



RESILIENT HERITAGE IN THE NATION'S OLDEST CITY:

A survey of the immediate and long
term impacts of flooding in historic
St. Augustine



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Jenny Wolfe, Historic Preservation Officer
1000 Friends of Florida Webinar February 20, 2019

DISCUSSION OVERVIEW:

- Define *Cultural Resources* and identify partners
- Survey the impacts of flooding and mitigation
- Identify vulnerabilities
- Local Planning and Regulatory Resources
 - ✓ Code of Ordinances: Building, Zoning, Preservation
 - ✓ Comprehensive Plan: new 'Peril of Flood' component, HP Element
 - ✓ County's Local Mitigation Strategy
 - ✓ Historic Preservation Master Plan: identify resources and risk, disaster recovery, protection and mitigation

MITIGATION DESIGN FOR HISTORIC BUILDINGS:

Building Elevations























MITIGATION DESIGN FOR HISTORIC BUILDINGS: Building and/or Site Alterations



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MITIGATION FOR HISTORIC INTERIORS:



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MITIGATION FOR HISTORIC INTERIORS:



MITIGATION FOR HISTORIC INTERIORS:

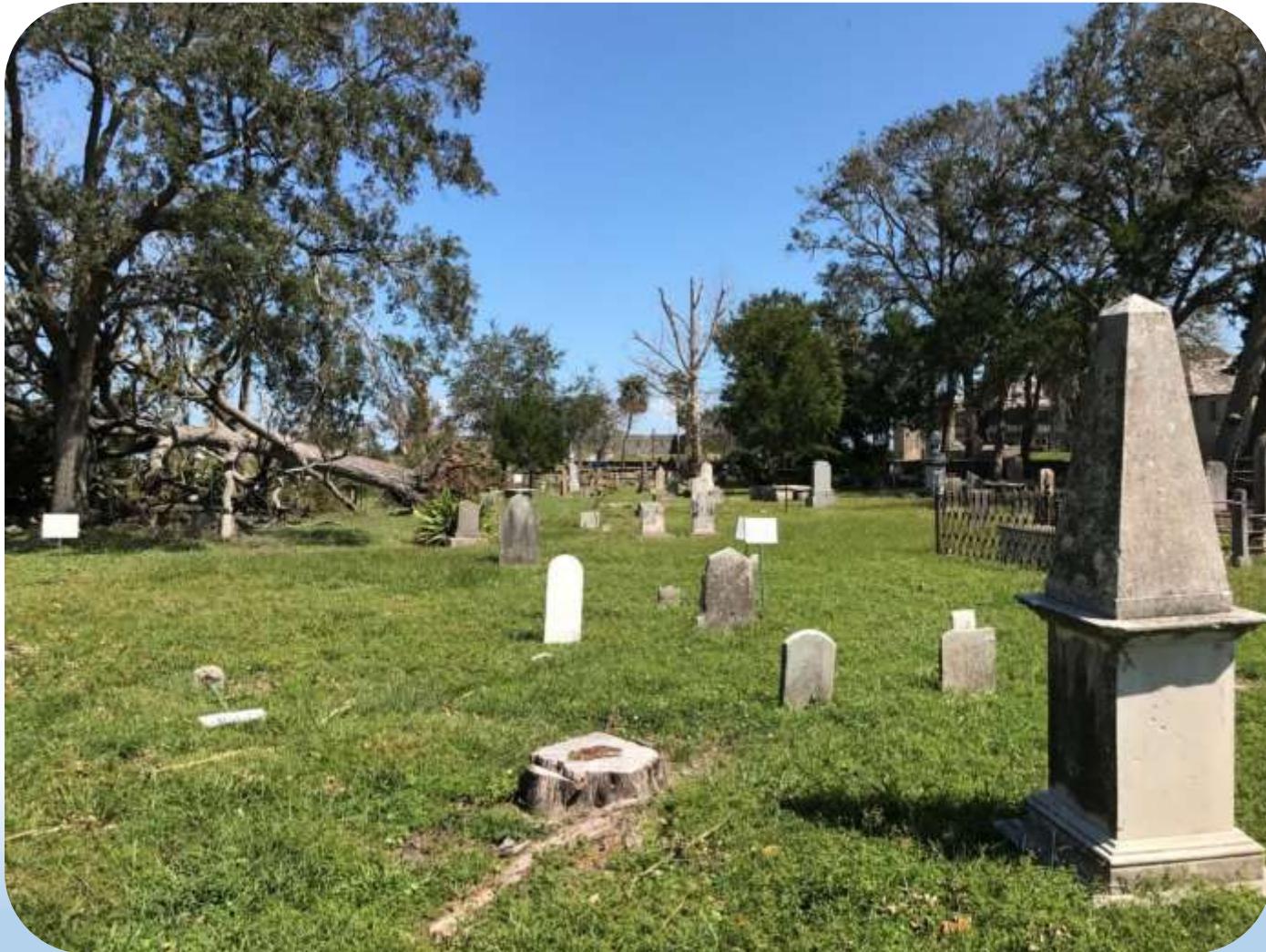


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MITIGATION DESIGN FOR HISTORIC BUILDINGS:

Demolition

Cemeteries...



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Impacts of Trees...

