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Emphasizing Historic Preservation in Hazard Mitigation and Resilience Alternatives

Heightening Awareness of the Importance of Historic and Cultural Assets in Flood Risk Reduction



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Overview

- Understanding and Defining Historic and Cultural Assets
- Key Guidance Documents
- Integrating Historic Preservation with Hazard Mitigation Planning
- Flood Mitigation Examples
- Conclusions and Opportunities

Understanding and Defining Historic and Cultural Assets

A Precursor to Identifying Potential Mitigation Projects

The Importance of Understanding the Asset

- What is the true **significance** of the asset?
 - Heritage and historic/cultural importance
 - Community identity and vision
 - Destination for tourism or visitation
 - Social or spiritual importance
- What is the age and designation of the asset?
- What is its actual and perceived value?
- Who owns or is responsible for the asset?
- What happens if the community does nothing to protect the asset from flooding?



How are historic properties defined?

36 CFR Part 800.16 [I][1][2]

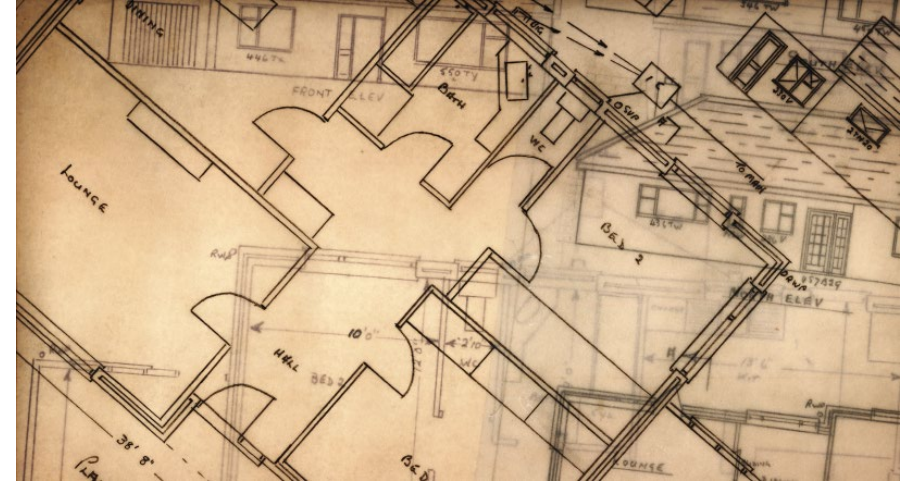
- *Historic property* means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.
- The term *eligible for inclusion in the National Register* includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the National Register criteria.



Brinegar Cabin, Doughton Park

Characteristics of Historic Buildings

- Vernacular **Construction**
 - Absence of an architect or engineer
 - Concept of “over design” (built prior to introduction of minimum standards)
 - Status of structural integrity
- Vintage **Materials**
 - Wood paneling, floors, siding, trim
 - Original glazing
 - Unique roofing
 - Brick work
 - Fences and railing



Type(s) of Flood Damage Occurring

- Structural damage
- Non-structural damage
- Contamination of building materials
- Fungal growth (mold)
- Impacts to architectural features and historic design elements
 - Versus modern improvements such as utilities, ingress and egress, etc.
- Contamination of artifacts or cultural assets
 - Documentation, artwork, antiques, etc.

