forever.”***

**— National Park Service**

# Impetus: Planning Gaps



***“Many disaster mitigation plans make no mention of historic resources. As more and more communities bank on historic resources to benefit the local economy, this needs to be remedied.”***

**— Andrew Rombach, University of Colorado  
Denver College of Architecture and Planning**

# Project Background

- **2012: Four coastal counties in CT** receive federal disaster declarations
- **2013: Approximately \$50 million** in Emergency Supplemental Historic Preservation Fund (ESHPF) grants to 11 states, D.C.
- **2014: Disaster Relief Assistance Grant (DRAG)** program set up by CT SHPO. Initially, reimbursable construction grants for property owners. Later, a series of survey, inventory, documentation and technical assistance programs
  - Historic neighborhood surveys
  - National Register nominations
  - Archaeological surveys
  - Underwater archaeological surveys
  - Historic dam survey
  - Digitization of inventories
  - GIS mapping
  - Outreach to municipalities and property owners
  - Statewide planning

# Project Goals

*“The Hurricane Sandy program is designed to foster partnerships between local, state, and federal community planners in order to ensure that important cultural resources are integrated into statewide hazard mitigation efforts.”*

*— National Park Service*

- **Provide disaster relief** to property owners
- **Better understand** the Connecticut’s historic resources
- **Assess the vulnerability** of historic resources
- **Prepare the SHPO** for future disasters
- **Integrate historic properties and cultural heritage values** on the state and local levels. Promote collaboration among state and local agencies

# Project Methodology

- **Data collection**
- **Resource mapping**
- **Regional charrettes and municipal meetings**
- **Best Practices Guide** for municipalities
- **Best Practices** for property owners
- **State Historic Preservation Plan** update
- **Online resources**

# Historic Resource Types

## A HISTORIC PROPERTY IS ANY RESOURCE LISTED IN OR ELIGIBLE FOR LISTING IN THE STATE OR NATIONAL REGISTERS OF HISTORIC PLACES

- **Archaeological resources.** Sites with physical evidence of past human occupation or activity (prehistoric or historic)
- **Cultural landscapes.** Geographic areas associated with a historic event, activity, or person; or that exhibits other cultural or aesthetic values
- **Ethnographic resources.** Sites, structures, objects, landscapes, and natural resources or features of traditional importance to a contemporary cultural group through associates three generations or more.
- **Buildings and structures.** Residences, commercial buildings, outbuildings, ecclesiastical buildings, dams, bridges, roadways, windmills, silos, vessels ...
- **Objects.** Sculpture, monuments, boundary markers, fountains, signs ...
- 8 • **Historic Districts.** Resources are either contributing or noncontributing