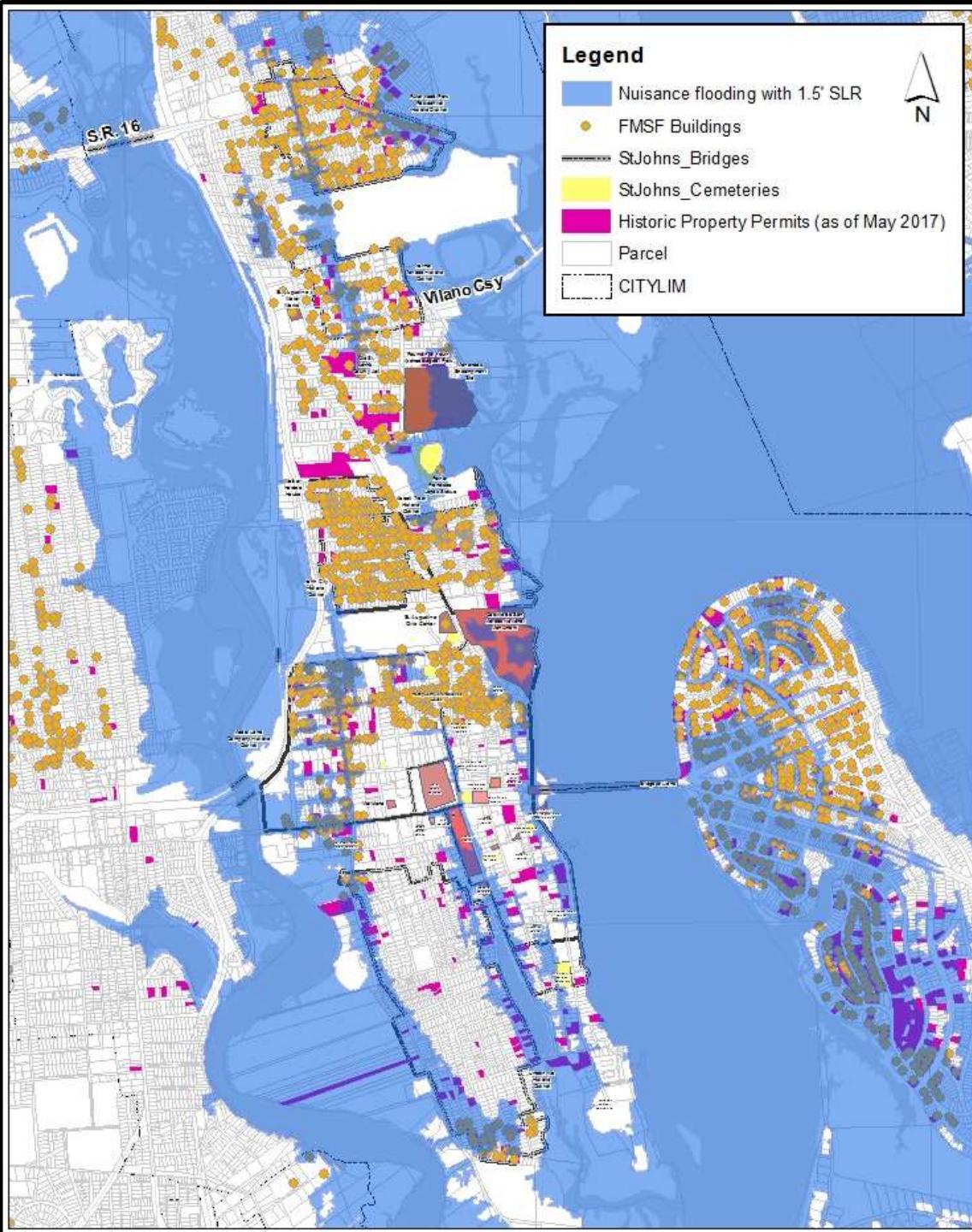


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Historic wall features...



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Vulnerability of Historic Resources and Projected Flooding:

