



# A HANDBOOK FOR HISTORIC RESILIENCE COMMUNITY PLANNING

*Protecting North Carolina's History, Culture,  
and Economy from Natural Hazards*



NC DEPARTMENT OF  
NATURAL AND CULTURAL RESOURCES







# A HANDBOOK FOR HISTORIC RESILIENCE COMMUNITY PLANNING

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and Economy from Natural Hazards*

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by Benjamin G. Hitchings, FAICP, CZO,  
with Philip R. Berke, Ph.D.

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THE UNIVERSITY  
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NC DEPARTMENT OF  
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# INTRODUCTION

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In August 2021, Tropical Storm Fred hit the Florida Panhandle and then churned north, dumping torrential rains on western North Carolina. As much as twenty inches fell in some places. Transylvania County resident Susan Arnold told reporters that water gushed into her front yard “like a rushing river.”<sup>1</sup> Cruso resident John Nelson said that in “five minutes [the river] was out of the bank” and literally picked his house up off its foundation.<sup>2</sup> Canton Middle School Principal Casey Kruk said, “It looks like you’ve taken a snow globe and shaken it up and turned everything upside down.”<sup>3</sup> Numerous bridges were washed out, and downtown Canton was submerged under several feet of water.<sup>4</sup> The historic Colonial Theatre was swamped along with other structures in Canton’s Main Street Historic District. Significant parts of the town’s history were at risk of being destroyed.

As the frequency and intensity of storms increase, stories like these are becoming more common. From 2016 to 2021, North Carolina experienced thirty-four weather-related disasters that cost a total of \$20–50 billion.<sup>5</sup> These events



*Flooding in Canton, N.C., caused by the remnants of Tropical Storm Fred, August 2021. Courtesy of A Shot Above of WNC, LLC.*

threaten not only lives and property but can also damage or destroy the buildings and sites that help tell a community’s story. These historic resources contribute to vibrant local cultures, healthy local economies, and the sense of connection that community members have with each other (and the place where they live).

In 2022, the N.C. Historic Preservation Office engaged the UNC School of Government to develop guidance materials and training

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1. Dianne Gallagher, “2 Dead and 20 Unaccounted for in North Carolina Flooding after the Remnants of Tropical Storm Fred Slam Area,” CNN, August 19, 2021.  
2. WSOCTV News Staff, “Sixth, Final Person Found Dead after N.C. Flooding from Fred, Officials Say,” WSOCTV, August 30, 2021.  
3. Gallagher, “2 Dead and 20 Unaccounted for in North Carolina Flooding.”  
4. Cory Vaillancourt, “Canton Selects Architects for Municipal Buildings,” *Smoky Mountain News*, February 1, 2023.  
5. National Oceanic and Atmospheric Administrator (NOAA), National Centers for Environmental Information (NCEI), Billion-Dollar Weather and Climate Disasters (2022), [ncei.noaa.gov/access/billions/mapping](https://ncei.noaa.gov/access/billions/mapping).

workshops to help local governments in North Carolina better protect their historic sites from natural hazards. A key component of this work was to develop a straightforward process that communities can use to prepare their own historic resilience plans. The methodology is designed to be used by local planners, emergency managers, consultants, and others to identify the historic resources that are most vulnerable to natural hazards and to implement strategies to better protect them. We have been mindful to create a process that is both effective and achievable by local staff who have many responsibilities and limited resources.

In preparing this methodology, we drew from various sources, most notably the Federal Emergency Management Agency's *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning*<sup>6</sup> and Texas A&M University's *Plan Integration for Resilience Scorecard Guidebook: Spatially Evaluating Networks of Plans to Reduce Hazard Vulnerability, Version 2.0*.<sup>7</sup>

This handbook walks you through a seven-step process for developing a historic resilience plan for your community. A visual summary of the process appears in Figure 1, below. In the following pages, we focus on each step, describing its *purpose*, the *essential tasks* you'll undertake (as well as some optional ones), the *products* you'll prepare (i.e., tables, charts, maps), *key considerations* to keep in mind as you do this work, and useful *resources*. As Canton's mayor, Zeb Smathers, said about the staff and architects the Town enlisted to begin repairing the damage from the storm of August 2021,



The Colonial Theatre in downtown Canton, N.C., in the aftermath of Tropical Storm Fred, 2021. Courtesy of GoFundMe Fundraiser by Taylor Thompson.



The Town of Canton has worked to rebuild in a safer way in the aftermath of Tropical Storm Fred. Photo by Ben Hitchings.

6. Federal Emergency Management Agency (FEMA), *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning* (FEMA 386-6/May 2005), [fema.gov/pdf/fima/386-6\\_Book.pdf](https://www.fema.gov/pdf/fima/386-6_Book.pdf).

7. Matthew Malecha, Jaimie Hicks Masterson, Siyu Yu, and Philip Berke, *Plan Integration for Resilience Scorecard Guidebook: Spatially Evaluating Networks of Plans to Reduce Hazard Vulnerability, Version 2.0* (Institute for Sustainable Communities, College of Architecture, Texas A&M University, 2019), [https://planintegration.com/wp-content/uploads/2023/03/PIRS-Guidebook-v2.0\\_2021.09.pdf](https://planintegration.com/wp-content/uploads/2023/03/PIRS-Guidebook-v2.0_2021.09.pdf).



“It’s not just rehabbing old buildings. They’re repairing our soul. They’re not just getting it back to where it was, but making it better and protecting it.”<sup>8</sup> We hope the Seven-Step

Planning Process helps your community preserve its historic resources (and the stories they tell) so that they will continue to be enjoyed by current and future generations.

**Figure 1. The Seven-Step Planning Process**



### Step 1

Identify flood-hazard areas in the community.



### Step 2

Identify historic resources located in flood-hazard areas.



### Step 3

Review the policy and regulatory context for historic resilience.



### Step 4

Engage the community about the vulnerability and value of historic resources.



### Step 5

Assess the community value of vulnerable historic resources, and prioritize them for protection.



### Step 6

Prepare an action plan for protecting vulnerable historic resources.



### Step 7

Implement the historic resilience community plan.

8. Vaillancourt, “Canton Selects Architects for Municipal Buildings.”





# STEP 1. IDENTIFY FLOOD-HAZARD AREAS IN THE COMMUNITY

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## PURPOSE

The first step is to identify which parts of the community are vulnerable to flooding. This will enable the planning project team to perform Step 2, which is identifying the historic resources that are at the greatest risk of flood damage and destruction.

## PRODUCT

The primary product of this step is a map of the flood-prone areas in the community.

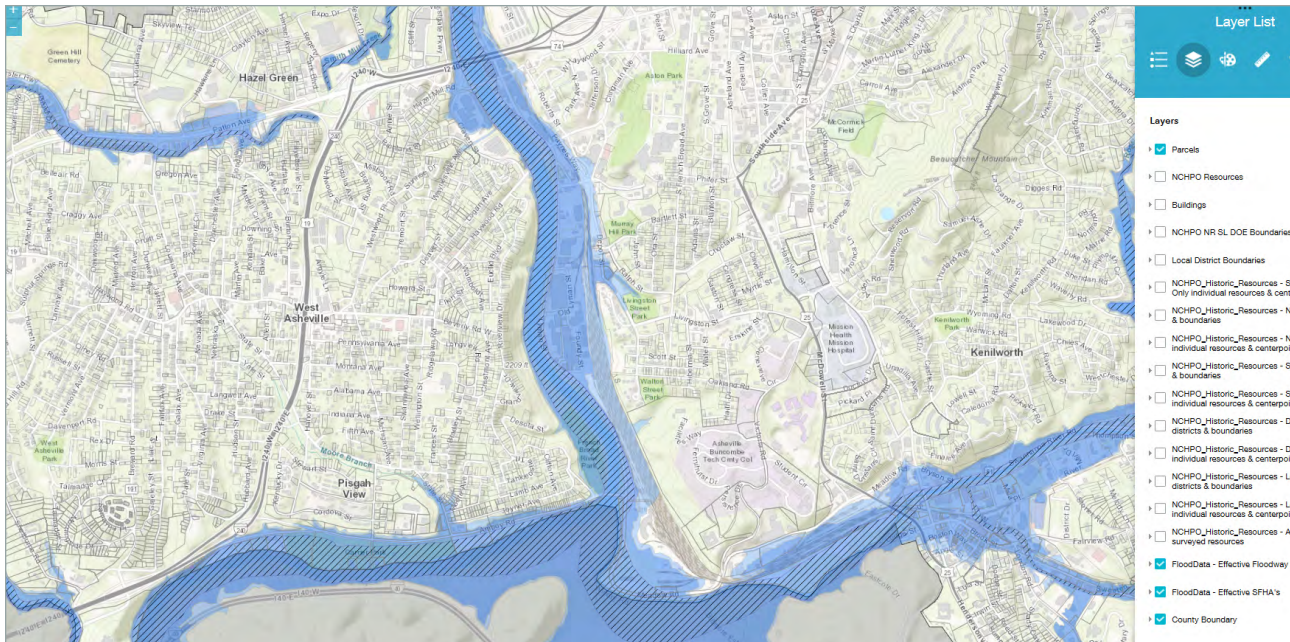
## ESSENTIAL TASKS

Flooding is by far the most impactful natural hazard in North Carolina, whether in riverine or coastal areas. The state provides floodplain data that identify the locations of coastal flooding-hazard areas, riverine floodways, high-risk flood zones (commonly referred to as “100-year floodplains”), and moderate-risk flood zones (commonly referred to as “500-year floodplains”). You can use this information to create a simple hazard analysis for your community, giving riskier locations higher points. The following tasks will help you do this.

**A. Acquire floodplain data.** The easiest way to acquire the latest floodplain-mapping data for your jurisdiction is to use the North Carolina Flood Risk Information System (FRIS) website, which allows you to access and download database-driven information:

- i. visit FRIS at [fris.nc.gov](https://fris.nc.gov),
- ii. find your community, and
- iii. follow the instructions to download the floodplain-mapping data.





The North Carolina Historic Preservation Office and the City of Asheville use geographic information system (GIS) technology to create maps like the one above, which shows areas in the floodway, high-risk flood zones, and moderate-risk flood zones.

**B. Clip the data.** Clip the data in GIS based on the boundaries of your community or the area that you are interested in (if you are unsure of how to do this, see the “Finding GIS Mapping Support” sidebar).

**C. Create separate data layers for different components of the floodplain.** Using GIS, create separate data layers for each of the following three components of the floodplain (if you are unsure of how to do this, see the “Finding GIS Mapping Support” sidebar):

- floodway and coastal flood-hazard areas,
- high-risk flood zones outside the floodway, and
- moderate-risk flood zones outside the floodway and the high-risk flood zones.

**D. Create your flood-hazard scoring system.** The Sample Flood-Hazard-Vulnerability Scoring System in Table 1, below, provides a recommended scoring system. This system

**Finding GIS Mapping Support:** This planning methodology relies heavily on the ability to conduct GIS analysis and mapmaking. If you and/or the members of your project team do not possess these skills, here are several options:

- County Government:** Enlist the help of GIS staff in your county government. Counties in North Carolina maintain local land records systems and often have people with GIS skills on staff.
- Councils of Governments (COGs):** Enlist the help of GIS staff at your Council of Governments. COGs often use GIS in their work for Rural Planning Organizations (RPOs) and to provide assistance to member governments.
- Private Consultants:** Many planning and engineering consulting firms have strong GIS capabilities and can potentially support you with this work.
- Do It Yourself:** See the DIY options in Appendix A, which includes a step-by-step guide as well as screenshots to help readers use online mapping tools.





*According to local merchants, the parking lot of the historic Cotton Mill in Asheville's River Arts District along the French Broad River has flooded two or three times in the last seven years. Photo by Ben Hitchings.*

is based on the frequency and magnitude of flooding in specific areas, and it will help you rate the vulnerability of your community's historic resources in Step 2. You will also use it in later steps to help prioritize the vulnerable historic resources that need protection. We recommend assigning the points as follows:

- i. **Floodway and coastal flood-hazard areas:** 3 points.
- ii. **High-risk flood zones outside the floodway:** 2 points.
- iii. **Moderate-risk flood zones outside the floodway and the high-risk flood zones:** 1 point.
- iv. **Areas outside the moderate-risk flood zones:** 0 points.

**E. Assign the appropriate score to each flood-hazard area.** In GIS, create a data attribute with the appropriate score for each type of flood-hazard area (if you are unsure of how to do this, see the "Finding GIS Mapping Support" sidebar).

**F. Map the flood-hazard areas.** Create a map of areas vulnerable to flooding showing the different types of flood zones described above. In Step 2, you will combine this with a map of historic resources to identify which properties are vulnerable to flooding.





Table 1. Sample Flood-Hazard-Vulnerability Scoring System

HAZARD AREA	POINTS	NOTES
Coastal Flooding	3	Area denoted as “V” on floodplain maps
Floodway	3	Channel needed to discharge the base flood
High-Risk Flood Zone	2	Area with 1% chance of flooding each year
Moderate-Risk Flood Zone	1	Area with 0.2% chance of flooding each year
Other	0	These areas are outside the risk zones but are not free from flooding

## KEY CONSIDERATIONS

- Finding good GIS assistance is crucial to successfully completing this step in the planning process.
- Resist the temptation to skip this step. Without a good understanding of the hazard-prone areas in your community, it will be difficult to identify and prioritize the most vulnerable historic resources.
- In addition to data analysis, some professional judgment may be needed to determine which areas have the highest risk of exposure to flooding and which historic resources are most vulnerable. To conduct this assessment, planners should consider collaborating with other professionals such as emergency managers, engineers, and hydrologists.

## RESOURCES

Federal Emergency Management Agency (FEMA), Flood Maps, [fema.gov/flood-maps](https://www.fema.gov/flood-maps).

FEMA, “How to Read a Flood Map” (2022), [fema.gov/sites/default/files/documents/how-to-read-flood-insurance-rate-map-tutorial.pdf](https://www.fema.gov/sites/default/files/documents/how-to-read-flood-insurance-rate-map-tutorial.pdf).

FEMA, “National Risk Index for Natural Hazards” (2023), [fema.gov/flood-maps/products-tools/national-risk-index](https://www.fema.gov/flood-maps/products-tools/national-risk-index).

FEMA, *National Risk Index Technical Documentation* (2023), [fema.gov/sites/default/files/documents/fema\\_national-risk-index\\_technical-documentation.pdf](https://www.fema.gov/sites/default/files/documents/fema_national-risk-index_technical-documentation.pdf).

North Carolina Floodplain Mapping Program, Flood Risk Information System (FRIS), [fris.nc.gov](https://fris.nc.gov).

North Carolina Floodplain Mapping Program, N.C. Flood Information Center, [flood.nc.gov/ncflood/](https://flood.nc.gov/ncflood/).

Philip Berke, Galen Newman, Jaekyung Lee, Tabitha Combs, Carl Kolosna, and David Salvesen, “Evaluation of Networks of Plans and Vulnerability to Hazards and Climate Change: A Resilience Scorecard,” *Journal of the American Planning Association* 81, no. 4 (2015): 287–302, [coastalresiliencecenter.unc.edu/wp-content/uploads/sites/845/2018/09/Berke\\_et\\_al\\_best\\_paper\\_JAPA\\_2015.pdf](https://coastalresiliencecenter.unc.edu/wp-content/uploads/sites/845/2018/09/Berke_et_al_best_paper_JAPA_2015.pdf).

Philip McDaniel, *PlanNC Computer Mapping Handout: Getting Started with (Q)GIS* (UNC School of Government and UNC Davis Library, 2021), available on the Historic Resilience Project website, [hrp.sog.unc.edu](https://hrp.sog.unc.edu).



# STEP 2. IDENTIFY HISTORIC RESOURCES LOCATED IN FLOOD-HAZARD AREAS

## PURPOSE

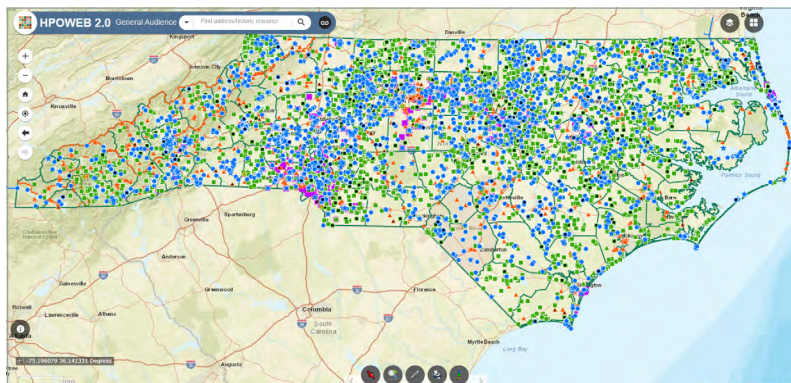
Once the flood-hazard zones have been mapped, it is time to identify the historic resources that are located in these areas. This will provide a list of the historic resources that are most vulnerable to flooding impacts.

## PRODUCTS

The primary products of this step are a map and a table showing the historic resources in the community that are located in flood-hazard zones.

## ESSENTIAL TASKS

Like Step 1, this step is conducted in-house by project staff, partners, and/or consultants. You will acquire data on the historic resources in your community and overlay it on your map of flood-hazard areas to identify which ones are most vulnerable to flooding.

