2022

# HERTFORD COUNTY RESILIENCE STRATEGY

**North Carolina Division of Coastal Management**

**Resilient Coastal Communities Program**

**Phase 1 and 2 Report**

Prepared by SWCA Environmental Consultants

4/15/2022

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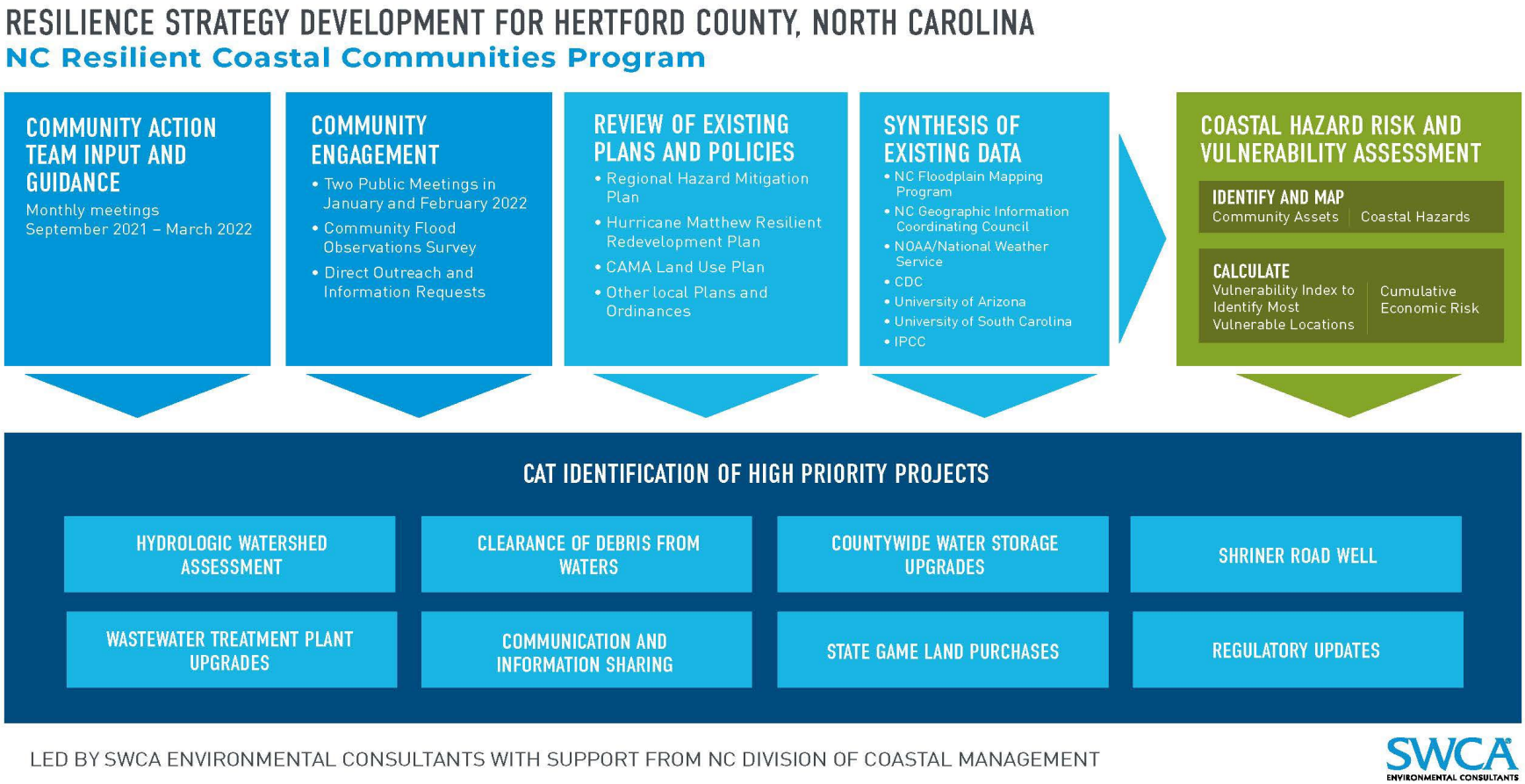
# SUMMARY


RESILIENCE STRATEGY DEVELOPMENT FOR HERTFORD COUNTY, NORTH CAROLINA
NC Resilient Coastal Communities Program
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Monthly meetings
September 2021 – March 2022
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WASTEWATER TREATMENT PLANT UPGRADES
COMMUNICATION AND INFORMATION SHARING
STATE GAME LAND PURCHASES
REGULATORY UPDATES
LED BY SWCA ENVIRONMENTAL CONSULTANTS WITH SUPPORT FROM NC DIVISION OF COASTAL MANAGEMENT
SWCA
ENVIRONMENTAL CONSULTANTS

# 1 INTRODUCTION

This Resilience Strategy was developed for Hertford County under the North Carolina Resilient Coastal Communities Program (RCCP) by the North Carolina Division of Coastal Management (DCM) and SWCA Environmental Consultants (SWCA) in consultation with a local Community Action Team (CAT). The objectives of the RCCP are to 1) address barriers to coastal resilience in North Carolina at the local level, such as limited capacity, economic constraints, and social inequities; 2) assist communities with risk and vulnerability assessments and developing a portfolio of planned and prioritized projects; 3) advance coastal resilience projects to be shovel-ready, or ready for implementation; and 4) link communities to funding streams for project implementation. The RCCP includes four phases.

- Phase 1: Community Engagement and Risk/Vulnerability Assessment
- Phase 2: Planning, Project Identification, and Prioritization
- Phase 3: Engineering and Design
- Phase 4: Project Implementation

This Resilience Strategy document includes the results of Phases 1 and 2 of the RCCP: a risk and vulnerability assessment and a priority resilience project portfolio. The process to develop this Resilience Strategy took place between August 2021 and April 2022 and included monthly CAT meetings, community engagement via two public open house meetings, a community flood observations survey, and direct outreach to local stakeholders. Projects identified through this process are intended to build on and align with existing plans such as the regional Hazard Mitigation Plan and Coastal Area Management Act (CAMA) Land Use Plan. At least one high-priority project identified through this process will be eligible for Phase 3 funding to support design and engineering work beginning in summer 2022, and subsequent Phase 4 funding will support project implementation.

## 1.1 Community Overview

Hertford County is situated in northeastern North Carolina to the north of the Albemarle Sound toward its western end. It is bordered to the south by Bertie County, to the west by Northampton County, to the north by Virginia, and to the east by the Chowan River (Figure 1). The Meherrin and Wiccacon Rivers drain much of the interior of the county eastward toward the Chowan. Some watersheds on the western side of the county drain toward the Roanoke River. Hertford County has a population of about 21,500 people as of the 2020 census, and covers an area of 360 square miles, of which 7.3 square miles are water (U.S. Census Bureau 2012). Much of the land is used for agriculture or forestry. The largest town, Ahoskie, has a population of about 4,600 and the county seat of Winton has a population of about 700 (U.S. Census Bureau 2021).

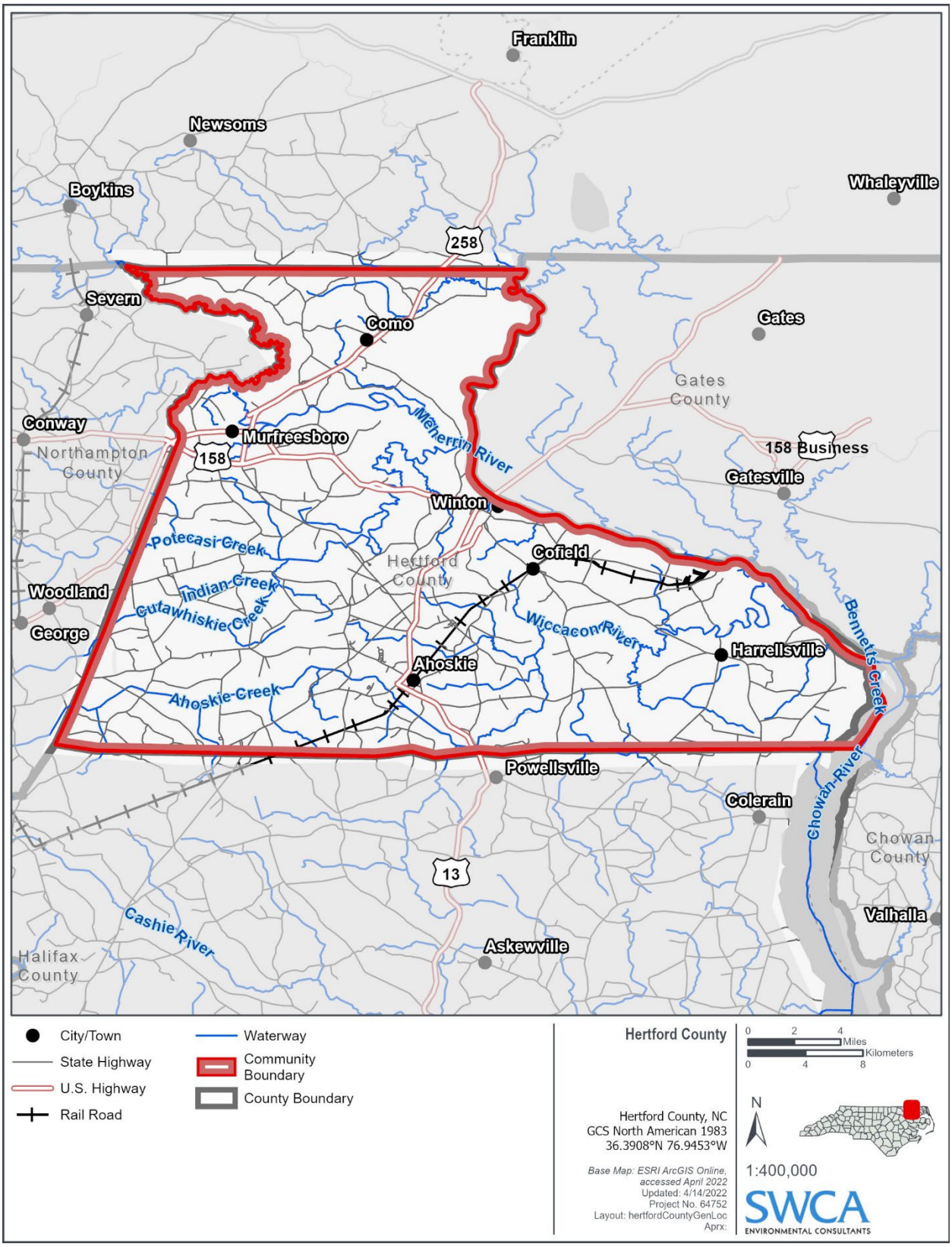


**Figure 1. Map of Hertford County, North Carolina showing towns, waterways, and major roads.**

# 2 COMMUNITY ACTION TEAM

Hertford County's Community Action Team (CAT) was formed in consultation with the County Planning and GIS Director and includes several county departmental directors and a professor at Chowan University. Several individuals, including local mayors and town administrators and representatives of other county departments and regional organizations were copied on CAT correspondence, but did not participate in monthly CAT meetings. A complete list of members is provided in Appendix A.

The CAT reviewed and provided feedback on the relevant coastal hazards, helped identify asset locations, identified additional local contacts with information about assets, provided review and feedback on the vulnerability and risk assessment results, supported planning and hosting of public open house meetings, agreed on criteria for prioritization of projects, contributed to definition of candidate projects, and reached agreement on the final list of high-priority projects included in this Resilience Strategy document.

CAT meetings were held approximately monthly between October and March for a total of seven CAT meetings. Summaries of all seven CAT meetings are provided in Appendix B.

# 3 VISION AND GOALS

The following vision and goals informed the development of Hertford County's Resilience Strategy.

## 3.1 Vision

The Vision Statement was developed collaboratively by the CAT to reflect their resilience vision for the county:

> *Vision: Hertford County is a resilient and vibrant community where citizens and visitors alike enjoy recreation and ecotourism activities supported by protection of the natural environment. Hertford County exemplifies a culture of resilience to coastal hazards through inclusive partnerships focusing on both effective response and recovery, and pro-active measures to prevent or minimize future damage.*
>
> *Our Approach to Resiliency: Communities within Hertford County seek to improve the local quality of life through sustainable economic development that enhances and protects the environment and culture of the region. Natural and cultural resource-based science, eco-tourism, and environmental education and outreach to the public help to diversify the local economy while minimizing the impacts of hazards. We employ an integrated approach to coastal resilience that addresses both upstream and downstream hydrologic dynamics, the unique physical and environmental settings of inter-connected water bodies, and the ongoing changes in climate and sea level rise.*

## 3.2 Goals

Resilience Goals were developed collaboratively by the CAT following initial review of the Vulnerability and Risk Assessment results and preliminary project list. The goals are intended to reflect the general resilience priorities for the community and identify themes and concerns. Goals are intended to support the vision and to be used to identify priority projects.

1. Local Policy and Regulations: Update all local ordinances to include resilience measures and review flood resilience-oriented ordinances already in place (including municipal ordinances) to identify needed updates or improvements to support resilience

2. Infrastructure/Nature Based: Complete three high-priority infrastructure/nature-based resilience projects by 2025

3. Pursue high priority resilience projects over the next 3 to 5 years

    a. Confirm which previously identified projects are already budgeted for by the county by June 2022

    b. Identify other agencies involved in implementing high-priority projects

    c. Identify sources of external funding for high-priority projects not already funded

    d. Complete feasibility studies and cost-benefit analysis for five high-priority projects to identify tiers of projects that match different funding sources

    e. Secure external funding for high-priority projects

    f. Work with Stephanie Harmon to get priority projects into North Carolina Department of Transportation lineup for future implementation post-2026 (or earlier, if possible)

4. Education, Awareness, and Incentive Programs: Make public information about flooding and resilience more accessible to residents

    a. Centralized website

    b. Information included with water bills/tax bills

The high-priority projects identified by the CAT are intended to align with this vision and move Hertford County toward completing these goals.

# 4 COMMUNITY ENGAGEMENT STRATEGY

The goals defined by the DCM for community engagement within the RCCP are to:

1. Promote representation and equitable outcomes for marginalized communities and vulnerable populations
2. Build trust, relationships, and partnerships
3. Provide feedback and validation of the Risk and Vulnerability Assessment developed by the CAT
4. Assist with prioritizing projects for Phases 3 and 4 of the Program

To achieve these goals, SWCA worked with the CAT to implement an approach to community engagement during Phases 1 and 2 of the RCCP that included the following elements.

## 4.1 Ongoing Online Engagement

Online engagement was conducted through the project website (Appendix C). The website included the following specific elements:

**Interactive webmap** – This map showed all the asset locations and hazard layers and allowed users to pan and zoom and turn on and off hazard layers to create a custom view showing the location and hazards of interest to them.

**Online survey** – The survey was available online and provided in hard copy at the first public meeting and asked respondents to identify the location, date, and time where they have observed flooding; describe the extent, observed depth, and maximum depth of the flooding; and to identify any critical locations or services they were unable to access during this flood event (e.g., school, workplace, medical facilities, clean water). The online version included an option for respondents to upload photographs of the flooding.

**Links to additional resources about risk reduction/preparedness** – These included the Ready NC Hurricane Preparedness Guide, guidance from the North Carolina Department of Health and Human Services on preventing and cleaning up mold/moisture, what to do with drinking water wells and septic systems in flooding conditions, and post-disaster resources from Legal Aid NC.

The website also included project contact information, a sign-up field to receive email updates, and information about upcoming public meetings.

## 4.2 Direct Two-Way Information Sharing

Two-way information-sharing methods included the two in-person public open house meetings (see attendance list in Appendix D), and individual outreach to key stakeholders. SWCA and the CAT members shared information with the community about the RCCP process, the public open house meetings, and the online survey via hard copy fliers, social media postings (Figure 2), emails to project contacts and existing listservs, and notices in local news outlets. Details of the specific strategies used to engage specific audiences in Hertford during the RCCP process are detailed in Table 1.


**Figure 2. Example social media post used to advertise the February public meeting.**

**Table 1. Engagement Strategies Used for Community Engagement in Hertford, North Carolina**

| Strategy | Audience and Timing | Goals |
|---|---|---|
| **Direct Outreach to Individual Stakeholders**<br>Via email and telephone | People who may have key information to share, including town and county staff and those who serve or represent vulnerable and underrepresented groups<br>*December–February* | -Gather key information missing from our assessment<br>-Understand perspectives of people otherwise underrepresented in this process |
| **Public Open House No. 1 – Risk Assessment**<br>-"Where I live and work" map at sign-in table<br>-Big interactive map for identifying assets and hazards<br>-Posters explaining types of resilience projects<br>-Collect questions for follow-up<br>-Collect survey responses and other information to incorporate<br>-Kids' corner with drawing prompt | Local residents, town and county staff, and business owners<br>*Mid-January* | -Introduce RCCP<br>-Hear and answer questions about hazards and provide personal actions to decrease risk<br>-Ground-truth the asset and hazard information collected and gather feedback and validation of the Risk and Vulnerability Assessment developed by the CAT<br>-Collect contact information for interested parties for updates and follow-up |
| **Survey with Interactive Map**<br>-Identifying specific locations on the map that have flooded in the past<br>-Identifying how hazards have impacted assets and access to assets in the past<br>-Online and linked on all public outreach materials<br>-In hard copy at the open house | Local residents and business owners, including those who were unable to attend the open house when it was scheduled<br>*January, during and following first open house* | -Ground-truth the asset and hazard information collected<br>-Gather feedback with which to validate the Risk and Vulnerability Assessment<br>-Gather input on criteria to be used in prioritizing resilience projects<br>-Collect contact information for interested parties for updates/follow-up |
| **Public Open House No. 2 – Priority Projects**<br>-Posters conveying preliminary project list<br>-Collect additional project ideas<br>-Collect questions for follow-up<br>-Collect comments to incorporate | Local residents, town and county staff, and business owners<br>*Late February* | -Review preliminary project list<br>-Learn about which projects the community considers highest priority, to assist with prioritizing projects |
| **Provide hazard preparedness activity for children at Public Open House meeting** | Youth<br>*First open house session* | -Engage vulnerable and underrepresented populations |
| **Public Open House meeting located at Chowan University and advertised to students taking related courses** | Youth<br>*First open house session* | |
| **Provide Spanish translations of RCCP program handout and some risk preparedness materials** | People with limited English proficiency<br>*For both open house sessions* | |
| **Public Open House meeting held in conjunction with County Commissioners meeting and advertised to Commissioners** | Decision-makers representing racial and ethnic minority populations and flood-prone areas<br>*Second open house session* | |

# 5 REVIEW OF EXISTING LOCAL AND REGIONAL EFFORTS

SWCA reviewed existing local and regional plans, ordinances, policies, and programs to identify resilience strategies already in place, previously identified assets, previously identified coastal hazards, and potential resilience projects to inform the RCCP process. Results of this review are summarized below in Table 2.

**Table 2. Existing Documents Reviewed for Hertford County**

| Document Name (Year) | Information Gleaned | | | |
|---|---|---|---|---|
| | Asset Locations | Hazard Information | Potential Resilience Projects | Resilience Strategies Already in Place |
| Hertford County Zoning Ordinance (2021) | | | • | • |
| Albemarle Region Hazard Mitigation Plan Update (2020) | • | • | • | • |
| NC Climate Risk Assessment and Resilience Plan (2020) | | | | • |
| State of North Carolina Hazard Mitigation Plan (2018) | | | | • |
| Hurricane Matthew Resilient Redevelopment Plan – Hertford County (2017) | | | • | • |
| Albemarle Region Hazard Mitigation Plan (2016) | • | • | | • |
| CAMA Land Use Plan – Hertford County (2011) | | | • | • |

# 6 RISK AND VULNERABILITY ASSESSMENT REPORT

To assess the overall coastal hazard risks and vulnerabilities Hertford County faces, SWCA identified important places in the county (assets) and types of coastal hazards that could impact the county (hazards), with input and oversight from the CAT. SWCA used this information to evaluate the county's key vulnerabilities and economic risks. The methods and results of this analysis are detailed below.

## 6.1 Identification and Mapping of Assets and Hazards

For purposes of this assessment, critical assets and natural infrastructure (assets) were defined as places that are important for emergency preparedness, response, recovery, and sustaining community life and sense of place  The types of assets identified in Hertford County fell into the categories of Cultural Sites, Emergency Services, Employers, Food and Supplies, Government Facilities, Hazardous Waste, Health and Medical, Law Enforcement/Corrections, Parks and Recreation (including natural resources), Residential, Roadways, Schools, and Utilities.

SWCA developed an initial asset list for the county starting with assets identified from existing information sources including the Albemarle Regional Hazard Mitigation Plan and the National Register of Historic Places (NRHP). This list was then reviewed and revised by the CAT members and shared with other knowledgeable county staff for additional feedback. A preliminary map showing asset locations was shared during the first open house meeting in January and meeting attendees pointed out additional important locations, which were added to the asset list.

SWCA also inquired with the State Historic Preservation Office (SHPO) about additional eligible properties not yet listed in the NRHP within Hertford County. The SHPO reported there are 330 sites recorded in the county and 61 cultural resources reports on file for projects conducted in the county. Looking at all these sites was beyond the scope of the RCCP Phases 1 and 2. Should these be of interest to the county in the future to help identify additional community assets, the SHPO can provide more detail about these sites and reports.

To identify relevant coastal hazards, SWCA looked at those identified as [high hazard] in the Albemarle Regional Hazard Mitigation Plan and identified appropriate data sets to represent these hazards at the local level. Hazards evaluated for the county include Sea Level Rise (both along coast lines and in low-lying areas where increases in the water table can result in inland flooding), Storm Surge inundation (coastal storm surge from increasing high tides during simulated storm events), and flooding because of high Precipitation events (areas likely to be flooded such as Federal Emergency Management Agency [FEMA]-defined 100-year and 500-year floodplains as well as historical records of event flooding). Data sets used to represent these historical accounts include both geospatial data and input from community members at open house events. Data sets used to represent community hazards were selected after an extensive review of data documentation and similar reports in the region and are detailed in Appendix E.

In total, we identified and assessed vulnerability and risk from coastal hazards to 190 total asset locations for Hertford County (Table 3).

## 6.2 Vulnerability Assessment

Vulnerability scores for county assets were calculated by expanding on the framework outlined in the RCCP Handbook. The handbook defined an asset's vulnerability as a combination of the risk to the asset from potential hazards based on the asset's location (Exposure), the degree to which an asset would be affected if exposed to hazards (Sensitivity), and any measures already taken to offset the negative impacts if the asset is exposed to hazards (Adaptive Capacity). To ensure a range of vulnerability scores for project prioritization, Exposure, Sensitivity, and Adaptative Capacity scores were calculated using a 0 to 5 scale.

**Asset Vulnerability = Exposure + Sensitivity – Adaptive Capacity**

**Exposure**, ranked from 0 (no exposure) to 5 (high exposure), represents the combined hazard exposure as an average of Sea Level Rise Exposure, Precipitation Exposure, and Storm Surge Exposure. Individual hazard exposure scores for Sea Level Rise and Storm Surge were calculated by assigning scores 0 to 5 to capture the likelihood of an asset being exposed to a hazard and the severity of that hazard, then using an exposure matrix (Figure 3) to classify the exposure as none (0), low (1), moderately low (2), moderate (3), moderately high (4), and high (5) (see Figure 3). Precipitation Exposure was calculated using a similar approach, but to account for localized flooding during high-intensity storm events, a Reported Event Inundation Factor 2 or more points was added to each area to reflect the number of times data showed it had been flooded during historical events. Additional information on how hazard severity and probability were assigned for each hazard type is provided below in the description of vulnerability assessment fields.

**Sensitivity**, ranked 0 (no effect) to 5 (highly affected), is the sum of the asset type sensitivity (0–3) and social sensitivity (0–2) of an asset. Asset type sensitivity scores were assigned categorically using assumptions about how a hazard would affect the physical infrastructure and functionality of an asset. Social Sensitivity was calculated by determining if an asset is in or serves a socially sensitive community based on social vulnerability index scores and input from stakeholder meetings (1 point) and if an asset inherently serves a socially vulnerable population (1 point).