- Archaeological sites captured in zones across city
- 3,581 recorded structures on the state inventory
- 7 National Register Historic Districts
- 27 Individual NR and NHL resources

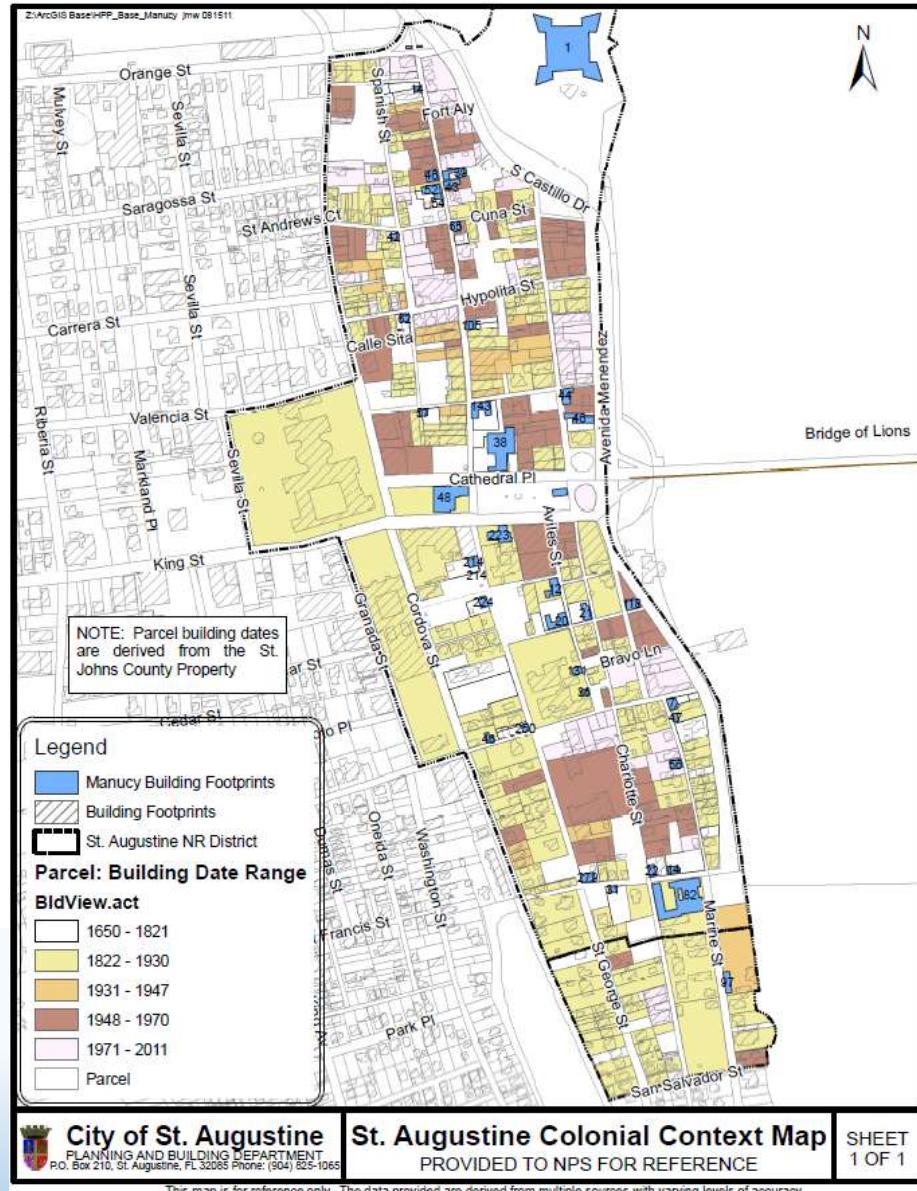
Scenario projected to occur between 2040 to 2100