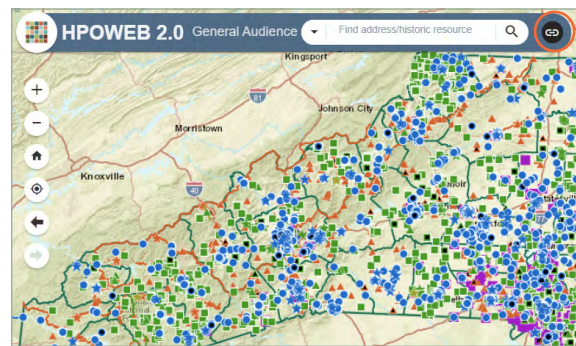


*The N.C. Historic Preservation Office's HPOWEB 2.0 online database and mapping tools include a wealth of information about historic sites across North Carolina.*



### A. Acquire the latest state data on historic resources.

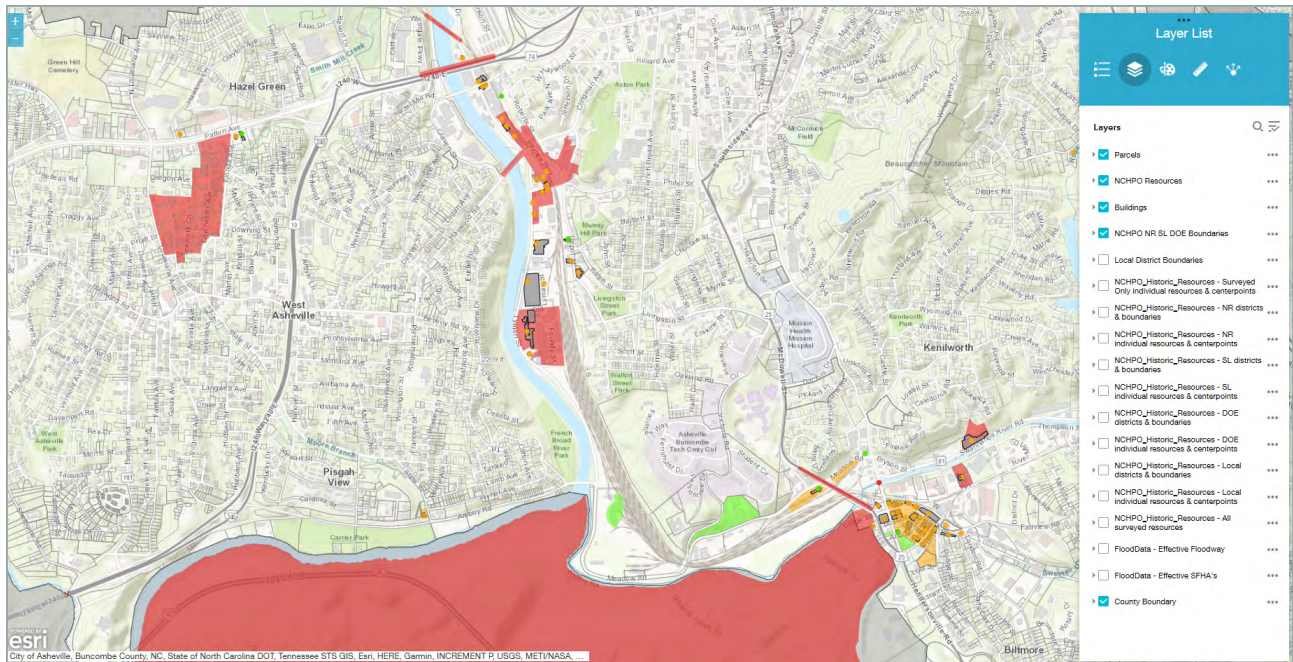
- i. Click on the following link for HPOWEB 2.0, the N.C. Historic Preservation Office's online historic-resources database: [nc.maps.arcgis.com/home/group.html?id=d56ec9c8aa77423b931f4d359f103ae6&view=list&categories=%5B%22%2FCategories%2FHPOWEB%22%5D#content](https://nc.maps.arcgis.com/home/group.html?id=d56ec9c8aa77423b931f4d359f103ae6&view=list&categories=%5B%22%2FCategories%2FHPOWEB%22%5D#content).
- ii. Click on the "Advanced User" version of HPOWEB 2.0.
- iii. Click on the "link" icon to the right of the HPOWEB 2.0 search box (see graphic) and select "Data Download" from the drop-down menu.
- iv. This will take you to a webpage that explains how to download data from the HPOWEB database (scroll down to find the appropriate instructions and the GIS-data zipped file).
- v. You can only download the complete HPOWEB dataset for all of North Carolina, which is updated monthly.
- vi. Clip the data in GIS based on the flood-hazard areas that you identified in Step 1. If you are unsure of how to do this, ask someone who is familiar with GIS (see the "Finding GIS Mapping Support" sidebar in Step 1).
- vii. Note that the link icon in HPOWEB 2.0 provides access to additional resources, including a tutorial on using the database.



### B. Acquire municipal and county data on historic resources.

- i. Contact historic preservation and GIS staff in your municipality and/or county to identify additional data on historic resources.
- ii. Seek to identify traditionally under-recognized or underappreciated resources, such as African-American settlement communities, by reaching out to local residents and leaders. See also the African American Heritage & Culture of North Carolina Digital Asset Map developed by the N.C. African American Heritage Commission and the Conservation Trust for North Carolina ([nc.maps.arcgis.com/apps/webappviewer/index.html?id=e5684374f26b496eb2202bcb1c1c2c02](https://nc.maps.arcgis.com/apps/webappviewer/index.html?id=e5684374f26b496eb2202bcb1c1c2c02)).
- iii. Add any new information that you find to the dataset you downloaded from HPOWEB 2.0 to create a single data layer of historic resources. If you are unsure of how to do this, ask someone who is familiar with GIS (see the "Finding GIS Mapping Support" sidebar in Step 1).

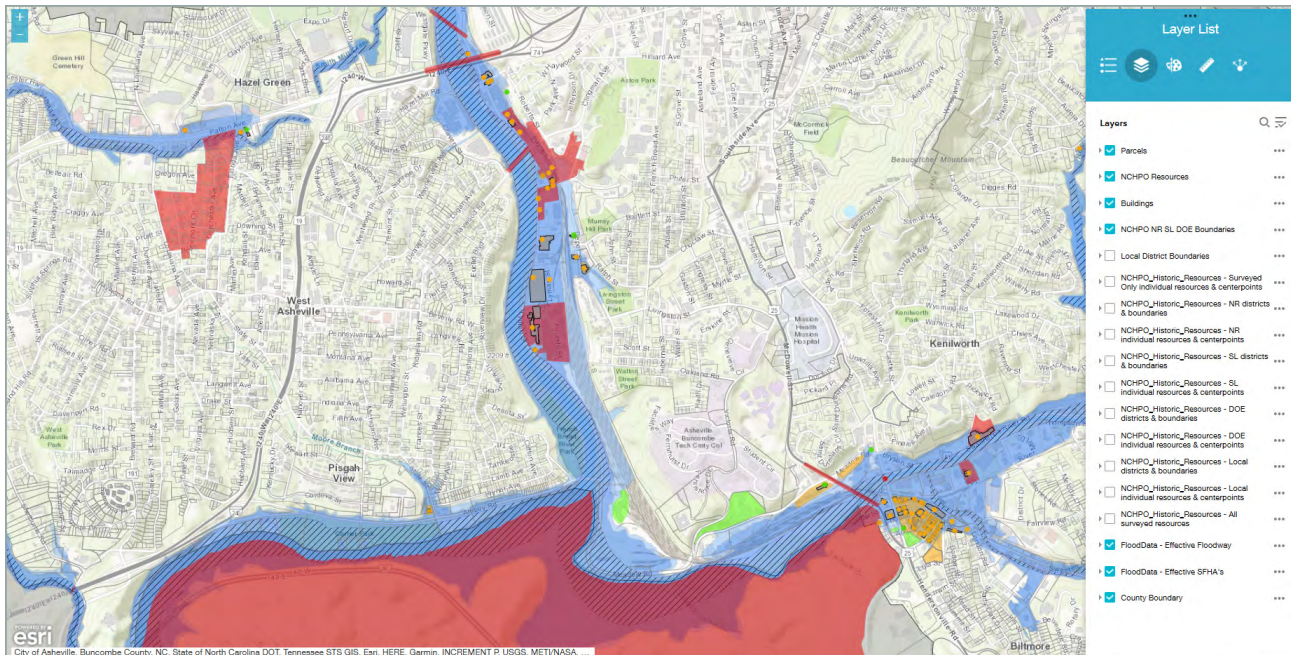




To identify vulnerable historic resources, historic preservation and GIS staff from the City of Asheville prepared the above map of local historic properties, clipped to the flood-prone areas.

### C. Overlay the historic-resources data on the flood-hazard-areas data.

- i. Using GIS, overlay your historic-resources data layer on your flood-hazard-areas data layer to identify the resources that are located in flood-prone areas. If you are unsure of how to do this, ask someone who is familiar with GIS (see the “Finding GIS Mapping Support” sidebar in Step 1).
- ii. The location of the symbols for each historic resource in HPOWEB 2.0 do not correspond to the full area covered by historic structures on the ground. For a more precise analysis, use your community’s planimetric data showing building footprints to see which structures may be at increased risk from flooding.
- iii. In addition to identifying which historic structures are located in flood-hazard areas, you should also identify which historic *districts* are located in those areas.
- iv. We recommend removing highly maintained infrastructure resources such as bridges and water features such as lakes from your list of vulnerable historic resources, since these resources are generally designed to be less vulnerable to flooding.
- v. Finally, we recommend also removing any data without information value, such as historic resources that no longer exist. Sometimes these records are still listed in the state or local dataset. The remaining information will constitute your historic-resources dataset.



To assess the vulnerability of each property, the City of Asheville staff overlaid the historic resources on the flood-hazard areas and scored them based on the severity of flood exposure.

**D. Use GIS to score the vulnerability of each historic resource.**

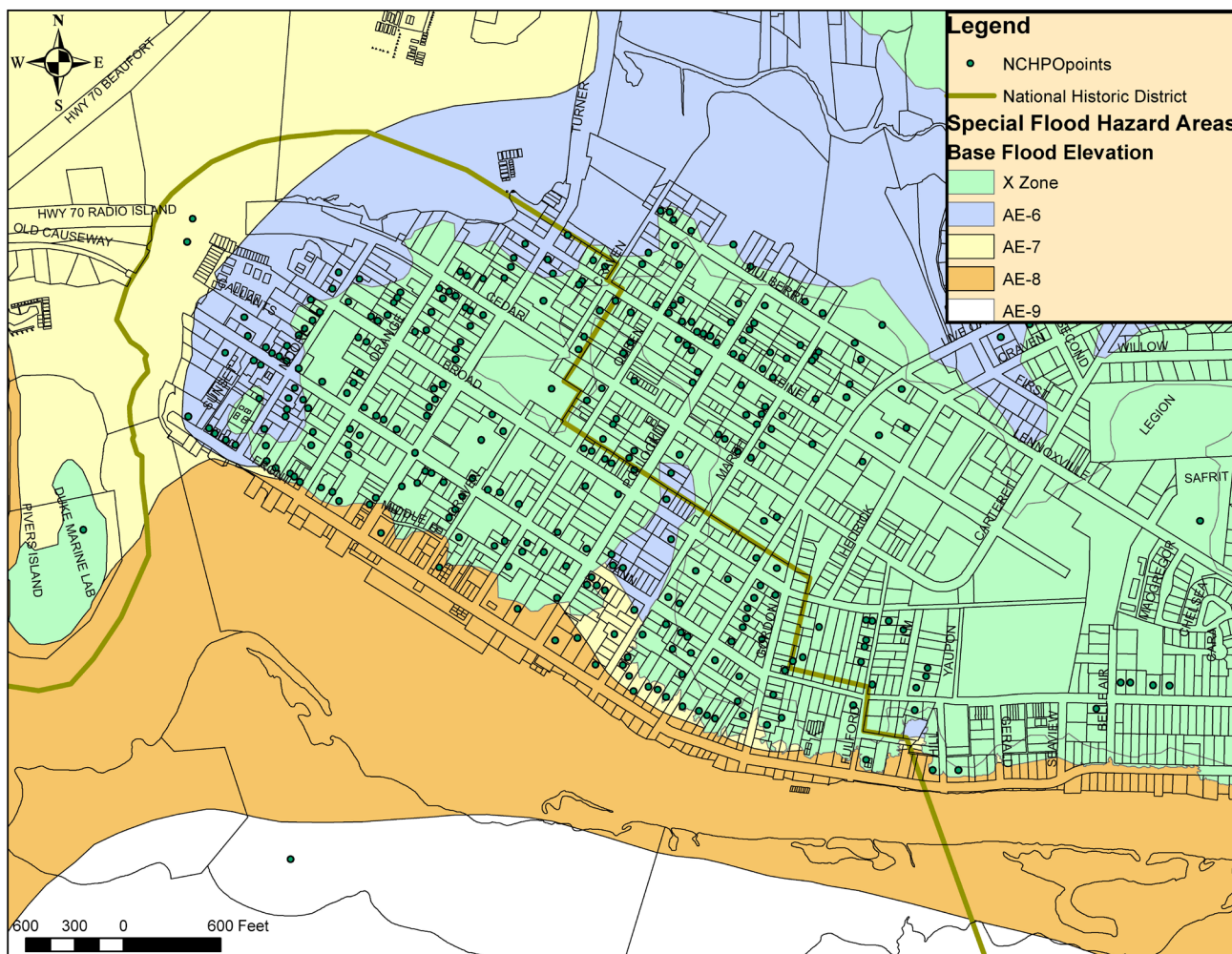
- i. Use the scoring system you created in Step 1 to score the vulnerability of each historic resource, basing your score on whether the resource is located in a floodway, a coastal flooding area, a high-risk flood zone (a 100-year floodplain) outside of a floodway, or a moderate-risk flood zone (a 500-year floodplain) outside of a floodway and a high-risk flood zone.
- ii. We recommend that the vulnerability score assigned to each historic resource be based on the most impactful (highest-scoring) floodplain category that touches a historic property. For example, if the corner of a property containing a historic mill extends into a floodway, then, according to our system, the vulnerability score of that historic resource is 3.

**Table 2. Sample Vulnerability Scoring Table**

RESOURCE NAME	STREET ADDRESS	APPLICABLE HAZARD AREA	VULNERABILITY SCORE (Step 2)	COMMUNITY VALUE SCORE (Step 5)	TOTAL SCORE
<i>Tobacco Barn</i>	27 Elm St.	Floodway	3	4	<b>7</b>
<i>Stengorse House</i>	81 Oak St.	Moderate-Risk Flood Zone	1	5	<b>6</b>
<i>Billings Stables</i>	35 River Rd.	Other	0	3	<b>3</b>



Resource and Address	Flood Zone
Duncan House 105-107 Front St. CR0040	AE-6
Fulford House 115 Front St. CR0151	AE-6
Mason House 117 Front St. CR0081	AE-6
Davis House Hotel 119-125 Front St. CR0036	AE-6
J. Davis House 127 Front St. CR0032	AE-6
First Citizens Bank 411 Front St. CR0077	AE-8
Beaufort Academy 505 Front St. CR0014	AE-6



As part of a pilot initiative to test the seven-step methodology proposed in this handbook, planning staff from the Town of Beaufort, N.C., created the map and table of vulnerable historic resources shown here. Photos by Ben Hitchings.



**E. Create a map and table of vulnerable historic resources.** Once you have overlaid the historic resources on the flood-prone areas and scored them, make a map showing the most vulnerable historic resources. In addition, prepare a table listing each historic resource and its flood-vulnerability score (see Table 2, above). We will use these materials in future steps to help prioritize the historic resources that need protection.

## OPTIONAL TASKS

- If resources permit, consider using your local information on historic resources to conduct an architectural/historic resources survey update for your community or county. Contact the N.C. Historic Preservation Office to find out whether your community might qualify for a matching grant to do this work. Then add the new information to the historic-resources layer in your GIS.
- If time permits, help identify historic resources by reviewing historic maps, prints, photographs, and other documents at your local library, historical society, the N.C. State Archives, UNC's Wilson Library (and its North Carolina Collection), and/or other locations. Then add the new information to the historic-resources layer in your GIS.

## KEY CONSIDERATIONS

- Structures are considered historic if they are at least fifty years old. Therefore, don't overlook mid-century modern structures and other more recent historic sites when compiling your list.
- Some county architectural surveys have not been updated recently. If this is the case in your community, consider contacting the N.C. Historic Preservation Office about available grant funds and assistance to update your county's survey ([hpo.nc.gov/grants-historic-preservation-projects](https://hpo.nc.gov/grants-historic-preservation-projects)).

## RESOURCES

North Carolina State Archives, [archives.ncdcr.gov](https://archives.ncdcr.gov).

North Carolina State Historic Preservation Office, County Architectural Surveys, [hpo.nc.gov/historic-preservation/architectural-surveys](https://hpo.nc.gov/historic-preservation/architectural-surveys) (use this link to find your county's survey).

North Carolina State Historic Preservation Office HPOWEB 2.0 Database, [nc.maps.arcgis.com/home/item.html?id=79ea671ebdccc45639f0860257d5f5ed7](https://nc.maps.arcgis.com/home/item.html?id=79ea671ebdccc45639f0860257d5f5ed7).

University of North Carolina, Wilson Library, North Carolina Collection, [library.unc.edu/wilson/ncc](https://library.unc.edu/wilson/ncc).



# STEP 3. REVIEW THE POLICY AND REGULATORY CONTEXT FOR HISTORIC RESILIENCE

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## PURPOSE

Another factor affecting the relative vulnerability of historic resources to natural hazards is the local policy and regulatory framework. The purpose of this step is to analyze the degree to which local policies might increase or decrease the resilience of a community's historic resources.

The goal of this step is to catalyze an informed conversation among historic preservation planners, land use planners, emergency managers, and others about potential synergies and conflicts in their plans. The effort to assess and harmonize the goals and policies of the local historic preservation plan, the land use or comprehensive plan, the hazard-mitigation plan, and other community plans is a valuable step toward promoting greater historic resilience. The results of this analysis can be used to identify collaborative opportunities that will help develop a more consistent and mutually supportive local framework for historic preservation, land use planning, and hazard mitigation.

This step is based on the methodology described in *Plan Integration for Resilience Scorecard Guidebook*, [https://planintegration.com/wp-content/uploads/2023/03/PIRS-Guidebook-v2.0\\_2021.09.pdf](https://planintegration.com/wp-content/uploads/2023/03/PIRS-Guidebook-v2.0_2021.09.pdf).

## PRODUCTS

The primary products of this step include:

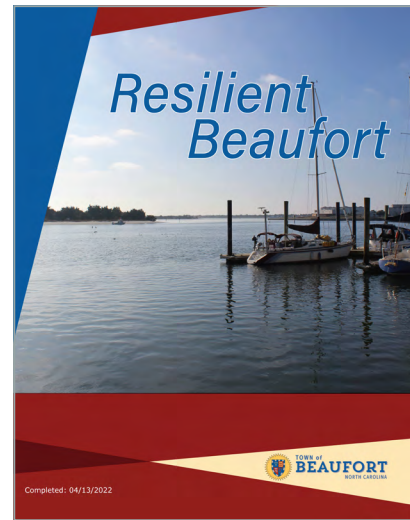
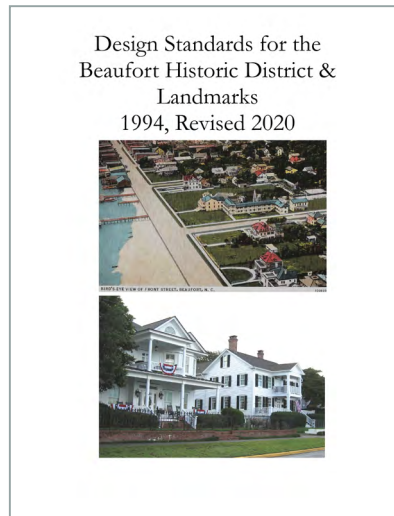
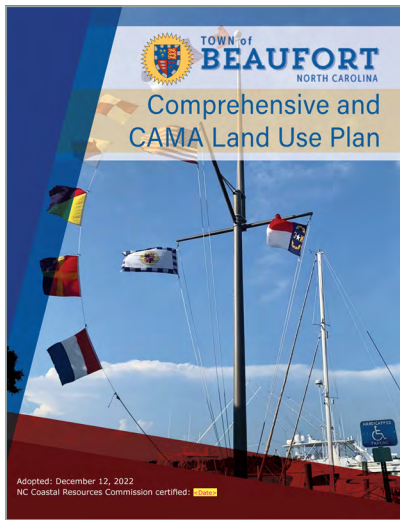
1. a rapid assessment of the extent to which various local plans and policies support historic resilience;
2. two tables tracking the policy links between historic preservation and hazard mitigation in your community's plans;
3. an initial meeting among historic preservation planners, land use planners, emergency managers, and other staff to discuss the relative consistency of key community plans and how they can be revised to promote greater historic resilience; and
4. potential ongoing collaboration between these staff members and other parties to build more consistency across plans and greater historic resilience in the community.