**Adaptive Capacity**, ranked 0 (no ability to moderate hazard damage), –1 (minor retrofits to moderate some hazard damage), –3 (retrofitted/modified to moderate most hazard damage), –5 (retrofitted/modified to offset all hazard damage), was assigned on an asset-specific basis from CAT and community input during open house meetings.

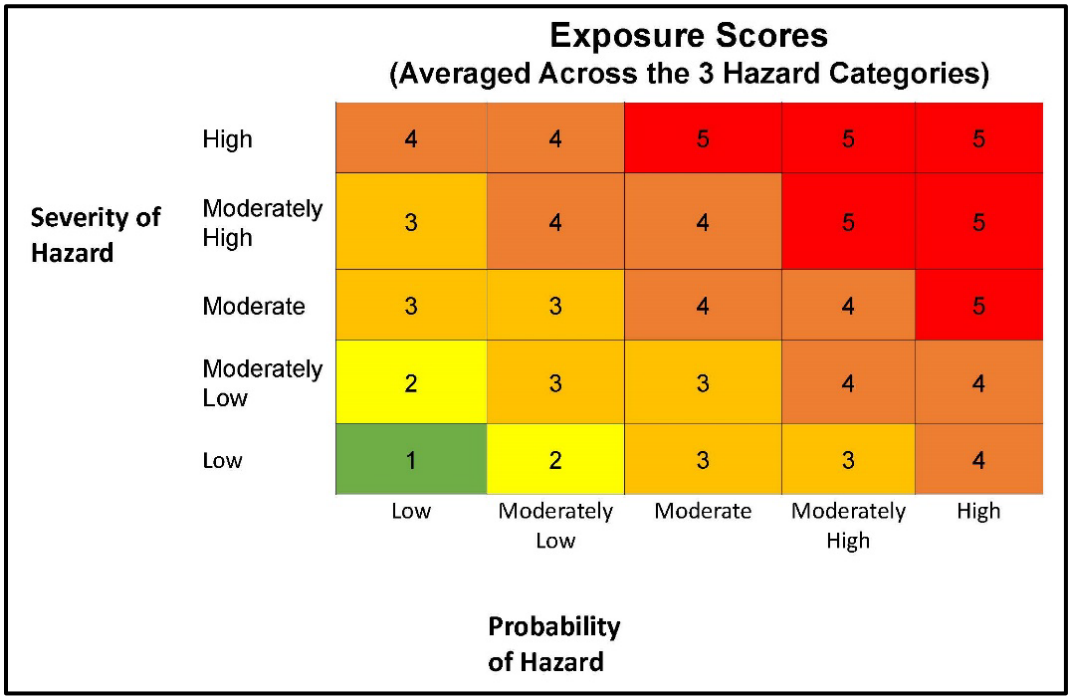


**Figure 3. Exposure matrix used to calculate the level of exposure for each of three hazard categories.**

All asset vulnerability scores, factors used to calculate asset vulnerability, and asset attribute data have been compiled into a holistic Asset List to provide additional details for planners and community members (Table 3). Fields in this table include the following:

**Asset Attribute and Characteristics Fields**

- **Asset ID** – Since an asset may function as multiple asset types and the town may have multiple assets with the same name, a singular unique Asset ID was assigned to each asset.
- **Asset Name** – An asset's proper name was used when available, otherwise nondescript names were assigned (e.g., pumping station, solar farm).
- **Asset Type** – Asset types were assigned to categorize assets based on the services they provide to the town. Some locations provide multiple services and, therefore, were assigned multiple asset types. For assets assigned to multiple type categories, all types were considered in analysis, but only the primary asset type was mapped (e.g., a high school that functions as an emergency shelter would be included in both Schools and Emergency Shelters Risk Evaluation but would be displayed in Schools on report figures) Asset type categories are Banks, Cemeteries, Childcare, Communications, Cultural Sites, Emergency Services, Employers, Food and Supplies, Government Facilities, Health and Medical, Law Enforcement/Corrections, Parks and Recreation (including natural resources), Restaurants, Roadways, Schools, and Utilities
- **Jurisdiction** – The physical location of assets in terms of jurisdictional boundaries (Town, unincorporated)

- **Address/Location** – Throughout the process of compiling assets, addresses and location descriptors such as plats and intersections were collected from text documents, web pages, county parcel data, and the CAT.
- **Ownership** – The ownership of each asset was pulled from ownership information in county parcel data and categorized into Federal, State, County, Town and Private ownership designations.
- **Estimated Value** – To provide an estimated value for each town asset, estimated values were assigned by finding the maximum value (Parcel Value, Land Value, or Improvement Value) associated with an asset's parcel (maximum values were combined for assets that spanned multiple parcels). The location and types of some assets (e.g., pumping wells, elevated water towers, frequently flooded streets) resulted in an under- or overestimation of value. For those assets, the general cost of infrastructure was assigned based on CAT input and publicly available information about infrastructure values. These values are estimates only, and do not necessarily reflect market value or replacement value for the asset.

**Vulnerability Assessment Fields**

- **Vulnerability** – Scored 1 through 10 with assets having a score greater than or equal to 5 being considered at risk. Calculated as: Exposure (0–5) + Sensitivity (0–5) + Adaptive Capacity (0, –1, –3, –5)
- **Exposure** – This provides an overall evaluation of how exposed the site is to coastal hazards, calculated as the average of Precipitation Exposure, Sea Level Rise Exposure, and Storm Surge Exposure
- **Precipitation Exposure (**Figure 4**)** – Calculated as: Floodplain Exposure (Current or Potential) + Reported Event Inundation Factor.
- **Floodplain Exposure** – Current Floodplain Exposure was derived from FEMA DFIRM data (North Carolina Flood Mapping Program 2020) and calculated as a function of the annual probability of precipitation flooding hazard (moderately low, 1% annual probability, for 100-year flooding or low, 0.2% annual probability, for 500-year flooding) and the severity of precipitation flooding hazard (moderately high for assets in the 100-year floodplain during a 100-year flood event, moderately high for assets in the 500-year floodplain during a 500-year flood event, and high for assets in the 100-year floodplain during a 500-year flood event). To account for increases in precipitation due to climate change, low-lying areas (within an elevation range of 0 to 27 feet above mean sea level, defined by reviewing current floodplain elevations) not currently listed as being in a floodplain were given a blanket Floodplain Exposure score of 2 to represent a low probability of flooding hazard and a low severity of flooding hazard.
- **Reported Event Inundation Factor** – Additive factor used to highlight areas of known flooding during large precipitation events as reported from historical satellite imagery (Schaffer-Smith

***Interpreting Vulnerability Index Values -*** *It is not necessarily a problem for a site to have a higher vulnerability index value. Even a site with very high Exposure may still be resilient if it has low Sensitivity. For example, a public boat launch site could have a very high Exposure score of 5 because it is subject to regular flooding, but because the asset can easily recover after flooding, is not located in a socially vulnerable area, and is not providing critical services to vulnerable populations, it has a low Sensitivity score of 1. Though its overall Vulnerability Index value may be on the higher end (6), this is not concerning for this site.*

2020) or community engagement. For areas with a Floodplain Exposure score greater than 0, 1 point was added for each historical flooding event recorded for that area. For areas with a Floodplain Exposure score of 0 that were reported as having historical flooding, 2 points were awarded to areas with at least one reported flooding event and 1 point was added for each additional storm event.

- **Sea Level Rise Exposure (**Figure 5**)** – Maximum Sea Level Rise Exposure score calculated for the asset. This exposure rating evaluated potential inundation from encroaching coastal lines and inland flooding as a result of higher water tables under 1- to 10-foot National Oceanic and Atmospheric Administration (NOAA) sea level rise projections (NOAA Office of Coastal Management 2017). Scores for the probability of an asset being affected by sea level rise were calculated by grouping scenarios into the following categories based off projected sea level rise under different Intergovernmental Panel on Climate Change (IPCC 2014) emission scenarios: high – 1 to 2 feet expected under all scenarios; moderately high – 3 to 4 feet expected under most scenarios, moderately low – 5 to 6 feet expected under some scenarios; low – 7 to 10 feet expected under only the highest scenario). The severity of sea level rise hazards was assigned considering the accumulative effects of subsequent increases in sea level. For example, under 1 to 2 feet of sea level rise an asset may have a moderately low severity, but under 3- to 4-foot sea level rise conditions that asset will see higher inundation levels and would have a severity score of moderate.
- **Storm Surge Exposure (**Figure 6**)** – Maximum Storm Surge Exposure score calculated for the asset. High tide, coastal storm surges from National Hurricane Center Slosh Model Simulated Category 1 through Category 5 storms (Zachry et al. 2015) were evaluated using the annual probability calculated from historical records for the state of North Carolina to assign probability values like Floodplain Exposure (Category 1 – high with greater than 10% annual probability; Categories 2, 3, and 4 – moderate with approximately 5% annual probability; Category 5 – moderately low with approximately 1% annual probability). Severity of exposure was calculated by categorizing simulated feet of inundation (low – 1 foot, moderately low – 2 to 3 feet, moderate – 4 to 5 feet, moderately high – 6 to 7 feet, high – greater than 8 feet)
- **Sensitivity** – Asset Type Sensitivity + Social Sensitivity, where social sensitivity is a function of both the social vulnerability by service type and by the asset's physical location
- **Asset Type Sensitivity** – For assets that were assigned multiple asset types, the highest categorical sensitivity score was used. Scores for asset categories are as follows: Cemetery, Parks and Recreation, and Restaurants (1); Banks, Cultural Site, Childcare, Employers, Schools (2); Communications, Emergency Services, Food and Supplies, Government, Hazardous Waste, Health and Medical, Law Enforcement/Corrections, Roadways, Utilities (3).
- **Social Vulnerability (geographic)** – Average of Asset Location Social Vulnerability Score and Asset Service Community Vulnerability Score where social vulnerability scores (SoVI) represent the potential negative effects on communities caused by external stresses on human health (calculated by CDC/ATSDR/Division of Toxicology and Human Health Sciences/Geospatial Research, Analysis & Services Program 2020; Hazards and Vulnerability Research Institute 2011), and the asset service community is all Census Blocks or Tracts that intersected a 1-mile radius of the asset (this area was assumed sufficient as vulnerability data is at the Census Block and Tract scale). Social vulnerability of the asset location and community were found by assigning threshold values to already calculated SoVI values as follows: top 10% of socially vulnerable areas (1), top 20% of socially vulnerable areas (0.75), top 30% of socially vulnerable areas (0.5), top 50% of socially vulnerable areas (0.25).
- **Social Vulnerability (by service type)** – Service Type sensitivity scores were assigned to asset locations that have been shown in the documentation to provide services to vulnerable

populations, including the elderly (e.g., nursing homes, food distribution systems), chronically ill or physically disabled people (e.g. dialysis centers, medical facilities), less wealthy or food insecure individuals and families (e.g., food pantries, schools, public fishing access, local housing authorities), and historically marginalized groups (e.g., community organizations and cultural sites of significance to African American communities), people without adequate health insurance (e.g., EMS and Emergency Services), incarcerated individuals (e.g., correctional facilities), and those experiencing abuse or violence (e.g., law enforcement, medical facilities), youth and families (e.g., schools and childcare facilities, community centers, parks), and people without reliable internet access (e.g., libraries).

- **Adaptive Capacity** – Scores of 0, –3, and –5 were assigned based on the degree of adaptation described in CAT input.

More details regarding the specific More details regarding the specific data sets referenced in calculating each of these elements of the Vulnerability Index are summarized in Appendix E.

See Appendix F for detail maps showing assets and hazards in each of the numbered areas below (Figure 7).

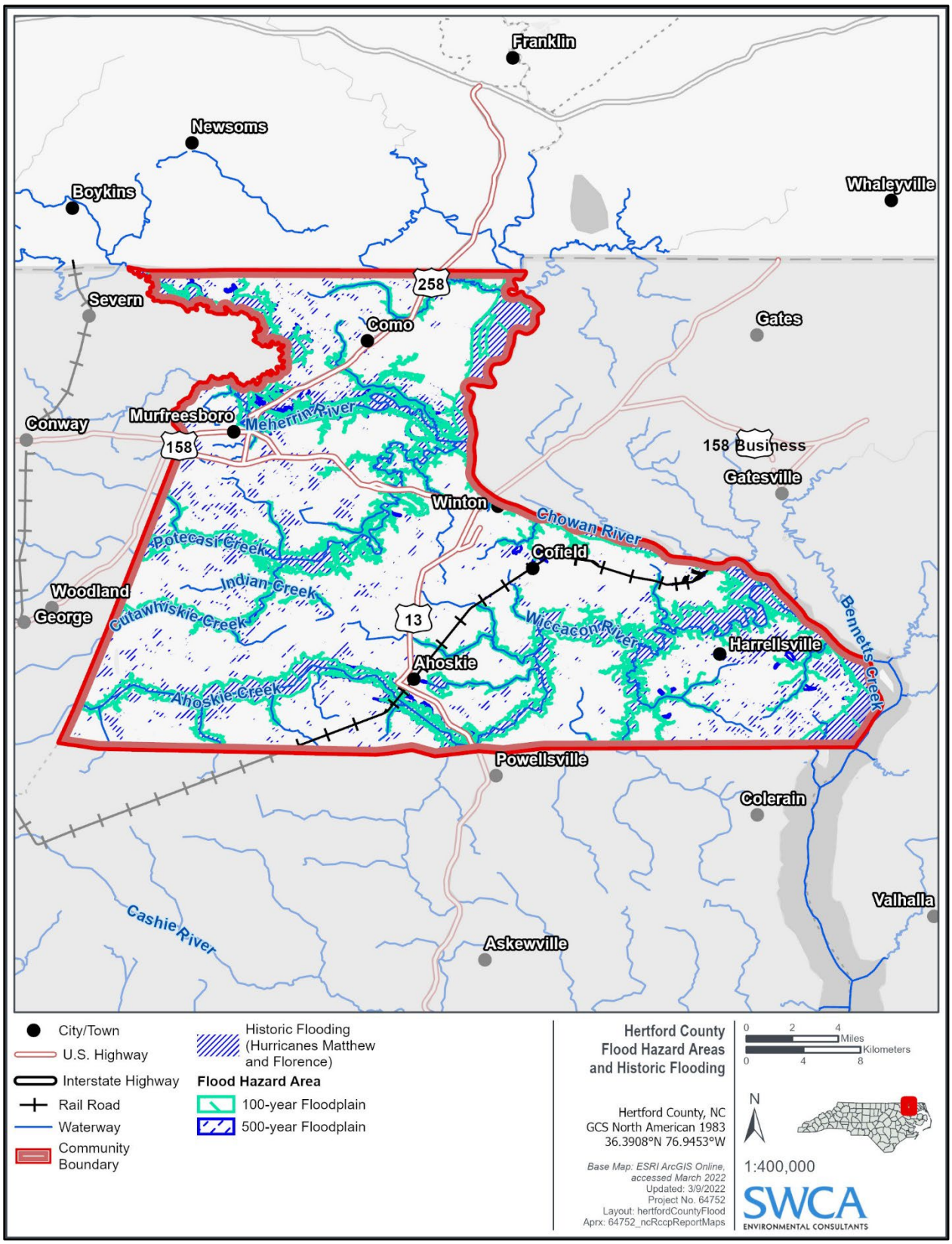


**Figure 4. FEMA 100-year and 500-year floodplains and areas of historical flooding from Hurricanes Florence and Matthew around Hertford County, North Carolina.**

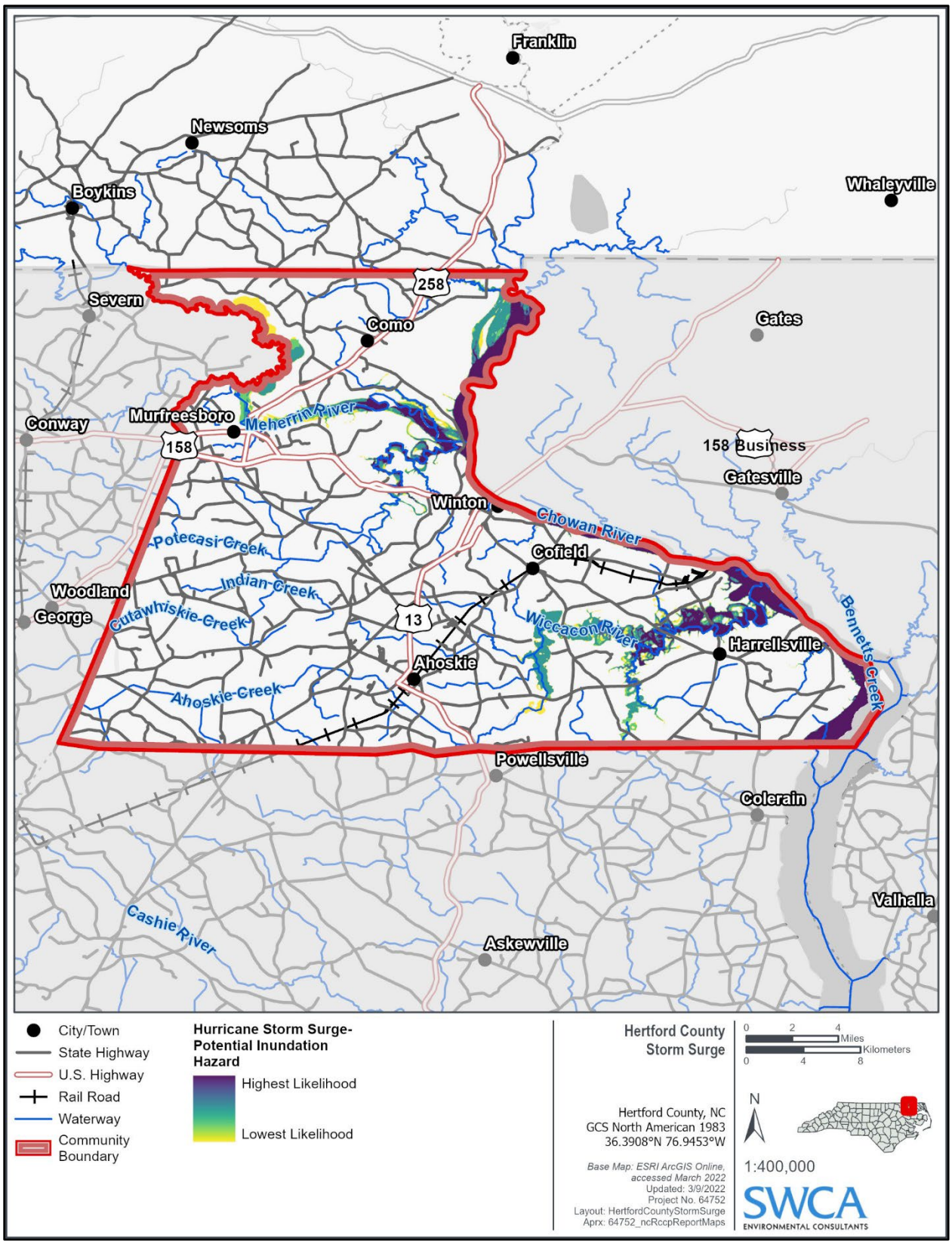


**Figure 5. Areas with potential for storm surge inundation around Hertford County, North Carolina.**

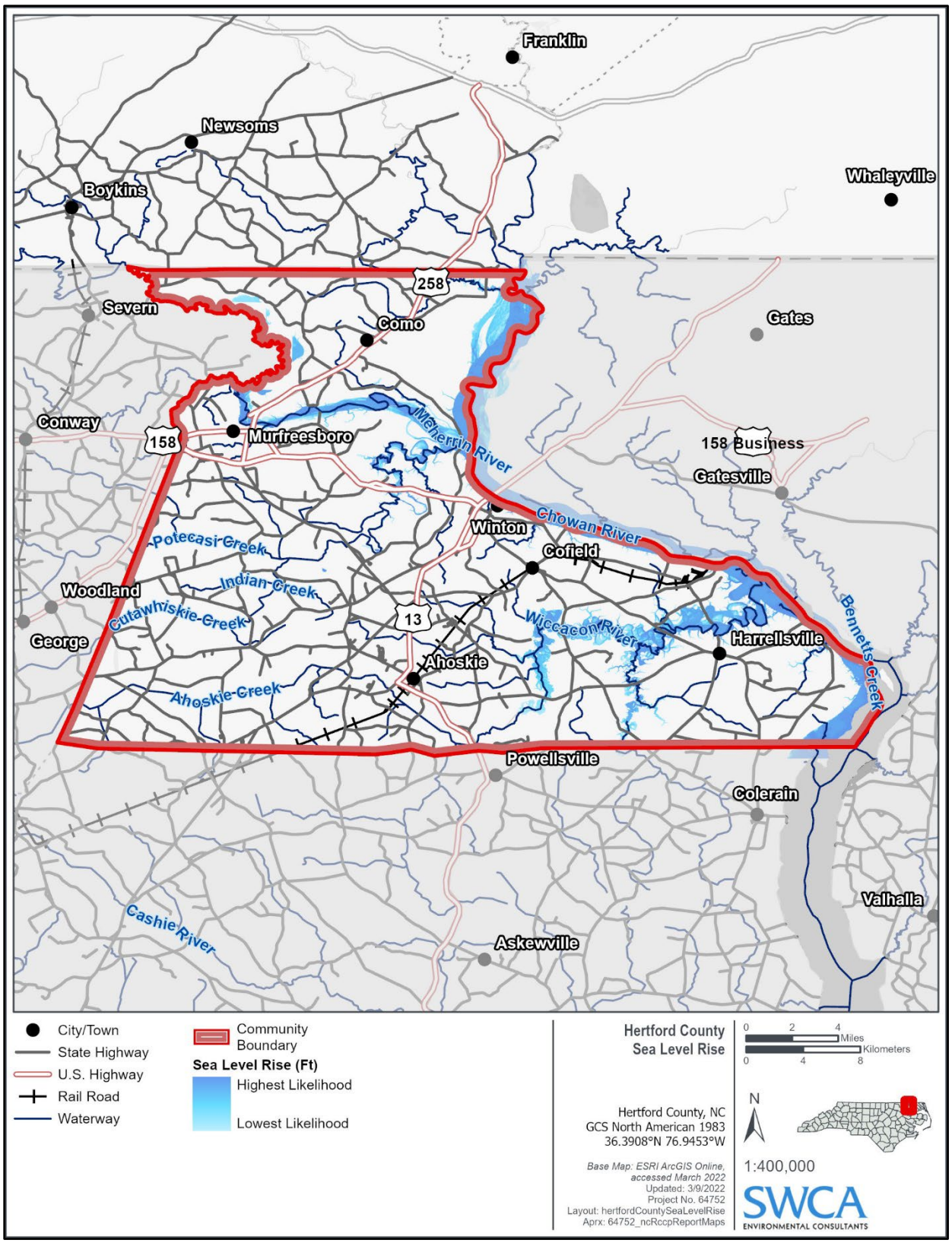


**Figure 6. Areas at varying levels of risk from sea level rise from high likelihood of impact (dark blue) to lowest likelihood of impact (light blue) around Hertford County, North Carolina.**