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37 Spanish (1 British) Colonial historic buildings and structures



LOCAL PLANNING AND REGULATORY RESOURCES:

- Local Planning and Regulatory Documents:
 - ✓ Building Code and Flood Plain Management
 - ✓ Zoning Code and Preservation Ordinances
 - ✓ Comprehensive Plan: Peril of Flood Act, Historic Preservation Element
- County's Local Mitigation Strategy
- Historic Preservation Master Plan Hazard Mitigation Chapter

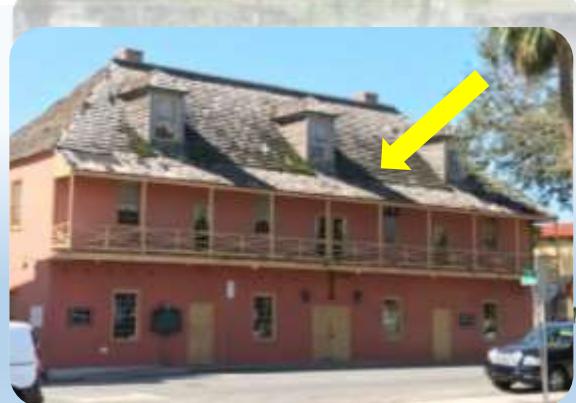
LOCAL REGULATIONS: BUILDING, ZONING, PRESERVATION CODES



After



Before



- Base flood elevations affects building design
- Variances for rehabilitations at existing BFE
- Maximum building heights set by zoning code
- In-kind replacement materials for historic properties vs. insurance allowance
- Economic incentives for preservation: tax credits, property tax exemptions, tourism

COMPREHENSIVE PLAN:

- Currently undergoing Evaluation and Appraisal Report for updates
- Peril of Flood Act: Draft language reviewed would add language related to sea level rise and flooding adaptation in the Conservation and Coastal Management Element at a minimum and recommends draft language in the Future Land Use, Transportation, Housing, Infrastructure, Intergovernmental Coordination, and Historic Preservation Elements
- Historic Preservation Element: currently undergoing Evaluation and Appraisal Report process for future updated Comprehensive Plan

Dewberry

MEMORANDUM

Addressing Sea Level Rise Flood Exposure within the Comprehensive Plan

For the part of Road and the City needs to relate these identified SLR vulnerabilities to goals, outcomes, and policies within the Comprehensive Plan. The status requires that this at least be addressed within a community Coastal Management Element, but these requirements could be balanced when coupled with modified language from other corresponding elements of the plan. Suggested changes to the Conservation and Coastal Management Element are identified below as well as other corresponding elements which are covered later in this document. Proposed, additional language is identified by ~~underlined text~~ text in the sections below. As CCM objectives 1-2 relate explicitly to conservation, these are not included. Only those goals or objectives with changes are shown in the following sections.