## ESSENTIAL TASKS

### A. Assemble the following adopted plans for the community (if available).

- i. Gather all plan documents produced by any department, agency, or stakeholder group that have the potential to influence how hazard areas that contain historic resources are developed and managed in the community. We suggest that the project team focus on the plans in a, b, and c, below, and then, if time permits, it can evaluate additional plans identified in d.
  - a. The community’s comprehensive plan/land use plan.
  - b. The community’s hazard-mitigation plan.
  - c. The community’s historic preservation plan (and historic preservation design standards).
  - d. Other small-area community plans (e.g., a historic district plan, a downtown plan, a corridor plan) or functional plans (e.g., a climate action plan, a transportation plan, a disaster recovery plan).
- ii. Use specific plan-selection criteria.
  - a. The plans selected should still be relevant and have some influence on policy decision-making. If a plan is largely out of date, it may not be worthwhile to include in this analysis.
  - b. The plans should intersect with flood-hazard zones. If the geographic area covered by the plan does not intersect with flood-hazard zones, it does not need to be included in this analysis.
  - c. In particular, consider plans that affect how the community grows or develops and that refer to the community’s spatial aspects.



The examples above from the Town of Beaufort, N.C., reflect the kinds of plans that are useful to review for the analysis described in Step 3: Beaufort’s Comprehensive and CAMA Land Use Plan, Design Standards for the Beaufort Historic District & Landmarks, and Resilient Beaufort (the Town also has a Watershed Restoration Plan). In addition, the region is covered by the Pamlico Sound Regional Hazard Mitigation Plan.

**B. Identify organizational experts for each plan.**

- i. Identify and engage staff or local Subject Matter Experts (SMEs) who are responsible for each of the plans and/or are familiar with the relevant topics.
- ii. Let them know about the policy review you will conduct. Invite them to:
  - a. validate the list of plans selected in “Essential Task” A, above, to ensure that a manageable portfolio of relevant documents is included, and
  - b. conduct the policy review with you or go over your draft results as a prelude to an internal meeting and discussion.

**C. Conduct a topical review across plans.**

- i. Check to see if historic preservation is addressed in the comprehensive plan/land use plan and hazard-mitigation plan.
  - a. Is there a chapter or section devoted to this topic?
  - b. Are there action items devoted to this topic?
  - c. Conduct a word search to see if “historic,” “historic preservation,” “heritage,” or similar terms appear in these documents, and if so, how frequently?

**D. Check to see if resilience is addressed in the historic preservation plan and historic preservation design standards.**

- i. Is there a chapter or section devoted to this topic?
- ii. Are there action items devoted to this topic?
- iii. Conduct a word search to see if “resilience,” “flooding,” “floodplain,” “hazard mitigation,” or similar terms appear in these documents, and if so, how frequently?

**E. Conduct a quick assessment of the integration of historic preservation and hazard policies.**

- i. Search each plan to identify strategies, policies, goals, or potential opportunities linking historic preservation to hazards (see Table 3.1, below). Some suggested search terms that work best for each type of plan are listed in Table 3.1.
- ii. Do the historic preservation standards allow for resilient adaptations?

***Sample Policy and Its Resilience Implications***

A comprehensive plan might include a policy that reads: “Focus new development near Shepherd’s Meadow.” However, this measure could have the impact of increasing impervious surface and stormwater runoff in an area that includes important historic structures. As a result, this policy would be included in the historic-resilience analysis with a score of -1 for potentially increasing the vulnerability of affected historic sites to natural hazards. Flagging this issue raises its profile and could spark staff and community discussions to help address it.

***Sample Regulation and Its Resilience Implications***

A development ordinance might include a regulation to require that redevelopment sites meet the community’s current enhanced stormwater-management standards. This could have the impact of reducing stormwater runoff from properties in the area and reducing the potential flood risk to nearby historic sites. As a result, this regulation would be included in the historic-resilience analysis with a score of +1 for potentially reducing the vulnerability of affected historic sites to natural hazards.



**Table 3.1. Links between Historic Preservation and Hazard-Mitigation Policies, Asheville, N.C.**

Plan/Search Term	# Times Mentioned	# Times “Historic” & “Hazards” Are Linked	Opportunity/Policy/Goal
<b>Comprehensive Plan</b>			
Heritage	20	0	
Historic	70	1	p. 338, future land use and hydrology
Historic preservation	12	0	
<b>Historic Preservation Plan</b>			
Flood	2	1	p. 60, upstream flood policy
Floodplain	0	0	
Hazard mitigation	0	0	
<b>Hazard-Mitigation Plan</b>			
Heritage	1	0	
Historic	17	1	p. 7.9, hazards and preservation plan
Historic preservation	7	1	p. 7.3, vulnerability of historic resources

#### F. Conduct a policy review.

- i. Review the location of vulnerable historic resources identified in Steps 1 and 2 of the Seven-Step Planning Process.
- ii. Think about both individual historic resources and historic districts.
- iii. Add relevant text from the policies in the plans (see Table 3.2).
- iv. With these locations in mind, review the goals, policies, and actions in the three plans—comprehensive/land use; hazard mitigation; historic preservation—to think about potential significant impacts on historic resources.
  - a. For example, does a plan call for locating new development along a waterfront or a river where there are important historic resources? Could the new development potentially increase the amount of local stormwater and raise the risk of flooding for these historic resources, depending on how it is built?
  - b. Alternatively, does a plan call for updating floodplain management standards, creating a potential opportunity to reduce flood risks for the local area, including for its historic structures?
  - c. Are there any policies that could potentially increase the resilience of historic resources? If so, mark them with a “+” (plus sign).
  - d. Are there any policies that could potentially decrease the resilience of historic resources? If so, mark them with a “-” (minus sign).
  - e. Summarize the key policy issues identified that might have a significant positive or negative impact on historic resilience.

**Table 3.2. Text Source of Links between Historic Preservation and Hazard-Mitigation Policies in Asheville, N.C.**

<b>Comprehensive Plan</b>
Policy, p. 338: “. . . zoning amendment or a development proposal congruent with the existing character of the surrounding area, and their impact on . . . hydrology, fire, safety, parks and historic resources.”
<b>Historic Preservation Plan</b>
Policy 6.7, p. 60: “Work with Biltmore Village merchants to restore the original historic Olmsted landscape streetscape. River flooding and commercial expansion outside the district may put additional pressure on the historic resource within the district.”
<b>Hazard-Mitigation Plan</b>
Opportunity, p. 7.3: “Planning and regulatory capability is based on the implementation of plans, ordinances, and programs that demonstrate a local jurisdiction’s commitment to guiding and managing growth, development, and redevelopment in a responsible manner while maintaining . . . emergency response and mitigation planning . . . [as well as] protecting . . . historic, and cultural resources in the community.”
Opportunity, p. 7.9: “An often overlooked aspect of the historic preservation plan is the assessment of buildings and sites located in areas subject to natural hazards and the identification of ways to reduce future damages. This may involve retrofitting or relocation techniques that account for the need to protect buildings that do not meet current building standards or are within a historic district that cannot easily be relocated out of harm’s way.”

**G. Conduct plan integration hot-spot assessment (optional).** This assessment methodology is adapted from the approach described in *Plan Integration for Resilience Scorecard Guidebook*, [https://planintegration.com/wp-content/uploads/2023/03/PIRS-Guidebook-v2.0\\_2021.09.pdf](https://planintegration.com/wp-content/uploads/2023/03/PIRS-Guidebook-v2.0_2021.09.pdf).

- i. Review the map of historic sites exposed to flood-hazard areas identified in Step 2.
  - a. Identify “hot spots” by selecting “high-value” historic sites or clusters of historic resources in flood-hazard areas.
- ii. Identify policies.
  - a. Review the policies and goals in each plan and think about their potential significant impacts on historic resources in the selected hot spots.
  - b. Assess the identified policies and goals based on three criteria:
    1. Places: are they specific and mappable?
    2. Policy tools: are there tools (such as regulations, public investments, and incentives) to achieve goals and outcomes? Any policy statement without tools is unlikely to be actionable.
    3. What is their effect on the vulnerability of the hot-spot historic resources? If they reduce vulnerability: +1; if they have a neutral impact: 0; if they increase vulnerability: -1.



# Riverfront Planning & Development



Downtown

West Asheville

Greenway

River Arts District  
Form Based Code  
Planning Area

French Broad River

*The French Broad River corridor in Asheville, N.C., is a good example of a place to conduct a hot-spot analysis to assess the consistency of policies regarding development and flooding. Courtesy of Living Asheville Comprehensive Plan, 2018.*



- iii. Classify the policies that offer best practices in reducing vulnerability but do not meet the three criteria above (and could be considered nonspecific) as “General.”
  - a. General policies may be amended and leveraged to reduce vulnerability to historic preservation resources in the selected hot spots.
- iv. Record each policy in a table (see Table 3.3 for an example) along with its score and a brief explanation, if needed. An editable Word doc of this table is available on the [Historic Resilience Project website](#) for your use and adaptation.

#### H. Share and discuss draft results of the policy review.

- i. Share the draft results of the policy review with staff or the SMEs identified in “Essential Task” B, above.
- ii. Convene one or more meetings to discuss the draft results and make any needed revisions.
  - a. What potential policy conflicts and consistencies were identified that could affect the resilience of historic resources?
  - b. What potential policy adjustments were identified?
  - c. What potential collaborations might exist to advance shared policy goals or implementation projects?
  - d. Are there remaining areas of major policy conflict or disagreement that need to be worked through?
  - e. Are there other policy documents that should be analyzed in a similar manner?
    - 1. Are there discrepancies across plans (for example, one plan calls for buyouts of flooded property and strategic retreat while another suggests densification in the same area)?
    - 2. Do some plans contain an overall policy mix likely to increase vulnerability while others contain policies likely to reduce it?
    - 3. Are there opportunities to align policies that support multiple benefits (for example, could park/greenway investments align with riverfront setback regulations)?
    - 4. Do policies address equity considerations in hot spots of high value for the heritage of people of color?
- iii. What next steps did the group identify to continue advancing this work to improve historic resilience?



*The goal of Step 3 is to catalyze a meeting and discussion among the local government staff members who are responsible for land use, historic resources, and hazard mitigation in the community. This can lead to valuable collaborations that will help make historic and community resources more resilient. Photo by Ben Hitchings.*



Table 3.3. Plan Integration Policy Score Sheet, River Arts District (RAD), Asheville, N.C.

POLICY, PAGE #	PLACE-SPECIFIC	POLICY	VULNERABILITY	NOTES
<b>Comprehensive Plan</b>				
Allow higher density multifamily development in transit corridors in RAD, p. 22	Yes	Zoning	-1	
In the RAD, flooding is a larger threat that proactively requires building to meet floodplain ordinance requirements, p. 354	Yes	Building code	+1	
<i>General Best Practices</i> Implement low-impact development and other types of green infrastructure strategies that may include naturalized stormwater features, pp. 208–09	No	Public investment	+1	Not specific to RAD historic district. Since RAD is vulnerable and land use policies aim to increase future densities, low-impact development might be prioritized
Work with African American Heritage Commission to develop artistic heritage standards wayfinding through interventions, p. 157	No	Street design	0	Not specific to RAD, yet the RAD was redlined, indicating support for heritage likely is a priority. Not sure if reduces/ increases vulnerability.
<b>Historic Preservation Plan</b>				
Work with Biltmore Village merchants to restore the original historic Olmsted landscape streetscape, p. 60	Yes	Environment restoration	+1	
<b>Hazard-Mitigation Plan</b>				
<i>General Best Practices</i> City conducted a Climate Resilience Assessment, which was adopted as part of the City's Comprehensive Plan, pp. 9–14	No	No	+1	Not place-specific; a policy to use data from the Assessment could support resilience, but this policy statement doesn't offer concrete tools by which the city might act.
Continue participation in the NFIP's Community Rating System [with] a goal to improve the rating class to 7 or better by the next verification cycle in 2024, pp. 9–16	No	Flood insurance	+1	Policy does not need to be site-specific. Has positive impact for whole city.
Develop a comprehensive flood-warning and response plan, pp. 9–17	No	Emergency response	+1	Since RAD is an especially flood-prone site and is planned for medium-high density development, it might be given high priority.

Note: An editable Word doc of this table is available on the [Historic Resilience Project website](#) for your use and adaptation.

## OPTIONAL TASKS

- If time and resources permit, the project team can evaluate policies in additional plans and ordinances and add those results to the analysis.

## KEY CONSIDERATIONS

- The exact impacts of a given policy or regulation can be difficult to quantify. As a result, when conducting this analysis, the project team should consult with SMEs, if any are available, and use its best professional judgment to appropriately score the historic-resilience implications of different policies and regulations.

## RESOURCES

Joseph DeAngelis, AICP, Johamary Peña, Alexandra Gomez, Jaimie Masterson, AICP, and Philip Berke, “Building Resilience through Plan Integration” (American Planning Association, PAS Memo, January/February 2021), [planning.org/publications/document/9210305](https://planning.org/publications/document/9210305).

Matthew Malecha, Jaimie Hicks Masterson, Siyu Yu, and Philip Berke, *Plan Integration for Resilience Scorecard Guidebook: Spatially Evaluating Networks of Plans to Reduce Hazard Vulnerability, Version 2.0* (Institute for Sustainable Communities, College of Architecture, Texas A&M University, 2019), [planintegration.com/resource/plan-integration-for-resilience-scorecard-guidebook/](https://planintegration.com/resource/plan-integration-for-resilience-scorecard-guidebook/).

Philip Berke, Galen Newman, Jaekyung Lee, Tabitha Combs, Carl Kolosna, and David Salvesen, “Evaluation of Networks of Plans and Vulnerability to Hazards and Climate Change: A Resilience Scorecard,” *Journal of the American Planning Association* 81, no. 4 (2015): 287–302, [coastalresiliencecenter.unc.edu/wp-content/uploads/sites/845/2018/09/Berke\\_et\\_al.\\_best\\_paper\\_JAPA\\_2015.pdf](https://coastalresiliencecenter.unc.edu/wp-content/uploads/sites/845/2018/09/Berke_et_al._best_paper_JAPA_2015.pdf).

Philip Berke, Justin Kates, Matt Malecha, Jaimie Masterson, Paula Shea, and Siyu Yu, “Using a Resilience Scorecard to Improve Local Planning for Vulnerability to Hazards and Climate Change: An Application in Two Cities,” *Cities* 119 (2021), [sciencedirect.com/journal/cities](https://sciencedirect.com/journal/cities).





# STEP 4. ENGAGE THE COMMUNITY ABOUT THE VULNERABILITY AND VALUE OF HISTORIC RESOURCES

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## PURPOSE

This step actively engages public stakeholders by sharing the results of Steps 1, 2, and 3 with them and seeking their input on the community value of the historic resources you've identified in preparation for Step 5.

## PRODUCTS

The primary products of this step are a public-engagement process (online and in-person) that shares information with community stakeholders and summarizes the input provided by them.

## ESSENTIAL TASKS

Once the project team has analyzed the vulnerability of historic resources to flood hazards, it is time to involve stakeholders in the community. Their feedback on the information you've gathered will enable you to assess the community value of the vulnerable historic resources and to calculate the "Public Sentiment" score used in Step 5.

- A. Organize the community-engagement activities.** For this component of the project, these three activities are recommended:
- i. create a **project webpage** that is updated regularly to share information with stakeholders;
  - ii. hold a **community workshop** to present the draft list of vulnerable historic resources and solicit feedback on their community value; and





*Making an opening presentation at a community workshop can help orient participants to the project and explain the workshop activities. Photo by Ben Hitchings.*

- iii. make an **overview presentation** to one or more local government boards in your jurisdiction or associations such as the historic preservation commission (if there is one), the planning board, the governing board, and/or a local historical society (if there is one) to seek their input.

It can also be helpful to enlist ongoing assistance from an interested local government board such as the historic preservation commission or the planning board. If the project team makes periodic presentations to this board, it will likely receive beneficial input and guidance. This can be especially productive before and after hosting a major public-engagement event: the board can provide input on how to effectively structure the gathering, help analyze the feedback received, and provide crucial buy-in and support. The old adage that people will support what they help create is often applicable in this kind of effort.

In addition, it is important to identify and involve traditionally under-represented groups in the community as part of your outreach work. Key ways to do this include connecting with leaders of underserved groups to get their suggestions for effective community-engagement techniques and holding meetings in spots where people commonly gather, such as places of worship immediately after services or neighborhood facilities (make sure to schedule meetings in advance). Keep in mind that participation may be greater if you plan meetings and workshops with attention to potential barriers, such as lack of transportation, lack of childcare, and conflicts with mealtimes. Some local governments even recruit “neighborhood ambassadors” and pay them a stipend to engage under-involved community members in civic activities and planning efforts.

A public-engagement workshop allows you to share the information gained in Steps 1, 2, and 3 and to gather important feedback needed to score each vulnerable historic resource as part of the Community Value Assessment in Step 5. In particular, this kind of workshop is an excellent way to solicit input on the “Public Sentiment” factor (see Step 5, Factor 3 of the regular approach and Factor 4 of the enhanced approach).

Key initial steps in organizing a community workshop include picking a date for the event (make sure there are no major conflicts on the community calendar) and securing a venue (reserve a familiar and accessible public location, if possible). Then the project team can draft an agenda for the event. A sample workshop agenda is included in Appendix B.

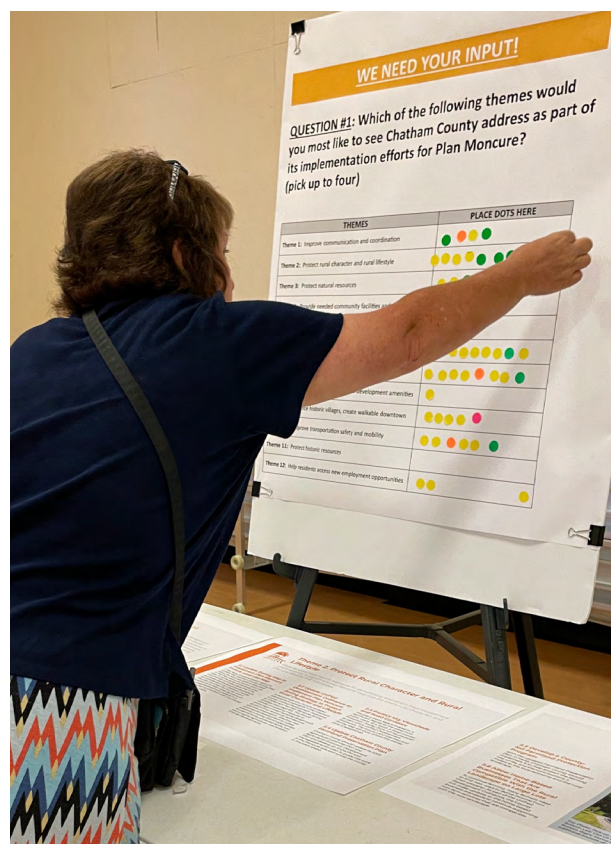
One activity to consider including in the workshop is a “poster session” in which stakeholders examine posters containing summary information on the project team’s analysis and put sticky dots by the vulnerable historic resources they would most like to see protected. After the workshop, the project team can assign “Public Sentiment” points to each resource based on the number of dots it received. To do this fairly, it is important to give each stakeholder the same number of dots for this assignment (perhaps at a sign-in table when they first arrive). The project team can establish ranges based on the number of dots, for example, allocating three points for any resource that receives between eleven and fifteen dots, two points for any resource that receives between six and ten dots, and one point for any resource that receives between zero and five dots.

This kind of activity can also be structured as a survey that is administered either in-person or online to gain input from stakeholders

### *Creative Ways to Engage Local Stakeholders*

There are many ways to involve local residents in the planning process. Here are two examples:

1. **Show and Tell:** Hold a local version of *Antiques Roadshow* at a community center or other public building, inviting residents to share photographs, prints, artifacts, and/or stories about historic sites in the community. Document their input and ask about other historic resources in the community that might need protection.
2. **Local Visit:** Arrange a visit with local residents after services at a place of worship or at another location in their community. Share the draft map/list of documented historic sites you’ve gleaned from state and county sources and ask the residents to review it and identify additional sites. Encourage them to tell stories about these places.