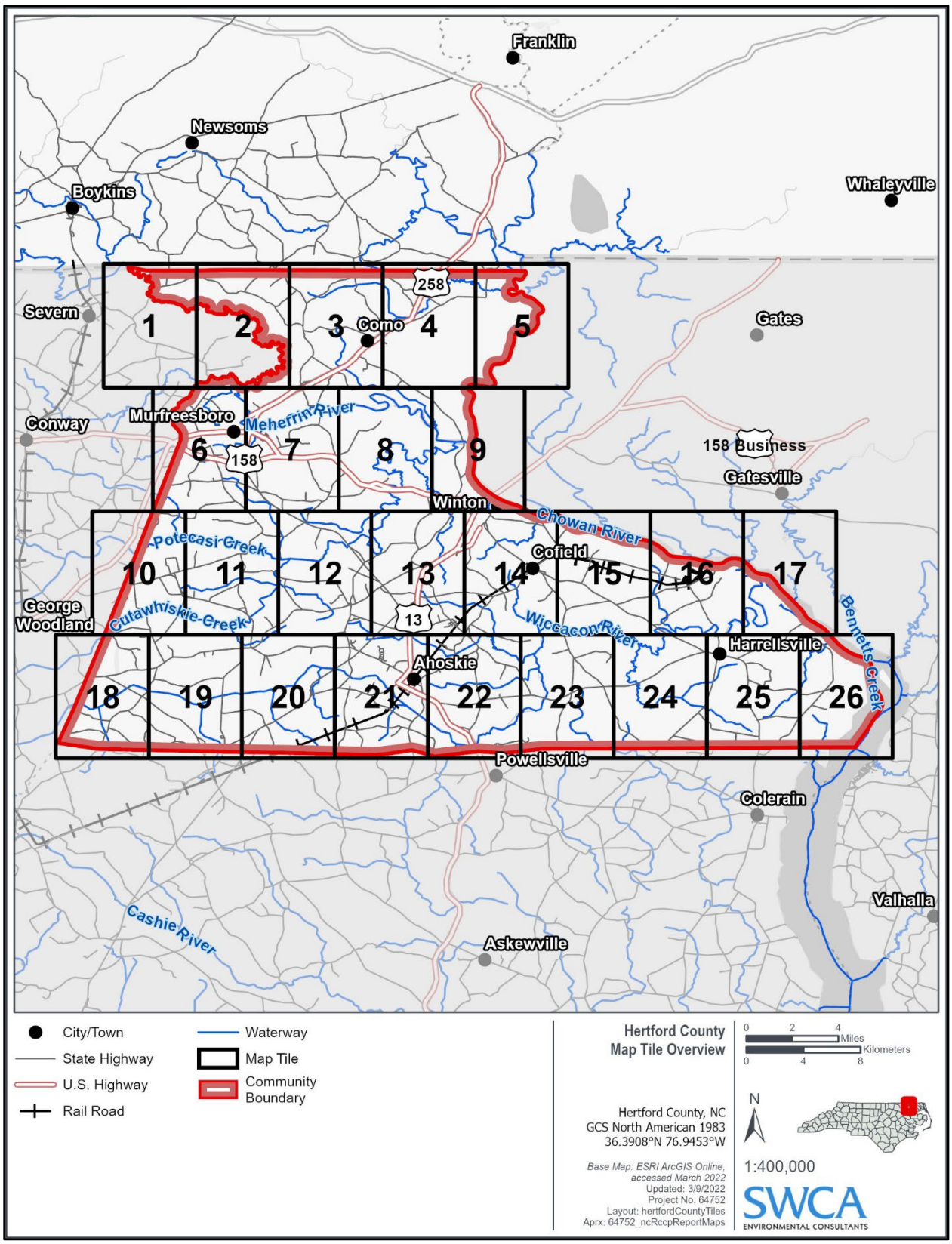


**Figure 7. Map tile overview for maps showing details of assets and hazards around Hertford County, North Carolina. Individual maps can be found in Appendix F.**

**Table 3. Asset Information and Calculation of Vulnerability Index for Each Asset for Hertford County, North Carolina. (Assets are listed from highest vulnerability to lowest vulnerability index. See Section 6.2 above for description of how scores were calculated.)**

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-176 | Settlements along eroding banks – Leisure Shore Road | Residential | Leisure Shore Rd along Meherrin River | Private | 3,973,743 | Hertford County | 9 | 5 | 5 | 5 | 4 | 4 | 3 | 1 | 0 | 0 |
| HC-177 | Settlements along eroding banks – River View Road | Residential | River View Rd and Rte 158 | Private | 3,973,743 | Town of Winton/ Hertford County | 9 | 5 | 5 | 5 | 4 | 4 | 3 | 1 | 0 | 0 |
| HC-178 | Settlements along eroding banks – Mount Pleasant Wharf | Residential | Southeast of Chowan Swamp Game Land | Private | 3,973,743 | Hertford County | 9 | 5 | 5 | 5 | 4 | 4 | 3 | 1 | 0 | 0 |
| HC-126 | Twin Oaks and Twins Incorporated | Health and Medical | 817 US Hwy 258 North | Private | 324,338 | Hertford County | 7 | 2 | 5 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-165 | NuCor Steel | Employers | 1505 River Rd | Private | 14,657,681 | Hertford County | 7 | 4 | 5 | 4 | 4 | 3 | 2 | 1 | 0 | 0 |
| HC-167 | Wastewater Treatment Ponds and Overflow | Hazardous Waste | Wilson Qtr Boyet Blk 626 | Town | 186,441 | Town of Murfreesboro | 7 | 3 | 5 | 3 | 1 | 4 | 3 | 1 | 0 | 0 |
| HC-170 | Chowan Swamp Game Land | Parks and Recreation | Multiple areas along the Chowan River | State | 5,482,057 | Hertford County | 7 | 5 | 5 | 5 | 4 | 2 | 1 | 1 | 0 | 0 |
| HC-172 | Murfreesboro Town Park | Parks and Recreation | B/Side Hwy 258 | Town | 298,552 | Town of Murfreesboro | 7 | 4 | 5 | 4 | 4 | 3 | 1 | 1 | 1 | 0 |
| HC-134 | Chinkapin Creek Trail Paddle Access at North Carolina Highway 561 | Parks and Recreation | 1485 NC-561 | Private | 0 | Hertford County | 6 | 4 | 5 | 3 | 3 | 2 | 1 | 1 | 0 | 0 |

[1] These values are based on state assessor data and other publicly available information. These are estimates only, and do not necessarily reflect market value or replacement value for the asset. Values for historic districts include all parcels within the historic district.

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-136 | Harrellsville Boat Access Area | Parks and Recreation | 206 Old Ferry Rd | State | 53,727 | Hertford County | 6 | 4 | 5 | 4 | 4 | 2 | 1 | 1 | 0 | 0 |
| HC-137 | Murfreesboro Boat Access Area | Parks and Recreation | 126 US Hwy 258 N | Town | 2,293,147 | Town of Murfreesboro | 6 | 4 | 5 | 4 | 4 | 2 | 1 | 1 | 0 | 0 |
| HC-141 | Tunis Boat Access Area | Parks and Recreation | 104 Wildlife Ln | State | 207,718 | Hertford County | 6 | 4 | 5 | 4 | 4 | 2 | 1 | 1 | 0 | 0 |
| HC-179 | Portion of Benthall Bridge Road | Roadways | Benthall Bridge Rd | State, County | 200,000 | Hertford County | 6 | 2 | 5 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-019 | Approximate Location of Gatling Gun Invention | Cultural Site | 140 Gatling Rd | Private | 1,000 | Hertford County | 5 | 2 | 5 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-074 | Ahoskie Fire Department | Emergency Services | 301 S Martin Luther King Jr. Dr | Town | 978,706 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-075 | Ahoskie Police Department | Emergency Services | 705 W Main St | Town | 1,565,695 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-076 | Ahoskie Rural Volunteer Fire Department | Emergency Services | 609 W Main St | Private | 297,138 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-077 | Como Volunteer Fire Department and Emergency Medical Services | Emergency Services | 1201 US Hwy 258 North | Town | 85,728 | Town of Como | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-078 | Harrellsville Volunteer Fire Department Station 4 | Emergency Services | 227 E Main St | Private | 50,281 | Town of Harrellsville | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-079 | Hertford County Ambulance Service | Emergency Services | 102 Industrial Park Rd | County | 328,222 | Hertford County | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-080 | Hertford County Emergency Management | Emergency Services | 102 Industrial Park Rd | County | 328,222 | Hertford County | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-081 | Hertford County Sheriff's Office | Emergency Services | 701 N Taylor St | County | 3,738,522 | Town of Winton | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-083 | Murfreesboro Fire Department | Emergency Services | 200 Sycamore Street | Town | 944,926 | Town of Murfreesboro | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-089 | Winton Volunteer Fire Department | Emergency Services | 503 N Main St | Town | 311,239 | Town of Winton | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-103 | Ahoskie Food Pantry | Food and Supplies | 701 E Church St | Private | 1,852,628 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-104 | Hertford County Office of Aging Nutrition Site | Food and Supplies | 320 W Main St | County | 131,708 | Town of Murfreesboro | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-105 | Hertford County Office of Aging Nutrition Site | Food and Supplies | 418 Everette St | County | 605,409 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-106 | Hertford County Office of Aging Nutrition Site | Food and Supplies | 408 S Camp St | County | 208,543 | Town of Winton | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-118 | Ahoskie Public Library | Government | 210 E Church St | Town | 128,393 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-119 | Murfreesboro Public Library | Government | 213 E Main St | Town | 363,892 | Town of Murfreesboro | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-120 | Hertford County Library | Government | 303 W Tryon St | County | 2,065,368 | Town of Winton | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-121 | Ahoskie Housing Authority | Government | 200 Pierce Ave | Private | 2,418,778 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-122 | Vidant Roanoke – Chowan Hospital | Health and Medical | 500 South Academy Street | Private | 21,113,897 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-123 | Ahoskie House Nursing Home | Health and Medical | 407 Loftin Lan South | Private | 1,636,900 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-124 | Guardian Care of Ahoskie | Health and Medical | 604 Stokes St East | Private | 2,540,819 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-127 | Davita Dialysis Center | Health and Medical | 626 W Main St | Private | 1,372,293 | Town of Murfreesboro | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-128 | Davita Dialysis Center | Health and Medical | 129 Hertford County High School Rd | Private | 703,555 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-129 | Chowan University Department of Public Safety | Law Enforcement/Corrections | 401 Union St | Private | 79,332 | Town of Murfreesboro | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-130 | City of Murfreesboro Police Department | Law Enforcement/Corrections | 115 E Broad St | Town | 944,926 | Town of Murfreesboro | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-131 | Hertford County Sheriffs Dept/Hertford County Jail | Law Enforcement/Corrections | 701 N Taylor St. | County | 261,189 | Town of Winton | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-132 | North Carolina State Highway Patrol Troop A District 2 | Law Enforcement/Corrections | 242 State Hwy 42 W | State | 416,405 | Hertford County | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-139 | Potecasi Creek Trail Paddle Access at Parkers Ferry | Parks and Recreation | 1130 Parkers Ferry Rd | Private | 0 | Hertford County | 5 | 3 | 5 | 0 | 4 | 2 | 1 | 1 | 0 | 0 |
| HC-144 | Wiccacon River Trail Paddle Access at Thomas Bridge Road (SR 1427) | Parks and Recreation | 604 Thomas Bridge Rd | Private | 0 | Hertford County | 5 | 3 | 5 | 0 | 4 | 2 | 1 | 1 | 0 | 0 |
| HC-150 | Hertford County High School/Emergency Shelter | Schools, Emergency Services | 1500 1st Street W | County | 14,871,151 | Town of Ahoskie | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-151 | Hertford County Middle School/Emergency Shelter | Schools, Emergency Services | 1850 State Hwy 11 N | County | 11,320,447 | Town of Murfreesboro | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-166 | Old Wastewater Plant | Hazardous Waste | Rhue Rd | Town | 257,333 | Town of Ahoskie | 5 | 1 | 4 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-168 | Hertford County Landfill | Hazardous Waste | Mount Moriah Road (SR 1174) | County | 435,331 | Hertford County | 5 | 1 | 2 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-169 | Federal Correctional Institution – River Correctional Institution | Law Enforcement/Corrections | 145 Parkers Fishery Rd | Private | 12,525,508 | Hertford County | 5 | 0 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 |
| HC-171 | Ahoskie Creek Recreational Complex | Parks and Recreation | 114 Lakeview Dr | Town | 1,620,030 | Town of Ahoskie | 5 | 2 | 5 | 0 | 0 | 3 | 1 | 1 | 1 | 0 |
| HC-180 | Chowan University | Schools | 1 University Place | Town | 54,724,827 | Town of Murfreesboro | 5 | 1 | 2 | 0 | 0 | 4 | 2 | 1 | 1 | 0 |
| HC-182 | Fresh Air Energy Solar Site – Built 2016 | Utilities | Bradley | State | 237,911 | Hertford County | 5 | 2 | 5 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| HC-194 | Transcontinental Gas Interstate Pipeline | Utilities | Approximately 10 miles through Saint John | Private | 450,000 | Hertford County /Northampton County | 5 | 2 | 5 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| HC-027 | Deane House #82003468 | Cultural Site | South of SR 1446 | Private | 639,539 | Hertford County | 4 | 1 | 2 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-082 | Millennium Fire Department Incorporated | Emergency Services | 246 Millennium Rd | Private | 210,341 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 1 | 0 |
| HC-085 | NC Division of Forest Resources District 7 – Hertford Co | Emergency Services | 129 River Rd | Private | 173,451 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-087 | Saint John Fire Department | Emergency Services | 1127 State Rd 561 W | Private | 57,690 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 1 | 0 |
| HC-088 | Union Rural Volunteer Fire Department | Emergency Services | 103 Union Rd | County | 413,666 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 1 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-098 | Food Lion | Food and Supplies | 1498 E Memorial Dr | Private | 717,001 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-099 | Food Lion | Food and Supplies | 920 W Main St | Private | 85,271 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-100 | Piggly Wiggly | Food and Supplies | 1007 E Memorial Dr | Private | 402,232 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-101 | Ace Hardware | Food and Supplies | 1405 E Memorial Dr | Private | 186,888 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-102 | Ace Hardware | Food and Supplies | 415 W Main St | Private | 2,068,540 | Town of Murfreesboro | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-107 | Agriculture/Transportation Building No. 70000457 | Government | 111 N 5th St | Private | 61,747 | Town of Murfreesboro | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-108 | Ahoskie Post Office | Government | 115 Church Street W | Private | 351,817 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-109 | Ahoskie Town Hall | Government | 201 W Main St | Town | 276,139 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-110 | Cofield Post Office | Government | 1240 Ahoskie Cofield Rd | Private | 46,136 | Town of Cofield | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-111 | Como Post Office | Government | 1226 US Hwy 258 N | Private | 34,489 | Town of Como | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-112 | Harrellsville Post Office | Government | 116 E Main St | Private | 29,886 | Town of Harrellsville | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-113 | Hertford County Courthouse | Government | 119 Justice Dr | County | 12,335,134 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-114 | Murfreesboro Post Office | Government | 115 N Wynn St | Private | 156,693 | Town of Murfreesboro | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-115 | Murfreesboro Town Hall | Government | 105 E Broad St | Town | 944,926 | Town of Murfreesboro | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-116 | Winton Post Office | Government | 406 N Main St | Private | 83,335 | Town of Winton | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-117 | Winton Town Hall | Government | Main St | Private | 50,175 | Town of Winton | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-125 | Pinewood Manor | Health and Medical | 240 S Early Station Rd | Private | 847,242 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 0 | 1 | 0 |
| HC-142 | Wiccacon River Trail Paddle Access at North Carolina Highway 45 bridge | Parks and Recreation | 1512 NC Hwy 45 S | Private | 0 | Hertford County | 4 | 2 | 2 | 0 | 3 | 2 | 1 | 1 | 0 | 0 |
| HC-143 | Wiccacon River Trail Paddle Access at Old Ferry Road (SR 1433) | Parks and Recreation | 125 Taylors Way | State | 0 | Hertford County | 4 | 2 | 2 | 3 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-145 | Ahoskie Christian School | Schools | 500 Kiwanis Ave | Private | 833,189 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 1 | 0 |
| HC-146 | Ahoskie Elementary School | Schools | 200 N Talmage St | County | 2,061,442 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 1 | 0 |
| HC-147 | Bearfield Primary School | Schools | 145 Hertford County High School Rd | County | 9,030,741 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 1 | 0 |
| HC-148 | C.S. Brown High | Schools | 102 C S Brown Dr | County | 969,730 | Town of Winton | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 1 | 0 |
| HC-152 | Ridgecroft School | Schools | 420 State Hwy 11 N | Private | 2,311,183 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 1 | 0 |
| HC-153 | Riverview Elementary School | Schools | 236 US Hwy 158 Business | County | 7,300,449 | Town of Murfreesboro | 4 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 1 | 0 |
| HC-156 | Cable – CenturyLink office | Utilities | 119 W Main St No. 601 | Private | 127,968 | Town of Ahoskie | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-157 | Gas Pipeline | Utilities | North of State Rd 1400 | Private | 450,000 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-164 | Ahoskie Historic District | Cultural Site | Ahoskie | County, Town, Private | 64,418,619 | Town of Ahoskie | 4 | 1 | 3 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-173 | Dr. George W Mitchell Memorial | Parks and Recreation | 5992-07-5056 | Town | 285,578 | Town of Ahoskie | 4 | 2 | 5 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-174 | Beechwood Country Club | Parks and Recreation | PO Box 516 205 Country Club Rd | Private | 2,022,159 | Hertford County | 4 | 2 | 5 | 0 | 1 | 2 | 1 | 1 | 0 | 0 |
| HC-175 | Settlement with recurring septic issue | Residential | Intersection of State Rt 1400 (River Rd) and State Rt 1402 (Tunis Rd) | Private | 293,563 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-181 | Solar Farm – Built 2017 | Utilities | LOTS 109,112 Parker | Private | 31,796 | Hertford County | 4 | 0 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-183 | Solar Farm – Built 2016 | Utilities | Downs PL000PC2-0014G | Private | 35,097 | Hertford County | 4 | 0 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-184 | Solar Farm – Built 2016 | Utilities | Doughtie | Private | 39,155 | Hertford County | 4 | 0 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-187 | Price Solar Farm – Built 2016 | Utilities | Flowers PL000PC2-0015C | Private | 597,800 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-189 | Solar Farm – Built 2019 | Utilities | Parker | Private | 118,995 | Hertford County | 4 | 0 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-190 | Solar Farm – Built 2019 | Utilities | Adkins, Williams & Greene PL000PC2-0030I | Private | 985,011 | Hertford County | 4 | 0 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-191 | Solar Farm – Built 2018 | Utilities | Vaughn | Private | 89,669 | Hertford County | 4 | 0 | 0 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-192 | Gas Line | Gas Line | Along Rt 13 | Private | 88,081 | Hertford County | 4 | 0 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-193 | Gas Line | Gas Line | Along Rt 13 | Town | 100,395 | Town of Cofield | 4 | 0 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 0 |
| HC-001 | State Employees' Credit Union | Banks | 900 W Main St | State | 638,688 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-002 | State Employees' Credit Union | Banks | 1125 N Academy St | State | 265,953 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-003 | PNC | Banks | 137 E Main St | Private | 339,963 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-004 | PNC | Banks | 102 E Church St | Private | 886,803 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-005 | Southern Bank | Banks | 506 Main St | Private | 266,656 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-006 | Southern Bank | Banks | 336 E Main St | Private | 227,586 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-007 | Wells Fargo | Banks | 300 Main St E | Private | 2,689,883 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-011 | Green Cemetery | Cemetery | North of State Rd 1424 | Private | 297,390 | Hertford County | 3 | 1 | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-018 | Ahoskie School | Cultural Site | 105 N Academy St | Private | 569,112 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-020 | B. B. Winborne | Cultural Site | 333 Jay Trail | Private | 189,309 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-021 | Barnes, David A. House | Cultural Site | 625 W Main St | Private | 424,342 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-023 | Buckhorn Church | Cultural Site | 1243 US Hwy 258 N | Private | 209,468 | Town of Como | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-024 | Bynum Plantation House | Cultural Site | 741 Statesville Rd | Private | 188,582 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-025 | C. S. Brown School Auditorium No. 85001657 | Cultural Site | 108 C S Brown Dr | Private | 159,235 | Town of Winton | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-026 | Cowper-Thompson House No. 91001908 | Cultural Site | 405 N St | Private | 296,602 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-028 | Doctor Gary House | Cultural Site | 408 N Wynn St | Private | 359,362 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-029 | Evans Tinsmith Shop | Cultural Site | 503 Williams St | Private | 9,822 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-030 | Exhibits Building | Cultural Site | 111 N 5th St | Private | 61,747 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-031 | Gingerbread House | Cultural Site | 401 E Broad St | Private | 184,021 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-032 | Gray Gables No. 82003470 | Cultural Site | Main St | Private | 130,569 | Town of Winton | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-033 | Hare Plantation House No. 71000588 Location | Cultural Site | 1.6 miles of junction of SR 1317 and US Hwy 258 | Private | 271,950 | Hertford County | 3 | 0 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-034 | Hertford Academy, a.k.a. Freeman House No. 71000591 | Cultural Site | 200 E Broad Street | Private | 240,192 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-036 | Jenkins House | Cultural Site | 501 N 4th St | Private | 201,420 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-037 | John Wheeler House No. 71000596 | Cultural Site | 407 E Broad St | Private | 234,203 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-038 | Jordan Building | Cultural Site | 407 Williams St | Private | 30,040 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-040 | Melrose No. 71000592 | Cultural Site | 100 E Broad St | Private | 344,936 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-042 | Morgan-Myrick House No. 71000594 | Cultural Site | 404 E Broad St | Private | 262,927 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-044 | Murfee-William House | Cultural Site | 320 Williams St | Private | 115,775 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-045 | Murfree-Smith Law Office | Cultural Site | 318 Williams St | Private | 108,246 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-046 | Murphy-Spiers House | Cultural Site | 409 North St | Private | 210,136 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-047 | Myrick Plantation House | Cultural Site | 824 Statesville Rd | Private | 954,850 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-048 | Overseer's House | Cultural Site | 310 N 4th St | Private | 190,944 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-049 | Parker, King House No. 02001663 | Cultural Site | 304 Mount Moriah Rd | Private | 107,901 | Hertford County | 3 | 0 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-050 | Pipkin-Harrell-Chitty House | Cultural Site | 207 N Wynn St | Private | 143,024 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-051 | Rea, William, Store | Cultural Site | E Williams St | Private | 11,530 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-052 | Rea-Lassiter Home | Cultural Site | 104 N 4th St | Private | 195,398 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-053 | Riddick House/Manley Plantation No. 71000589 | Cultural Site | 1 mile south of junction of SR 1319 and SR 1322 | Private | 612,315 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-054 | Roberts H. Jernigan No. 01000123 | Cultural Site | 209 Catherine Creek Rd S | Private | 333,375 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-055 | Roberts-Vaughan House No. 71000595 | Cultural Site | 130 E Main St | Private | 305,466 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-056 | Rose Bower | Cultural Site | 132 E Main St | Private | 187,004 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-057 | Shephard Plantation | Cultural Site | 248 Buckhorn Church Rd | Private | 135,258 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-058 | Site of Old Myrick-Yeates-Vaughan House No. 83001891 | Cultural Site | 319 W Main St | Private | 26,431 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-059 | Southall-Neal-Worrell House | Cultural Site | 301 E Broad St | Private | 95,543 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-060 | The Brady C. Jefcoat Museum | Cultural Site | 201 W High St | Private | 1,123,884 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-061 | The Cedars, a.k.a. T.E Brown House No. 83001890 | Cultural Site | Southeast of Murfreesboro off SR 1167 | Private | 224,970 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-062 | The Columns Building No. 71000590 | Cultural Site | 603 Woodridge Dr | Private | 49,970,695 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-063 | Thomas, Dr. Roscius P. and Mary Mitchell, House and Outbuildings | Cultural Site | 734 Thomas Bridge Rd | Private | 438,516 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-064 | Trader-Carter House, Ross House | Cultural Site | 503 Williams St | Private | 22,491 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-065 | Vernon Place No. 82003469 | Cultural Site | 1311 US Hwy 258 N | Private | 210,057 | Town of Como | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-066 | Vincent-Deale Blacksmith Shop | Cultural Site | 202 N 4th St | Private | 9,818 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-067 | Vinson House | Cultural Site | 324 Jay Trail | Private | 150,660 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-068 | Waddlen House | Cultural Site | 1102 US Hwy 258 N | Private | 640,560 | Town of Como | 3 | 0 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-069 | Weston House | Cultural Site | 501 N 4th St | Private | 296,602 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-070 | William Rea Museum/Store | Cultural Site | 409 Williams St | Private | 19,718 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-071 | Williams Plantation House | Cultural Site | 847 New Hope Church Rd | Private | 37,920 | Hertford County | 3 | 0 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-072 | Winborne & Winborne Building | Cultural Site | 201 N 4th St | Private | 47,511 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-073 | Worrell Plantation House | Cultural Site | 640 Boones Bridge Rd | Private | 471,540 | Hertford County | 3 | 0 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-090 | Liberty Healthcare Group, LLC | Employers | 216 E Church St | Private | 183,786 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-091 | Solid Foundation | Employers | 1321 1st St W | Private | 672,851 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-092 | Vidant Roanoke – Chowan Hospital | Employers | 500 S Academy St | Private | 431,591 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-093 | Hertford County Board of Education | Employers | 701 N Martin St | County | 3,738,522 | Town of Winton | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-094 | Jernigan Oil Company | Employers | 415 E Main St | Private | 373,711 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-095 | Perdue Products, Inc. | Employers | 2108 US-13 S | Private | 285,986 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-096 | Walmart Associates | Employers | 2150 US 13 S | State | 10,614,972 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-097 | Enviva Pellets | Employers | 142 NC-561 | Private | 12,466,166 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-135 | Cofield Community Recreation Center | Parks and Recreation | 521 NC-45 South | Private | 290,476 | Town of Cofield | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 1 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-138 | Potecasi Creek Trail Paddle Access at North Carolina Highway 11 | Parks and Recreation | South of State Hwy 11 N | Private | 0 | Hertford County | 3 | 2 | 5 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| HC-140 | Potecasi Creek Trail Paddle Access at U.S. Highway 158 | Parks and Recreation | 122 Sheriff Rd | Private | 0 | Hertford County | 3 | 1 | 2 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-149 | Hertford County Early College High School | Schools | 109 Community College Rd | Private | 957,8213 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 0 |
| HC-154 | Roanoke – Chowan Community College | Schools | 109 Community College Rd | Private | 957,8213 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 1 | 0 |
| HC-155 | Roanoke Electric Cooperative Facilities | Utilities | 518 NC Hwy 561 W | Private | 2,990,282 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| HC-159 | Historic Preservation Foundation of North Carolina Preserve | Cultural Site | Parker-Dunn (TRACT 604) | Private | 664,538 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-160 | East End Historic District | Cultural Site | East End | Town | 1,464,145 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-161 | Murfreesboro Historic District | Cultural Site | Murfreesboro | County, Town, Private | 5,587,910 | Town of Murfreesboro | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-162 | Ahoskie Downtown Historic District | Cultural Site | Ahoskie Downtown | Town | 4,422,489 | Town of Ahoskie | 3 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-163 | Harrellsville Historic District | Cultural Site | Harrellsville | Town | 6,062,224 | Town of Harrellsville | 3 | 0 | 1 | 0 | 0 | 3 | 2 | 1 | 0 | 0 |
| HC-185 | Solar Farm – Built 2012 | Utilities | Weston | Private | 280,301 | Hertford County | 3 | 0 | 1 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| HC-186 | Price Solar Farm – Built 2016 and 2019 | Utilities | PL000PC2-0015J | Private | 788,608 | Hertford County | 3 | 0 | 1 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |