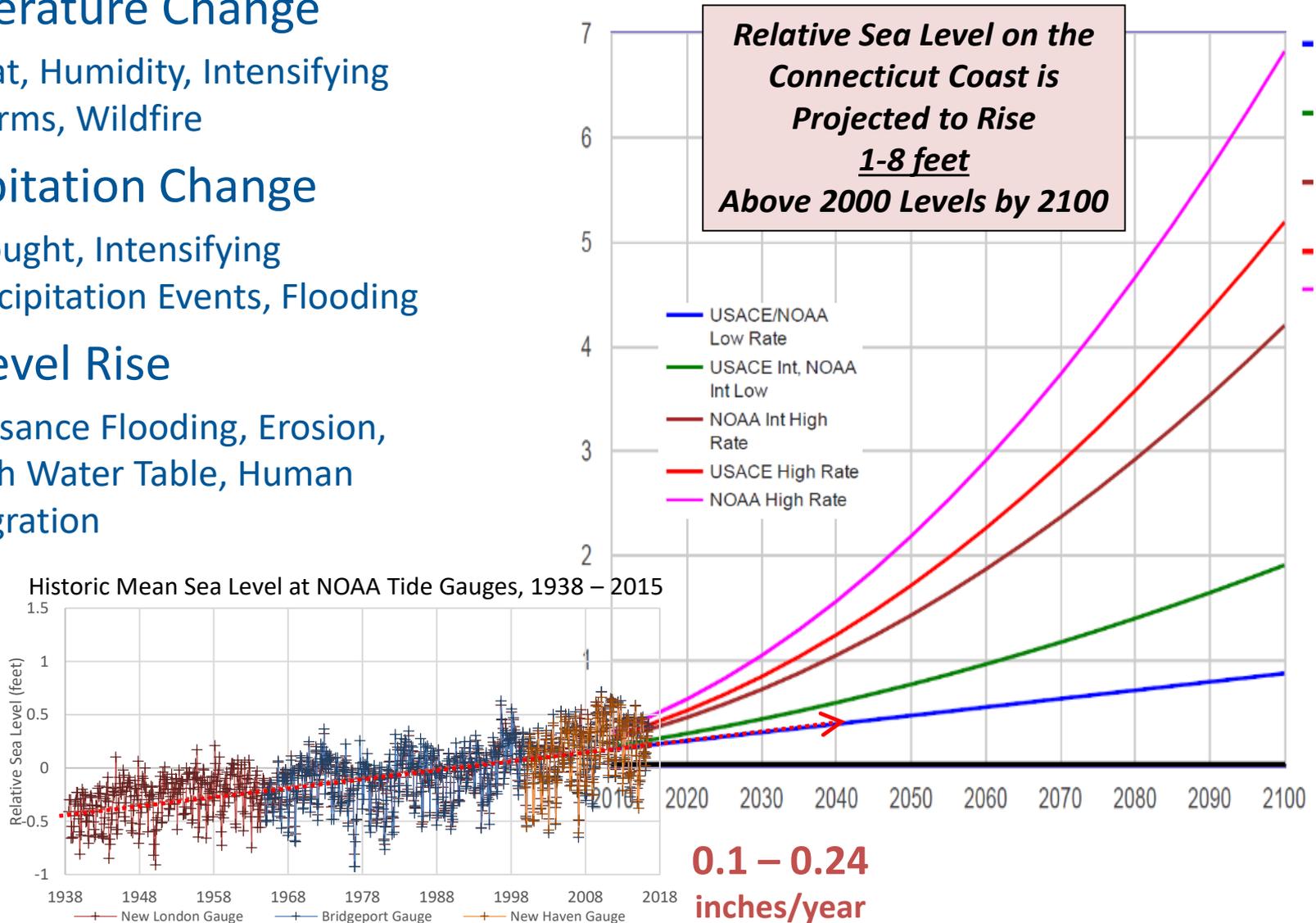
# Risks Considered

- **Inundation** from Storm Surge and Riverine Flooding
  - FEMA 1% Annual Chance Flood
- **Wind: Stress and Debris**
  - Approximately equal geographically
  - Some construction more vulnerable
  - Directly on water = higher risk
- **Winter Storms: Snow and Icing**
  - Approximately equal geographically
  - Some construction more vulnerable
  - Snow load on roofs is the greatest risk



# Future Risks

- Temperature Change
  - Heat, Humidity, Intensifying Storms, Wildfire
- Precipitation Change
  - Drought, Intensifying Precipitation Events, Flooding
- Sea Level Rise
  - Nuisance Flooding, Erosion, High Water Table, Human Migration







# Spatial Data



# Guidance for Municipalities

## 1

### Identify Historic Resources

Historic sites *must be officially listed on a register* to be recognized and eligible for protections, exemptions, and funding opportunities