There are lots of ways to easily capture input on public preferences, including the use of sticky dots on posters. Photo by Ben Hitchings.





Posters with colorful graphics and clear descriptions are a good way to share information with stakeholders and solicit their feedback. Photo by Ben Hitchings.

who are not able to attend an event. Web-based survey software from SurveyMonkey, MetroQuest, or PublicInput can help the project team collect and tabulate responses automatically, reducing administrative staff time (which can help offset the fee that is usually required for such software). More basic but free software is available from vendors such as Google Forms, Jotform, and SurveyPlanet.

**B. Synthesize the public input received.** Before the public-engagement activities, make sure to have a good plan for documenting public input. For example, you could provide sticky notes for placing comments on a map, sticky dots for highlighting preferences on a poster, flip charts (for staff and participants), comment cards, and/or online or written surveys. At the end of the meeting, take photos of the input and/or collect flip charts, sticky notes, comment cards, and other written documentation. After the meeting, summarize the input you've received and use it to help finalize the project team's prioritization of vulnerable historic resources.

**C. Share the results.** Once the project team has summarized the public’s input, it should consider sharing the results on the project website, in presentations to local boards, and through other means to reach a broader audience for additional questions and feedback. If done in a thoughtful and genuine manner, the outreach and engagement that the project team conducts can build the investment of community stakeholders in the project, provide useful insights on specific historic resources to prioritize, and develop support for the recommendations included in the final community plan for historic resilience.

## OPTIONAL TASKS

- If time and resources permit, the project team could prepare a more extensive public-engagement program. One way to start is by drafting a Community-Engagement Plan. A template for doing this appears in Appendix C.
- Consider engaging community members and others to research traditionally underappreciated places and spaces. One great resource for finding historic African-American settlement communities and other culturally significant sites is the African American Heritage & Culture of North Carolina Digital Asset Map, which was developed by the N.C. African American Heritage Commission and the Conservation Trust for North Carolina ([aahc.nc.gov/resources/mapping-black-history-and-heritage-north-carolina](http://aahc.nc.gov/resources/mapping-black-history-and-heritage-north-carolina)).

## KEY CONSIDERATIONS

- Develop a clear agenda for public meetings and workshops that includes all the topics you want to address.
- Be sure to have a structured means of gathering “Public Sentiment” input if you are going to include it as a factor in your Community Value Assessment in Step 5.
- Decide how you will capture public input in the activities you conduct. Some common tools are sticky notes and sticky dots, flip charts, comment cards, and/or online or written surveys.
- Don’t forget to advertise the meetings and workshops. Useful channels include the project website, social media, the local newspaper, and word of mouth. A good turnout will show public interest in the project, provide a larger sample size for the input submitted, and help to legitimize the work of protecting vulnerable historic resources.

## RESOURCES

American Planning Association (APA), Research KnowledgeBase, Online Public Engagement, [planning.org/knowledgebase/onlineengagement](http://planning.org/knowledgebase/onlineengagement) (note: you must be an APA member to access this link).

Davenport Institute for Public Engagement and Civic Leadership (Pepperdine School of Public Policy), [publicpolicy.pepperdine.edu/davenport-institute/thought-leadership/news.htm](http://publicpolicy.pepperdine.edu/davenport-institute/thought-leadership/news.htm).

International Association for Public Participation, [iap2.org](http://iap2.org).





Milton J. Herd, *A Planner's Guide to Meeting Facilitation* (Chicago: American Planning Association, PAS Report 595, 2019), [planning.org/publications/report/9178119/](https://planning.org/publications/report/9178119/) (note: you must be an APA member to access this publication).

Public Participation Partners, *Community Engagement Process Development: Public Participation Playbook* (Raleigh: Public Participation Partners, 2020), <https://cityofraleigh0drupal.blob.core.usgovcloudapi.net/drupal-prod/COR22/CEPDPlaybook.pdf>.

Sam Kaner, *Facilitator's Guide to Participatory Decision-Making*, 3rd ed. (Hoboken, N.J.: Jossey-Bass, 2014).

State of California, Governor's Office of Planning and Research, "Community Engagement and Outreach: Designing Healthy, Equitable, Resilient, and Economically Vibrant Places" (chapter 3 of *General Plan Guidelines*, 2017), [opr.ca.gov/docs/OPR\\_C3\\_final.pdf](https://opr.ca.gov/docs/OPR_C3_final.pdf).



# STEP 5. ASSESS THE COMMUNITY VALUE OF VULNERABLE HISTORIC RESOURCES, AND PRIORITIZE THEM FOR PROTECTION

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## PURPOSE

Once the project team has engaged the community in the planning process by sharing information on the historic resources that are vulnerable to natural hazards, the next step is to assess the community value of these properties to help prioritize them for greater protection.

## PRODUCTS

The main product of this step is a table listing the relative community value of the vulnerable historic sites. The project team will then combine each site's community value with its vulnerability score (determined in Step 2) to create an overall score for use in prioritizing its protection.

## ESSENTIAL TASKS

**A. Select your approach to assessing community value.** Decide on the approach your team will use to conduct the Community Value Assessment. Because North Carolina has communities with a wide range of resources, capabilities, and needs, we have prepared two different examples of a scoring system (see Tables 5.1 and 5.2, below). A more detailed explanation of the different factors considered in creating a scoring system is included in the "Additional Information" section, below.

- i. **Regular approach (see Table 5.1).** This approach uses a scoring system with three factors to rate the community value of each historic resource located in a flood-hazard area. In general,





*The Thomas Murray House is a contributing structure in the Beaufort National Register Historic District in Beaufort, N.C., and lies in the High-Risk Flood Zone. Photo by Ben Hitchings.*

- it is better suited for smaller communities and communities with more limited resources that want a systematic and defensible methodology that is relatively easy to conduct. At the outset of the assessment process, the project team should review the sample scoring table provided (Table 5.1) and decide which factors it would like to use. An editable Word doc of the regular approach is available on the [Historic Resilience Project website](#) for your use and adaptation.
- ii. **Enhanced approach (see Table 5.2).** This approach uses a scoring system with up to seven factors to rate the community value of each historic resource located in a flood-hazard area. In general, it is better suited for medium to large communities with more resources, and for places with more participatory populations, where it may be important to use a multifaceted methodology when making defensible decisions about where and when to invest public resources. At the outset of the assessment process, the project team should review the sample scoring table provided (Table 5.2) and decide which factors it would like to use. An editable Word doc of the enhanced approach is available on the [Historic Resilience Project website](#) for your use and adaptation.



**Table 5.1. Historic Resources Community Value Assessment—Regular Approach**

RESOURCE NAME AND ADDRESS	FACTOR 1		FACTOR 2		FACTOR 3		COMMUNITY VALUE	
	National Register Designation*	Pts.	Local Historic Value	Pts.	Public Sentiment	Pts.	Total Pts.	
<i>Tobacco Barn</i>	NR Eligible	2	High	3	High	3	8	High
<i>Stengorse House</i>	NR	3	High	3	Low	1	7	Medium
<i>Billings Stables</i>	Unlisted	0	Medium	2	Medium	2	4	Low

\* See the following page for details about the scoring system for the “National Register Designation” factor.

**Table 5.2. Historic Resources Community Value Assessment—Enhanced Approach**

RESOURCE NAME AND ADDRESS	FACTOR 1		FACTOR 2		FACTOR 3		FACTOR 4		FACTOR 5		FACTOR 6		FACTOR 7		COMMUNITY VALUE	
	National Register Designation*	Pts.	Local Historic Designation	Pts.	Local Historic Value	Pts.	Public Sentiment	Pts.	Equity	Pts.	Economic Importance	Pts.	Degree of Integrity	Pts.	Total Pts.	
<i>Tobacco Barn</i>	NR Eligible	2	Contributing	3	Medium	2	High	3	High	3	Low	1	Medium	2	16	Medium
<i>Stengorse House</i>	NR	3	Landmark	3	High	3	High	3	Low	1	Medium	2	High	3	18	High
<i>Billings Stables</i>	Surveyed	1	Other	0	Low	1	Medium	2	Medium	2	Medium	2	Low	1	9	Low

\* See the following page for details about the scoring system for the “National Register Designation” factor.

**B. Conduct the Historic Resources Community Value Assessment.** Using your preferred approach (regular or enhanced), complete the Community Value Assessment for all the vulnerable historic resources identified in Step 2. Use the public input received in Step 4 to calculate scores for the “Public Sentiment” factor (see Factor 3 in the regular approach and Factor 4 in the enhanced approach, both above). Once the factors have been calculated, finalize the overall rating for each historic resource. We have provided two examples of how to do this (see Tables 5.1 and 5.2, above). Please note that the editable Word docs of these tables on our website include additional columns for weighting each factor, in case the community would like to distinguish their relative importance, as well as columns for the points assigned to each factor, which will help systematize the process. Once you have completed the Community Value Assessment, display the results in a summary table, listing the total points calculated for each historic resource.





### Scoring System—National Register Designation

RATING (National Register of Historic Places)	FACTOR 1
Listed Individual Property/Contributing Resource in National Register Historic District	3
Determined Eligible/Study List	2
Surveyed/Noncontributing Resource in National Register Historic District	1
Not Surveyed	0

### Scoring System— Local Historic Designation

RATING (Local Designation)	FACTOR 2
Landmark/Contributing Structure in Local Historic District	3
Noncontributing Structure in Local Historic District	1
Other	0

**C. Combine the vulnerability score with the community value score.** Take the vulnerability score generated for each vulnerable historic resource in Step 2 and add it to the community value score generated for that resource earlier in this step to calculate an overall **Historic-Vulnerability-Value Score**. A sample score sheet to help you do this is provided in Table 5.3, below.

**Table 5.3. Sample Historic-Vulnerability-Value Score Sheet**

Step 2		Step 2, Table 2	Step 5, Table 5.1 or 5.2	Step 5	
RESOURCE NAME	STREET ADDRESS	VULNERABILITY SCORE	COMMUNITY VALUE SCORE	HISTORIC-VULNERABILITY-VALUE SCORE	PRIORITY
Tobacco Barn	27 Elm St.	3	8	11	1
Stengorse House	81 Oak St.	1	7	8	2
Billings Stables	35 River Rd.	0	4	4	3

**D. Summarize the results, and identify priorities.** Once the project team has calculated the historic-vulnerability-value score for each of the vulnerable historic resources, it should summarize this information in an easy-to-read table and map. This will provide clear information about community priorities that can be shared with local boards and the general public and will serve as a quick reference for use in subsequent steps. The project team should then consider prioritizing protection measures, starting with the resources with the highest historic-vulnerability-value scores, as it works to identify implementation strategies before taking action in Steps 6 and 7.

## ADDITIONAL INFORMATION: A DETAILED EXPLANATION OF OPTIONS FOR A COMMUNITY VALUE ASSESSMENT

The two methodologies (or “scoring models”) for conducting a Community Value Assessment for vulnerable historic resources in your community are adapted from an approach described in the Federal Emergency Management Agency’s guide to protecting historic structures from natural hazards.<sup>1</sup> The regular approach we’ve developed includes up to three factors: “National Register Designation,” “Local Historic Value,” and “Public Sentiment.” The enhanced approach includes up to seven factors: “National Register Designation,” “Local Historic Designation,” “Local Historic Value,” “Public Sentiment,” “Equity,” “Economic Importance,” and “Degree of Integrity.”

We strongly encourage each community to customize or “calibrate” the scoring model by selecting factors that make the most sense for its specific context and by deciding whether to use weighted scoring. This is particularly important in the enhanced approach because there are so many potential factors, particularly for assessing the different aspects of a resource’s local importance. It is best to do this calibration before the different resources have been scored to help keep this process as unbiased as possible.

What follows are explanations of the seven different factors in the **enhanced approach**, which include the three used in the **regular approach**. Communities that want to use a more sophisticated evaluation system may find that using all seven factors makes sense or they may decide to add, remove, or adapt some of the factors, depending on their local circumstances. Calibrating the scoring model so that the analysis is conducted in an appropriate manner for your community is a key initial step in assessing community value.



*The Grand Bohemian Hotel is a contributing structure in the Biltmore Village Local Historic District in Asheville, N.C., and lies in the High-Risk Flood Zone of the Swannanoa River. Photo by Ben Hitchings.*

**Factor 1. National Register Designation:** This is the current designation that each historic resource has under the system maintained for the National Register of Historic Places. Information on National Register status is available online from the N.C. Historic Preservation Office at [HPOWEB 2.0](#) (see Step 2

<sup>1</sup> Federal Emergency Management Agency (FEMA), *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning*, chapter 2.



*The Romanesque Revival building of the New Bern City Hall in New Bern, N.C., is a contributing structure in both the New Bern Local Historic District and the National Register Historic District and is located just outside the Moderate-Risk Flood Zone of the Neuse River. Photo by Ben Hitchings.*

for more details). Information on local historic preservation status is available from the applicable local government. Designation options for a resource in the National Register typically indicate if it:

- is an individual property (with local, state, national significance);
- is a contributing property in a National Register Historic District (with local, state, national significance);
- is a noncontributing property in a National Register Historic District (with local, state, national significance);
- has been determined eligible for the National Register (under Section 106 of the National Historic Preservation Act);
- is on the state’s “study list” (approved by the National Register Advisory Committee and potentially eligible for the National Register);
- has been surveyed; or
- has not been surveyed.

Archaeological resources in North Carolina use a slightly different nomenclature, which is described in Appendix D, along with suggestions on how to score these resources. If your community has significant archaeological resources in areas subject to flood risk, we strongly encourage your project team to score them using this kind of hierarchy so that they are comparable to other local historic resources.

**Factor 2. Local Historic Designation:** In some cases, locally designated historic resources maintain their historic integrity better over time than those in National Register districts, because locally designated resources require a Certificate of Appropriateness (COA) that helps to ensure their ongoing care. As a result, some communities may want to include designation in a local historic district as a separate factor in their community value scoring model (Factor 2) or use this information to help determine its local historic value (Factor 3). North Carolina’s local historic preservation categories are:

- local landmark;
- contributing (building, site, structure, object) in local historic district;
- noncontributing (building, site, structure, object) in local historic district; and
- undesignated.

**Factor 3. Local Historic Value:** Even if a resource is not listed in the National Register system, it may still have particular importance to the local community. For example, it could be a local historic landmark or a contributing structure in a local historic district. Or it could be a type of building that’s common but maybe it’s also the last remaining structure on the property that gave the community its name. Or it could already be eligible for the National Register, but the owner or sponsor has not yet invested the resources needed to have it officially designated. The FEMA guide recommends choosing one of the following categories to indicate a resource’s level of significance:<sup>2</sup>

- High: This is an exceptional property or resource important to maintaining the unique character of the community. If you do not include Factor 2 in your Community Value Assessment, but the resource is a designated local historic landmark and/or in a local historic district, then it probably falls into this category.
- Medium: This resource is an important representative example that contains some unique details.
- Low: This resource is important, but other representative examples exist in the community.

Consider using local Subject Matter Experts (SMEs) and/or members of the project team to make this evaluation.

**Factor 4. Public Sentiment:** Public views on the relative value of local historic resources are an important component of the assessment. Local governments often want to know what community constituents care about. This is especially true when developing a plan that will help allocate public resources for protecting local historic properties. In addition, seeking public input can help build support for plan implementation.

There are many ways to gather this input. Some combination of in-person and virtual engagement is often desirable to reach a broad range of community stakeholders. Consider assessing this factor as part of the community-engagement process in Step 4. The project team might hold a public workshop with posters or handouts listing historic resources in the community and invite attendees to vote for their favorites. This could be followed up by an online survey to seek input from community members who couldn’t attend in person.

After the community input has been gathered, the project team can use it to classify public sentiment for each historic resource as High, Medium, or Low.

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2. FEMA, *Integrating Historic Property and Cultural Resource Considerations*, p. 2-26.



*Recognized on the National Register of Historic Places, the Lockville Dam, Canal, and Powerhouse along the Deep River also have significant local historic value related to longstanding industrial and engineering activities in southeastern Chatham County, N.C. Photo by Ben Hitchings.*





**Factor 5. Equity:** Many communities have under-recognized or underappreciated resources, sometimes from groups that no longer live in the community or have been traditionally disadvantaged. Often, there are few of these resources remaining in the community, or they are not in good condition compared to other resources. Yet they are vital assets that can help us better tell the stories of all the groups that have lived within a community. As a result, this factor awards points to help recognize the importance of these resources, with High, Medium, and Low classifications based on the extent to which they are associated with traditionally disadvantaged groups in the community and are one of the few such resources remaining:

- High: The resource is associated with an under-represented or traditionally disadvantaged group and is one of the few such resources remaining.
- Medium: The resource is associated with an under-represented or traditionally disadvantaged group and is one of a number of such resources remaining.
- Low: The resource is not associated with an under-represented or traditionally disadvantaged group in the community.

**Factor 6. Economic Importance:** Another consideration is economic value. Because historic resources often make an important contribution to community character, they can help support local tourism. Tryon Palace in New Bern, N.C., for example, attracts more than 227,000 visitors a year.<sup>3</sup> In many cases, these historic resources are one of a kind. What contribution do historic sites make to property values in your community? Are they a catalyst for economic development? Do they generate revenues from entrance fees, food services, and gift shops? Do they bring in visitors who spend money at other businesses in the community? These questions should be considered together to evaluate whether the economic importance of each historic resource is High, Medium, or Low. Consider using local SMEs and/or members of the project team to make this evaluation.

**Factor 7. Degree of Integrity:** Finally, to what extent does each historic resource still reflect its historic features and character? FEMA describes this as how well “it conveys its significance” and is able to “tell its history.”<sup>4</sup> The National Register identifies seven aspects of historic integrity:

- location,
- association,
- setting,
- materials,
- design,
- feeling, and
- workmanship.

One approach would be to focus on the physical aspects of integrity, which is most applicable for resources that derive historical significance from their architectural characteristics. Another approach

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3. *New Bern Resiliency & Hazard Mitigation Plan* (2022), prepared for the City of New Bern by Moffatt & Nichol, with NEMAC, FernLeaf, and the Craig Group, p. 6-8.

4. FEMA, *Integrating Historic Property and Cultural Resource Considerations*, p. 2-26.



*In 2022, consultants for the N.C. Department of Transportation identified Jack Womble's filling station near Moncure, N.C., as eligible for listing on the National Register of Historic Places, despite its declining physical integrity. If conducted in a historically sensitive way, thoughtful rehabilitation could bring this slice of Americana back to life and help tell the story of the local community. Photo by Ben Hitchings.*

would be to consider several or all of these aspects when rating the resources as either High, Medium, or Low.

To learn more about the National Register's seven aspects of integrity, see Chapter VIII of the National Park Service Bulletin, "How to Apply the Criteria for National Register Evaluation," available at [nps.gov/subjects/nationalregister/upload/NRB-15\\_web508.pdf](https://nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf).

Consider using local SMEs and/or members of the project team to decide what approach to use for assessing the degree of integrity of each vulnerable historic resource.



## OPTIONAL TASKS

- If time and resources permit, conduct a more detailed economic evaluation of each historic property. The FEMA guide includes a good example of a worksheet estimating the value (or replacement value) of cultural resources.<sup>5</sup>
- Depending on interest and resources, conduct the Community Value Assessment for all historic resources in the community, not just those located in flood-hazard areas. The results may provide information that can be used in other local historic preservation work.