| Asset ID | Asset Name | Location | Asset Type | Ownership | Estimated Value ($)[1] | Jurisdiction | Vulnerability Index | Average Exposure (0–5) | Precipitation (0–5) | Sea Level Rise (0–5) | Storm Surge (0–5) | Total Sensitivity (0-5) | Sensitivity (0–3, by asset type) | Social Vulnerability (by location) | Social Vulnerability (by service) | Adaptive Capacity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-188 | Solar Farm – Built 2017 | Utilities | Sessoms Lots 1 & 3 PL000PC2-0016J | Private | 416,750 | Hertford County | 3 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 |
| HC-008 | Black Jack Cemetery | Cemetery | 549 New Hope Church Rd | Private | 185,474 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-009 | Brantley Cemetery | Cemetery | 432 Hall Siding Rd | Private | 86,383 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-010 | Brinkley Cemetery | Cemetery | 115 Brinkley Rd | Private | 6,763 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-012 | Hillcrest Cemetery | Cemetery | 508 Mountain St | Private | 78,107 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-013 | Jenkins Cemetery | Cemetery | 114 Wood Ln | Private | 3,187 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-014 | Stony Creek Cemetery | Cemetery | 2524 NC-42 | Town | 27,759 | Town of Hertford | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-015 | Vann Cemetery | Cemetery | South of SR 1425 | Private | 67,378 | Hertford County | 2 | 0 | 1 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-016 | Weaver Cemetery | Cemetery | 114A Poole Rd | Private | 109,564 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |
| HC-022 | Brown, Wiley and Jane Vann, House | Cultural Site | 248 Union Rd | Private | 377,543 | Hertford County | 2 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| HC-035 | James Newsome House No. 84000803 | Cultural Site | 121 Pittman Rd | Private | 148,571 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| HC-039 | King-Casper-Ward-Bazemore House No. 82001299 | Cultural Site | W of Ahoskie on NC 11 | Private | 314,078 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| HC-041 | Mitchell, William, House | Cultural Site | 612 NC Hwy 42 W | Private | 426,701 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| HC-043 | Mulberry Grove No. 80002848 | Cultural Site | SW of Ahoskie | Private | 16,535 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| HC-158 | Highland Memorial Cemetery | Cemetery | 109 Ward Rd | Private | 55,014 | Hertford County | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 |

## 6.3 Evaluation of Risk

To quantify the potential economic risk to town assets, Estimated Values for assets with a vulnerability score of 5 or greater were summarized by asset type and ownership (Table 4 and Table 5). Estimated values were assigned by finding the maximum value (Parcel Value, Land Value, or Improvement Value) associated with an asset's parcel. A threshold of 5 for the risk evaluation was used because it represents assets in a community with an average or above average vulnerability. In Hertford County 52 assets with an estimated total value of $173,106,952 were determined to be at risk (defined as Vulnerability Index of 5 or higher). This value was calculated by assuming the value of assets that overlap are reflected in the cost estimate of the larger asset area (i.e., the cost of a government building in a historic district would be captured in the overall estimated cost for the historic district). This assumption was carried over into grouped estimated value calculations, and spatial duplicates were removed within each category. Estimated values for each Asset Type should be considered independently since assets with multiple type designations were included in the evaluation of each of their assigned types.

**Table 4. Calculation of Total Asset Value at Risk (defined as Vulnerability Index of 5 or higher) for Each Asset Type for Hertford County, North Carolina**

| Asset Type | Number of Assets at Risk | Total Asset Value at Risk ($) |
|---|---|---|
| **Cultural Sites**[2] | 1 | 232,391 |
| **Emergency Services** | 10 | 8,300,457 |
| **Employers** | 1 | 14,657,681 |
| **Food and Supplies** | 4 | 2,798,288 |
| **Government** | 4 | 4,976,431 |
| **Hazardous Waste** | 3 | 879,105 |
| **Health and Medical** | 6 | 27,691,802 |
| **Law Enforcement/Corrections** | 5 | 14,227,360 |
| **Parks and Recreation** | 9 | 9,955,231 |
| **Residential** | 3 | 11,921,229 |
| **Roadways** | 1 | 200,000 |
| **Schools** | 1 | 54,724,827 |
| **Schools, Emergency Services** | 2 | 26,191,598 |
| **Utilities** | 2 | 687,911 |

**Table 5. Calculation of Total Asset Value at Risk (defined as Vulnerability Index of 5 or higher) for Each Ownership Type for Hertford County, North Carolina**

| Ownership Category | Number of Assets at Risk | Total Asset Value at Risk ($) |
|---|---|---|
| Private | 2 | 68,353,904 |
| State | 6 | 6,597,818 |
| County | 11 | 33,965,890 |
| Town of Ahoskie | 5 | 4,550,157 |

[2] Includes all parcels within historic districts

| Ownership Category | Number of Assets at Risk | Total Asset Value at Risk ($) |
|---|---|---|
| Town of Como | 1 | 85,728 |
| Town of Murfreesboro | 7 | 59,242,216 |
| Town of Winton | 1 | 311,239 |

# 7 PROJECT PORTFOLIO

## 7.1 Identification and Prioritization of Resilience Projects

The overall purpose of the RCCP is to support coastal communities to identify and pursue priority resilience projects that reduce and minimize risks posed by coastal hazards. The CAT referenced the following criteria (based on those in the RCCP Handbook) as well as their vision and goals in reaching agreement on a set of eight high-priority resilience projects for the County.

- Impact
  - Overall benefit to the community as a whole
  - Advances prior efforts/aligns with other plans
  - Has potential co-benefits, e.g., provides a recreational amenity, contributes to local economy, preserves a habitat, strengthens resilience to non-climate stressors like pandemics
  - Important for long-term resilience (i.e., taking climate change, sea level rise, and other future conditions into account)
  - Reduces vulnerability of key assets to coastal hazards
  - Reduces economic risk posed by coastal hazards in one or more sectors
  - Supports social equity
- Feasibility
  - Capacity to implement
  - Technical soundness
  - Likely positive benefit-cost ratio
  - Identifiable sources of funding

## 7.2 Prioritization Process

To develop a priority list of resilience projects for Hertford County, SWCA first created a list of potential projects based on review of existing documents including the Albemarle Regional Hazard Mitigation Plan Update (North Carolina Emergency Management Division [NCEM] 2020) and the Hertford County Hurricane Matthew Resilient Redevelopment Plan (NCEM 2017).

Project prioritization proceeded in three rounds. In the first round, the CAT reviewed the full list of potential projects compiled from existing resources to remove projects already completed or no longer relevant to the county and add any additional projects for consideration. In the second round, CAT members added or refined some project ideas based on the criteria above and selected a short list to bring to the second public meeting for review and feedback (Figure 8). In the third round, CAT members refined and adjusted their high priority list based on the criteria above and to better reflect public input and the vulnerability assessment results.

**Figure 8. County staff and community members discuss potential projects at the January public meeting.**

The eight high-priority projects agreed upon by the CAT are described in more detail in the tables below. Generally, these projects were understood by the CAT to have broad community-wide risk reduction benefits or to benefit vulnerable populations, to be feasible, to align with the county's long-term resilience goals, to build upon other plans, and to link to efforts already underway.

All other projects considered by the CAT are documented in Appendix G. Some of the other projects considered were not prioritized because they had been completed or were already in progress since being identified in previous planning efforts. Others were very localized and not perceived by the CAT to have sufficient benefit to the community at large to be considered high priority. Others would not substantially contribute to reducing coastal hazard risks or were considered infeasible by the CAT for any of the reasons noted in the criteria above, and so were not prioritized.

## 7.3 High-Priority Projects

The following eight projects were identified as high priority by the Hertford County CAT. Projects are *not* listed in order of priority; they are all high priority projects. Click the links below to jump to more details for each project:

### 7.3.1 Hydrologic Watershed Assessment

| | |
|---|---|
| **Project Description** | Hydrologic assessment of watersheds to identify best "bang for buck" infrastructure improvements to reduce flooding and water management and maintenance priorities. |
| **Location** | Almost county-wide, except for watersheds already evaluated in the Southwest portion of the County. |
| **Source** | Discussion with CAT |
| **Scoping Questions** | |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding, runoff |
| **FEMA Community Lifelines** | Safety and Security |
| **Type of Solution** | Local Plans and Policies |
| **Project Estimated Timeline** | 1 year |
| **Responsible Entity** | County Planning Department with a Consultant |
| **Potential Partners** | Coordinate with NRCS/Soil & Water, Towns |
| **Existing Funding** | None identified by CAT |
| **Potential Funding Sources** | Building Resilient Infrastructure and Communities (BRIC) State Allocation, WaterSMART Cooperative Watershed Management Program (CWMP) |
| **Project Estimated Cost** | Medium - $100,000–$150,000 |
| **Anticipated Benefit** | High – Action would have a significant impact on risk reduction. |
| **Priority Rating** | High |

### 7.3.2 Clearance of Debris from Waters

| | |
|---|---|
| **Project Description** | Inspect debris blockage problems and secure funds for the clearance of debris from rivers, streams, and tributaries, where indicated based on the hydrologic watershed assessment |
| **Location** | Countywide |
| **Source** | Albemarle Region Hazard Mitigation Plan 2020 |
| **Scoping Questions** | Hydrologic watershed assessment is an important first step to confirm where debris is actually causing problems and ensure debris removal would have flood risk reduction benefit that justifies the expense and ecosystem disturbance |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding, runoff |
| **FEMA Community Lifelines** | Safety and Security |
| **Type of Solution** | Non-regulatory Programs |
| **Project Estimated Timeline** | Ongoing |
| **Responsible Entity** | Soil and Water Conservation District? |
| **Potential Partners** | Hertford County, NC DOT |
| **Existing Funding** | None identified by CAT |
| **Potential Funding Sources** | Streamflow Rehabilitation Assistance Program (StRAP) - includes debris removal: |
| **Project Estimated Cost** | High – $200,000–$500,000 recurring as needed to maintain waterways |
| **Anticipated Benefit** | High – Action would have a significant impact on risk reduction. |
| **Priority Rating** | High |

### 7.3.3 Countywide Water Storage Upgrades

| | |
|---|---|
| **Project Description** | The county could face water shortages if wells are forced to go offline during storms. Identify suitable sites and the install wells, storage tanks, or other means of retaining water. This redundancy will make the county more resilient during future emergencies. |
| **Location** | |
| **Source** | Hurricane Matthew Resilient Redevelopment Plan - Hertford County |
| **Scoping Questions** | |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding, storm surge, sea level rise |
| **FEMA Community Lifelines** | Safety and Security; Food, Water, Shelter |
| **Type of Solution** | Infrastructure |
| **Project Estimated Timeline** | |
| **Responsible Entity** | Hertford County Public Utilities / Rural Water |
| **Potential Partners** | |
| **Existing Funding** | None identified by CAT |
| **Potential Funding Sources** | Drinking Water State Revolving Fund, Building Resilient Infrastructure and Communities (BRIC) |
| **Project Estimated Cost** | High – $500,000–$1 million |
| **Anticipated Benefit** | High – Action would have a significant impact on risk reduction. |
| **Priority Rating** | High |

### 7.3.4 Shriners Road Well

| | |
|---|---|
| **Project Description** | This well flooded during Hurricane Matthew and had to be taken out of service. Install elevated generators and a remote access system so the well can be monitored by personnel even when surrounding roads are impassable. |
| **Location** | Shriners Road, Ahoskie |
| **Source** | Hurricane Matthew Resilient Redevelopment Plan - Hertford County |
| **Scoping Questions** | Type of generator may be a determining factor in overall cost. |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding |
| **FEMA Community Lifelines** | Safety and Security; Food, Water, Shelter |
| **Type of Solution** | Structure and infrastructure |
| **Project Estimated Timeline** | 1 year |
| **Responsible Entity** | Hertford County Public Utilities / Rural Water |
| **Potential Partners** | |
| **Existing Funding** | None identified by CAT |
| **Potential Funding Sources** | Hazard Mitigation Grant Program (HMGP) |
| **Project Estimated Cost** | Depends on exact specifications of the systems to be installed. |
| **Anticipated Benefit** | High – Action would have a significant impact on risk reduction. |
| **Priority Rating** | High |

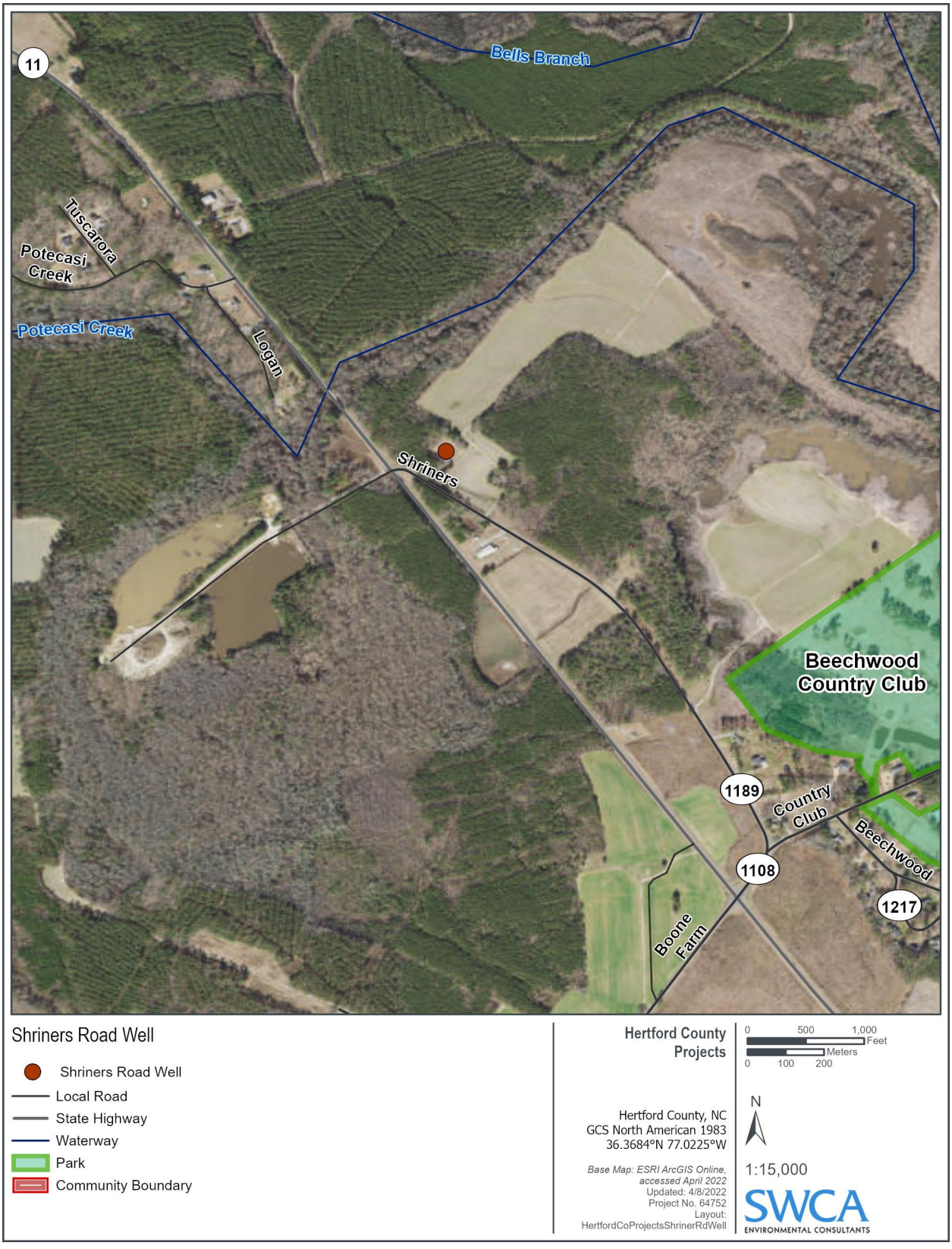


**Figure 9. Location of Shriner Road Well.**

### 7.3.5 Wastewater Treatment Plant Upgrades

| | |
|---|---|
| **Project Description** | Upgrade to prevent flooding impacts to wastewater treatment plant and reduce risk of releasing untreated wastewater during flood events. Murfreesboro (280 ft from riverbank) has flooded in the past, Winton retention ponds are about 500 feet from the waterway. |
| **Location** | Winton and Murfreesboro |
| **Source** | Public Meeting Input |
| **Scoping Questions** | |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding, sea level rise |
| **FEMA Community Lifelines** | Safety and Security; Hazardous Materials |
| **Type of Solution** | Infrastructure |
| **Project Estimated Timeline** | 2-5 Years |
| **Responsible Entity** | Towns of Winton and Murfreesboro |
| **Potential Partners** | |
| **Existing Funding** | Winton just received 100k for a wastewater study (Howard Hunter Proposal) – Kelly can provide more details |
| **Potential Funding Sources** | To be determined |
| **Project Estimated Cost** | Medium – $200,000 |
| **Anticipated Benefit** | High – Action would have a significant impact on risk reduction. |
| **Priority Rating** | High |