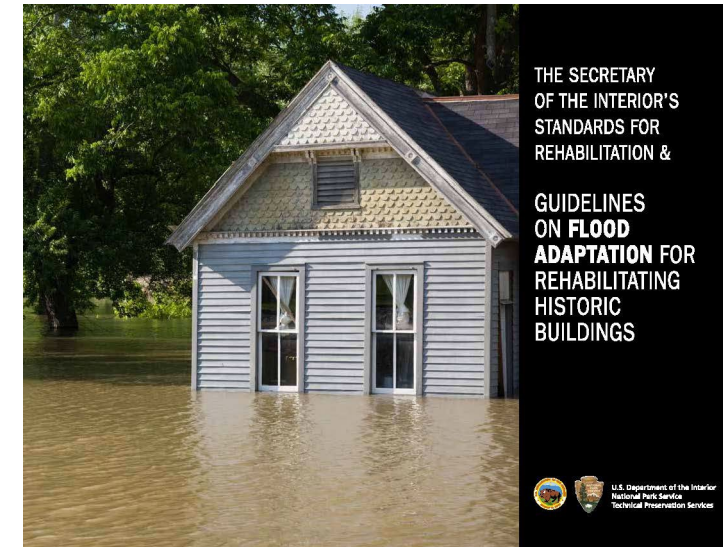


Key Guidance Documents

NPS and FEMA Resources

National Park Service Pubs

- National Park Service (NPS) Technical Preservation Services (<https://www.nps.gov/orgs/1739/tps-publications.htm>)
 - *The Secretary of the Interior's Standards for Rehabilitation & Guidelines on Flood Adaptation for Rehabilitating Historic Buildings* (2021)
 - *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (2017)
 - *The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines on Sustainability for Rehabilitating Historic Buildings* (2011)
 - *The Secretary of the Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings* (1997)



Federal Emergency Management Agency Pubs

- Federal Emergency Management Agency (FEMA)
 - *Integrating Historic Property and Cultural Resource Considerations Into Hazard Mitigation Planning* (FEMA 386-6)
 - https://www.fema.gov/pdf/fima/386-6_Book.pdf



Integrating Historic Property and Cultural Resource Considerations Into Hazard Mitigation Planning

State and Local Mitigation Planning How-To Guide

FEMA 386-6 / May 2005



Integrating Historic Preservation with Hazard Mitigation Planning

Where does all this fit in?

Evolution of 5-year Hazard Mitigation Plan Updates

- First generation risk and vulnerability assessments started with basics and built-up as data and technology improved and community interests and priorities expanded
- Started with residential, commercial, industrial and other physical building types
 - + Critical facilities and infrastructure
 - + Agriculture and education
 - + Social and economic impacts (direct and indirect)
 - + The environment and recreational areas
 - + **Historic preservation**, cultural assets and community values

Evolution of 5-year Hazard Mitigation Plan Updates

- Increased focus on whole-community **resiliency** thinking as an extension of other past programs and initiatives
 - What is **essential** to a community's preparedness?
 - What is of **true value** to a community's core identity and its residents?
 - How do we address resilience to **all threats**, including sudden shocks and chronic stressors, whether natural or human-caused?

Examples of Typical Alternatives

“Conventional Treatments” (NPS)

Planning and assessment

Temporary protective measures

Utility protection

Site and landscape adaptations

Dry/wet floodproofing

Filling of the basement

Elevate on a new foundation

Elevate the interior structure

Abandon the first story

Relocation

“Mitigation Techniques” (FEMA)

Hazard mitigation planning

Utility protection

Structural diversions

Floodproofing

Anchoring and/or relocating contents

Elevation

Retrofits (also fire, wind, seismic, other)

Relocation

Key Considerations for All Alternatives

- Location and site conditions
- Historic significance
- Flood risk / type(s) of flooding
- Physical attributes
- Features, materials, architectural style



Flood Mitigation Examples

Myths and Misconceptions About Mitigating Historic Properties

City of New Bern Resiliency and Hazard Mitigation Plan

- **Identify** and engage a core planning team
- **Assess** community support through historic values surveys, GIS, hazard mitigation planning, etc.
- **Engage** the public through proper audience identification and engagement
- **Evaluate** protection of physical property, social impacts, economic impacts, tourism, other



Belhaven Residential Elevations

- Post-Hurricane Fran elevation project (1996)
- Maintain look-and-feel of original state of homes
- Careful coordination
 - State Historic Preservation Officer (SHPO)
 - State Hazard Mitigation Officer (SHMO)
 - Property Owner
 - Stakeholders



Frame building elevated on concrete block foundation faced with brick veneer in Belhaven, NC. Over 375 properties in the community were elevated in place after Hurricane Fran in 1996. A projecting brick course was used to mark where the original house ended and the new foundation began. Archival quality photos were taken before the work began.

Tilman O'Neal House, Ocracoke



Conclusions and Opportunities

What can you do to be an historic preservation champion?

Conclusions and Opportunities

- Add historic preservation to your mindset in your daily routine
 - Floodplain management
 - Emergency management
 - Hazard mitigation planning
 - Transportation planning
 - Community resilience
 - Disaster recovery (short-term and long-term)
- Consider appropriate guidance in local decision-making
- Actively look for opportunities to highlight historic preservation in local planning processes and discussions
- You don't have to be an expert... you can be a **champion, educator or supporter!**



Thank you. Questions?

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