Conservation and Coastal Management Element

Coastal Management Goal

To prevent loss of life and damage to property in the coastal areas from the effects of natural disasters, ~~reduce the risk of flooding and erosion on areas~~, while encouraging appropriate public access to and use of coastal areas.

CCM Objective 19

In the event that public or private property in the City is damaged by a natural disaster, the post-disaster redevelopment will reduce or eliminate the risk of human life and property damage by natural hazards ~~reduce the risk of flooding and erosion on areas~~. The measurable target for this objective is that, in the event property is damaged or destroyed by a natural disaster, post-disaster redevelopment will be in accordance with (1) the densities and intensities of land use established by the Future Land Use Plan; (2) the criteria for developing in the Conservation Overlay Zones implemented by the City Code; and (3) requirements of the Building Code.

CCM Objective 13

The City will reduce current flood risks consistent with FEMA regulations, ~~reduce the risk of flooding and erosion on areas~~, and the NFIP Community Rating System (CRS), and its resulting insurance ~~reduce the risk of flooding and erosion on areas~~.

CCM Policy 13.1: The City will continue to participate in the Federal Community Rating System (CRS) Flood Insurance Program and its resulting insurance ~~reduce the risk of flooding and erosion on areas~~.

CCM Policy 13.2: Development and redevelopment in the City will be consistent with ~~reduce the risk of flooding and erosion on areas~~ the principles of the Coastal Building Guidelines, ~~reduce the risk of flooding and erosion on areas~~ and the resulting insurance ~~reduce the risk of flooding and erosion on areas~~.

CCM Objective 14

The City will implement the recommended planning processes and programs necessary to ~~reduce the risk of flooding and erosion on areas~~ reduce flood risk through floodplain management, ~~reduce the risk of flooding and erosion on areas~~ and other programs related to climate change as recommended by the State of Florida, and the City's environmental, economic, and social needs.

CCM Policy 14.1: The City will implement the recommended planning processes and programs necessary to ~~reduce the risk of flooding and erosion on areas~~ reduce flood risk through floodplain management, ~~reduce the risk of flooding and erosion on areas~~ and other programs related to climate change as recommended by the State of Florida, and the City's environmental, economic, and social needs.

MEMORANDUM

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Part of Road Memorandum 1-8 of 10

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Additional Flood Exposures Already Addressed within the Comprehensive Plan

The City already addresses other aspects of flood exposure within the existing Comprehensive plan as follows:

- **Storm Surge:**
 - Coastal Management Element, Objectives 9, 10, and 11;
 - The Coastal High Hazard Area is graphically depicted on the Future Land Use-5 map;
 - Capital Improvement Element, Objective 2

Part of Road Memorandum 1-8 of 10

County's Local Mitigation Strategy

St. Johns County Local Mitigation Strategy
(<https://www.sjcemergencymanagement.com/lms.html>)

Recognizes value of significant cultural resources

LMS include project lists so when hazard mitigation funding becomes available there is a prioritized list of projects that can be recommended forward

Federally funded projects must consider impacts to cultural resources



2013 Sea Wall Project: While this was not initiated through the LMS the process for review would be similar. Projects that receive federal hazard mitigation funds will require a Cultural Resource Review in accordance with the National Historic Preservation Act. Additionally, the local preservation board reviewed the project in accordance with the local preservation ordinance.

Mitigation for the historic seawall included archaeological investigation, documentation, and selective design for the new wall. The local review board considered impacts to the streetscape as well as the design elements.