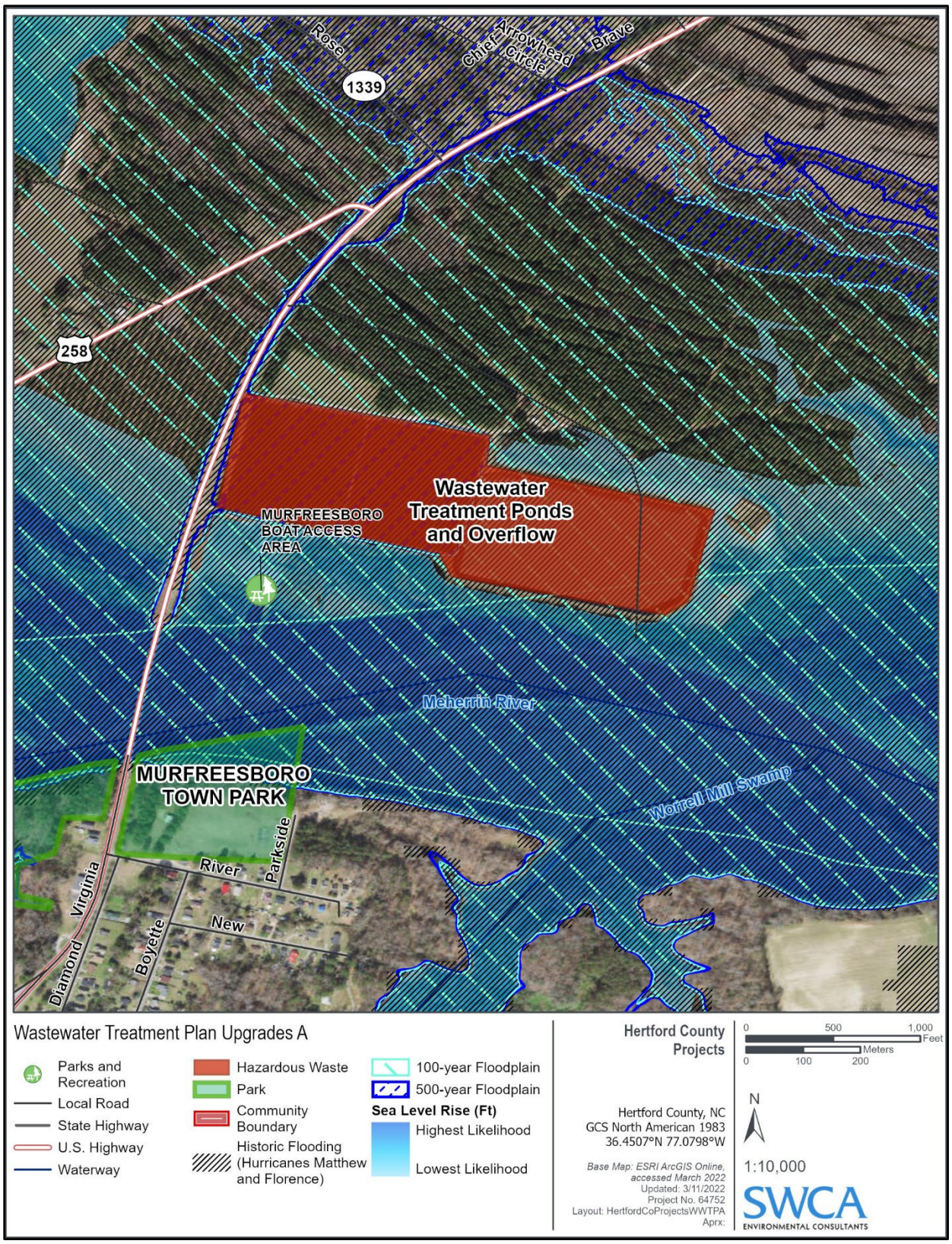


**Figure 10. Location of wastewater treatment plant upgrades, 1 of 2.**

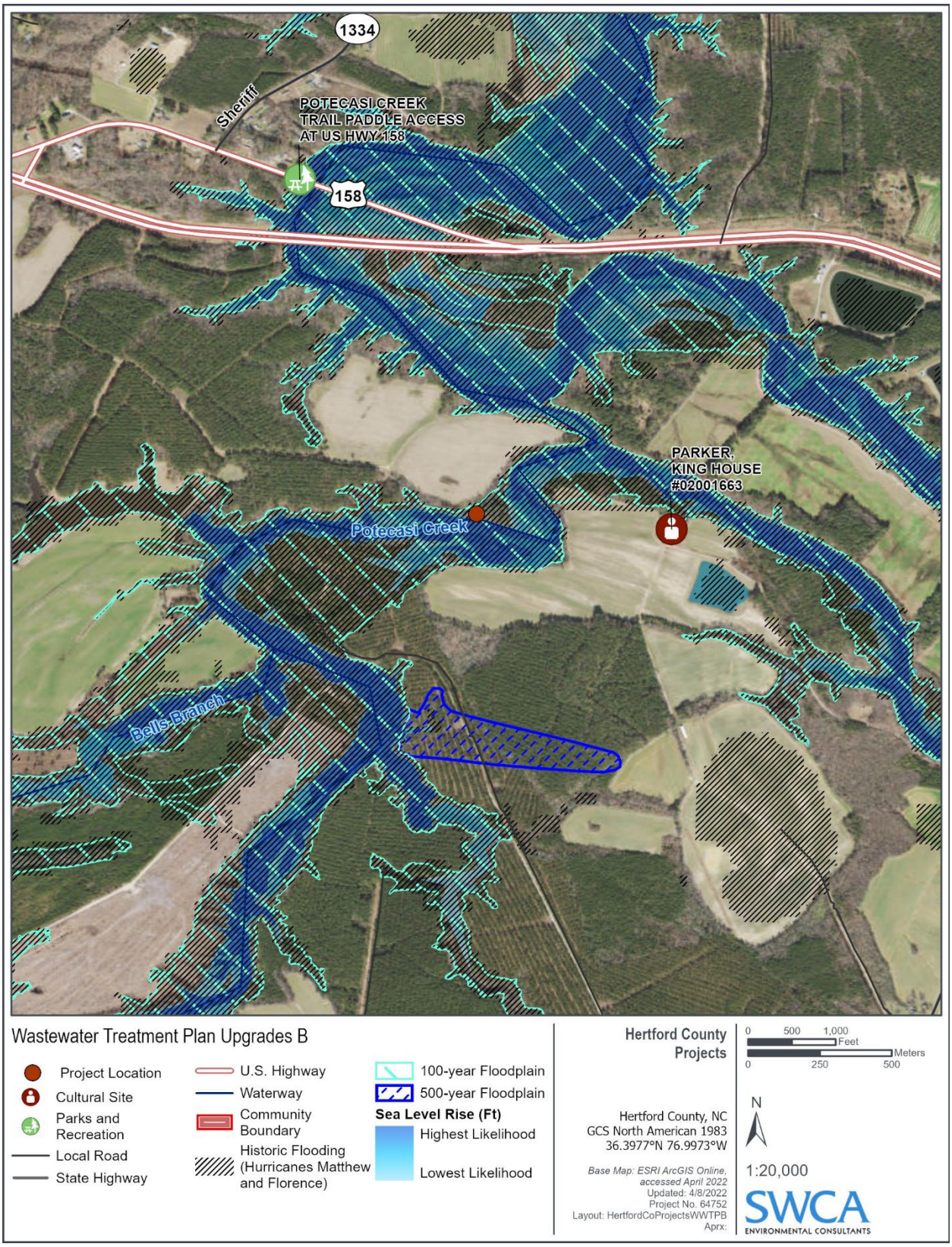


**Figure 11. Location of wastewater treatment plant upgrades, 2 of 2.**

## 7.3.6 Communication and Information Sharing

| | |
|---|---|
| **Project Description** | A collaborative effort to create clear and consistent information for county residents about flooding related issues, including:<br>1.Education/outreach to encourage maintaining vegetation along ditch banks to prevent erosion and maintain runoff capability<br>2.Annual notice to all property owners within a special flood hazard area that clearly states the property is susceptible to flooding. The County will also maintain a flood map information service, whereby County residents can call or come by to receive information regarding their property in relation to the defined floodplain.<br>3.Make information regarding hazards and development regulations within the floodplain available. The County Planning Director will ensure that the local library maintains information relating to flooding and flood protection (maintain dates of distribution and librarian certification of availability). The County will provide a link on their website to FEMA resources addressing flooding and flood protection. This information will be made available to citizens, realtors, developers, and contractors.<br>4.Improved Coordination on Drainage and Flooding Issues. Clarify who residents should contact about various drainage or flooding questions/concerns including emergencies, and ensure corresponding linkages between departments at local, county, state, and federal levels. |
| **Location** | Countywide and online |
| **Scoping Questions** | |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding, Storm Surge, Sea Level Rise, Runoff, Erosion |
| **FEMA Community Lifelines** | Safety and Security; Communications |
| **Type of Solution** | Education and Outreach |
| **Project Estimated Timeline** | 1 year |
| **Responsible Entity** | NRCS Soil and Water Conservation District, Floodplain Administrator, County Planning Department |
| **Potential Partners** | Albemarle-Pamlico National Estuary Partnership |
| **Existing Funding** | None identified by CAT |
| **Potential Funding Sources** | Albemarle-Pamlico National Estuary Partnership Engagement and Stewardship grants: https://apnep.nc.gov/engagement-and-stewardship-fy2021-request-proposals; NCAG Environmental Enhancement Grant Program |
| **Project Estimated Cost** | Low – $5,000–$10,000 |
| **Anticipated Benefit** | High – Action would have a significant impact on risk reduction. |
| **Priority Rating** | High |

### 7.3.7 State Game Land Purchases

| | |
|---|---|
| **Project Description** | Put flood-prone lands in conservation to maintain flood capacity, prevent construction of structures that would be at risk, and reduce maintenance costs for flood-prone areas |
| **Location** | Two potential locations include Chowan riverfront north of Winton and easements along "Vaughns Creek" on the Meherrin (herring run area). |
| **Source** | Public Meeting input |
| **Scoping Questions** | Could this incorporate easements for Vaughns Creek for fisheries conservation? |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding, sea level rise, storm surge, erosion |
| **FEMA Community Lifelines** | Safety and Security |
| **Type of Solution** | Natural/Nature based |
| **Project Estimated Timeline** | 2-5 years |
| **Responsible Entity** | Hertford County |
| **Potential Partners** | Division of Coastal Management, Coastal Land Trust |
| **Existing Funding** | None identified by CAT |
| **Potential Funding Sources** | Infrastructure Investment and Jobs Act (IIJA) funding to DCM through NOAA (DCM, on behalf of the state, will be able to apply for 3 projects (acquisitions or restoration) per year for the next 5 years). |
| **Project Estimated Cost** | TBD depending on areas selected |
| **Anticipated Benefit** | Medium – Action would have an impact on risk reduction. |
| **Priority Rating** | High |

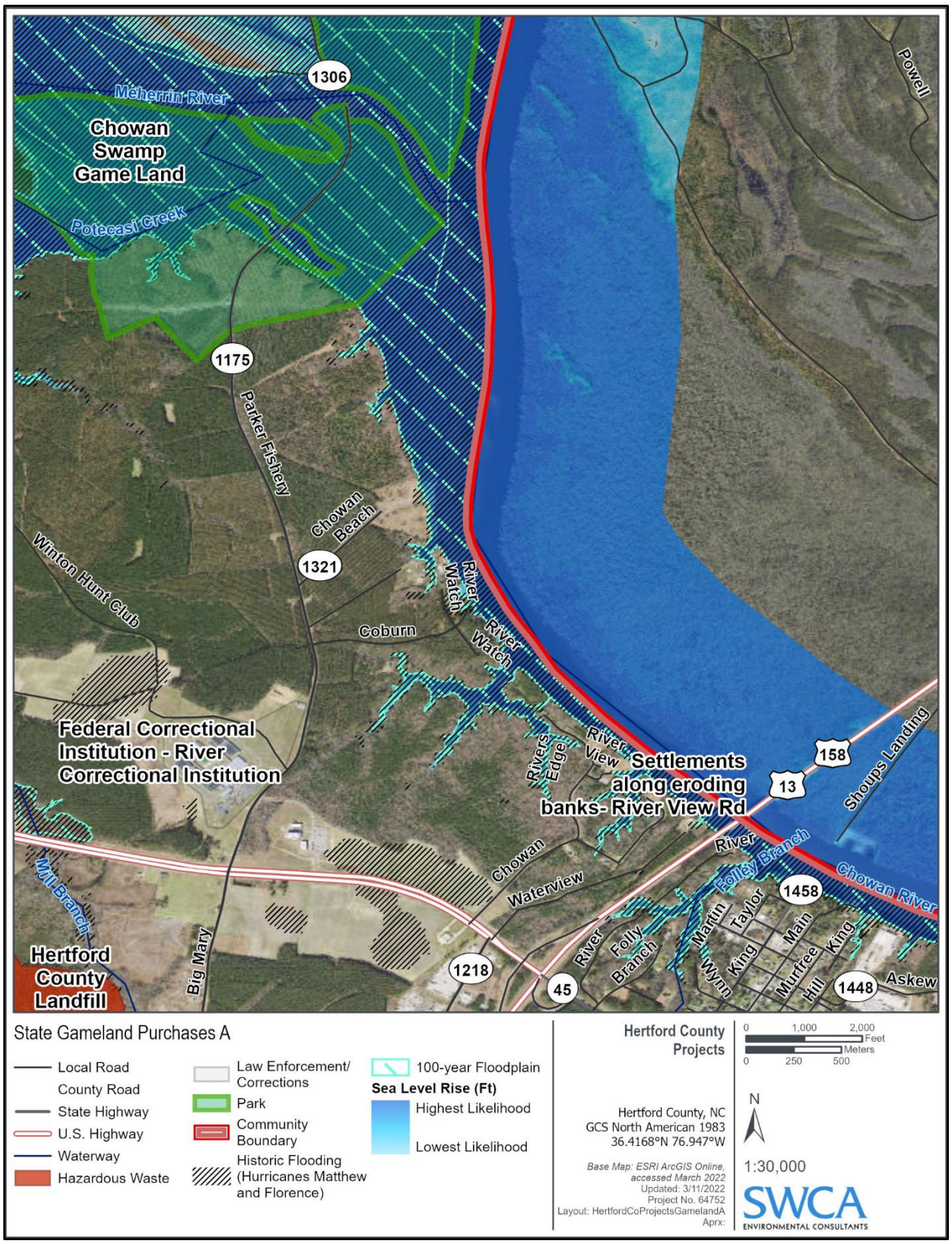


**Figure 12. Location of potential state game land purchases, 1 of 2.**

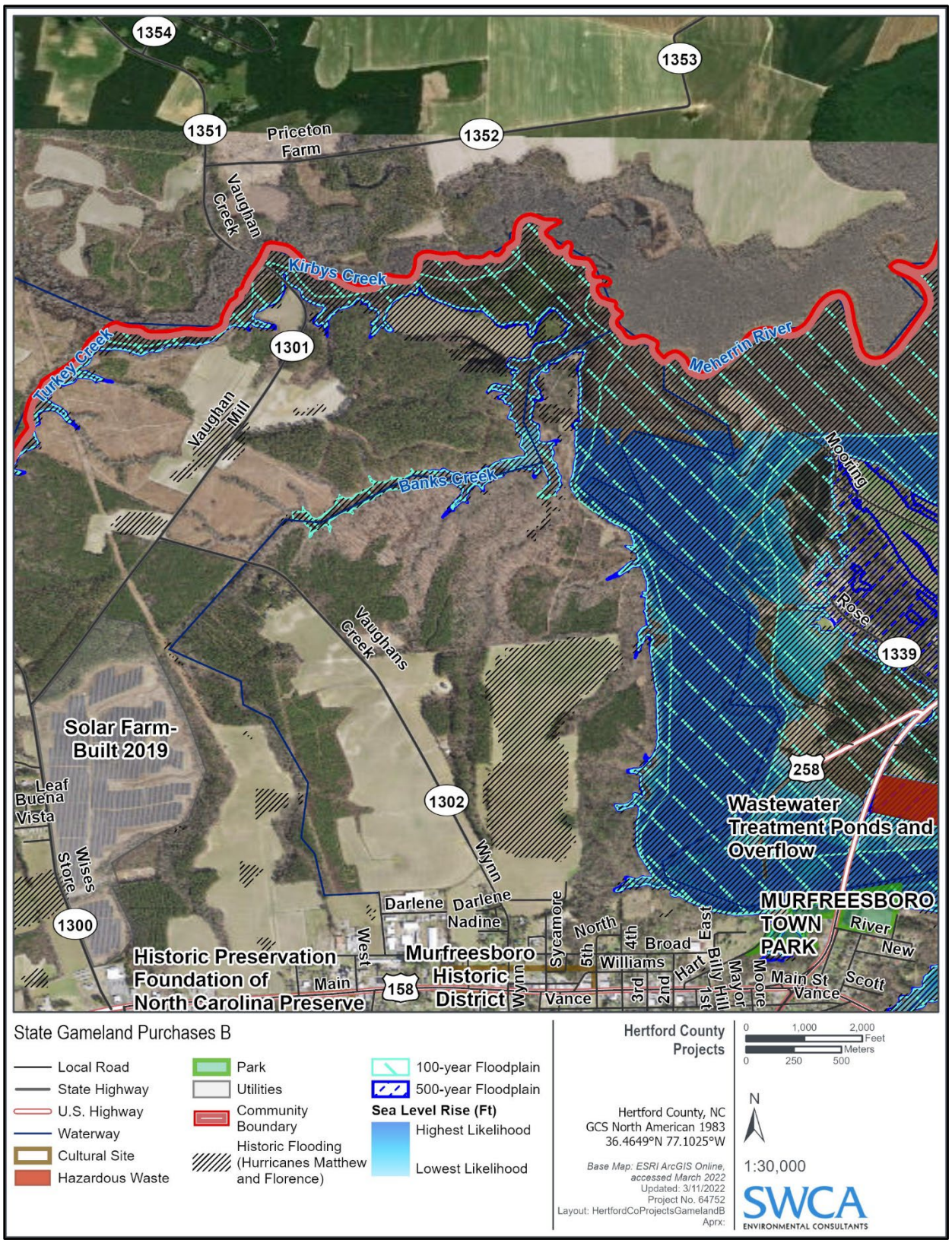


**Figure 13. Location of potential state game land purchases, 2 of 2.**

## 7.3.8 Regulatory Updates

| | |
|---|---|
| **Project Description** | 1.Provide annual review of development restrictions in floodplain areas and maintain initiatives to ensure limited residential and commercial development in the floodplain and optimal protection of critical facilities.<br>2. Review County and municipal zoning, subdivision, and flood damage prevention ordinances for improved control of flooding hazards and improvement of drainage.<br>3.Adopt and annually update a capital improvements plan with an emphasis on mitigation for critical facilities. |
| **Location** | Countywide |
| **Source** | Albemarle Region Hazard Mitigation Plan 2020 |
| **Scoping Questions** | In case the team is not already aware, NC has developed an updated Model Flood Damage Prevention Ordinance (2021) that includes state-recommended / higher regulatory standards for the County and municipalities to consider adopting: https://flood.nc.gov/ncflood/documentcenter.html?type=11 |
| **Hazard(s) Addressed by Project** | Precipitation-based flooding, sea level rise, storm surge |
| **FEMA Community Lifelines** | Safety and Security |
| **Type of Solution** | Local Policy and Plans |
| **Project Estimated Timeline** | Ongoing |
| **Responsible Entity** | Flood Plain Administrator |
| **Potential Partners** | Hertford County, County Commission |
| **Existing Funding** | None identified by CAT |
| **Potential Funding Sources** | Building Resilient Infrastructure and Communities (BRIC) State Allocation |
| **Project Estimated Cost** | Low – $15,000-$50,000 |
| **Anticipated Benefit** | High – Action would have a significant impact on risk reduction. |
| **Priority Rating** | High |

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# APPENDIX A

## Community Action Team Members

**Table A-1. Community Action Team Members for Hertford County, North Carolina**

| Name | Title/Affiliation |
|---|---|
| Kelly Bowers | Hertford County Economic Development |
| Brenda Brown | Hertford County Social Services |
| David Cotton | Hertford County Manager |
| James "Bo" Dame | Chowan University |
| Diedra Evans | Hertford County Office on Aging |
| Stanley Lassiter | Hertford County Rural Water Districts |
| Robert Mizelle | Hertford County Chief Code Building Inspector |
| Eric Parker | Hertford County Soil and Water Conservation District |
| Chris E. Smith | Hertford County Emergency Management Director |
| Sara Powell Turner | Hertford County GIS/Planning Director |
| **Copied** | |
| Rebecca Castello | Hertford County Cooperative Extension |
| Helen Eure | Hertford County Cooperative Extension |
| Ed Evans | Environmental Health Supervisor |
| Brenda Greene | Choanoke Area Development Association |
| Gerwyn Evans Heath | Town of Winton |
| Susan Kennington | Town Clerk, Town of Como |
| Kerry McDuffie | Town Manager, Town of Ahoskie |
| Henry Nuss | Mayor, Town of Harrellsville |
| Irvin Stephens | Mayor, Town of Como |
| Tiffany Walton | Supervisor for Children and Adult Services |
| Mitch Woodward | Area Specialized Agent, Watersheds and Water Quality |
| June Wynn | Mayor, Town of Cofield |
| | Administrator, Town of Murfreesboro |

# APPENDIX B

## Community Action Team Meeting Summaries

*Ctrl+Click to jump to the summary of a specific meeting:*

# MEETING SUMMARY
# HERTFORD COUNTY CAT

## Meeting No. 1, Monday September 27, 2021, from 3:00 to 4:00 p.m.

**Meeting Objectives**

- Introduce the purpose, milestones, and schedule for the RCCP process
- Review and answer any questions about the role of the CAT members
- Review existing information available and gaps for consideration under RCCP, including:
    - Priority hazards for assessment
    - Initial discussion of assets to be mapped
- Confirm next steps following this meeting

**Participants**

Hertford County Staff
Kelly Bowers, Economic Development
David Cotton, County Manager
Helen Eure, Cooperative Extension
Diedra Evans, Office of Aging
Robert Mizelle, Building Inspector
Eric Parker, Soil & Water
Chris Smith, Emergency Services
Sara Turner, GIS & Planning

Other Members
Bo Dame, Chowan University
Mitch Woodward, NC Cooperative Extension

Facilitation and Support Staff
Kathryn Gardner, SWCA Environmental Consultants
Meg Perry, SWCA Environmental Consultants
Mackenzie Todd, NC Division of Coastal Management

**Action Items**

CAT Members

- Share any additional existing materials to review, hazards or assets to focus on, or recommended avenues for sharing information with the community beyond this group - by Monday, Oct. 11

SWCA

- Share meeting recording and summary with CAT members – by Monday, Oct. 4
- Share examples of vision statements for CAT consideration – by Monday, Oct. 4
- Invite CAT members to access the SharePoint folder – by Monday, Oct. 4
- Follow up with Chris about status of projects from the Hurricane Matthew Redevelopment Plan – by Friday, Oct. 8

**Summary of Key Points from Presentation and Discussion**

Program Overview
Meg Perry, SWCA Environmental Consultants, introduced the four-phase Resilient Coastal Communities Program (RCCP). The four phases of the program are outlined below and explained in further detail in the Program Handbook:

- *Phase 1: Risk and Vulnerability Assessment* (approximately September – December 2021) Evaluating local assets, hazards, and vulnerabilities. This phase will include one public open-house event.
- *Phase 2: Planning, Project Identification, & Prioritization* (approximately December – March 2022) Identifying priority actions (such as infrastructure repair or creation of living shorelines) to reduce the risks identified in Phase 1. This phase will include a second public open-house event.
- *Phase 3: Engineering and Design* (approximately February – September, 2022)
- *Phase 4: Project Implementation*

Mackenzie Todd, Division of Coastal Management (DCM), explained that DCM will share information about how to apply for funding from the state for Phase 3 in early 2022. DCM expects to provide approximately $40,000 – 50,000 to each of the 26 communities currently participating in the program to support Phase 3 design for one priority project. Phase 3 is expected to run through late summer/early fall of 2022. After Phase 3, communities will have the opportunity to apply via a competitive proposal process for Phase 4 implementation funds.

Ms. Perry explained that the Division of Coastal Management has contracted with SWCA to provide technical support to four communities in completing Phases 1 and 2 of the Program between now and March 2022. The four communities SWCA is supporting are Bertie County, Hertford County, Town of Hertford, and Town of Windsor.

Community Action Team Role

Ms. Perry explained the role of the CAT is to provide guidance and input for Phases 1 and 2 to ensure the Resilience Strategy developed by SWCA reflects the community's vision and goals and accurately reflets the issues and needs in the community.

Meetings are scheduled for November and December to discuss the Risk and Vulnerability Assessment process and results. Additional meetings will be scheduled in January – March 2022 focused on development of the prioritized project portfolio and review of the final Resilience Strategy document.

Community Resilience Goals

Ms. Perry shared the following general goals for this effort:

1. Prepare the County to implement projects that reduce risks and speed recovery from coastal hazards by evaluating local risks and vulnerabilities and identifying and scoping priority coastal resilience projects.
2. Qualify the County for project funding through the RCCP and other funding programs

She asked CAT members to consider what specific vision and goals for resilience this program can help Hertford County pursue. This will be discussed further in subsequent meetings.

Review of Existing Materials

Ms. Perry explained that the SWCA team has begun reviewing the existing materials related to resilience planning that the County has previously created or approved. She asked CAT members to share any other existing information that might be relevant to SWCA's analysis. The following is a list of studies and plans SWCA is currently reviewing:

- County Zoning Ordinance (2021)
- County RCCP Application (2021)
- Albemarle Regional Hazard Mitigation Plan (2020)
- County Hurricane Matthew Resilient Redevelopment Plan - Hertford County (2017)
- County CAMA Land Use Plan (2011)

Discussion of Hazards

In addition to general hazard types that SWCA plans to assess, which include flooding, storm surge, erosion, and sea level rise, the group identified some specific hazard concerns, as follows:

- Riverine flooding in residential areas during/following big rainfall events is a significant issue. Some areas were purchased during the Hurricane Floyd buyout, but some remain.
- Events that saturate the wetlands lead to back up/overflow into surrounding areas.
- Agricultural erosion is an issue, where accumulated sediment from runoff blocks drainage ditches and culverts - Ahoskie Creek and Horse-Flat Swamp both have erosion in some areas.

Discussion of Assets

The group identified a preliminary list of assets that may not be captured in existing plans and reports, including:

- The County fuel storage site
- Transportation/clear roads – There are low bridges, off ramps, and dips in roadways prone to flooding. These transportation access issues are particularly important for emergency response and access to homebound seniors who receive in-home aid, meal delivery, and respite/hospice services from the County
- Cemeteries and graveyards
- Vaughn's Creek NW of Murfreesboro - hot spot for herring; used as a metric for herring health
- Chowan University - has a manmade dam on the campus; Union Street that connects university dorms to the rest of campus frequently floods
- Wastewater ponds immediately adjacent to waterways - in Winton and at least one other location
- Commercial and recreational fishing sites
- Hare's Millpond

Next Steps

The hazards and assets discussed during this call will inform work by SWCA to map the County's coastal hazards and community assets, building on information in the existing plans and reports the County has already developed or approved. The next meeting of the CAT is scheduled for **Tuesday, November 2 from 10:00 – 11:00 a.m.**

# MEETING SUMMARY
# HERTFORD COUNTY CAT

## Meeting No. 2, Tuesday November 2, 2021, from 10:00 to 11:00 a.m.

**Meeting Objectives**

- Review draft map of information available and gaps for consideration under RCCP, including:
  - Priority hazards for assessment
  - Assets to be mapped
- Review Vision Statement
- Confirm next steps following this meeting

**Participants**

CAT Members
Kelly Bowers, Economic Development
Brenda Brown, Social Services
Rebecca Castello, Cooperative Extension
David Cotton, Hertford County
Helen Eure, Cooperative Extension
Stanley Lassiter, Rural Water Districts
Kerry McDuffie, Town of Ahoskie
Eric Parker, Soil & Water Conservation
B Powell, Phone Participant
Sara Turner, Hertford County GIS

Facilitation and Support Staff
Kathryn Gardner, SWCA Environmental Consultants
Meg Perry, SWCA Environmental Consultants
Mackenzie Todd, NC Division of Coastal Management

**Action Items**

CAT Members
- Review draft vision statement and provide any suggested edits to Meg Perry (meg.perry@swca.com) by Friday, Nov. 19
- Review asset list and send suggested additions to Meg Perry (meg.perry@swca.com) - by Tuesday, November 30

SWCA
- Share draft asset list and link to interactive draft asset and hazard map for CAT members to review by Friday Nov. 12
- Contact specific members about locations of assets mentioned on the call (utilities, wells, substations, airport) by Friday Nov. 19
- Confirm timing and location for 1st Public Input Meeting by Friday Nov. 19

**Summary of Key Points from Presentation and Discussion**

RCCP Process

Meg Perry, SWCA, reminded the group about the four phases of the RCCP process. The CAT and SWCA are currently focused on Phase 1 Risk and Vulnerability Assessment (see Figure 1 below).