- **Manage Identified Resources**
  - Utilize GIS data, keep up to date
- **Survey Unrecognized Resources**
  - Submit survey info to SHPO
  - Survey potentially eligible properties
  - “Download” knowledge from employees or volunteers
- **Prioritize Hazard Areas:**
  - Survey in hazard zones (such as FEMA flood zones)
  - **Consider Future Hazards:** Survey areas at risk from climate change effects
  - **Consider Other Hazards:** such as erosion hazard areas
- **Consider Future Historic Sites:**
  - Identify sites that will be eligible within the next 50 years
- **Consider Other Resources:**
  - Cemeteries, archaeological sites, historic landscapes
- **Educate:**
  - Local government, residents, landowners
  - Confusion over historic status of a resource can impact homeowners
  - Listing a property on a Register **does not restrict the rights of owners**

## 2

### Revisit Historic Preservation Regulations & Ordinances

- **Hazard Mitigation Retrofit Design Guidance**
  - Add to existing historic district regulations
  - Acknowledge need to repair, rehabilitate, & retrofit historic structures to protect from current and future hazards
  - Provide information about in-kind material selection and architecturally consistent retrofits
- **Delineate Future-Historic Overlay District**
  - Apply village overlay (or design districts, floating districts) to areas that do not currently contain a significant number of designated historic properties, but may in the future.
  - Design zoning language such that the zone can be changed as new areas become historic over time.
- **Consider Future Hazard Zones**
  - Areas not currently managed by hazard-mitigation regulations may be exposed to hazards in the future
- **Consider Other Cultural Resources**
  - Historic landscapes, cemeteries, agricultural areas
  - Pursue zoning regulations to protect such areas
- **Implement a Historic Preservation Ordinance**
  - Create more broadly applicable regulations that will help protect historic resources not covered by other overlays or requirements

# Guidance for Municipalities

## 3

### Coordinate Regionally and with the State

Help magnify the effectiveness of planning and response efforts

- **Collaborate**
  - on **local plan development**
  - on **hazard response**
- **Share**
  - reports and spatial data regionally
  - information & feedback with the State
- **Cooperate**
  - Develop **Mutual-aid** agreements
  - Complete cooperative **grant applications**
- **Participate**
  - in **Regional Preservation Initiatives**
  - Incorporate preservation into **regional emergency response drills**
  - Establish regional “**recovery drills**” that address historic preservation
  - Create a **regional task force** for historic resources
- **Communicate**
  - Determine **State-level contacts** for emergency events
  - Invite State personnel to emergency drills
  - Contact the **State Historic Preservation Office** about historic resource preservation & hazard protection
  - Identify **State-owned historic properties** within community

## 4

### Integrate Preservation & Resilience in Planning Documents

- **Collaborate between departments**
  - Building, P&Z, Public Works, Emergency Management, etc.
- **Cross-reference Documents**
  - Consistent concerns, goals, strategies, & actions
- **Streamline Planning Documents**
  - Incorporate suggestions into the POCD
  - Build actions into capital improvement plan
- **Hazard Mitigation Plans**
  - Address historic resources in the HMP
  - Note whether critical facilities have historic value.
- **Plan of Conservation and Development**
  - Note impacts of future hazards on historic resources
  - Note historic resources currently in hazard areas
  - Integrate preservation & mitigation in recommendations
- **Emergency Operations Plan**
  - Build historic preservation actions into EOP
  - Ensure preservation during response and immediate recovery
- **Assign Preservation Responsibilities**
  - Assign historic resource hazard resilience to specific person or department
- **Permit and Grant Applications**
  - Require applicants include historic resource information
  - Pursue hazard mitigation projects that also help preserve historic and cultural resources

# Guidance for Municipalities

## 5

### Revisit Floodplain Regulations & Ordinances

- **Substantial Improvement:**
  - (44 CFR 59.1): “alteration to an *historic structure* does not constitute a substantial improvement, provided that the alteration will not preclude the structure’s continued designation as an historic structure.”
- **Variances:**
  - (44 CFR 60.6(a)): “Variances may be granted for the repair or rehabilitation of *historic structures* upon a determination that the proposed repair or rehabilitation will not preclude the structure’s continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.”
- **Insurance:**
  - Determine pricing impacts prior to starting any work
  - Certain funding sources prioritize historic preservation
- **Municipal Protocol:**
  - Maintain list of historic structures within SFHA
  - If variance is requested, check structure against list
  - Require variance requests include proof of registration
  - Establish local Historic Resource Commission to advocate for and monitor historic resources