HISTORIC PRESERVATION MASTER PLAN: Hazard Mitigation Chapter



Adopted October 2018

Partially implemented. Major projects and any code revisions will require additional public input

http://www.citystaug.com/government/planning_and_building/HistoricPreservationMasterPlan.php



HP MASTER PLAN: Identify Resources and Risk



AP Photo by John Bazemore



2019 Grant: Resilient Heritage In The Nation's Oldest City



- Document historic and cultural resources at risk recognizing broader resources such as streetscapes



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HP MASTER PLAN: Disaster Recovery

- Have a disaster response plan in place and know requirements and expectations
- Identify preservation partners to assist in post-flood review process
- Create an expedited review process for disaster response and allow more staff approvals which meet local design standards
- Establish a debris management plan to promote preservation and reuse of historic material



Photo courtesy UF Historic Preservation



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RESPONDING TO DISASTER: Document Historic Buildings



- Contacted each property owner of most individually listed (NR/NHL) historic buildings and conducted site visits
- NCPTT rapid assessment form and mobile program considered along with other methods. See also 'HMS Florida' mobile monitoring tool by FPAN
- Detailed form used for 10 original Davis Shores buildings (ca. 1926 vs. 1940s-60s)

Rapid Building and Site Condition Assessment

Inspection Inspector _____ Affiliation _____	Inspection date/time _____ <input type="checkbox"/> AM <input type="checkbox"/> PM	Page 1 of _____ Attachments <input type="checkbox"/> Sketches <input type="checkbox"/> Documents <input type="checkbox"/> Photographs <input type="checkbox"/> Other	
Property Description Building name _____ Address _____ Historic district name _____ Number of stories above ground _____ below ground _____ Approx footprint area (square feet) _____ Number of residential units _____			
Characteristics Building age <input type="checkbox"/> 0-25 yr <input type="checkbox"/> 25 - 50 yr <input type="checkbox"/> 50-100 yr <input type="checkbox"/> 100+ yr <input type="checkbox"/> Unverified <input type="checkbox"/> Reported <input type="checkbox"/> Estimated Foundation <input type="checkbox"/> Pier <input type="checkbox"/> Slab <input type="checkbox"/> Chain Wall <input type="checkbox"/> Basement <input type="checkbox"/> Other _____ Roof type <input type="checkbox"/> Flipped <input type="checkbox"/> Gable <input type="checkbox"/> Mansard <input type="checkbox"/> Pyramid <input type="checkbox"/> Flat <input type="checkbox"/> Other _____ Roof covering <input type="checkbox"/> Slate <input type="checkbox"/> Metal <input type="checkbox"/> Tile <input type="checkbox"/> Asphalt <input type="checkbox"/> Asbestos <input type="checkbox"/> Other _____ Wall finish <input type="checkbox"/> Stucco <input type="checkbox"/> Vinyl <input type="checkbox"/> Vinyl <input type="checkbox"/> Masonry <input type="checkbox"/> Asbestos <input type="checkbox"/> Other _____ Landscape features <input type="checkbox"/> Walkway <input type="checkbox"/> Chemistry <input type="checkbox"/> Fence <input type="checkbox"/> Soil _____ Archaeological site <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> On SHPO List <input type="checkbox"/> Unknown _____ Visible artifacts <input type="checkbox"/> Bone <input type="checkbox"/> Pottery <input type="checkbox"/> Metal <input type="checkbox"/> Stone _____ Interior condition <input type="checkbox"/> Structural Damage <input type="checkbox"/> Mold/Mildew <input type="checkbox"/> Fire _____ Interior contents <input type="checkbox"/> Antiques <input type="checkbox"/> Archives <input type="checkbox"/> Art Work <input type="checkbox"/> Other _____ Appears historic? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know <input type="checkbox"/> Is there a sign _____ Historic designation <input type="checkbox"/> Natl Hist Landmark <input type="checkbox"/> Natl Reg/Chassis _____			
Flood Data Nature of water <input type="checkbox"/> Standing <input type="checkbox"/> Running _____ Space where water entered <input type="checkbox"/> Basement/Crawl _____ Depth of water measured from main floor (+/-) _____ Sediment deposited <input type="checkbox"/> On Site <input type="checkbox"/> In Building _____			
Evaluation Investigate the building for the conditions and check the appropriate items: - Collapsed or off foundation - Leaning, other structural damage - Damage to windows, doors - Chimney, pier, or other falling hazard - Roof damage - Foundation damage - Siding damage - Damage to electrical, mechanical, AC systems - Landscape damage Potential Hazards <input type="checkbox"/> Electrical <input type="checkbox"/> Lead <input type="checkbox"/> Asbestos <input type="checkbox"/> Metal <input type="checkbox"/> Other _____			
Further Actions - Recommendations <input type="checkbox"/> Add Temporary _____ Detailed evaluation recommended <input type="checkbox"/> Structural <input type="checkbox"/> Environmental _____ Other recommendations _____ Barriers resulted in the following areas: <table border="1"><tr><td>Posting <input type="checkbox"/> Inspected <input type="checkbox"/> Restricted Use <input type="checkbox"/> Unsafe</td></tr></table>			Posting <input type="checkbox"/> Inspected <input type="checkbox"/> Restricted Use <input type="checkbox"/> Unsafe
Posting <input type="checkbox"/> Inspected <input type="checkbox"/> Restricted Use <input type="checkbox"/> Unsafe			