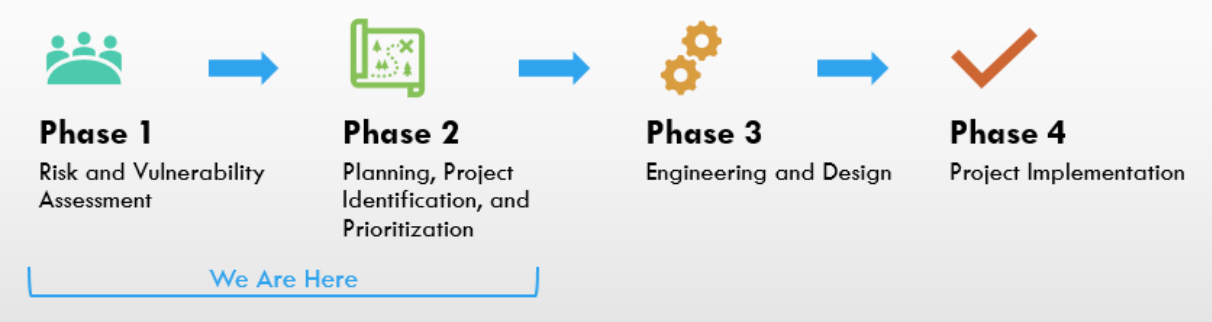



**Figure 9. Phases of the Resilient Coastal Communities Program.**

Elements of Phase 1 In Progress

The Phase 1 Vulnerability Assessment will look at all the community asset locations to determine: 1) their Exposure – what hazards might occur at this location, 2) Sensitivity – how damaging those hazards would be to the asset, and 3) Adaptive Capacity – how much opportunity is there for this asset to change or adjust to reduce risk from coastal hazards. These factors will be summarized in a single number (Vulnerability Index) for each asset that indicates how vulnerable it is to hazards.

Phase 1 also includes a Risk Assessment that will estimate the cumulative economic risk of hazard impacts in the community. The current work to collect and map asset and hazard information will ultimately feed into these two assessments.

Vision Statement

Each community needs a Vision Statement to help guide decision making and prioritization. It is also useful to have a Vision Statement prepared when applying for funding. Ms. Perry shared the following elements of a vision statement to help guide the CAT in developing theirs (Figure 2).

During the meeting, the group reviewed several example vision statements based on those in use by other communities and drawing upon vision language in existing planning documents. The group selected language from the examples that is applicable to their community and made additional edits resulting in the following preliminary vision statement:

> **Vision: Hertford County is a resilient and vibrant community where citizens and visitors alike enjoy recreation and ecotourism activities supported by protection of the natural environment. Hertford County exemplifies a culture of resilience to coastal hazards through inclusive partnerships focusing on both effective response and recovery, and pro-active measures to prevent or minimize future damage.**
>
> **Our Approach to Resiliency: Communities within Hertford County seek to improve the local quality of life through sustainable economic development that enhances and protects the environment and culture of the region. Natural and cultural resource-based science, eco-tourism, and environmental education and outreach to the public help to diversify the local economy while minimizing the impacts of hazards. We employ an integrated approach to coastal resilience that addresses both**

**upstream and downstream hydrologic dynamics, the unique physical and environmental settings of inter-connected water bodies, and the ongoing changes in climate and sea level rise.**

CAT members should send any suggested adjustments to this vision statement language to Ms. Perry (meg.perry@swca.com).


**Figure10. Elements of a resilience vision statement.**

Draft Hazard and Asset Map Review

The group reviewed a preliminary version of the assets and hazards map which included assets and hazards from the following sources:

| **Asset Data Sources** | **Hazards Identified** |
|---|---|
| 2016 & 2020 Regional Hazard Mitigation Plans | 100 & 500 year flood plain |
| USGS Data | National Hurricane Center high tide inundation |
| National Register of Historic Places | storm surge (by storm category) |
| Sites Identified During 1st CAT Meeting | Historical Hurricane Florence Data |

The group identified additional hazard and asset types it would like to see included in the final version, including:

**Assets Needed**
Natural & Cultural Features
Utilities (ex: Wells, sub-stations, natural gas distribution points)
Economic Hubs
Transportation (ex: roads, railways, airport)
Community Services (ex: food banks, shelters)

**Hazards Needed**
Historical Hurricane Matthew Data
Sea Level Rise Projections (at least out to 30 year)
Localized drainage and inland flooding data
NC DOT Road flooding data based on rainfall not storm surge

Next Steps

The next CAT Meeting will focus on review of the draft Risk and Vulnerability Assessment and initial discussion of the resilience projects. The first of two public open house meetings is tentatively scheduled for December 15 from 11am-1pm at Chowan University or potentially in mid-January to enable involvement of students. The next meeting of the CAT is scheduled for **Tuesday, December 7 from 3:00 – 4:00 p.m.**

# MEETING SUMMARY
# HERTFORD COUNTY CAT

## Meeting No. 3, Tuesday December 7, 2021, from 3:00 to 4:00 p.m.

**Meeting Objectives**

- Provide Risk Assessment Status Update
- Plan for Public Meeting(s) in January
    - Review public outreach materials in development
    - Confirm meeting format, timing, and next steps
- Confirm next steps
    - Schedule for 2022 CAT Meetings

**Participants**

CAT Members
Kelly Bowers, Economic Development
David Cotton, Hertford County
James "Bo" Dame, Chowan University
Helen Eure, Cooperative Extension
Diedra Evans, Office on Aging
Stanley Lassiter, Rural Water Districts
Eric Parker, Soil & Water Conservation
Chris Smith, Hertford County
Sara Turner, Hertford County GIS

Facilitation and Support Staff
Kathryn Gardner, SWCA Environmental Consultants
Meg Perry, SWCA Environmental Consultants
Mackenzie Todd, NC Division of Coastal Management

**Action Items**

CAT Members

- Review draft asset list and provide any suggested edits to Meg Perry (meg.perry@swca.com) by Monday, Dec. 13

SWCA

- Update maps in preparation for public open house by Monday, Jan. 3
- Finalize materials for public open house advertising by Monday, Dec. 20

**Summary of Key Points from Presentation and Discussion**

Review of Hazard Maps

Three maps were provided for review by the CAT:

1) Flood Plain Map – shows the 100 and 500 year flood plain
2) Historical Flood Map – shows historical data of area flooded during Hurricanes Matthew and Florence, data was collected via satellite imagery
3) Sea Level Rise Map – shows areas at risk of sea level rise based on 'bathtub' modeling. Areas lower in the landscape are more susceptible to sea level rise first and areas higher in the landscape would be impacted at more severe levels of sea level rise. This is not based on a timeline prediction because there are many factors that may influence how quickly sea level rise occurs.

The northeast corner of the Sea Level Rise map has missing data because this is the edge of the area that the sea level rise model covers. SWCA agreed to add a more prominent note to the map explaining this.

Asset Discussion

Assets noted as missing that need to be added:

- Hazardous Waste site in Murfreesboro
- Concentrated Animal facilities and waste sites (i.e. Chicken and hog houses, hog lagoons)
- Family Care homes (like Ahoskie House) – Existing data includes daycares and needs to be categorized

CAT members requested information showing residences within hazard areas. Meg agreed to work with SWCA's GIS team to map residential areas at highest risk.

CAT members should respond to Meg (meg.perry@swca.com) no later than Monday, December 13 to identify any other missing assets. Examples include:

- Community landmarks and gathering places
- Locations important for safety during a storm
- Assets important for recovery and rebuilding after a storm

Public Open House

The first of two open house meetings is tentatively planned for **January 13th from 11am -2pm** at Chowan University. Bo and Meg will coordinate after the meeting to finalize the meeting space. CAT members are asked to attend if available to help answer questions from attendees. Mackenzie offered DCM to help with refreshments.

Next Steps

The next CAT Meeting will focus preparation for the first public open house and is scheduled for **Tuesday, January 4 from 3:00 – 4:00 p.m.**

# MEETING SUMMARY
# HERTFORD COUNTY CAT

## Meeting No. 4, Tuesday January 4, 2022, from 3:00 to 4:00 p.m.

**Meeting Objectives**

- Prepare for Open House Meeting
- Hear an update and share input on the Vulnerability and Risk Assessment

**Participants**

CAT Members
Brenda Brown, Social Services
Rebecca Castello, Cooperative Extension
David Cotton, Hertford County
James Bo Dame, Chowan University
Diedra Evans, Office of Aging
Chris Smith, Hertford County
Sara Turner, Hertford County GIS

Facilitation and Support Staff
Kathryn Gardner, SWCA Environmental Consultants
Meg Perry, SWCA Environmental Consultants
Mackenzie Todd, NC Division of Coastal Management

**Action Items**

CAT Members

- Help advertise the public meeting on 1/12 - COMPLETED

SWCA

- Prepare print materials for public meeting - COMPLETED
- Create master list of existing project ideas and add new project ideas - Prior to next CAT meeting

**Summary of Key Points from Presentation and Discussion**

Public Meeting Preparation
The group reviewed plans and publicity materials for the upcoming Open House Meeting. Meg Perry, SWCA, explained that SWCA has arranged for newspaper and radio announcements. CAT members were encouraged to circulate the announcement using the flier and social media post prepared by SWCA.

**The website for program information and survey collection is now live and accessible to the public:** https://nc-rccp-community-portal-swcagis.hub.arcgis.com/

Information collected during this meeting will inform the vulnerability assessment and help identify potential projects to include on the project list. A brief report on key themes from the public meeting will be circulated to the CAT following the meeting.

Risk and Vulnerability Assessment
Meg explained the next step in the process will be to evaluate each asset based on 3 criteria:

1) Exposure – How often or severely is an asset exposed to flooding hazards

2) Sensitivity – How much would this location be impacted by flooding (e.g., temporarily impacted and easy to repair, significant repairs needed and longer duration of inoperability, or likely to be completely destroyed by a flood)
3) Adaptive Capacity – What measures are already in place to protect or reduce flooding impacts at this location?

This information will be used to develop a "Vulnerability Index" – a single number that indicates how vulnerable that location is to coastal hazards. This will enable the CAT to compare the vulnerability of different sites and can help identify and prioritize potential resilience projects.

Next Steps

The next CAT Meeting will focus on review of the vulnerability assessment results and preliminary project list on **Tuesday, February 1 from 3:00 – 4:00 p.m.**

# MEETING SUMMARY
# HERTFORD COUNTY CAT

## Meeting No. 5, Tuesday February 1, 2022, from 3:00 to 4:00 p.m.

**Meeting Objectives**

- Review Preliminary Project List and Discuss Resilience Goals
- Review Preliminary Vulnerability Scores
- Prepare for February Open House

**Participants**

CAT Members
Kelly Bowers, Economic Development
Robert Mizelle, Building Inspections
Eric Parker, Soil & Water Conservation
Sara Turner, Hertford County GIS

Facilitation and Support Staff
Kathryn Gardner, SWCA Environmental Consultants
Meg Perry, SWCA Environmental Consultants
Mackenzie Todd, NC Division of Coastal Management

**Action Items**

CAT Members

- Review draft goals and provide any suggested edits to Meg Perry (meg.perry@swca.com) by Friday, Feb. 11
- Review preliminary project list and share any information about current status of projects on the list or other projects that should be added with Meg Perry (meg.perry@swca) by Friday, Feb. 11.

SWCA

- Provide meeting description for Commissioners Agenda - Completed
- Confirm with Chris if Hurricane Matthew projects are completed – Wednesday, Feb. 9
- Confirm event space for 2nd public meeting
- Share updated project list and asset list with vulnerability scores in advance of the next meeting – by Monday, February 14.

**Summary of Key Points from Presentation and Discussion**

Review of Project Types and Preliminary Project List
Existing sources of project information have been combined into a single table for review by CAT Members. CAT members should respond to Meg (meg.perry@swca.com) no later than Friday, February 11 to identify projects that have already been completed or need to be taken off the list.

Goals
Goals are important to direct the work of the CAT members moving forward. The draft goals identified by the group are listed below:

- **Local Policy and Regulations:** Update all local ordinances to include resilience measures by [TIMEFRAME]

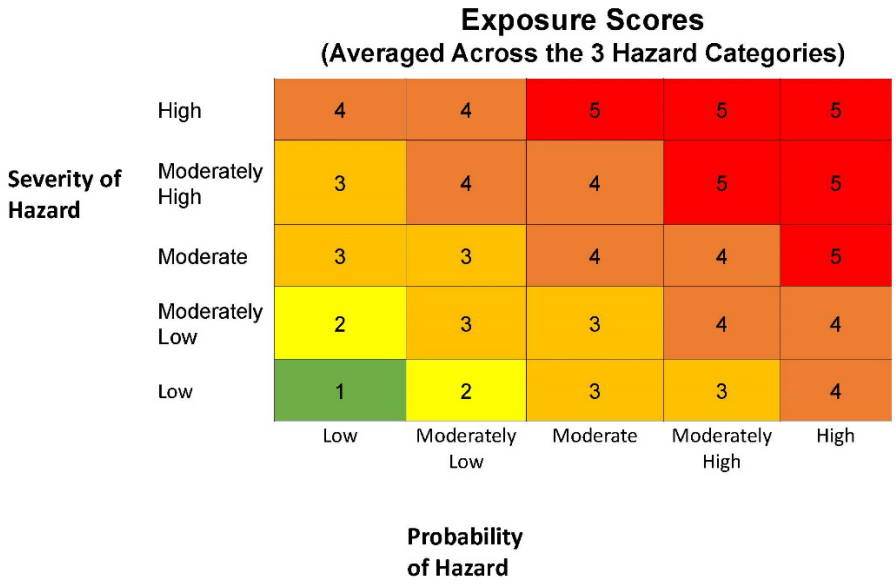
    - Review flood resilience-oriented ordinances already in place (including municipal ordinances) to identify needed updates or improvements to support resilience
- **Infrastructure/Nature Based:** Complete three high priority infrastructure/nature-based resilience projects by 2025
    - Review potential resilience project list and confirm status of each by March 2022
    - Confirm which previously identified projects are already budgeted for by the County by June 2022
    - Identify other agencies involved in implementing high priority projects
    - Identify sources of external funding for high priority projects not already funded
    - Complete feasibility studies and cost-benefit analysis for five high priority projects to identify tiers of projects that match different funding sources
    - Secure external funding for X number of high priority projects
    - Work with Stephanie Harmon to get priority projects into DOT lineup for future implementation post-2026 (or earlier, if possible)
- **Education, Awareness, and Incentive Programs:** Make public information [from xyz departments] about flooding/resilience more accessible to residents by [timeframe]
    - Centralized website
    - Info included with water bills/tax bills
- **Local and Regional Plans**??

CAT Members should respond to Meg (meg.perry@swca.com) no later than Friday, February 11 to provide feedback on the goals.

Review of Vulnerability Scores

A draft version of the vulnerability scores for each asset was presented to the group. The vulnerability score combines the Exposure, Sensitivity, and Adaptive Capacity for each asset.

The exposure score is measured by assessing the probability that an asset will be exposed to each of three flooding hazard types and the severity of that type of flooding at that location. Then the scores for the three flooding types are averaged to generate a final exposure score that ranges from 0 (no exposure) to 5 (high exposure).




Sensitivity and Adaptive Capacity scores will be finalized for review by the next CAT Meeting.

Public Open House

The second of two open house meetings is tentatively planned for **February 21st from 6pm -7pm** preceding the County Commissioners meeting at 7:00. Sara and Meg will coordinate after the meeting to finalize the meeting space. CAT members are asked to attend if available to share input and help answer questions from attendees.

Next Steps

The next CAT Meeting will focus on refinement of the project list in preparation for the second public open house and is scheduled for **Tuesday, February 15 from 3:00 – 4:00 p.m.**

# MEETING SUMMARY
# HERTFORD COUNTY CAT

## Meeting No. 6, Tuesday February 15, 2022, from 3:00 to 4:00 p.m.

**Meeting Objectives**

- Review and Refine Updated Project List
- Confirm plans for February Public Meetings

**Participants**

CAT Members
Kelly Bowers, Economic Development
Brenda Brown, Social Services
James Bo Dame, Chowan University
Diedra Evans, Office of Aging
Sara Turner, Planning and GIS

Facilitation and Support Staff
Kathryn Gardner, SWCA EnvironmentalConsultants
Meg Perry, SWCA Environmental Consultants

**Action Items**

CAT Members

- Help advertise the public meeting on 2/21 by making direct invitations

SWCA

- Prepare print materials for public meeting by 2/21

**Summary of Key Points from Presentation and Discussion**

Preliminary Project List

The group reviewed slides describing different project types, and a preliminary list of potential projects identified from previous studies and public meetings to be discussed in more detail at the public meeting on Monday February 21.

Discussion Notes

- Sara Turner provided information regarding the Flood Damage Ordinance for Herford County.
- Meg to confirm if this ordinance affects the status of any other project ideas
- Buyouts/elevation of damaged properties usually occurs immediately following a flooding event, so this may be lower on the list for now and moved up later
- The Ahoskie Health Department was renamed to Albemarle Regional Health Services – but still in the same location, still in a flood hazard
- The capital improvements plan is not updated annually, but rather periodically (next March 2022)
- Potential Project: Information hub page where residents can go to find all information related to flooding
- Wastewater Treatment Facilities – Mufreesboro is in need of updates, but other communities may also be in need, make sure not to exclude other wastewater treatment facilities

Public Meeting Preparation

The second of two open house meetings is scheduled for Monday February 21 from 6-7pm at the Hertford County Courthouse immediately prior to the County Commissioners meeting. The group reviewed plans and publicity materials for the upcoming Open House Meeting. Meg explained that SWCA has arranged for newspaper announcements. CAT members were encouraged to personally invite members of the community to attend and provided with copies of a flier and social media posts to use.

Next Steps

The next CAT Meeting will focus on confirming the CAT's high priority project list and is scheduled for **Tuesday, March 1 from 3:00 – 4:00 p.m.**

# MEETING SUMMARY
# HERTFORD COUNTY CAT

## Meeting No. 7, Tuesday March 1, 2022, from 3:00 to 4:00 p.m.

**Meeting Objectives**

- Confirm high priority projects
- Confirm plans for review of draft report

**Participants**

CAT Members
Kelly Bowers, Economic Development
James Bo Dame, Chowan University
Stanley Lassiter, Rural Water Districts
Eric Parker, Soil & Water Conservation
Chris Smith, Emergency Management
Sara Turner, Planning and GIS

Facilitation and Support Staff
Kathryn Gardner, SWCA EnvironmentalConsultants
Meg Perry, SWCA Environmental Consultants

**Action Items**

SWCA

- Draft final Resilience Strategy report and send to CAT for review by 3/14

CAT Members

- Provide feedback on draft report by 4/1

**Summary of Key Points from Presentation and Discussion**

Priority Project List

The group reviewed and discussed the project list in light of feedback and discussions at the public meeting, previously identified criteria and goals, and the results of the vulnerability assessment. The CAT members agreed on a group of high priority projects to be described in more detail in the final Resilience Strategy report:

- Clearance of debris from rivers, streams and tributaries
- Hydrologic Watershed Assessment
- Water/Wastewater Upgrades
    - Countywide Water Storage
    - Shriner Road Well
    - Wastewater Treatment Plant Upgrades
- Communication and Information Sharing
    - Education/Outreach to encourage maintaining vegetation along ditches
    - Notices sent to all property owners
    - Information hub related to flooding
    - Improved coordination on drainage and flooding issues
- Administrative Policies

- Annual Review of development restrictions in floodplain areas
- Review of county and municipal zoning, subdivision and flood damage areas
- Capital Improvements Plan

Next Steps

SWCA will provide a draft report to the CAT members by **March 14th** for review. CAT members are requested to review the draft report and provide feedback by **April 1st**. The final report will be delivered by mid April.

# APPENDIX C

# Project Website Content


**Figure C-1. Example screenshot of the project website, 1 of 4.**

The four phases of the program include:

**Phase 1: Community Engagement and Risk & Vulnerability Assessment- Current Phase**

Phase 2: Planning, Project Selection and Prioritization

Phase 3: Engineering and Design

Phase 4: Implementation

By completing the Resilience Strategy (Phases 1 and 2), the town becomes eligible for additional state funding to support design and engineering for a priority resilience project and will strengthen grant proposals to other funders.

North Carolina
RESILIENT COASTAL COMMUNITIES PROGRAM

Learn more about the N.C. Resilient Coastal Communities Program

## What does the Resilience Strategy do?

A Resilience Strategy-

- Identifies areas at risk from coastal hazards such as flooding, storm surge, and sea level rise
- Integrates hazard data and local knowledge to identify where community assets may be at risk
- Identifies strategies to reduce risks from coastal hazards
- Identifies priority projects for resilience funding

## Timeline for Completion

The target completion date for the Resilience Strategy is March 2022.

## Planning Process and Community Engagement

To create the Resilience Strategy, your community and its supporting contractor, SWCA Environmental Consultants will:

- Create a Community Action Team (CAT) to help guide the planning process
- Define a resilience vision and goals
- Map assets and coastal hazards
- Assess vulnerability and economic risk
- Identify strategies to reduce vulnerability to coastal hazards
- Develop a priority list of resilience projects for funding and implementation

Community members will have the opportunity to provide input in three ways:

- Online survey – January 2022
- Public Open House meeting focused on community assets and hazard areas – January 2022
- Public Open House meeting focused on resilience project priorities – February 2022

### Be Prepared!

Check out the resources below to prepare your household for future floods and storms:

- Ready NC Hurricane Preparedness Guide (also available in Spanish)
- Preventing and Cleaning Up Mold/Moisture
- What to do with Drinking Water Wells and Septic Systems in Flooding Conditions
- Post-Disaster Resources from Legal Aid NC

### Contact Us

Additional Information on community contacts can be found on your community portal.