## 6

### Strengthen Recovery Planning

Avoid damage during cleanup and recovery

- **Emergency Operations Plan:**
  - Incorporate historic resource protection into EOP so those assets are considered during initial response
- **Disaster Recovery Plan (DRP):**
  - Develop a DRP that designates roles and responsibilities
  - Include historic resource protection
- **Recovery Ordinances:**
  - Ensure ordinances protect historic resources during recovery activities
  - Delay-demolition, regulated activities, protected areas
- **Recovery Drills**
  - Run Emergency Recovery Drill to determine weaknesses and threats in recovery capabilities with regards to historic and cultural resources
- **Debris Management Plan (DMP):**
  - Review & revise DMP to ensure storage of debris after a storm will not negatively impact historic or cultural sites

# Guidance for Municipalities

## 7

### Prioritize Adaptation Measures

- **Nonstructural** measures:
  - Preparedness
  - Emergency response
  - Retreat
  - Regulatory and Financial measures
- **Structural** measures:
  - Permanent and temporary flood barriers
  - Groins and jetties
  - Wet and dry floodproofing
- **Scale:**
  - **Site-specific**
  - **Neighborhood-scale**
  - **Community or Regional scale**
- **Considerations**
  - **Cost** of implementation and maintenance over time
  - **Impact** of hard structures on adjacent properties
  - **Type of risk** (inundation, wave action, tidal forces, etc)
  - Effect mitigation will have on historic character
  - Hazard mitigation as **part of the historic character**

## 8

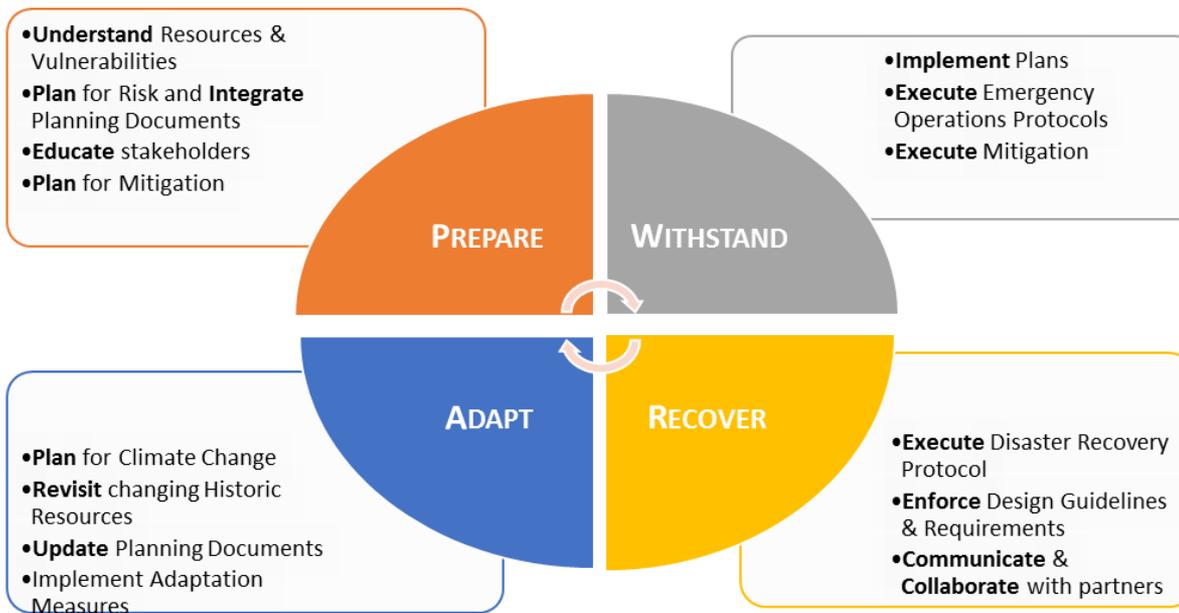
### Education

The local community and government must understand the risks and vulnerabilities, and must buy-in to the value of continued preservation.