## KEY CONSIDERATIONS

- At the outset of this step, consider identifying SMEs who can help with scoring the various factors for each historic site in the assessment of community value. If needed, reach out to organizations like the N.C. Historic Preservation Office ([hpo.nc.gov](http://hpo.nc.gov)) and/or Preservation North Carolina ([presnc.org](http://presnc.org)) for help in finding assistance.
- Make sure to document which scoring method the project team selects in order to be able to use this approach consistently in the scoring process and to share the methodology as appropriate with local government boards and community stakeholders to substantiate the resulting prioritization.
- This is a step in the planning process on which the project team can spend a lot of time and resources. Work to achieve the right balance of technical rigor and efficiency so that the assessment of community value is meaningful and defensible, while making sure that the planning process does not get bogged down in it. In the absence of other expertise, the project team may want to use its best professional judgment based on available information to score each historic resource.

## RESOURCES

Federal Emergency Management Agency (FEMA), *Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning* (FEMA 386-6/May 2005), [fema.gov/pdf/fima/386-6\\_Book.pdf](https://www.fema.gov/pdf/fima/386-6_Book.pdf).

National Park Service, National Register Bulletin, “How to Apply the National Register Criteria for Evaluation” (1997), [nps.gov/subjects/nationalregister/upload/NRB-15\\_web508.pdf](https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf).

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5. FEMA, *Integrating Historic Property and Cultural Resource Considerations*, p. 2-31.







# STEP 6. PREPARE AN ACTION PLAN FOR PROTECTING HISTORIC RESOURCES

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## PURPOSE

Once the project team has prioritized the vulnerable historic resources that need protection, it is time to develop a customized portfolio of implementation measures—an action plan—that will decrease the vulnerability of these resources and increase their resilience. Then the project team will be ready to prepare the Historic Resilience Community Plan using the information gathered in all six steps.

## PRODUCTS

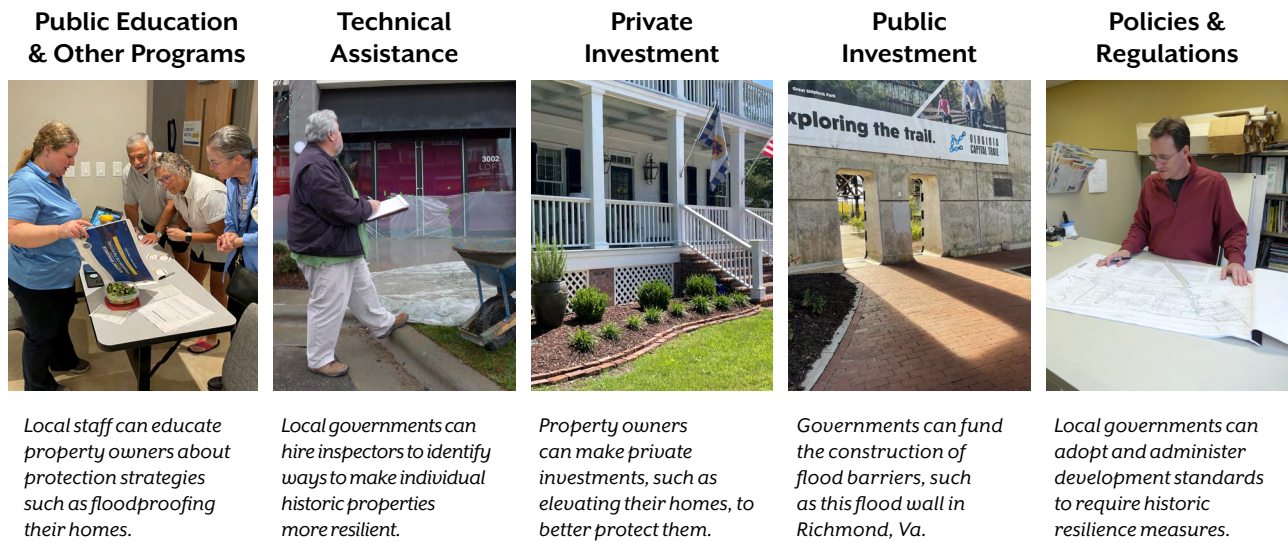
The primary products of this step are an Implementation Projects Table (or action plan), which includes a detailed description of specific implementation measures, and a Historic Resilience Community Plan.

## ESSENTIAL TASKS

A key part of this stage is developing a set of implementation projects that are both impactful and feasible, with measures that are appropriate for addressing the hazards that threaten the historic resources in the community. Property owners and local governments can draw upon a variety of potential implementation tools, including community education, technical assistance, private funding, and more (see Figure 6.1).

One challenge with this work is that the implementation strategies can vary depending on the level of proposed action, which can be at the structure level, the site level, the neighborhood/district level, or the community level (see Figure 6.2).

**Figure 6.1. Historic Resilience Implementation Toolbox**



The following steps will help you develop an effective implementation portfolio:

- A. Scan the lists of potential implementation tools in Figure 6.1, above, and Table 6.1, below.
- B. Review the prioritized list and map of vulnerable historic resources you created in Step 5, and look for properties with a high score. If resources are in close proximity or face similar threats, they may benefit from similar implementation measures.
- C. Review other resource documents prepared as part of the Historic Resilience Project ([hrp.sog.unc.edu](http://hrp.sog.unc.edu))—including the *Historic Resilience Primer*, *Resilience Design Standards*, and *Historic Resilience Training Modules*—to develop a more detailed understanding of potential implementation measures.

**Figure 6.2. Potential Levels of Action to Implement Historic Resilience Measures**

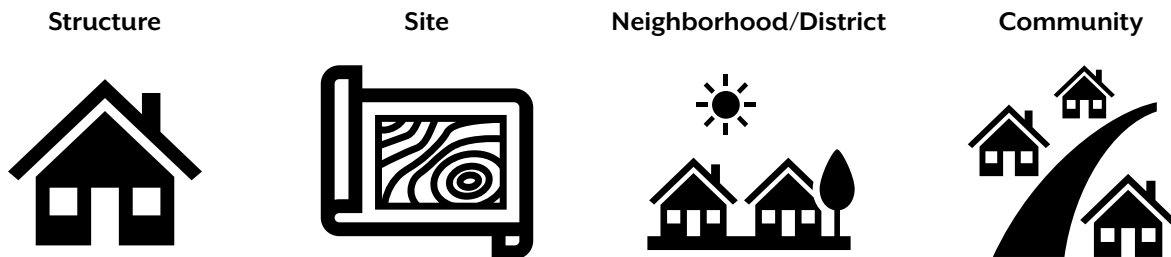




Table 6.1. Toolbox of Potential Historic Resilience Implementation Measures\*

TOOL	DESCRIPTION	TYPE OF TOOL	PROJECT LEAD
<i>Structure Level</i>			
<b>Temporary measures</b>	Installing sandbags, plywood sheets, or other temporary means of blocking floodwaters from a building or property.	Private Investment	Owner
<b>Preventive maintenance</b>	Maintaining the basic strength and structural integrity of a structure to help it better resist flood impacts.	Private Investment	Owner
<b>Weatherization</b>	Protecting a structure's interior from the entry of outdoor elements like wind and water to help reduce the impacts of natural hazards.	Private Investment	Owner
<b>Dry proofing</b>	Protecting a building by sealing its exterior walls to prevent the entry of floodwaters.	Private Investment	Owner
<b>Wet proofing</b>	Protecting a building by allowing floodwaters to enter so that internal and external hydrostatic pressure are equalized. Typically, only enclosed areas used for parking, storage, or building entry are wet proofed.	Private Investment	Owner
<b>Elevation</b>	Raising a structure above the established flood levels to better protect it from flood impacts.	Private Investment	Owner
<b>Relocation</b>	Moving a structure to a less flood-prone location to reduce the risk of flood damage.	Private Investment	Owner
<b>Pre-disaster mitigation assessment</b>	Conducting an assessment of ways to better protect a structure or property from natural hazards as a first step toward making subsequent improvements.	Technical Assistance	Government; Owner
<b>Cost-share to make adaptations</b>	Providing funding assistance to property owners to make historic resilience improvements to their property.	Public Investment; Private Investment	Government; Owner
<b>Buyout and adaptation (or demolition)</b>	Purchasing and relocating or demolishing a structure by the government to help the property owner move to a safer site and reduce the risk to life and property.	Public Investment	Government
<i>Site Level</i>			
<b>Drainage improvements</b>	Using natural and structural measures such as pipes, drains, grassy swales, and dry wells to help stormwater infiltrate the ground and reduce the volume of runoff.	Private Investment; Public Investment	Owner, Government
<b>Green-infrastructure installation</b>	Installing natural stormwater-management measures such as rain gardens, bioswales, and other ways of promoting the infiltration of stormwater into the ground.	Private Investment; Public Investment	Owner, Government
<b>Flood barriers</b>	Using structural measures such as earthen or concrete walls to help block the flow of floodwaters into developed areas.	Private Investment	Owner, Government

*continued on next page*



Table 6.1. (continued)

TOOL	DESCRIPTION	TYPE OF TOOL	PROJECT LEAD
<i>Neighborhood/Community Level</i>			
<b>Resilience Adaptation Study</b>	Analyzing a neighborhood or district to identify measures that would improve its historic resilience.	Public Education & Other Programs	Government; Nonprofit
<b>Stream restoration</b>	Restoring the natural form and function of a stream and its banks to help it better manage floodwaters.	Public Investment	Government; Nonprofit
<b>Flood barriers</b>	Using structural measures such as earthen or concrete walls to help block the flow of floodwaters into developed areas.	Public Investment	Government
<b>Open-space protection</b>	Acquiring and protecting green space and natural areas to help maintain the landscape's ability to absorb and manage floodwaters.	Public Investment	Government; Nonprofit
<b>Growth guidance</b>	Using local government development standards and regulations to guide new development to areas with lower flood risks.	Policies & Regulations	Government
<b>Impervious surface limits</b>	Limiting the amount of pavement and rooftops in new development to help reduce the quality and quantity of stormwater runoff.	Policies & Regulations	Government
<b>Community rating system (CRS)</b>	Participating in the voluntary incentive program run by FEMA and enacted by local governments that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program (NFIP). Participation can reduce homeowners' insurance premiums.	Policies & Regulations	Government
<b>Stormwater-management requirements</b>	Adopting state and/or local regulations to install stormwater retention ponds, grassy swales, and other measures to better manage the quality and quantity of stormwater from a site or a neighborhood.	Policies & Regulations	Government
<b>Property-owner education</b>	Using literature, videos, trainings, and other resources to teach property owners about the importance of historic resilience and how to advance this work on their properties and in the community.	Public Education & Other Programs	Government; Nonprofit
<b>Post-disaster assistance plan</b>	Creating a detailed plan to help residents and businesses recover after a natural disaster and build back more safely to reduce the impacts of future events.	Planning	Government

\*See the *Historic Resilience Primer* for more details about these tools.

- D. Meet as a project team and/or with SMEs (subject matter experts), such as staff from the N.C. Historic Preservation Office, to identify an overall implementation strategy and to evaluate the promising measures.

As part of this process, it can be helpful to develop broad goals and tangible outcome-based objectives before shaping the more specific policies and measures that will enable you to achieve those goals (see the “Goals vs. Objectives vs. Policies” sidebar for more details).

Begin to identify appropriate measures at the physical scales that are applicable to the historic resources in your community. For example, if a community has scattered historic resources, then a neighborhood-scale intervention like a regional stormwater management facility might not be as effective as measures that can be applied to a structure or site, such as elevating buildings above the established flood level. Alternatively, if the community has a historic district with a number of vulnerable historic resources, then coordinated neighborhood- or district-level actions, such as setting limits on the amount of impervious surface allowed in new development, may be more beneficial.

In addition, during the implementation-measure selection process, staff and partner departments should consider how their roles and responsibilities relate to the kind of hazard mitigation that supports historic resilience.

- E. Once the preliminary list of implementation measures is prepared, the project team should review each measure for its alignment with the plan’s priorities, the feasibility of its implementation by the local government or other lead party, and its impact on improving historic resilience. Then the draft set of implementation measures can be finalized.<sup>1</sup>
- F. Organize and list the final implementation measures in a project table that includes the name of each project, a brief description of it, the lead staff, the anticipated cost, the potential funding sources, and the steps needed to make it operational. Categorize the projects based on when the local government or project sponsor can reasonably start working on them, whether in the short term (one to two years following plan adoption), medium term (three to five years following adoption), or long term (six to ten years following adoption). A sample Implementation Project Table appears in Appendix E. If the project team prefers, it can focus the implementation table on short-term projects and provide more details about all of the proposed implementation measures in the plan itself.

#### *Goals vs. Objectives vs. Policies*

When preparing a Historic Resilience Community Plan, it can be helpful to develop overarching goals and more tangible objectives, as well as the detailed policies or measures needed to achieve them. This approach can help stakeholders develop a shared understanding of what the plan is trying to accomplish and how it will do so. One way to define these terms is as follows:

**Goal:** An ideal future condition; for example, a vibrant historic district.

**Objective:** A tangible milestone for advancing the goal; for example, a 10% increase in visitors over the next three years.

**Policy:** Specific policies or measures to implement the goal; for example, planting street trees and marketing historic walking tours.

(Adapted from Berke et al., *Urban Land Use Planning*, pp. 296–98.)

1. Hitchings and Berke, “From Planning to Doing: Conducting a Plan Implementation Feasibility Assessment.”





Once the project team has prepared a draft action plan, it should share this information with community stakeholders to get their feedback.

- G.** Hold a community workshop to present the draft set of implementation projects (or action plan) and solicit feedback on them. In planning this event, the project team can draw on the public-engagement techniques described in Step 4.
  - If resources are limited, it can be productive to hold an open house for the public an hour or two before making a presentation to an appointed board such as the Historic Preservation Commission or Planning Board. The open house could feature posters that explain the Historic Resilience Project, identify and analyze the community’s vulnerable resources, and share the action plan’s key recommendations. Project staff and/or consultants would be present to share additional information, answer questions, and gather feedback. This feedback could then be discussed during the board meeting and/or summarized afterward, so that potential revisions to the plan can be shared with the governing board as part of the review and adoption process.
- H.** Finalize the action plan based on the input received and your team’s professional judgment.
- I.** Prepare a draft of the Historic Resilience Community Plan, describing the six steps that the project team has taken, the public-involvement measures it has used, the stakeholder input it has received,

and the implementation measures proposed. A sample table of contents for this kind of plan appears in Appendix F. Consider asking partners such as staff from the N.C. Historic Preservation Office to review a draft of the plan before it is released to the public.

- J. Once the project team has a strong draft of the Historic Resilience Community Plan, it can be released as a “Public Review Draft” to stakeholders for their comments, presented to local appointed boards such as the Historic Preservation Commission and the Planning Board for review and recommendation, and submitted to the local governing board for review and adoption.

## OPTIONAL TASKS

- If time and resources permit, the project team might seek public input on the implementation measures before it prepares a draft list of projects for the action plan. Given the fairly technical nature of some of the implementation tools, providing stakeholders with basic information on how they work might be important in order to get useful feedback.
- To make sure that public resources for improving historic resilience are spent in an equitable manner throughout the community, the project team might conduct an equity review once it has a draft set of recommended implementation projects.
- Hiring a professional graphic designer to lay out the Historic Resilience Community Plan can improve its appearance and make it easier to read and use. An attractive and professional appearance can also give the plan more credibility.

## KEY CONSIDERATIONS

- It can be helpful to take photos of public-engagement efforts and other steps in the planning process to use in illustrating the Historic Resilience Community Plan.
- Understanding what implementation measures the local government and other project partners are already pursuing is important to be able to develop an efficient and impactful action plan.
- Enlisting the help of SMEs, such as staff from the N.C. Historic Preservation Office, can greatly facilitate the development of an efficient and effective action plan.
- Requesting input from staff in other departments on the proposed implementation measures can help align the work on historic resilience with other hazard mitigation efforts and build a more collaborative organizational approach to improving resilience in the community.
- Keeping the list of short-term implementation projects manageable is a challenge, but it is important to helping manage community expectations and developing a historic resilience plan that can be successfully implemented.

## RESOURCES

Allan Shulman, with Sarah Codey and Adrienne Burke, *Resilient Rehab: A Guide for Historic Buildings in Miami-Dade County* (Miami-Dade County Office of Historic Preservation, 2022), [miamidade.gov/planning/library/reports/resilient-rehab-report.pdf](https://miamidade.gov/planning/library/reports/resilient-rehab-report.pdf).



Ben Hitchings, FAICP, CZO, with Jim Joyce and Adam Lovelady, *PlanNC Guidebook: A Practitioner's Guide to Preparing Streamlined Community Plans* (Chapel Hill: University of North Carolina, School of Government, August 2021), [sog.unc.edu/publications/books/plannc-guidebook-practitioners-guide-preparing-streamlined-community-plans](https://sog.unc.edu/publications/books/plannc-guidebook-practitioners-guide-preparing-streamlined-community-plans).

Benjamin G. Hitchings and Philip R. Berke, "From Planning to Doing: Conducting a Plan Implementation Feasibility Assessment" (American Planning Association, PAS Memo, forthcoming in 2023).

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Jennifer Eggleston, Jennifer Parker, and Jennifer Wellock, *The Secretary of the Interior's Standards for Rehabilitation & Guidelines on Flood Adaptation for Rehabilitating Historic Buildings* (U.S. Department of the Interior, National Park Service, Technical Preservation Services, Washington, D.C., 2021), [home.nps.gov/orgs/1739/upload/flood-adaptation-guidelines-2021.pdf](https://home.nps.gov/orgs/1739/upload/flood-adaptation-guidelines-2021.pdf).

Philip R. Berke, David R. Godschalk, and Edward J. Kaiser, with Daniel A. Rodriguez, *Urban Land Use Planning*, 5th ed. (Urbana and Chicago: University of Illinois Press, 2006), [press.uillinois.edu/books/?id=c030796](https://press.uillinois.edu/books/?id=c030796).



# STEP 7. IMPLEMENT THE HISTORIC RESILIENCE COMMUNITY PLAN

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## PURPOSE

Once the Historic Resilience Community Plan has been adopted, it is time to work systematically to implement the various projects included. This process can take a number of years. With sustained effort, the local government and its partners can strengthen the resilience of historic resources in the community and help preserve their history, culture, and economic value for current and future generations.

## PRODUCTS

The key products of this step are successful implementation projects and their positive impacts, with interim deliverables such as project charters, work plans, budgets, project teams, and partnerships. An annual update to appointed and elected boards is also recommended.

## ESSENTIAL TASKS

- A. Identify initial implementation projects to evaluate.** Review the Implementation Projects Table you developed in Step 6 and identify an initial set of short-term projects for scoping.
- B. Scope each implementation project that you've identified, and select an initial portfolio of projects.** For each project in the initial list, draft a preliminary charter that summarizes its key information (see Figure 7.1, below, and Appendix G), prepare an initial scope of work (see Figure 7.2, below), and develop a preliminary project budget in order to estimate the necessary level of staffing and funding needed. While some projects may only require staff time, others may necessitate discretionary funds, an allocation in the annual budget, or third-party funding. After finishing this process, the local government or other sponsor organization may decide to advance some projects



Figure 7.1. Sample Project Charter Template

PROJECT CHARTER (insert name of project): _____			
Project Purpose:			
Project Sponsor:		Project Manager:	
Project Cost:		Funding Source(s):	
Start Date:		Completion Date:	
Project Scope:			
Key Deliverables:	1.	4.	
	2.	5.	
	3.	6.	
Key Milestones:	1.	Date:	
	2.	Date:	
	3.	Date:	
	4.	Date:	
Key Assumptions:	1.	3.	
	2.	4.	
Key Risks/Issues:	1.	3.	
	2.	4.	
Project Team:	1.	4.	
	2.	5.	
	3.	6.	
Project Partners:	1.	3.	
	2.	4.	
Success Indicators:	1.	3.	
	2.	4.	