Project Contact- Meg Perry- Project Manager, SWCA Environmental Consultants

- Phone: 984.275.4317
- Email: meg.perry@swca.com

Technical Support Contact

- Email Project Team

SWCA *Copyright 2021. SWCA Geospatial Services. This webpage and associated applications were developed with community stakeholder input and represent working platforms for the continued evaluation of assets, hazards and strategic planning. Replication or use of these platforms/data for analysis is prohibited.*

**Figure C-2. Example screenshot of the project website, 2 of 4.**


**Figure C-3. Example screenshot of the project website, 3 of 4.**

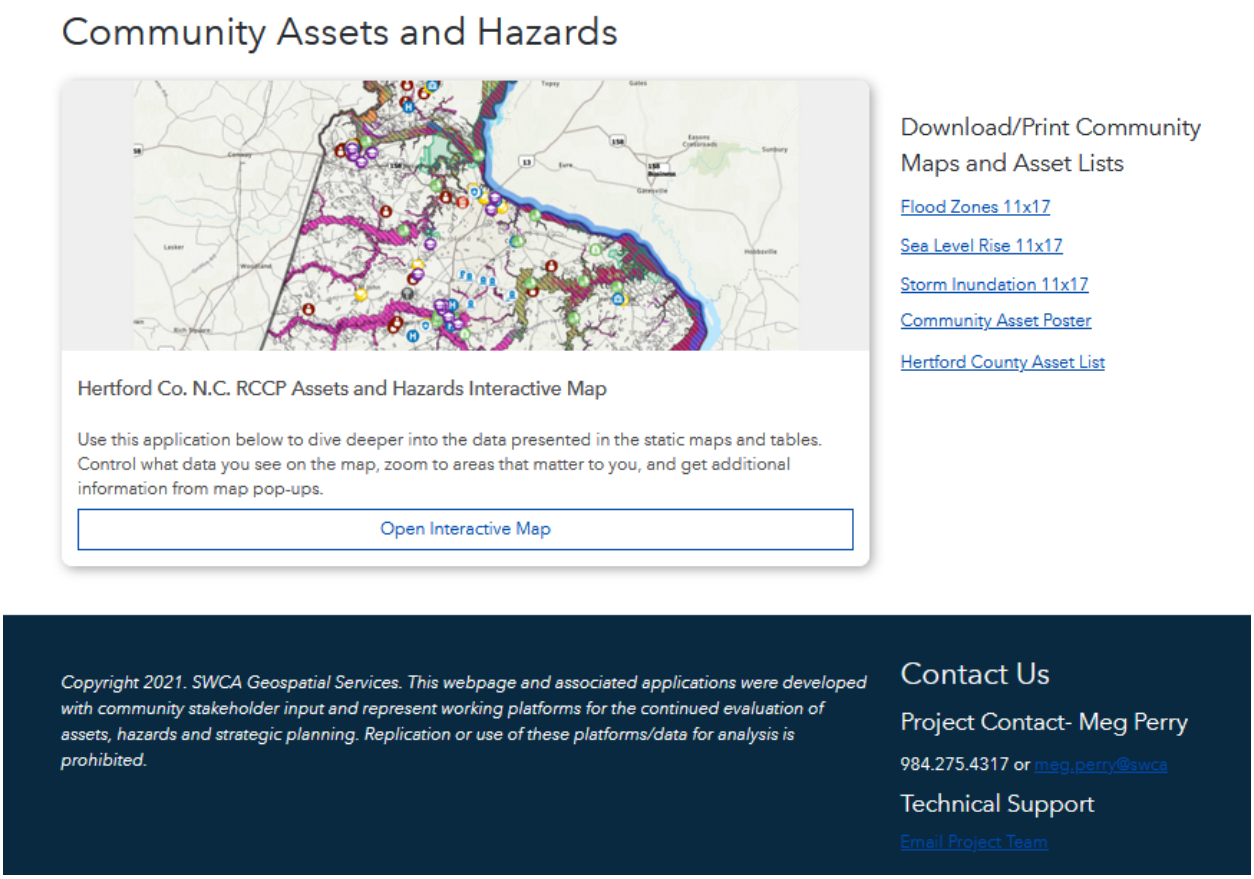



**Figure C-4. Example screenshot of the project website, 4 of 4.**

# APPENDIX D

# Public Meeting Attendees

**Table D-1. Attendance at the Two Public Meetings Held in January and February 2022 for Hertford County, North Carolina**

| First Name | Last Name | Affiliation | Meeting 1 | Meeting 2 |
|---|---|---|---|---|
| **Attendees** | | | | |
| Kelly | Bowers | CAT/Hertford County Economic Development | | X |
| James “Bo” | Dame | Chowan University | X | |
| Leroy | Douglas, II | County Commissioner | | X |
| Leslie | Edwards | Hertford County Finance Director | | X |
| Diedra | Evans | CAT/Hertford County Office on Aging | | X |
| Ronald | Gatling | County Commissioner | | X |
| Jaquan | Harper | Chowan University | X | |
| John | Horton | County Commissioner | | X |
| Kyndra | Jackson | Chowan University | X | |
| Skadi | Kylander | Chowan University | X | |
| Andre | Lassiter | County Commissioner | | X |
| William | Mitchell | County Commissioner | | X |
| Robert | Mizelle | CAT/ Hertford County Chief Code Building Inspector | X | |
| Tim | Moore | Chowan University | X | |
| Eric | Parker | CAT/Hertford County Soil and Water Conservation District | X | |
| JoAnne | Powell | Roanoke-Chowan Community Health Center | | X |
| James | Pugh | Resident | X | X |
| Kim | Schwartz | Roanoke-Chowan Community Health Center | | X |
| Julian | Taylor | Resident | | X |
| Janice | Taylor | Resident | | X |
| Hal | Thomas | Mayor, Town of Murfreesboro | | X |
| Sara | Turner | CAT/Hertford County Planning and GIS | X | X |
| | | **Total Attendees** | **9** | **15** |
| **Support Staff** | | | | |
| Kathryn | Gardner | SWCA Environmental Consultants | X | X |
| Tancred | Miller | NC Division of Coastal Management | X | |
| Meg | Perry | SWCA Environmental Consultants | X | X |
| Mackenzie | Todd | NC Division of Coastal Management | X | X |

# APPENDIX E

## Data Used in Vulnerability and Risk Assessment

**Table E-1. Data Used in Assessment of Asset Vulnerability and Risk for Hertford County, North Carolina**

| Field/Variable | Data Used to Define Field/Variable | Data Summary | Use in Risk and Vulnerability Assessment | Additional Information on Source Data |
|---|---|---|---|---|
| **Flood Plain Exposure** | North Carolina Preliminary Flood Zones | Areas representing the area within the flood mapping boundaries defined by the engineering models for the 100-year (1% annual chance), 500-year (0.2% annual chance) and floodway (river channel and adjacent land areas for flood discharge). | Floodplain type was categorized and used to assess current climate precipitation induced flood risk under varying conditions across the landscape. | Data was produced by North Carolina Floodplain Mapping Program in 2020 at 6-m spatial resolution |
| **Flood Plain Exposure** | High Resolution Elevation (DEM 20') | Elevation data was created using LiDAR collected by NC Floodplain Mapping Program | Elevation data was processed to find low lying areas outside the current 500-year flood plains that have the potential for precipitation induced flood risk under future climate conditions across the landscape. | Data was produced by North Carolina Department of Transportation in conjunction with the North Carolina Floodplain Mapping Program in 2020 at 6-m spatial resolution |
| **Reported Event Inundation Factor** | Hurricane Matthew Inundated Areas | Areas that experienced flooding during Hurricane Matthew, based on aerial photographs taken October 8 to 16, 2016. | Inundated areas were used assess extreme precipitation event flood risk across the landscape. | Data was produced by the Center for Biodiversity Outcomes, Arizona State University in 2020 at 5-m spatial resolution |
| **Reported Event Inundation Factor** | Hurricane Florence Inundated Areas | Areas that experienced flooding during Hurricane Florence, based on aerial photographs taken September 18 to 22, 2018. | Inundated areas were used assess extreme precipitation event flood risk across the landscape | Data was produced by the Center for Biodiversity Outcomes, Arizona State University in 2020 at 5-m spatial resolution |
| **Reported Event Inundation Factor** | Community Flood Reporting Point | Areas outside of the 100- and 500-year floodplains that were identified by the public as having frequent or severe flooding during large precipitation events. | Point locations were converted to inundated areas based on the underlying elevation and topography. These inundated areas were used to assess extreme precipitation flood risk across the landscape. | Data was collected via analog maps at community stakeholder engagement meetings and online flood reporting survey |
| **Sea Level Rise Exposure** | Sea Level Rise (SLR) Inundation Extent 1-foot to 10-foot Scenarios | Data represents where water would be present along coast lines and intertidal waterways (under normal, non-flood conditions) at increasing sea levels. This is based on a "modified bathtub model," which identified the areas of land that would be covered with water if you increased the water height by a specific amount. It does not address when or how quickly the sea level might increase. | Simulated scenario data was combined with Sea Level Rise (Low) Inundation data and categorized into severity values 1 through 5 used to assess sea-level rise risk under varying conditions across the landscape. | Data was produced by the National Oceanic and Atmospheric Administration, Office for Coastal Management in 2017 at 10-m spatial resolution |

| Field/Variable | Data Used to Define Field/Variable | Data Summary | Use in Risk and Vulnerability Assessment | Additional Information on Source Data |
|---|---|---|---|---|
| **Sea Level Rise Exposure** | Sea Level Rise (Low) Inundation Extent 1-foot to 10- foot Scenarios | Data represents where water would be present in inland areas (under normal, non-flood conditions) at increasing sea levels. This is based on a "modified bathtub model," which identified the areas of land that would be covered with water if you increased the water height by a specific amount. It does not address when or how quickly the sea level might increase. | Simulated scenario data was combined with Sea Level Rise (SLR) Inundation data and categorized into severity values 1 through 5 used to assess sea-level rise risk under varying conditions across the landscape. | Data was produced by the National Oceanic and Atmospheric Administration, Office for Coastal Management in 2017 at 10-m spatial resolution |
| **Sea Level Rise Exposure** | Duck Pier Local Sea Level Rise Scenario Statistics | Data lists northern North Carolina regional projected sea level rise in feet sea for five IPCC emissions scenarios. | Data was used to determine the likelihood of sea level rise inundation per emission scenario. | Data was produced by the National Oceanic and Atmospheric Administration; National Weather Service in coordination with the IPCC in 2017 |
| **Storm Surge Exposure** | Sea, Lake, and Overland Surges from Hurricanes (SLOSH) Category 1-5 High Tide Simulations | Data depicts the simulated storm surges from tropical cyclones, developed using tens of thousands of simulations of climatology-based hypothetical tropical cyclones. | Modeled data from Category 1 through 5 storms were combined and inundation depth was categorized into severity values 1 through 5 used to assess storm surge risk under varying conditions across the landscape. | Data was produced by the National Oceanic and Atmospheric Administration, National Weather Service, National Hurricane Center in 2018 at 30-m spatial resolution |
| **Storm Surge Exposure** | Hurricane Landfall Statistics | Data lists all recorded hurricanes by category that have made landfall in the state of North Carolina since 1851. | Data was used to determine likelihood of storm surge exposure event by hurricane category. | Data was produced by the National Oceanic and Atmospheric Administration; National Weather Service |
| **Social Vulnerability (geographic)** | Social Vulnerability Index (SVI) 2018 | Data represents a combination of socioeconomic factors that are used to identify and map the communities that will most likely need support before, during, and after a hazardous event. | Total SVI rankings were categorized using the flag approach and used to assess the most current socially vulnerable populations in the community. | Data was produced by the CDC's Division of Toxicology and Human Health Sciences, Geospatial Research, Analysis & Services Program (GRASP) in 2020 at the tract level |
| **Social Vulnerability (geographic)** | Social Vulnerability Index (SoVI) 2000 | Data represents a combination of socioeconomic factors that are used to identify and map the communities that will most likely need support before, during, and after a hazardous event. | Total SoVI rankings were categorized using the flag approach and used to assess the socially vulnerable populations in the community at a localized scale. | Data was produced by the Hazards and Vulnerability Research Institute, University of South Carolina in 2011 at the block group level |

| Field/Variable | Data Used to Define Field/Variable | Data Summary | Use in Risk and Vulnerability Assessment | Additional Information on Source Data |
|---|---|---|---|---|
| **Estimated Cost** | Assessor Parcel Boundaries | Data represents county level parcels with standardized attributes such as ownership, addresses and assessed monetary values | Monetary value fields such as Parcel Value, Land Value, and Improvement Value were used to calculate total estimated cost values for assets considered at risk. | Data was produced by the North Carolina Geographic Information Coordinating Council in coordination with local government agencies and last updated 2022 |