- **Retrofitting Historic Resources:**
  - Clarify rules of applying flood mitigation measures without affecting historic designation
  - In public areas, provide:
    - FEMA's Technical Guide for Historic Properties
    - Secretary of Interior Standards
    - Information about Historic Preservation Tax Credits
- **Guidance for Permit Applicants:**
  - Guide homeowners through applications
  - Help account for coastal resilience & historic preservation
- **Incentives:**
  - Illustrate economic benefits of preservation
- **Diversity of Resources:**
  - Increase awareness and appreciation of cultural resources:
- **Historic Records of Storms:**
  - Historic and archaeological resources can educate people about historic storms, sea levels, & hazards

# Best Practices Guide

- A best practices guide will be provided for guidance to municipalities to *prepare, withstand, adapt, and recover* relative to historic resources



ADAPT: BEST PRACTICES	
<b>A.</b>	<b>Determine Future Risks</b>
•	Identify Future Hazard Geography <ul style="list-style-type: none"> <li>○ Sea Level Rise</li> <li>○ Changing Temperatures</li> <li>○ Increased Participation</li> </ul>
•	Overlay in Relation to Existing Resources
•	Identify Future Resources Eligible for Protection
<b>A.</b>	<b>Adaption in Planning Documents</b>
•	Plan of Conservation and Development – State, Regional, and Local
•	Hazard Mitigation Plans – State, Multi-Jurisdictional, and Local
•	Coastal Resiliency Plans – Regional and Local
<b>A.</b>	<b>Communication and Collaboration</b>
•	Between Municipal Departments <ul style="list-style-type: none"> <li>○ Floodplain Manager</li> <li>○ Planning &amp; Zoning/Building Dept.</li> <li>○ Emergency Manager</li> <li>○ Emergency Response Personnel</li> <li>○ Department of Public Works</li> <li>○ Historic Commission, Historian, etc.</li> <li>○ Conservation Commission</li> </ul>
•	Between Communities (Mutual Aid)
•	Between Different Levels of Government
<b>A.</b>	<b>Education</b>
•	Municipal Staff
•	Property Owners
•	Historic District Commissions

# State Historic Preservation Plan Chapter

- A resiliency report will be prepared to summarize findings and describe the eight strategies
- National Park Service guidance is incorporated into the report
- A condensed version of the report will be used as a chapter in the update to the State Historic Preservation Plan

## INTERNAL DRAFT

### Connecticut's Historic Resources: Hazards, Risks and Resiliency Planning



*A Preliminary Evaluation of Vulnerability and Recommendations  
for State and Local Plans*

*April 28, 2017*

*Prepared for the State Historic Preservation Office  
Department of Economic and Community Development*



# Preservation = Resiliency Planning

- Heritage resources in flood risk zones are non-renewable and endangered.
- Historic properties convey our history and anchor our Identity.
- Inventories of all classes of historic properties are incomplete even as more properties become eligible.
- New tools are being developed by SHPO to assist in inventory, evaluation and designation.
- Resilience planning for historic properties is critical at the community, municipal, state and federal levels.

# Connecticut – *Still Revolutionary*

- As a result of the DRAG Program, all 28 coastal communities in Connecticut and the five COGs have been provided guidance on integrating historic properties into all aspects of the planning cycle.
- A Best Practices Handbook will be disseminated to all Connecticut municipalities.
- SHPO is incorporating resilience planning into the updated State Historic Preservation Plan.