*This sample project-charter template can be used by a project team to help think through and summarize key information about the initiative and to facilitate greater coordination between team members and decision-makers. See Appendix G for a larger version.*

because of their feasibility, timeliness, and level of priority while delaying others that require more development or funding.

**C. Secure the necessary project funding.** For projects that require a budgetary allocation or third-party funding, work with a municipal or county manager’s office, a finance director, and/ or others to finalize the budget and request the necessary funding. For local governments, this may require inclusion in the upcoming annual budget or an amendment to the current year’s budget.

Some projects may depend on state, federal, or private foundation grants to move forward. In this case, potential funders must be identified, their funding criteria reviewed, and grant applications drafted and submitted. Grant awards are usually made on an annual cycle, so this timing needs to be considered in deciding when implementation projects might move forward.



*Assembling the right team is a key project task. Photo by Ben Hitchings.*

Figure 7.2. Sample Project Schedule

Tasks	Schedule - 2011			Schedule -- 2012			Schedule -- 2012		
	Jul./ Aug.	Sept./ Oct.	Nov./ Dec.	Jan./ Feb.	Mar./ Apr.	May/ Jun.	Jul./ Aug.	Sept./ Oct.	Nov./ Dec.
<b>1.0 TOD Market Reconnaissance</b>									
1.01 Conduct initial site analysis	100%								
1.02 Review economic and demographic data	100%								
1.03 Identify comparable TODs nationwide	100%								
1.04 Conduct expert interviews	100%								
1.05 Prepare report		50%	100%						
<b>2.0 TOD Development Suitability Analysis</b>									
2.01 Develop area over maps as the county, town, site, and local context levels	100%								
2.02 Identify and map the built features	100%								
2.03 Identify and map the natural features	100%								
2.04 Identify and map points of connectivity	100%								
2.05 Develop multiple build-out scenarios				100%					
2.06 Show scenarios to review panel				100%					
2.07 Revise scenarios to address input				100%					
<b>3.0 Neighborhood Compatibility Modeling (SketchUp)</b>									
3.01 Gather site imagery				100%					
3.02 Gather photos of transit-oriented development				100%					
- Find examples similar of site development scenarios prepared in Land Suitability Analysis				100%					
3.03 Build SketchUp model of development scenarios				100%					
- Use to illustrate transition to neighboring properties; show project phasing over time				100%					
3.04 Prepare presentation of model imagery with summary development scenario information					100%				
3.05 Show scenarios at Public Meeting						100%			
3.06 Prepare summary of public input from meeting							100%		
3.07 Revise model to address public input								50%	100%
<b>4.0 Affordable Housing Needs Assessment</b>									
4.01 Organize Affordable Housing Advisory Group				100%					
4.02 Conduct data gathering and analysis for Needs Assessment				100%					
4.03 Prepare initial Needs Assessment findings				100%					
4.04 Hold meeting of Affordable Housing Advisory Group					100%				
- Present initial findings; solicit input on strategies					100%				
4.05 Prepare draft recommendations on Affordable Housing Strategies						100%			
4.06 Distribute draft recommendations to Affordable Housing Advisory Group							100%		
4.07 Affordable House Group reviews and provides comments by date to be established								100%	
4.08 Prepare draft report on Affordable Housing									100%
4.09 Distribute for review and comment									100%
4.10 Revise and finalize									50%

*This kind of work plan and schedule can serve as a valuable tool in the initial scoping of a prospective project.*

**D. Create the project teams.** Once the necessary resources have been identified and secured for each project, select a project manager and assemble a project team with the skills and capacity needed to successfully carry it out. Depending on the size of your local government or sponsor organization, you may want to consider spreading involvement across various staff to broaden the opportunity for participation, contribution, and learning. In some cases, a local government or sponsor organization may need to partner with other departments, agencies, or organizations to gather the necessary resources and expertise. If there are a number of projects being pursued, the selection of a lead staff person, such as a planning director or a historic preservation planner, to manage the entire portfolio of projects will help to keep each initiative moving forward with adequate resources.



Once the project is organized, it is time for team members to carry it out. Photo by Ben Hitchings.





*An essential task is providing an annual update to appointed and elected boards on the progress made in implementing the Historic Resilience Community Plan. Photo by Ben Hitchings.*

- E. Operationalize the projects.** The project team needs to refine its charter and then draft a detailed work plan and schedule (see Figure 7.2). Now it is time to launch the project. A public-kickoff event can raise the profile of the project in the community and build stakeholder interest and participation.
- F. Provide an annual update.** To provide accountability and demonstrate progress on implementing the Historic Resilience Community Plan, it is important to provide a periodic update to appointed and elected boards and to other community partners. Doing this once a year is usually sufficient. Staff should report on their implementation progress over the previous year, describe their plans for the year ahead, and request feedback and course corrections to guide the work as it moves forward.
- G. Periodically update the Historic Resilience Community Plan.** As the community makes progress in implementing the Historic Resilience Community Plan, and as circumstances evolve, it is important to regularly update the plan. For example, a community may gain insight over time about which implementation measures are most effective and, as a result, it may want to reprioritize or reconsider the implementation projects selected. The frequency of updates will depend on the community. Typically, plans are updated every five or so years, and new plans are drafted every ten years.

## OPTIONAL TASKS

- Depending on the experience of the project team members, it may be important to train them on project management techniques before they start their work.
- If a community is implementing a number of projects at once, it may want to establish a system for managing the entire portfolio so that the work keeps moving forward with adequate resources.





*It's important to track the annual budget cycle so that projects are ready to compete for this important source of funding during the budget-development process.*

## KEY CONSIDERATIONS

- Department heads and project managers should track the annual budget cycle so that the next set of implementation projects in need of funding is ready to submit as part of the budget-development process.
- It can be helpful to include a mix of smaller and larger projects in the overall project portfolio. Smaller projects are often easier to implement and can help maintain momentum as project sponsors work to secure funding for the larger, often more impactful initiatives.
- One strategy for moving smaller projects forward is to see if there are unspent funds available near the end of the budget year that can be used to advance them.
- As projects are launched and eventually completed, look for opportunities to involve elected officials—in ceremonial groundbreakings and ribbon cuttings, for example—to engage their interest in and support for the projects.
- Developing and implementing community plans is hard work. So it is important to remember to celebrate your successes. See the photos below for two examples of successful historic resilience collaborations in North Carolina.



*The Town of Morrisville, N.C., worked with Esther Dunnegan in the Shiloh Community to save a tobacco barn built by long-standing community member Luther Green. The barn was going to be demolished to make way for new development. Instead, through the work of Ms. Dunnegan, the Morrisville Planning Department, and the developer of Shiloh Crossing, the developer donated the barn to the Town, and the Town had it moved to the Shiloh Community Park. The Parks and Recreation Department and the Public Works Department then set it on a permanent foundation to use in telling the story of the African-American agricultural experience in that community. Photos by Ben Hitchings.*





*The Town of Beaufort, N.C., and the N.C. Historic Preservation Office worked with the property owners of the Duncan House on Front Street to elevate it above the design flood elevation (base flood elevation plus the required freeboard) in a historically appropriate manner. Top photo courtesy of Filter Design Studio, P.L.L.C.; bottom photo courtesy of Kyle Garner, Town of Beaufort.*



## RESOURCES

American Management Association, [amanet.org](https://amanet.org).

Diana C. Mendes, “Project Management Is Good Planning!” (Chicago: American Planning Association, PAS Memo, September/October 2011), [planning.org/pas/memo/2011/sep/](https://planning.org/pas/memo/2011/sep/) (note: you must be an APA member to access this link).

Project Management Institute, [pmi.org](https://pmi.org).

Terry A. Clark, *Project Management for Planners: A Practical Guide* (Chicago: American Planning Association, 2002).







# CONCLUSION

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As the number of extreme weather events grows, North Carolina's historic resources increasingly find themselves in harm's way. These irreplaceable properties help tell our communities' stories. They contribute immeasurably to our local history, culture, and economy, and they help connect us with each other and the communities where we live.

The possibility that these properties will be damaged and destroyed is not inevitable. By using the seven-step process described in this handbook, communities can prepare historic resilience plans that guide meaningful and sustained action to make these important buildings and sites more resilient in the years ahead. This is a legacy worth leaving.

*Opposite page, clockwise from top left: Cape Lookout Lighthouse (1859); Miksch House in Old Salem (1771); historic Cabarrus County Courthouse, Concord, N.C. (1876); American Tobacco Campus, Durham (1874); R.U. Brooks House in Nashville, N.C. (1845; remodeled and enlarged c. 1900). Photo at bottom right by Anne Claire Broughton. All other photos by Ben Hitchings.*

# APPENDIXES

# APPENDIX A. DO-IT-YOURSELF (DIY) GIS MAPPING OPTIONS (FOR STEPS 1 AND 2)

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## DIY OPTION 1. ONLINE MAPPING TOOL

If you don't have access to a GIS system, you can conduct Steps 1 and 2 of the seven-step planning process online using a website maintained by the N.C. Historic Preservation Office (NCHPO). The site, Sea Level Rise and National Register Listings, includes riverine floodplain information.

The following steps will help you create a map of the historic resources that are in flood-prone areas in your community. The "Illustrated Steps" section below provides a more detailed visual guide of these steps.

- i. Click on the following link to access the NCHPO website: [nc.maps.arcgis.com/apps/webappviewer/index.html?id=d4da6a2fe23a47df9e8b032d2d40444f](https://nc.maps.arcgis.com/apps/webappviewer/index.html?id=d4da6a2fe23a47df9e8b032d2d40444f).
- ii. Click on the box in the lower-left corner of the Terms of Agreement screen to agree to the conditions of use.
- iii. Click the "OK" box in the lower-right corner of the Terms of Agreement screen.
- iv. Click on the HPO data-layers icon in the upper right (it looks like a stack of three papers).
- v. A drop-down menu will appear. Click the boxes on the left to select the data layers you would like to view. To see floodplain information, scroll down the list and click on "FRIS Flood Zones." To see specific historic resource information (National Register, local landmarks, etc.), click on the arrow to the left of the Historic Resources box, and select the different types of historic resources you would like to view.
- vi. On the main map, find your part of the state and zoom in to your community.
- vii. Click the legend icon (the circle at the bottom right of the screen) to see what the different symbols on the map mean.

Once you have a map view that you like, you can click on the printer icon (the circle that is second from right at the bottom) to print a PDF or JPG of it.

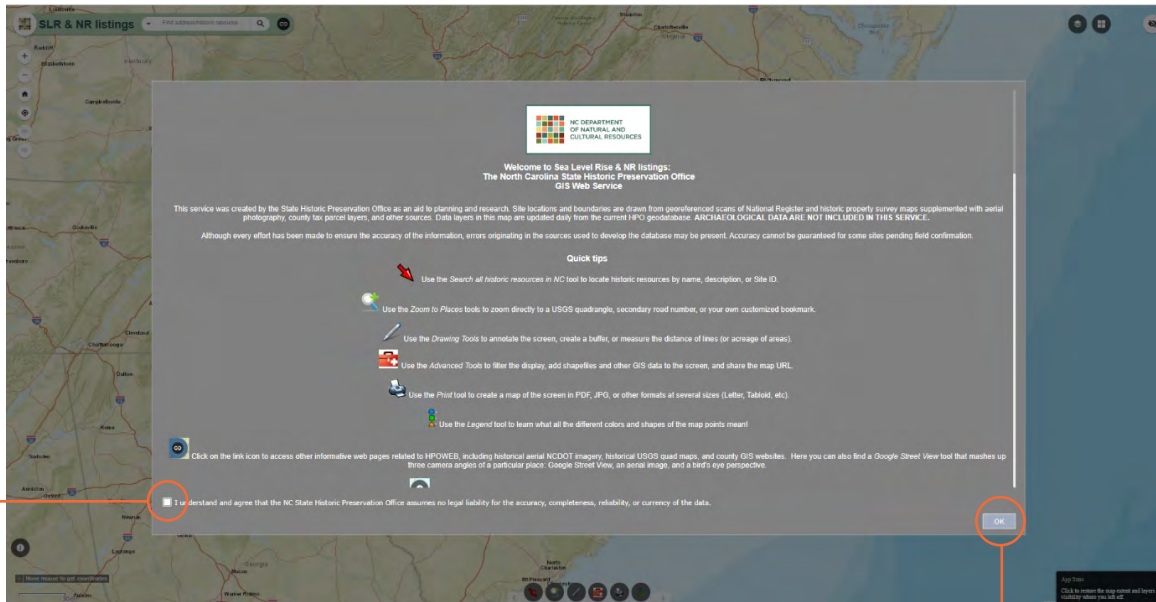
## DIY OPTION 2. OPEN-SOURCE GIS SOFTWARE

Open-source mapping software such as QGIS is available for free download at [qgis.org/en/site/forusers/download.html](https://qgis.org/en/site/forusers/download.html). See the School of Government's "Getting Started with (Q)GIS" handout on the [Historic Resilience Project website](#) for help getting started.

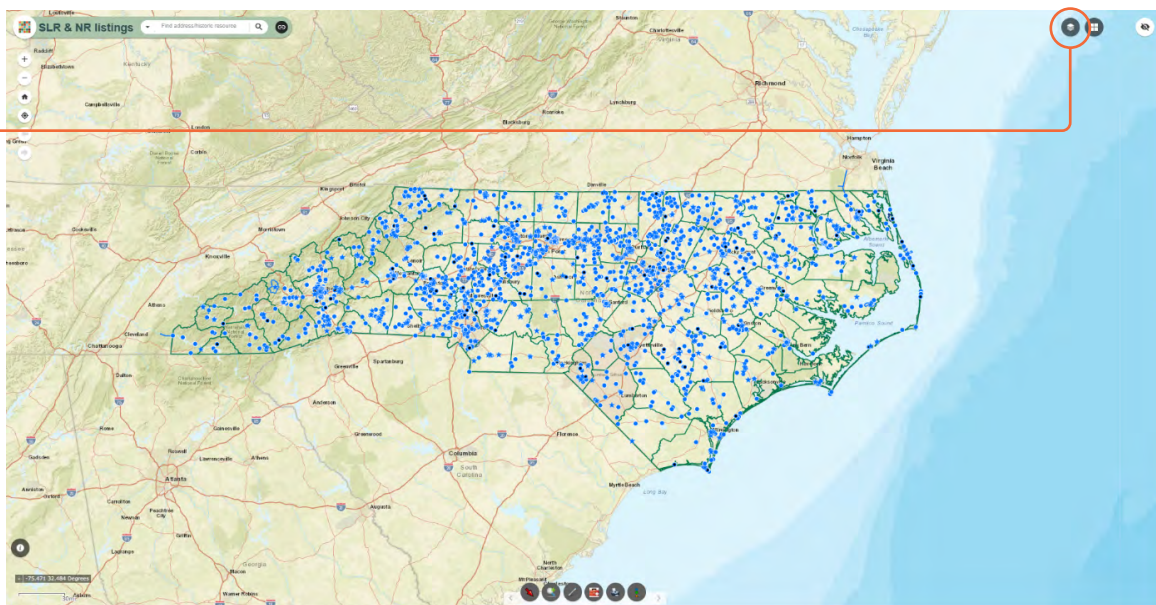


## ILLUSTRATED STEPS FOR USING THE NCHPO ONLINE MAPPING TOOL

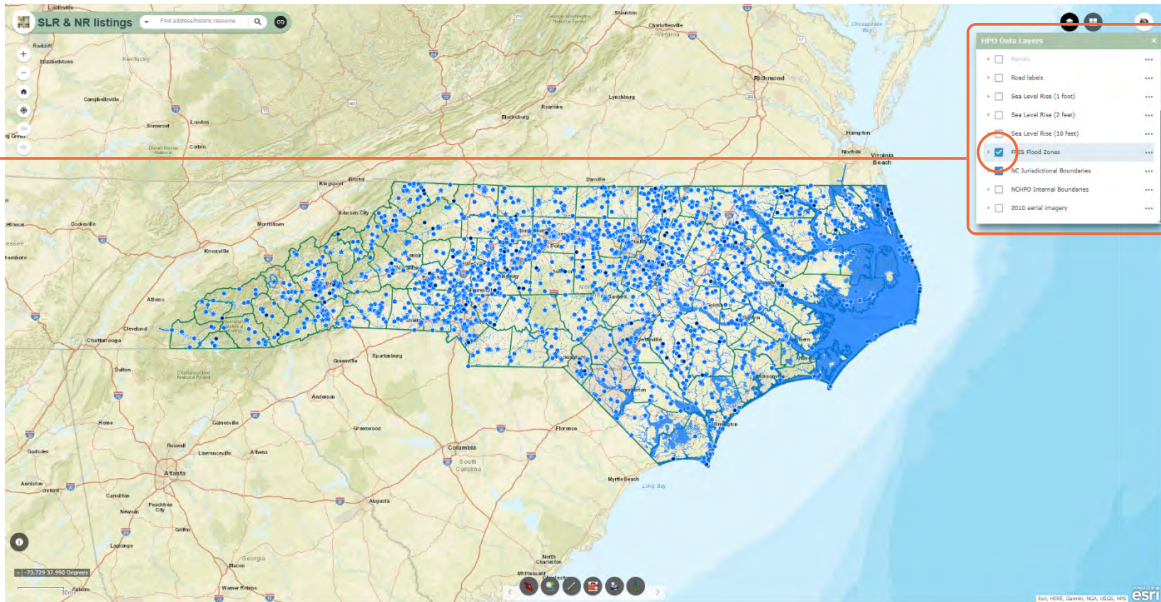
1. Click on this link for the NCHPO Sea Level Rise and National Register Listings: [nc.maps.arcgis.com/apps/webappviewer/index.html?id=d4da6a2fe23a47df9e8b032d2d40444f](https://nc.maps.arcgis.com/apps/webappviewer/index.html?id=d4da6a2fe23a47df9e8b032d2d40444f).
2. Click on the box in the lower-left corner of the Terms of Agreement screen to agree to the conditions of use.