A screen shot of the ODK rapid documentation form.



RESPONDING TO DISASTER: Florida Trust and FPAN assess impacts of Hurricane Michael



Florida Trust for Historic Preservation
P. O. Box 11206 Tallahassee, Florida 32302
(850) 244-8128

DISASTER REPORT FORM

Property Name: First Presbyterian Church

Property Address: Wewahitchka

Reviewer: Carter Quina, AIA Date of Review: 11-5-18

General Observations	Flood Damage	Wind Damage	Impact Damage	Comments
Foundation	X			BUILDING SHIFTED
Walls	X			WALLS ARE LEANING
Porches	X			TOWER IS SEPARATING
Windows and Doors	X			PARTIAL DAMAGE
Soffits and Trim	X			PARTIAL DAMAGE
Gutters and Flashing	X			PARTIAL DAMAGE
Roofing	X			PARTIAL DAMAGE
Chimney				
Landscaping				

If the interior was available for inspection, then complete the following items:

General Observations	Water Damage	Wind Damage	Impact Damage	Comments
Walls and Doors				
Floors and Ceilings				
Electrical Systems				
Mechanical Systems				

Observations and problems which need to be addressed: The old wood carpenter Gothic is leaning heavily to the north. The structure is still resting on the brick foundation but shifted. The bell tower has a crack where the nave pulled away from it. It appears that if strapped and lifted, it could be reset onto a stabilized foundation. We need to try to contact Owner and offer technical assistance before this church is demolished. I am sure the insurance company would suggest demolition. This is a beautiful little church building and due to its small size is fully restorable in my opinion.

9/18

Signature:

Date 11-5-18

FLORIDA USGS Disaster Documentation Form



First Presbyterian Church (Wewahitchka), courtesy C. Quina



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HP MASTER PLAN: Protection and Mitigation

- Provide protection for City-owned Historic and Cultural Resources including submerged resources and the archaeology lab
- Engage in hazard mitigation planning with county and other local agencies
- Develop information for property owners
- Prepare design guidelines for flood mitigation:
 - Balance flood mitigation and historic neighborhood character by defining acceptable building elevation heights/set a design flood elevation
 - Identify appropriate materials and design considerations for new ground floor spaces and access from front door; see new first floor garages and stairways
 - Identify acceptable water-resistant materials for flood-prone areas

The Historic Preservation Master Plan is a planning tool and none of its provisions will be binding upon properties located within the City of St. Augustine without first being adopted as part of the City's Comprehensive Plan and Code of Ordinances following required public hearings. However, the City is actively pursuing comprehensive plan amendments and code changes related to the Plan, and may invoke the pending ordinance doctrine. Furthermore, both federal and state law provide certain legal protections from government regulations, including new regulations affecting someone's pre-existing private property rights. These legal protections could include vested rights, also known as grandfathering. They could also include compensation if the new regulation impacts a property owner's reasonable, investment backed expectation under our existing regulations. When considering various strategies in this planning document, the City must evaluate the potential benefits of any new or amended regulation against the risks involved in future private property rights' litigation.





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Planning and Building Department

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