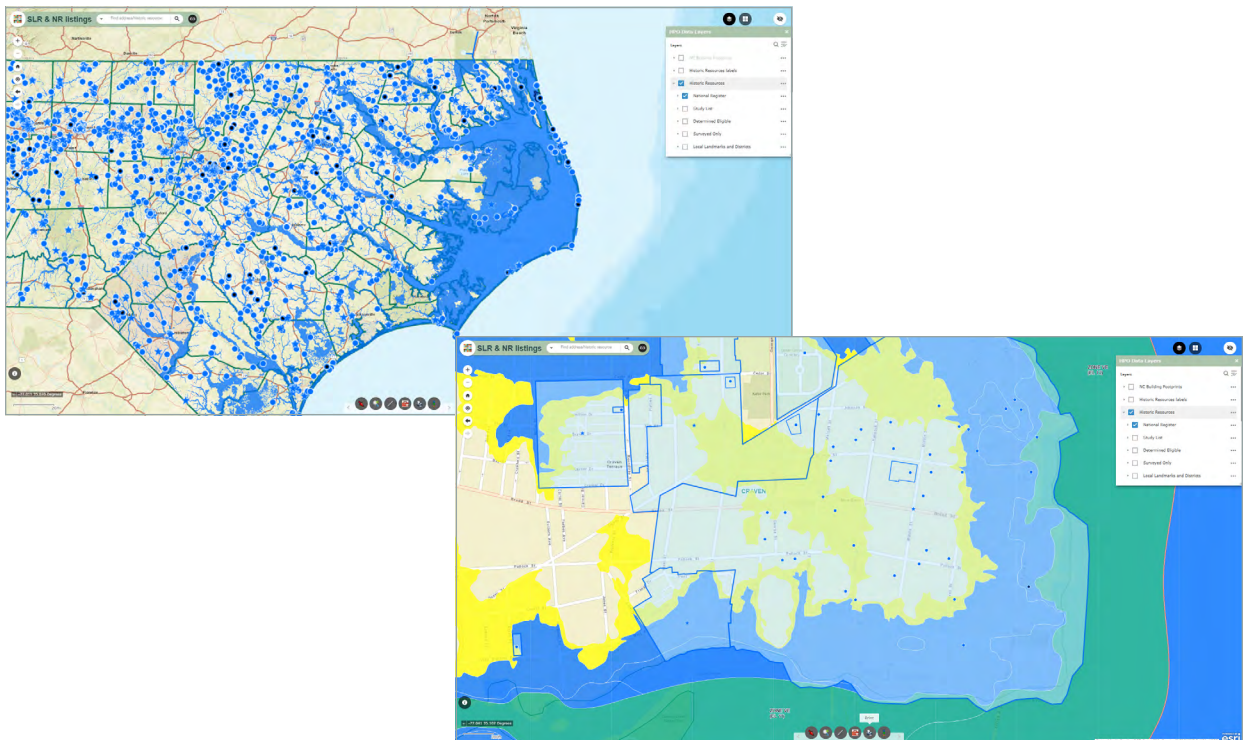
3. Click the “OK” box in the lower-right corner.
4. Click on the HPO data-layers icon (the circle with a stack of three papers) in the upper right.



5. A drop-down menu will appear. Click the boxes on the left to select the data layers you would like to view. To see floodplain information, scroll down the list to “FRIS Flood Zones.” To see historic resource information, click on the arrow to the left of the Historic Resources box and select the different types of historic resources you would like to view.

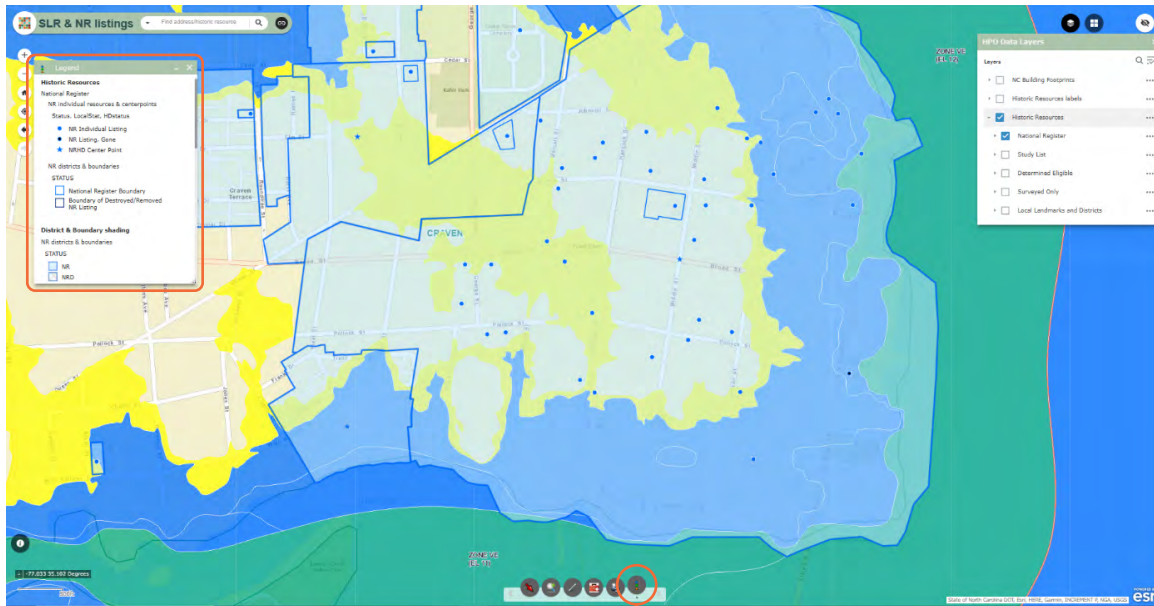


6. On the main map, find your part of the state and zoom in to your community.

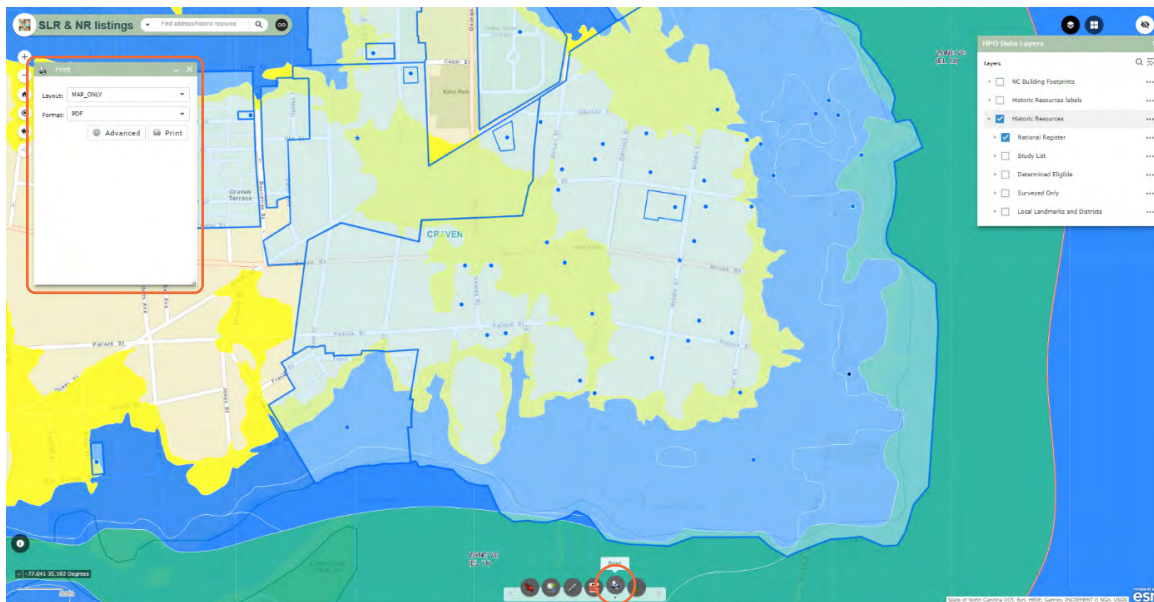




7. Click the legend icon (the circle at the bottom right) to see what the different symbols on the map mean.



8. Once you have a map view you like, you can click on the printer icon (the circle that is second from right at the bottom) to print a PDF or JPG of it.





# APPENDIX B. SAMPLE COMMUNITY WORKSHOP AGENDA

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This community workshop is intended to be a key component in the public-engagement process for developing the Historic Resilience Community Plan. Here is one way to structure it.

## ADVANCE ACTIVITIES

In the weeks leading up to the workshop, identify and reserve a location for the workshop. Then advertise the event broadly and try to build interest and excitement around it. Enlist volunteers to help get the word out. Public-engagement initiatives during the pandemic demonstrated that workshops can also be held successfully online to involve stakeholders who would have difficulty attending an in-person event. To maximize involvement, consider offering both an in-person event and a virtual event a few days later with similar content.

## SUPPLIES

Potential supplies to bring include audiovisual equipment, tables, seating, flip charts, easels, sticky notes, thick pens in assorted colors, sign-in sheets, handouts, and food. You may want to include activities for children so parents can bring their families. If necessary, consider offering free transportation to help those who might otherwise have problems reaching the meeting venue.

## IMMEDIATELY BEFORE STARTING THE MEETING

Set up a fun self-serve exercise as participants come into the meeting room (or join the meeting virtually). One example would be to display a map of the community's historic places and ask participants to identify the ones they have visited.

## MEETING AGENDA

1. **Welcome** (Mayor, Historic Preservation Commission Chair, Planning Board Chair, or Town Manager)
  - a. Welcome participants and thank them for helping to develop a community plan that will make the local historic resources more resilient.
2. **Introduction to the Project** (Town Manager, Planning Director, Historic Preservation Planner, or Planning Consultant)
  - a. Give a presentation describing why we're here and the purpose of the project.
  - b. Provide a general outline of the project schedule and the agenda for the workshop.
  - c. Highlight opportunities for public involvement in the planning process.

- 3. Open House with Posters** (staffed by local government planners, organizational partners, and/or planning consultants)
  - a. Create a series of stations illustrated with visually attractive posters that include engaging graphics and concise verbiage to explain the project. It can be helpful to include a large, clear header at the top of each poster so that workshops participants can see what topic the station addresses if they are standing across the room.
  - b. Consider having a “welcome” table at the entrance to the room with staff and handouts such as an agenda for the workshop and a summary of the project.
  - c. Consider having one station for each step performed to date in the seven-step planning process, along with basic information about the project, such as its purpose, the feedback you’re seeking, and what comes next.
  - d. Consider placing the posters on easels or folding tables to make the stations clear.
  - e. The stations should be organized in a sequence that matches how participants flow through the room. Participants should move sequentially through the steps that have been completed to date.
  - f. Staff should be available at each station to further explain the information presented and answer questions.
  - g. A key station to include is one that asks workshop participants to identify which historic resources in the community they value the most. This is one way to get data to score the “Public Sentiment” factor included in the sample community value scoring systems in Step 5. The project team could present a poster with information about the resources so that participants can vote with sticky dots on the ones they value most. See Step 4 for more details.
- 4. Online Survey**
  - a. Consider preparing a flyer with a web address or QR code for an online survey that participants can share with friends and neighbors. This can provide an important way to get input from people who were not able to attend the in-person workshop.
- 5. Conclude the Meeting**
  - a. Thank participants for attending, and distribute a flyer that describes the next steps in the planning process.
- 6. Take Photographs**
  - a. Consider taking photographs of the workshop with shots of attendees participating in the various activities that can be used in subsequent presentations as well as the final Historic Resilience Community Plan.
  - b. Before dismantling the stations, take photographs of any posters with participants’ comments or sticky dots so that you have a record of their input.
- 7. Debrief with the Project Team**
  - a. A day or two after the workshop, hold a video call or meeting with the project team to debrief on the event, identifying what went well, what could be improved, how the feedback will be summarized, and the next steps in the planning process.

By involving stakeholders in public decisions that will affect their community, the project team can build interest in and support for the historic resilience planning effort and its subsequent implementation.

# APPENDIX C. COMMUNITY-ENGAGEMENT-PLAN TEMPLATE \*

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Community engagement is a process of involving and empowering community members and organizations so that they can inform the historic resilience planning process. This worksheet will help you gather the necessary information to develop a customized strategy for engaging your community in the planning process. The process was adapted from the Community Engagement Plan prepared for the School of Government in the UNC Department of City and Regional Planning 2021 Spring Workshop by masters students Austin Amandolia, Qing Cheng, Katie Koffman, Cheng Ma, Amy Sechrist, Shane Sweeney, Lauren Turner, Ellery Walker, Carly Wang, and Maggie Wiener under the guidance of Lecturer John Tallmadge. The original worksheet was included in the School's *PlanNC Guidebook: A Practitioner's Guide to Preparing Streamlined Community Plans*.

## PART 1. IDENTIFYING KEY ELEMENTS AND PLAYERS

Sit down with local planning officials and work through the following questions together.

### 1. Identify Goals

- a. What are your goals for community engagement in the historic resilience community planning process?

\* An editable Word doc of this appendix is available on the [Historic Resilience Project website](#) for your use and adaptation.



## 2. Identify Stakeholders

A stakeholder is a person or group who has an interest or concern in something, or who will be impacted by the decision or plan. Examples include business owners, community groups, local organizations, churches, schools, families with children, retirees, other residents, elected officials, local staff, etc.

- a. Who are the key groups that will be affected by a historic resilience community plan? Identify at least one key community leader or member from each group who could provide input on the community-engagement process. Try to think outside the box.

HISTORIC RESILIENCE COMMUNITY PLAN'S STAKEHOLDERS		
Group	Unique Contributions It Can Make?	Key Contact
<i>Ex: business owners</i>	<i>speak to the needs and desires of the commercial sector</i>	<i>John Doe john@doe.org</i>

- b. Which groups listed above are not usually involved or are under-represented in local decisions? Are there any groups missing?

### 3. Identify Resources

- a. Do you have a budget for community engagement?
- b. Which local staff and volunteers could help with the community-engagement process?  
Some possible activities include participating in staffing events, presenting to community groups, and performing administrative tasks.

STAFF AND VOLUNTEERS FOR COMMUNITY ENGAGEMENT		
Staff/Volunteer Name	Time to Contribute (Hours/Week)	Role

### 4. Identify Existing Opportunities

- a. What are some community hubs and events where people congregate? For each event, include the date. Examples include parades, festivals, farmers' markets, schools, libraries, churches, popular downtown businesses, and post offices.

- b. What communication resources do you currently use to engage or inform your residents? Some examples include listservs, newsletters, a local website, social media, a newspaper.

- c. What other communication resources might be helpful?

**5. Identify Challenges and Limitations**

- a. Have you undertaken a community-engagement process in the past? What made it successful or challenging? For example, public works projects and grant applications.

- b. What constituencies are most likely to participate? Are there others that might be less able or willing to participate?



c. What concerns might people have about getting involved? What barriers might they face?

d. How can these barriers be overcome?

e. Are there any sensitive subjects, taboos, or controversial topics in the community that may need special treatment or consideration?

f. How could more community engagement be encouraged or incentivized?

## PART 2. OPPORTUNITIES AND LIMITATIONS

Based on the information gathered in your interview with local planning staff, list some of the opportunities and limitations for engagement in this community in the table below.

OPPORTUNITIES AND LIMITATIONS FOR COMMUNITY ENGAGEMENT	
Opportunities	Limitations

## PART 3. ENGAGEMENT TECHNIQUES

The table below lists a number of different techniques that might be employed to obtain additional public input. Consider which of these methods might be best for the community with which you are working.

METHODS OF ENGAGING THE COMMUNITY			
Method	Benefit(s)	Cost (\$-\$\$\$)	Time Commitment
Public meetings	Reaches large numbers of residents	\$\$-\$\$\$	High
Open house	Flexible space for informing and gathering input	\$\$-\$\$\$	High
Community workshop	Structured space for topic-specific community brainstorming	\$\$-\$\$\$	High
Stakeholder interviews	Reaches key community representatives; flexible location	\$\$	Moderate
Focus groups	Facilitates conversation and exchange between community stakeholders	\$\$	Moderate
Surveys	Wide reach; doesn't require attendance; quantitative data	\$\$\$	Moderate
Paper/mail	Accessibility for those without Internet; older generations; doesn't require tech resources	\$\$-\$\$\$	High
Digital	Younger generations; faster response time	\$\$	Moderate
Online engagement	Wide reach; no time, location, or cost restraints for residents	\$-\$\$	Flexible
Social media	Ability to bring community engagement into everyday life; sharing of recorded content; ease of dissemination	\$	Low
Website	Central location; can hold multiple forms of engagement	\$\$	Moderate
Email listservs	Direct communication prevents misinformation	\$	Low
Tabling	Integration into important existing community hubs and events	\$\$	Moderate

### 1. Identify Techniques

- a. Given the identified opportunities and challenges, use the table above to determine which community-engagement techniques would be most feasible and effective for involving the community in the historic resilience planning process.



## APPENDIX D. GUIDANCE FOR SCORING ARCHAEOLOGICAL RESOURCES IN THE COMMUNITY VALUE ASSESSMENT

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The community value scoring methods presented in Step 5 focus on aboveground resources. Yet subsurface resources, while sometimes under-recognized, are extremely important as well. The following guidance on how to score archaeological resources is provided by Dylan J. Clark, Ph.D., RPA, Assistant State Archaeologist at the N.C. Office of State Archaeology (OSA) in the N.C. Division of Historical Resources. This information should be used in conjunction with the information provided in Step 5 in the “Additional Information” section.

### FACTOR 1: NATIONAL REGISTER DESIGNATION

The National Register of Historic Places (NRHP) designations for archaeology (based on the Section 106 review criteria) break down like this:

- Individual listing.
- Part of/contributing to an NRHP Archaeological District.
- Part of an NRHP Historic District or Landmark where archaeology has been determined to contribute to the district/landmark’s status designation (for NRHP nominations, OSA regularly provides a statement of archaeological potential).
- Determined eligible under one of the four NRHP criteria (this and the preceding three designations carry the same value for OSA).
- Unassessed: This means that an archaeological site has technically been surveyed, but for various reasons, it was not evaluated sufficiently to determine its eligibility for the NRHP. It could potentially be significant but needs further archaeological testing.
- Not eligible: An archaeological site was surveyed and determined to be not eligible under any of the NRHP criteria. This could correspond with “low” value, either because it is not unique enough or has a very low quantity/density of archaeological artifacts and lacks “integrity.”

There are no “study list” or “surveyed” categories for archaeology. For OSA, an archaeological site does not exist until the area has been surveyed in some form. However, this does not necessarily mean it has been “systematically surveyed”—a “survey” can be as minimal as a “citizen reported an artifact” or the like. If the site is completely “unsurveyed,” it receives a 0 score for archaeology.

### FACTOR 3: LOCAL HISTORIC VALUE

For Factor 3, a high-value archaeological site could either be a listed, contributing, or determined eligible resource. Unassessed resources could be considered medium value in that they have not yet been fully determined to be significant but further study could reveal that they are. Low value could be applied to

a site that is not eligible, either because it is not unique or there are so many similar examples that it is not likely to yield important (i.e., new) information about history/prehistory.

## FACTOR 4: PUBLIC SENTIMENT

Factor 4 could be used for Traditional Cultural Properties (TCPs). In guidance from the Advisory Council on Historic Preservation (ACHP) and the National Park Service (NPS) (see [National Register Bulletin 38](#) and the [Update of National Register Bulletin 38](#)), TCPs are defined broadly and can include landscapes or landscape features (specific mountains, for example). The designation often depends on public acknowledgment or sentiment. It can also depend on how the place is currently used by people in the community (or by social groups within a larger community). It's an amorphous and flexible category that can accommodate a wide range of sacred landscapes.

## FACTOR 7: DEGREE OF INTEGRITY

The degree of integrity in archaeology can include the aspects that the National Park Service and the National Register outline (location, design, setting, materials, workmanship, feeling, and association), particularly if the site is working toward eligibility under criteria A through C.<sup>1</sup> It's more typical for archaeological sites to be eligible under D, in which case integrity refers to whether the archaeological resources remain intact above or under the ground or if there are intact "cultural features" remaining in an archaeological context (plowing, grading, or erosion has not disturbed the spatial relationship between artifacts that is needed to interpret time periods and human activities). Integrity can determine whether a site is eligible or not eligible for NR designation. For the purposes of scoring, not eligible archaeological sites can be a 1 or a 0, since they are non-contributing and lack the integrity needed for significance (e.g., they are not protected from construction or development).

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1. The National Register of Historic Places criteria for evaluating historic and archaeological resources are:

- A. they are associated with events that have made significant contributions to the broad patterns of our history; or
- B. they are associated with the lives of persons significant in our past; or
- C. they embody the distinctive characteristics of a type, period, or method of construction, or they represent the work of a master, or they possess high artistic values, or they represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. they have yielded, or may be likely to yield, information important in prehistory or history.

For more details, see the N.C. Historic Preservation Office's Fact Sheet 2 at [hpo.nc.gov/nrfacts2-criteria/pdf/download](https://hpo.nc.gov/nrfacts2-criteria/pdf/download).

# APPENDIX E. SAMPLE IMPLEMENTATION PROJECT TABLE\*

NO.	NAME	DESCRIPTION	STAFFING LEAD	EST. COST	FUNDING SOURCES	NEXT STEPS
<b>Short Term (1–2 years)</b>						
<b>Example 1</b>	<b>Conduct Historic Resilience Education Program</b>	Educate property owners about the risks of flooding and the value of having a pre-disaster mitigation assessment conducted to identify ways to make historic properties more resilient.	Planning Dept.	Staff time	N/A	<ul style="list-style-type: none"> <li>• Prepare scope of work</li> <li>• Add to annual work plan</li> </ul>
<b>Example 2</b>	<b>Offer Pre-Disaster Historic Property Mitigation Assessments</b>	Offer subsidized assistance with conducting pre-disaster mitigation assessments to owners of historic properties.	Planning Dept., Building Inspections Dept.	\$30k to pay for contractors	General fund; possible state and/or federal matching funds	<ul style="list-style-type: none"> <li>• Prepare scope of work</li> <li>• Add to annual work plan</li> <li>• Draft a Request for Proposals (RFP) for contractors</li> </ul>
<b>Medium Term (3–5 years)</b>						
<b>Example 3</b>	<b>Provide Historic Resilience Grants</b>	Make matching funds available to owners of historic properties upon application to implement historic resilience measures based on pre-disaster mitigation assessment.	Planning Dept., Building Inspections Dept.	\$100k in Year 1	General fund; possible state and/or federal matching funds	<ul style="list-style-type: none"> <li>• Prepare scope of work</li> <li>• Add to annual work plan</li> <li>• Draft grant program guidelines</li> </ul>
<b>Example 4</b>	<b>Adopt Enhanced Stormwater-Management Requirements</b>	Adopt enhanced stormwater-management ordinance requirements for new development to reduce community flood risks.	Planning Dept., Engineering Dept.	\$30K for consultant to draft ordinance language	General fund	<ul style="list-style-type: none"> <li>• Prepare scope of work</li> <li>• Add to annual work plan</li> <li>• Draft RFP for consultants</li> </ul>
<b>Example 5</b>	<b>Join NFIP Community Rating System</b>	Join Community Rating System (CRS) offered by the National Flood Insurance Program to reduce community risk and lower property-owner insurance premiums.	Planning Dept., Engineering Dept.	\$50k for consultant to draft ordinance language	General fund; state and/or federal hazard mitigation funds	<ul style="list-style-type: none"> <li>• Prepare scope of work</li> <li>• Add to annual work plan</li> <li>• Draft RFP for consultants</li> </ul>
<b>Long Term (6–10 years)</b>						
<b>Example 6</b>	<b>Install Green Infrastructure Stormwater Measures in New Community Center</b>	Use green infrastructure stormwater-management techniques such as bioswales and rain gardens to reduce stormwater runoff in parking lot of new community center.	Public Works Dept.	\$200k for measures	General fund; possible state and/or federal matching funds	<ul style="list-style-type: none"> <li>• Include in project design contract</li> <li>• Include in contractor RFP</li> </ul>

\* An editable Word doc of this table is available on the [Historic Resilience Project website](#).

# APPENDIX F. SAMPLE TABLE OF CONTENTS FOR THE HISTORIC RESILIENCE COMMUNITY PLAN

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The Historic Resilience Community Plan should explain the purpose of the project, describe the analysis conducted, summarize the public's involvement and feedback, present the prioritized list of historic resources, and detail the implementation measures selected to improve historic resilience in the community. Here is a sample table of contents:

## EXECUTIVE SUMMARY

Summarize the contents of the plan and the key implementation measures.

## INTRODUCTION

- A. Explain the purpose of the plan.
- B. Summarize the seven-step process followed to develop the plan.

## CHAPTER 1: IDENTIFYING VULNERABLE HISTORIC RESOURCES

- A. Describe the technical analysis conducted in Steps 1 to 3 to identify vulnerable historic resources in the community.
- B. Present the resulting maps and tables showing the historic properties.
- C. Summarize the results of the policy and ordinance review and opportunities to improve policy integration.

## CHAPTER 2: ENGAGING THE COMMUNITY ABOUT THE VALUE AND VULNERABILITY OF HISTORIC RESOURCES

- A. Describe the public-involvement efforts.
- B. Summarize the public input received.
- C. Describe the process used to calculate a Community Value Score for each vulnerable property.
- D. Present maps and tables of the prioritized vulnerable historic resources.

## CHAPTER 3: IMPLEMENTING THE PLAN

- A. Describe the development of the implementation strategy.
- B. Present descriptions and a summary table of the selected implementation measures.
- C. Discuss next steps to operationalize the plan and track its progress.

## APPENDIXES

Details pertaining to technical analysis and public input can be included in appendixes, which provide a place to share important and complex information without impairing the readability of the plan itself.



# APPENDIX G. SAMPLE IMPLEMENTATION PROJECT CHARTER\*

This form is designed to be completed at the outset of each plan implementation project by the project sponsor (such as the town manager) and the project manager (such as the planning director).

<b>PROJECT CHARTER</b> [insert name of project]		
<b>Project purpose</b>		
<b>Project sponsor</b>	<b>Project manager</b>	
<b>Project</b>	<b>Funding source(s)</b>	
<b>Start date</b>	<b>Completion date</b>	
<b>Scope</b>		
<b>Key deliverables</b>	1.	4.
	2.	5.
	3.	6.
<b>Key milestones</b>	1.	Date:
	2.	Date:
	3.	Date:
	4.	Date:
<b>Key assumptions</b>	1.	3.
	2.	4.
<b>Key risks/issues</b>	1.	3.
	2.	4.
<b>Team</b>	1.	4.
	2.	5.
	3.	6.
<b>Partners</b>	1.	3.
	2.	4.
<b>Success Indicators</b>	1.	3.
	2.	4.

\* An editable Word doc of this form is available on the [Historic Resilience Project website](#).



# GLOSSARY

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Below, you'll find definitions and helpful links for terms that appear in the Historic Resilience Project's publications. The Federal Emergency Management Agency (FEMA) has an extensive [glossary of related terms](#).

## **100-Year Floodplain (1 Percent Annual Chance Floodplain)**

An area with a 1 percent chance of flooding in any given year. This does not mean that an area will *only* flood once every 100 years. For more on the probability of flooding, recurrence intervals, and the possibility of a 100-year flood occurring in successive years, see the U.S. Geological Survey, "[The 100-Year Flood](#)."

## **500-Year Floodplain (0.2 Percent Annual Chance Floodplain)**

An area with a 0.2 percent chance of flooding in any given year. This does not mean that an area will *only* flood once every 500 years. For the probability of a 500-year flood occurring twice in a lifetime, see the U.S. Geological Survey, "[The 100-Year Flood](#)."

## **Base Flood Elevation (BFE)**

The height of flooding in a 100-year flood, as determined by FEMA. The BFE and other information appears on Flood Insurance Rate Maps (FIRMs) that can be accessed at the [FEMA Flood Map Service Center](#).

## **Certificate of Appropriateness (COA)**

An official approval issued by a local preservation commission that is required for altering the exterior of a property that is a designated local historic landmark or in a historic district. In limited circumstances, a COA may be required for altering the interior of a local landmark. Decisions for COAs are based on adopted design standards and evidence presented to the preservation commission through a quasi-judicial process. See [Chapter 160D, Section 947 of the North Carolina General Statutes](#).

## **Climate Change**

Long-term shifts in local, regional, and global weather patterns with a wide range of associated effects—including higher temperatures, rising sea levels, and more intense storms and droughts. See NASA, "[What Is Climate Change?](#)"

## **Coastal Area Management Act (CAMA)**

CAMA is a North Carolina law that protects the state's coastal areas by regulating activities and development that affect them. Administered by the Coastal Resources Commission with assistance from the North Carolina Department of Environmental Quality, CAMA applies to properties in twenty North Carolina counties along the coast. See [Chapter 113A, Article 7 of the North Carolina General Statutes](#). For more on CAMA rules and resources, see [Division of Coastal Management](#).

## **Coastal Flooding**

Coastal flooding occurs when normally dry land near the coast is inundated or covered by water as a result of high or rising tides that coincide with storm surges. See the [FEMA National Risk Index](#).

## **Community Rating System (CRS)**

This voluntary incentive program encourages communities to make efforts to enhance their floodplain management practices beyond the minimum requirements of the National Flood Insurance Program (NFIP). See FEMA, [Floodplain Management Community Rating System](#).

## **Design Flood Elevation (DFE)**

Used for retrofitting purposes, the DFE is the highest elevation of floodwater plus a community's additional freeboard or safety measurement. It is also known as the Flood Protection Elevation.

### Dry Floodproofing

A combination of measures, generally used to protect nonresidential buildings, that keeps water out of all or part of a structure during flooding. See FEMA, [Floodproofing Non-Residential Buildings](#).

### Engineered Structural Soil

A manufactured soil that nourishes and protects plants and trees, especially in urban environments, with a blend of porous materials, such as gravel, sand, clay, and compost. It provides structural support, increased drainage, and ample room for root growth. See CityGreen, [What Is Structural Soil?](#)

### Established Flood Risk

The National Park Service (NPS) defines this term as the “property-specific height of anticipated floodwater,” and it is based on information about a site and its flooding history. The NPS uses this term in lieu of other federal, state, and local regulatory language to avoid confusion about flood risks. For more, see [The Secretary of the Interior’s Standards for Rehabilitation & Guidelines on Flood Adaptation for Rehabilitating Historic Buildings](#).

### Floodplain

An area of land that is susceptible to inundation by floodwaters from rivers, streams, or other sources. Communities in a regulatory floodplain, or flood-hazard area, must regulate building development, construction, and repair to participate in the NFIP.

### Floodplain Management Ordinance

To participate in the NFIP, a community must adopt a Floodplain Management Ordinance, consisting of regulations to ensure that flood hazards are considered in all official actions relating to land management and use.

### Floodway

The portion of the regulatory floodplain that must be kept free of development so that flood elevations will not increase beyond a set limit—a maximum of one foot, according to NFIP guidelines. The floodway usually consists of the channel of a river or other watercourse and the land alongside it. Also known as a regulatory floodway.

### Freeboard

The height that is added to the Base Flood Elevation as a safety measure (it’s usually one to three feet above the BFE). It determines the lowest level of a structure that must be elevated or floodproofed to meet state or community floodplain management regulations.

### Green Infrastructure

Unlike gray infrastructure, such as sewer systems, green infrastructure filters and absorbs stormwater at its source. The Federal Water Pollution Control Act defines it as the “range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.” See the EPA’s [“What Is Green Infrastructure?”](#)

### Hazard Mitigation

The process of taking action to reduce or eliminate the potential loss of life and property in future disasters. FEMA has more information about hazard-mitigation measures and funding opportunities at [Hazard Mitigation Assistance Grants](#).

### High-Risk Flood Zone

Also known as Special Flood Hazard Areas (SFHAs), these zones are in the 100-year floodplain and experience frequent and severe flooding. Since they have a 26 percent chance of flooding over the course of a thirty-year mortgage, they face stricter development and flood-insurance regulations. On flood maps, high-risk zones are labeled “A” in inland or riverine areas and “V” in coastal areas.

### High-Tide Flooding

High-tide flooding occurs when a local sea level temporarily exceeds the threshold height for flooding. It is caused by extremely high tides, not storm surge or riverine flooding. See the [U.S. Climate Resilience Toolkit](#).

### Historic Character

The distinctive features and visual elements that add architectural and historic interest to structures, streets, and sites. See the National Park Service, [Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character](#).

### Historic Easements and Protective Covenants

These legal documents provide long-term protection to a historic property, preventing demolition and modifications that could alter its historic character. The restrictions run in perpetuity and are transferred with the property’s deed. See [Preservation North Carolina](#).

### Hydrodynamic Forces

The forces created by flowing water as it presses against the front of a structure, drags along its sides, and pulls on the back. Very fast-moving water can sometimes push a building off its foundation or carry debris that can strike



and damage it. For information about hydrodynamic and hydrostatic forces, see FEMA, [Engineering Principles and Practices for Retrofitting Flood-Prone Residential Structures](#).

### Hydrostatic Forces/Hydrostatic Load

The lateral and vertical forces of standing or slow-moving water that exert intense pressure on walls and floors. Hydrostatic forces can cause significant structural damage.

### Moderate-Risk Zone

These areas are commonly referred to as the 500-year flood zone, meaning that in any given year they have a 0.2 percent chance of flooding. Although there are usually fewer regulations associated with moderate-risk areas, flooding should be considered an inevitable eventuality. On flood maps, these areas are labeled either as “B” zones or “X (shaded)” zones.

### National Flood Insurance Program (NFIP)

Managed by FEMA, the NFIP provides federally backed flood insurance to residents, business owners, and communities. The rates are determined by FIRMs that delineate areas with high, moderate, or low risks of flooding. FEMA has more information at [Flood Insurance](#).

### Nuisance Flooding

Temporary but recurring shallow flooding that does not pose an immediate threat to public safety or cause major property damage but does disrupt daily activities, strain infrastructure, and lead to minor property damage. Nuisance flooding may occur along the coast, where it is also known as high-tide flooding, or in other low-lying areas. See more at the National Park Service, [“Coastal Geohazards—Nuisance Flooding.”](#)

### Resilience

The National Academies of Sciences, Engineering, and Medicine define resilience in a 2012 report as “the ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events.” See the full report, [Disaster Resilience: A National Imperative](#).

### Riverine Flooding

A flood that occurs when a stream or river overflows its banks and spills into adjacent areas. See the [FEMA National Risk Index](#).

### Special Flood Hazard Area (SFHA)

A designation on FEMA flood maps for a high-risk area where 100-year floods can be expected. The SFHA zones on a Flood Hazard Boundary Map (FHBM) or a FIRM are A, AO, AI-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO,

AR/AI-A30, VI-V30, VE, or V. The NFIP’s flood management regulations must be enforced in these areas, and flood insurance is mandatory.

### Storm Surge

An abnormal, usually sudden rise in sea level that results from atmospheric pressure changes associated with hurricanes, cyclones, and severe storms.

### Stream Restoration

A complex process that improves the function of a damaged or degraded stream channel and returns it to a more natural condition with a dynamic, self-sustaining ecosystem. For information on North Carolina’s stream-restoration efforts, see the [North Carolina Department of Transportation Stream Mitigation Program](#).

### Wet Floodproofing

Protective measures that allow floodwaters to enter and flow through parts of a building so that the internal and external hydrostatic forces are minimized and equalized. Wet floodproofing is usually limited to parking, storage, or special-access areas rather than living spaces.

### Zone AE

FEMA uses zones on its flood-insurance maps to convey the levels of risk in different geographic areas. Zone AE is considered a high-risk area in the 100-year floodplain. The “AE” label is now used on FIRMs instead of “AI-A30.”

### Zone AH

Zone AH has a 1 percent annual chance of shallow flooding, ranging in depth from one to three feet. These areas have a 26 percent chance of flooding over the life of a thirty-year mortgage.

### Zone AO

Zone AO is a river or stream flood-hazard area or an area with a 1 percent or greater chance of shallow flooding each year, usually in the form of sheet flow, ranging in depth from one to three feet. These areas have a 26 percent chance of flooding over the life of a thirty-year mortgage.

### Zone V

Zone V is a coastal area with a 1 percent or greater chance of flooding each year. The NFIP requires that buildings in this zone are anchored to resist wind and water forces, elevated above the BFE, and protected from waves, hurricane-force winds, and erosion. FEMA requires a V-Zone Certificate for all structures built or substantially modified in this zone. The [North Carolina Floodplain Mapping Program](#) has documents, certificates, and other resources.

# USEFUL RESOURCES

RESOURCE	DESCRIPTION/PURPOSE
<b>Historic Resilience</b>	
National Park Service's <a href="#">Guidelines on Flood Adaptation for Rehabilitating Historic Buildings</a> (PDF)	A document with technical preservation guidance for historic properties at risk of flooding.
<a href="#">NCHPO Disaster Preparedness and Response</a>	A webpage with information and links for property owners on disaster preparedness and response.
<a href="#">Disaster Mitigation for Historic Structures: Protection Strategies</a> (PDF)	A manual by 1000 Friends of Florida for integrating historic preservation and disaster preparedness.
<a href="#">Resilient Rehab: A Guide for Historic Buildings in Miami-Dade County</a> (PDF)	Guidance from Miami-Dade County on how to protect historic resources from natural hazards.
<b>Local Examples</b>	
<a href="#">Edenton Historic District Design Standards</a> (PDF)	Design standards for Edenton's historic districts, including a "Disaster Preparedness and Prevention" chapter.
Charleston's <a href="#">"Design Guidelines for Elevating Historic Buildings"</a> (PDF)	Design guidelines focusing on these key aspects of elevation projects for historic buildings: streetscape/context, site design, foundation design, and architecture/preservation.
Baltimore's <a href="#">Fells Point Flood Mitigation Guidelines</a> (PDF)	Guidelines for property owners and tenants to minimize the impact of flooding on historic rowhouse properties.
FEMA's <a href="#">Homeowner's Guide to Retrofitting: Six Ways to Protect Your Home from Flooding</a> (PDF)	A guide to protecting your home from flooding.
<b>Mapping and Data</b>	
<a href="#">HPOWEB 2.0</a>	A mapping tool and database from NCHPO of historic resources throughout North Carolina.
<a href="#">African American Heritage &amp; Culture of North Carolina</a>	A digital asset map of cultural sites and natural resources developed by the N.C. African American Heritage Commission and the Conservation Trust for North Carolina.
<a href="#">FIMAN</a> (Flood Inundation Mapping and Alert Network)	A real-time digital tool that provides rain and stage gage data, flood inundation maps, flooding alerts, and other information.
<a href="#">NC FRIS</a> (North Carolina Flood Risk Information System)	Digitally accessible flood maps, reports, risk assessments, and more.

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RESOURCE	DESCRIPTION/PURPOSE
<a href="https://flood.nc.gov">NC Floodplain Mapping Program (flood.NC.gov)</a>	Extensive information, maps, and resources on flooding in North Carolina.
<a href="#">Sea Level Rise and National Register Listings</a>	A mapping tool and database from NCHPO that enables users to overlay historic resources and flood-hazard areas.
<a href="#">FEMA Glossary</a>	FEMA's official glossary of emergency-management terms.
<b>Planning Resources</b>	
State of North Carolina's <a href="#">Hazard Mitigation Plan</a> (PDF)	A federally mandated plan identifying potential hazards in North Carolina and actions that could reduce the loss of life and property.
FEMA's <a href="#">Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning</a> (PDF)	A planning guide for the protection of historic resources from natural hazards.
<a href="#">Plan Integration for Resilience Scorecard™ Guidebook: Spatially Evaluating Networks of Plans to Reduce Hazard Vulnerability, Version 2.0</a> (PDF)	A guide to evaluating the consistency of adopted community plans and the extent to which they potentially strengthen or weaken community resilience.
<a href="#">PlanNC Guidebook: A Practitioner's Guide to Preparing Streamlined Community Plans</a>	A School of Government handbook that describes a seven-step process for efficiently preparing community plans.