# APPENDIX F

## Detail Maps of Assets and Hazards

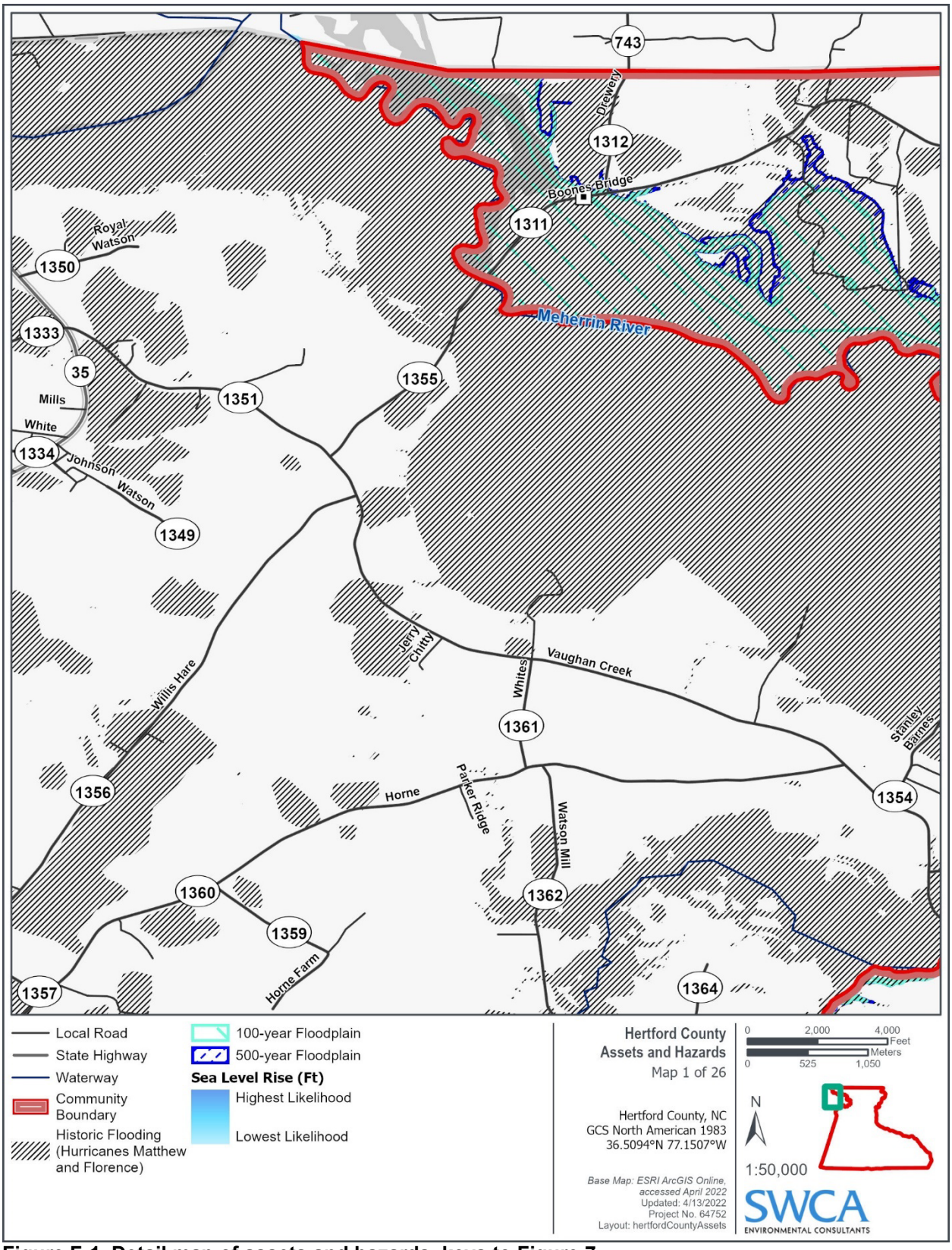



**Figure F-1. Detail map of assets and hazards, keys to Figure 7.**

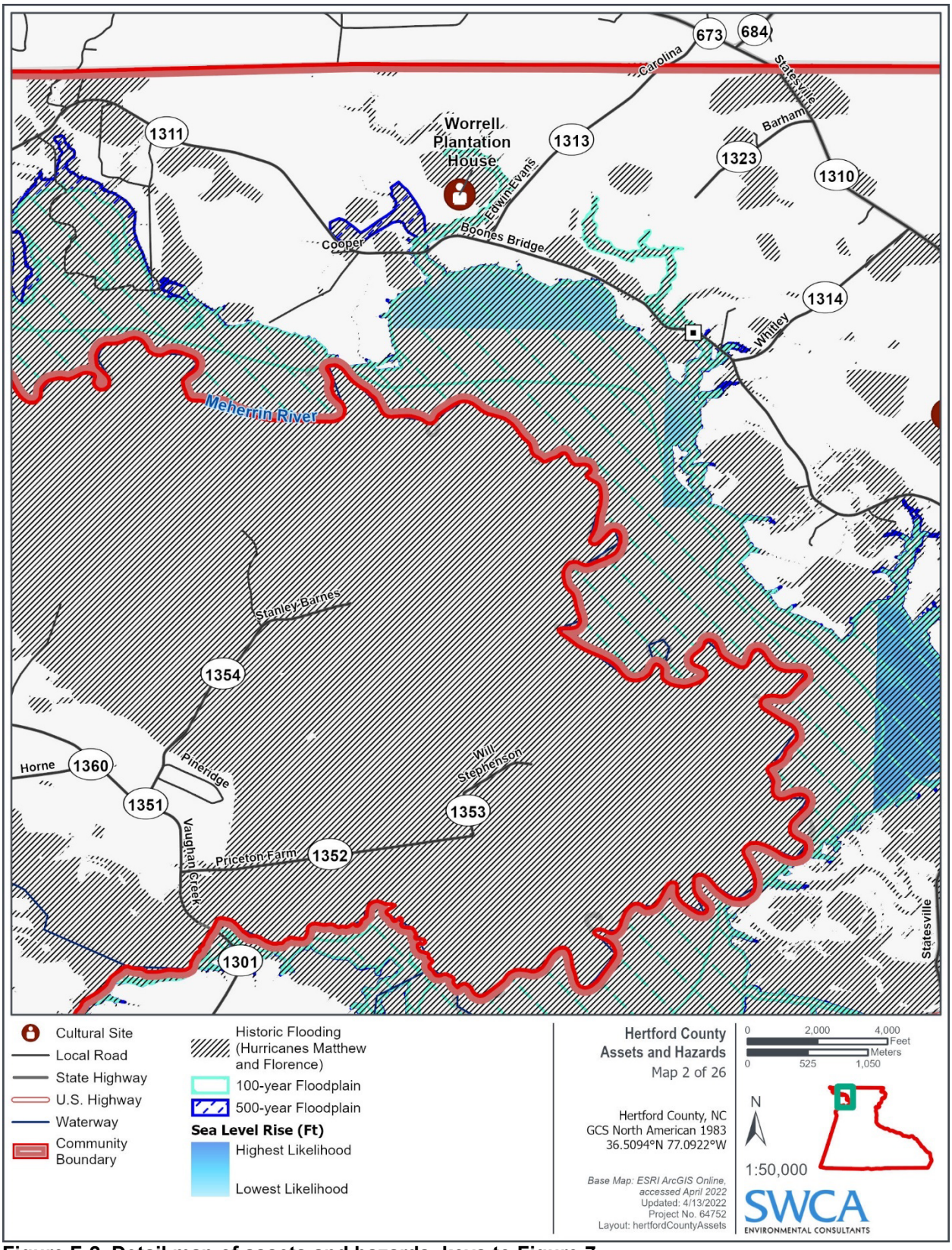



**Figure F-2. Detail map of assets and hazards, keys to Figure 7.**

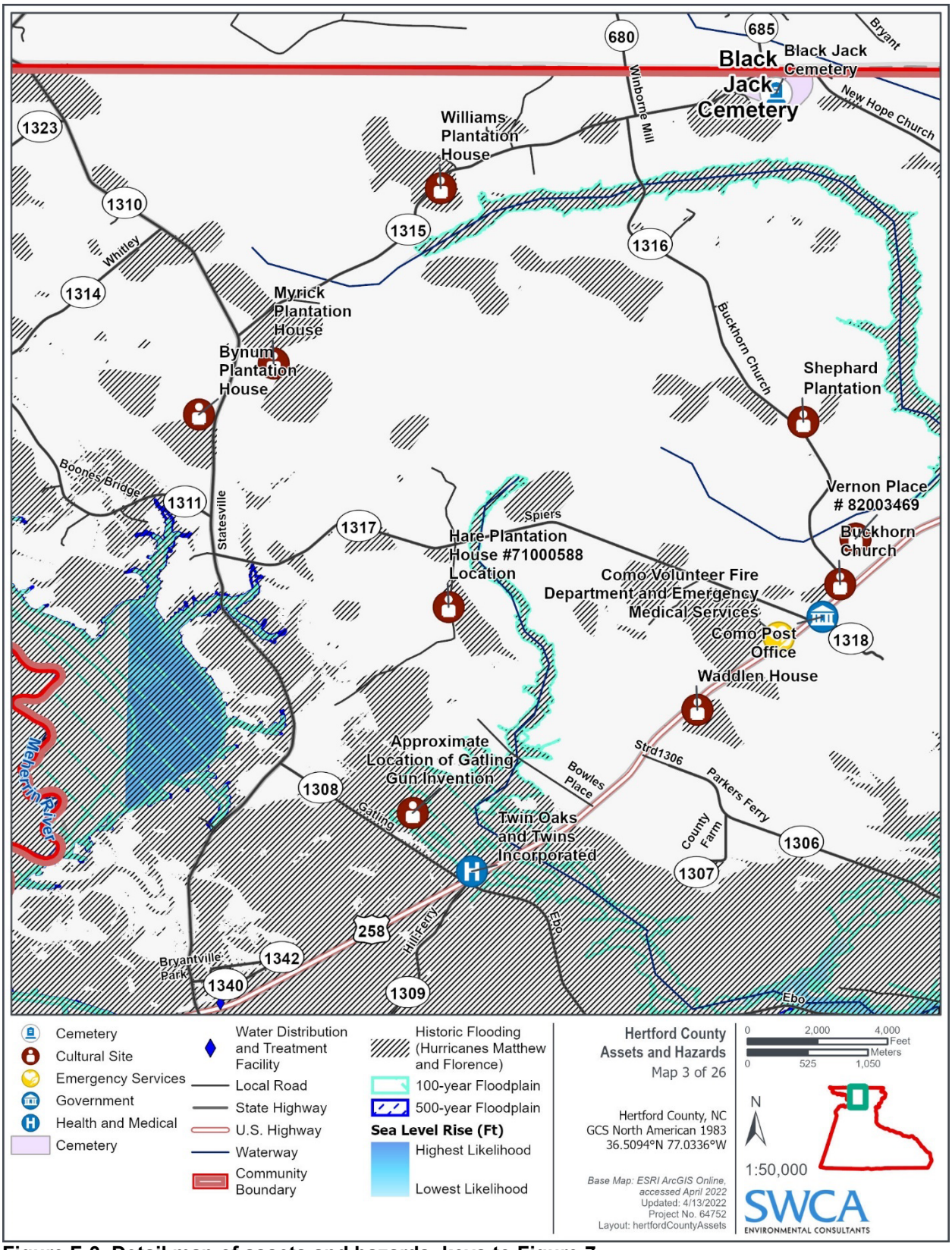



**Figure F-3. Detail map of assets and hazards, keys to Figure 7.**

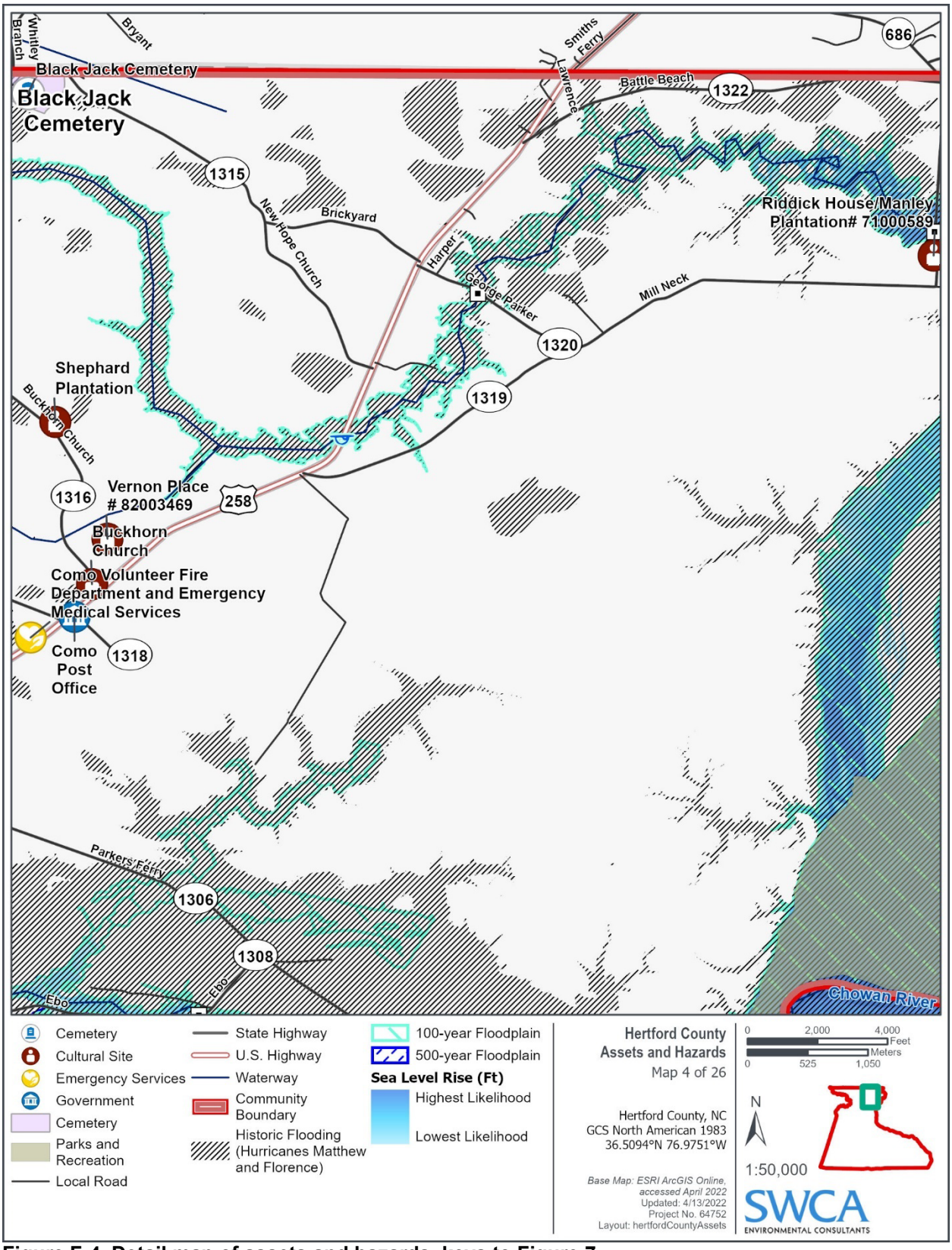



**Figure F-4. Detail map of assets and hazards, keys to Figure 7.**

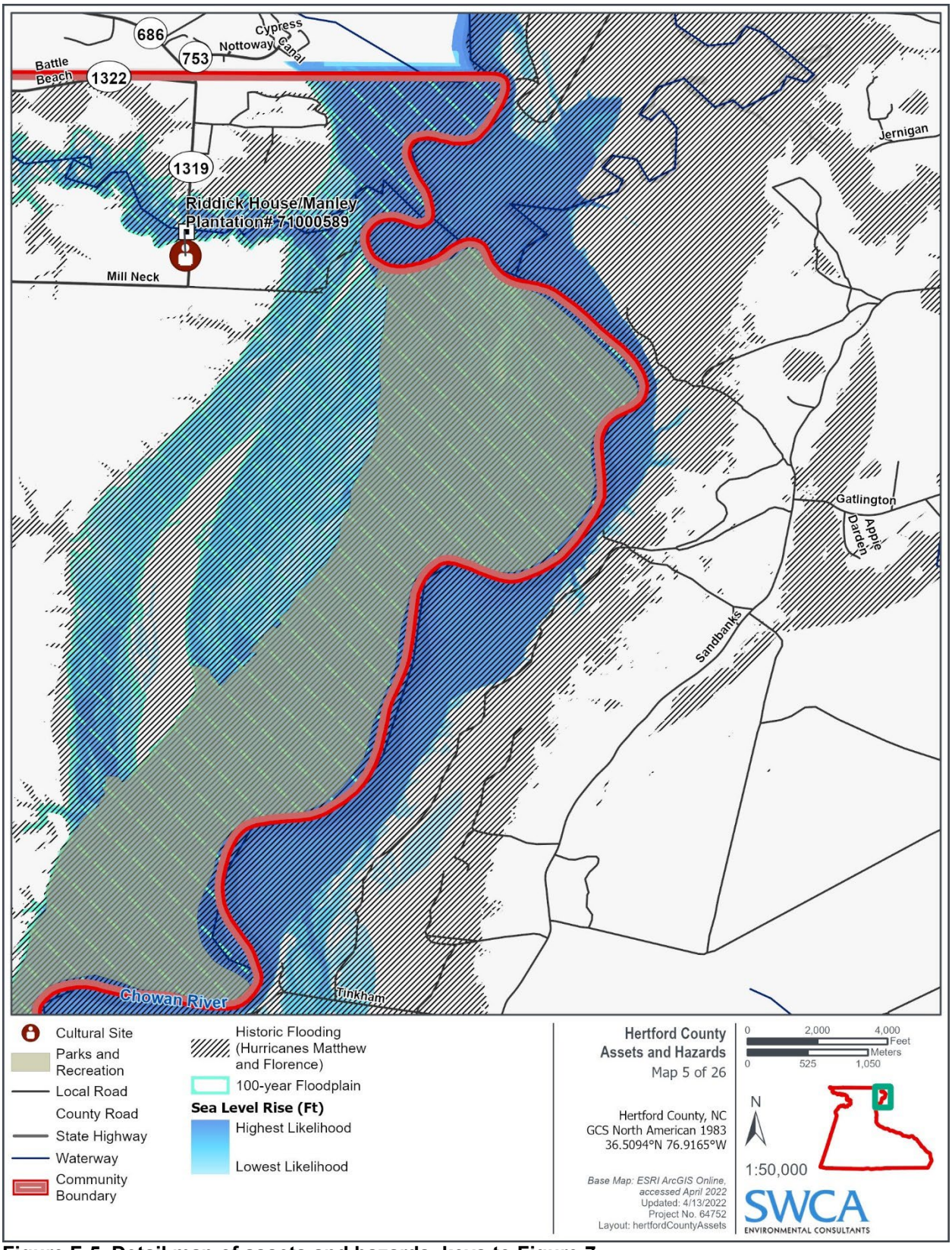



**Figure F-5. Detail map of assets and hazards, keys to Figure 7.**

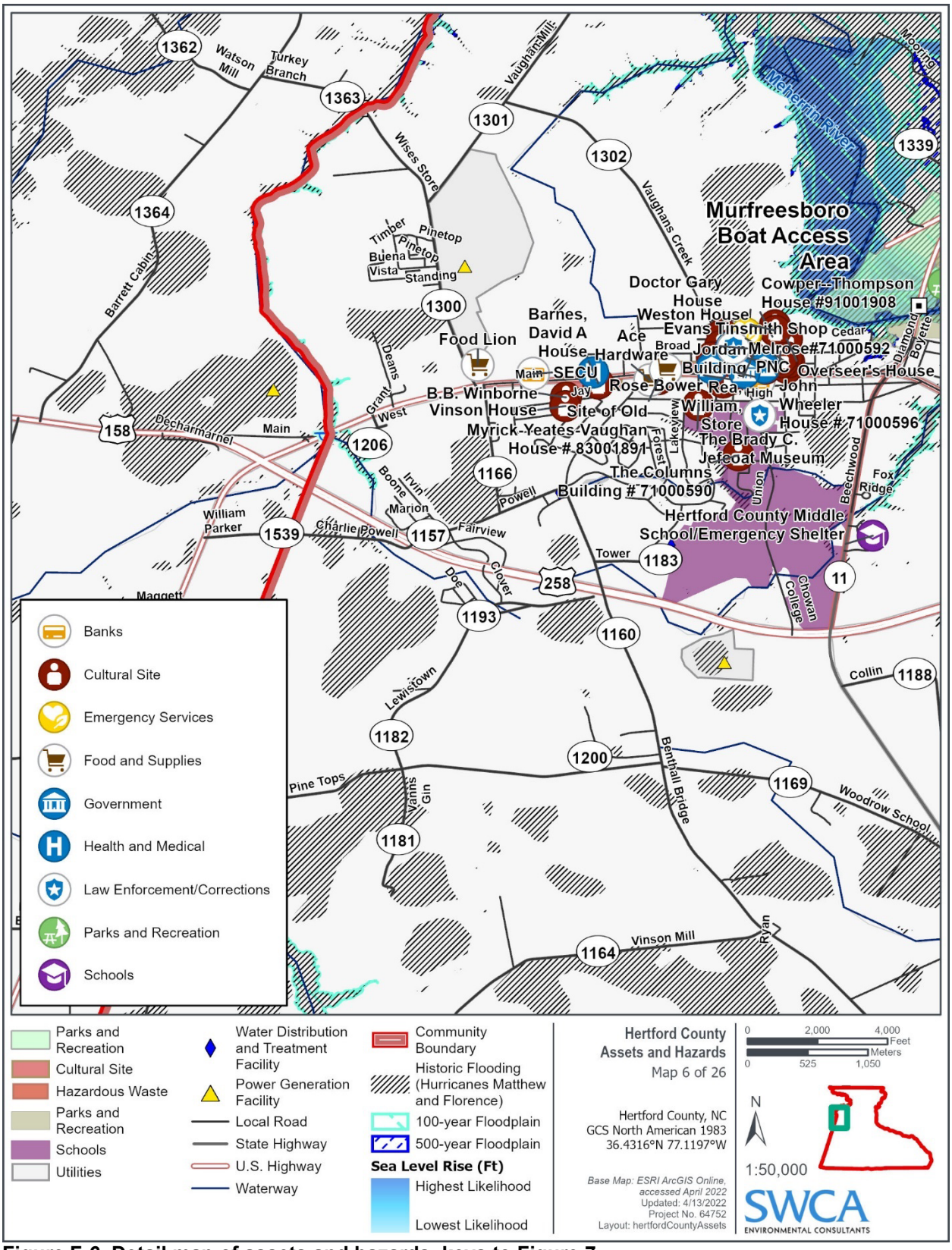



**Figure F-6. Detail map of assets and hazards, keys to Figure 7.**

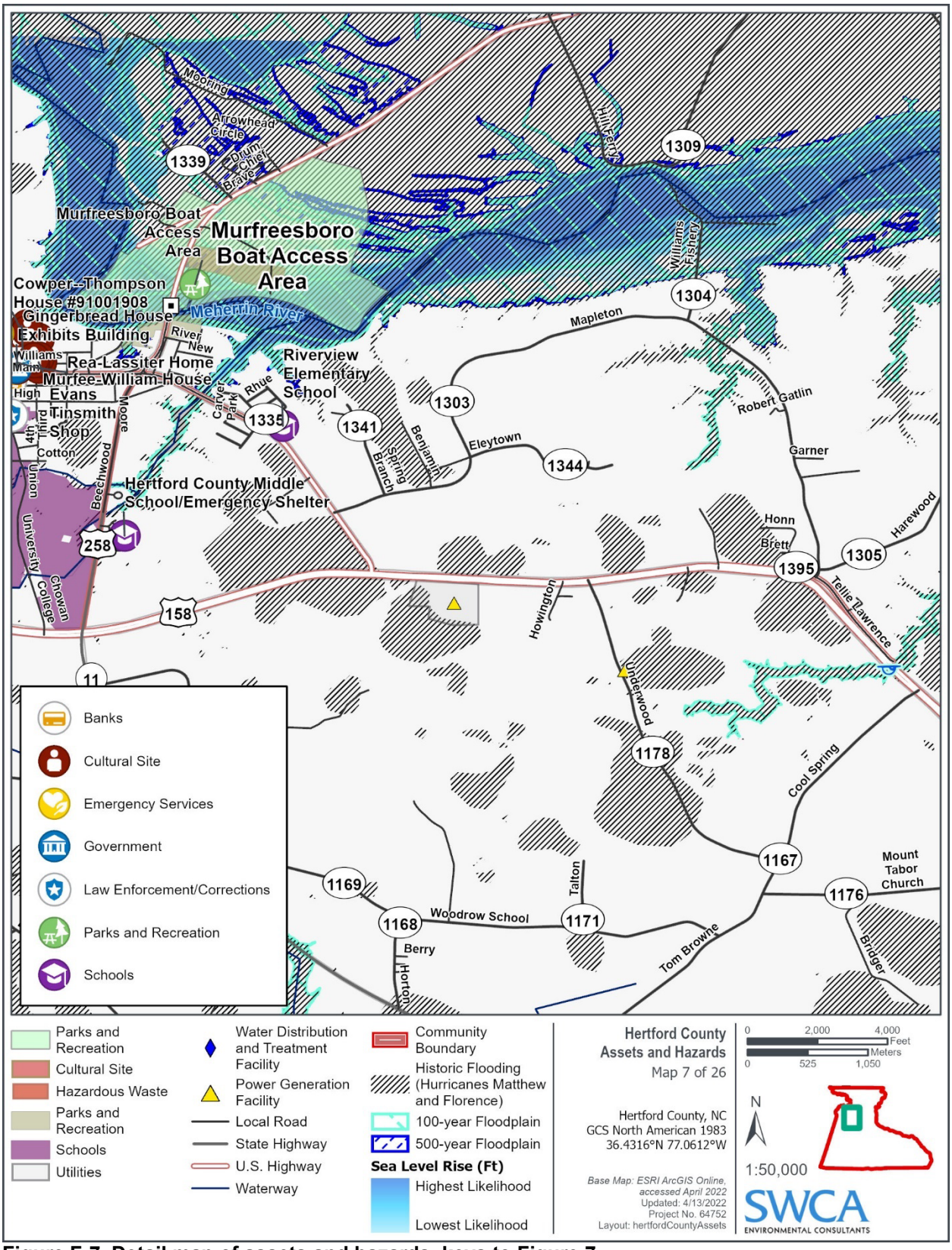



**Figure F-7. Detail map of assets and hazards, keys to Figure 7.**

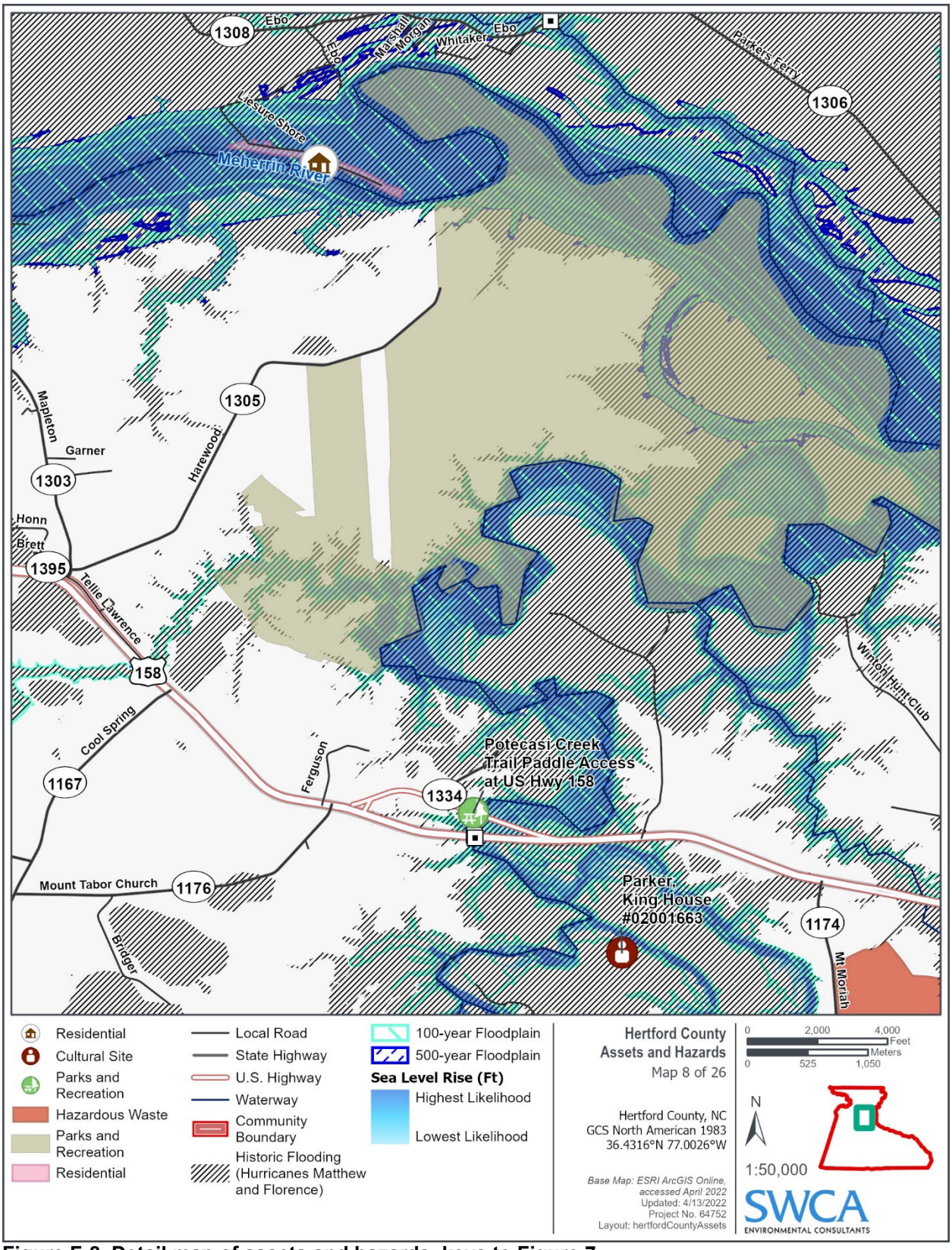



**Figure F-8. Detail map of assets and hazards, keys to Figure 7.**

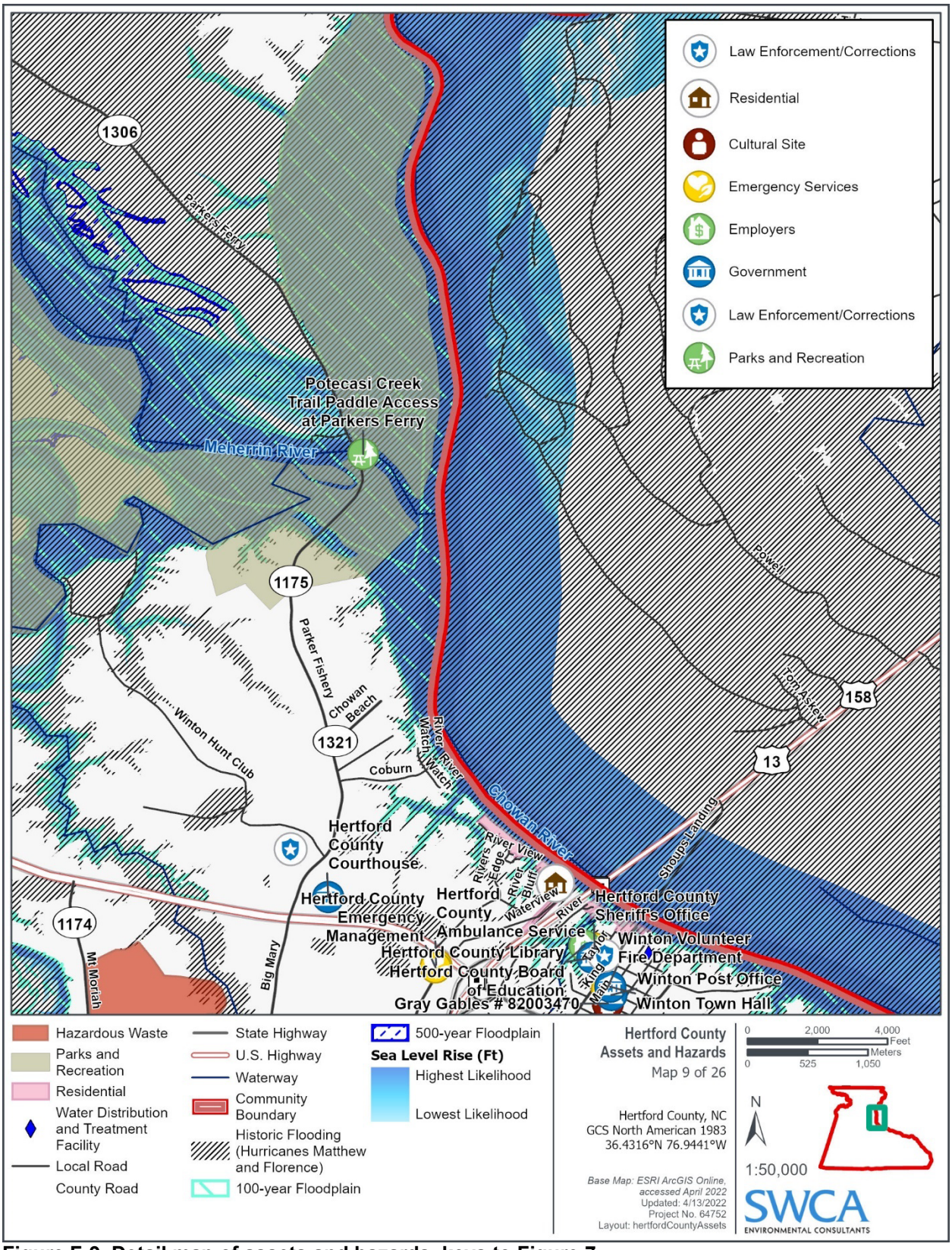



**Figure F-9. Detail map of assets and hazards, keys to Figure 7.**

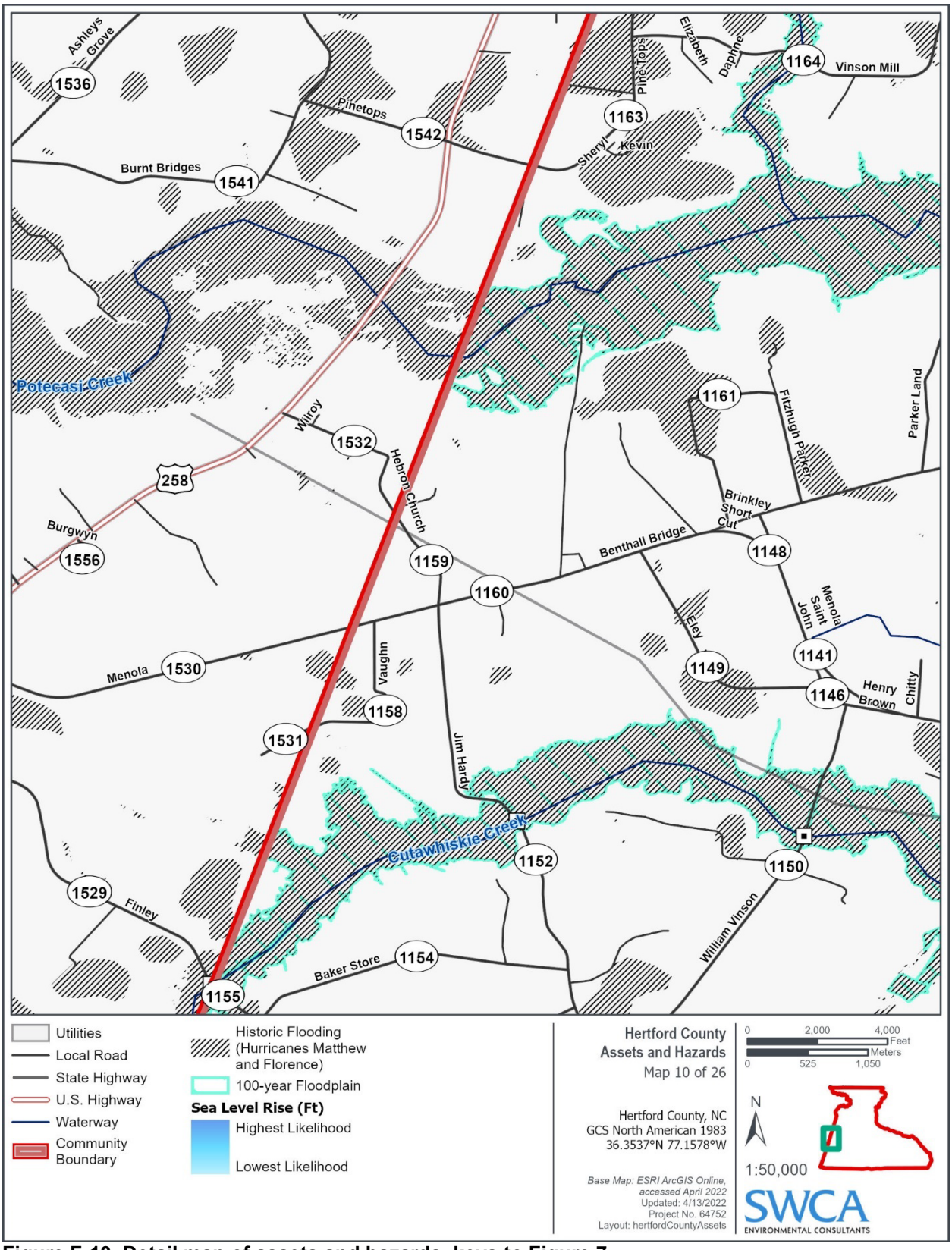



**Figure F-10. Detail map of assets and hazards, keys to Figure 7.**

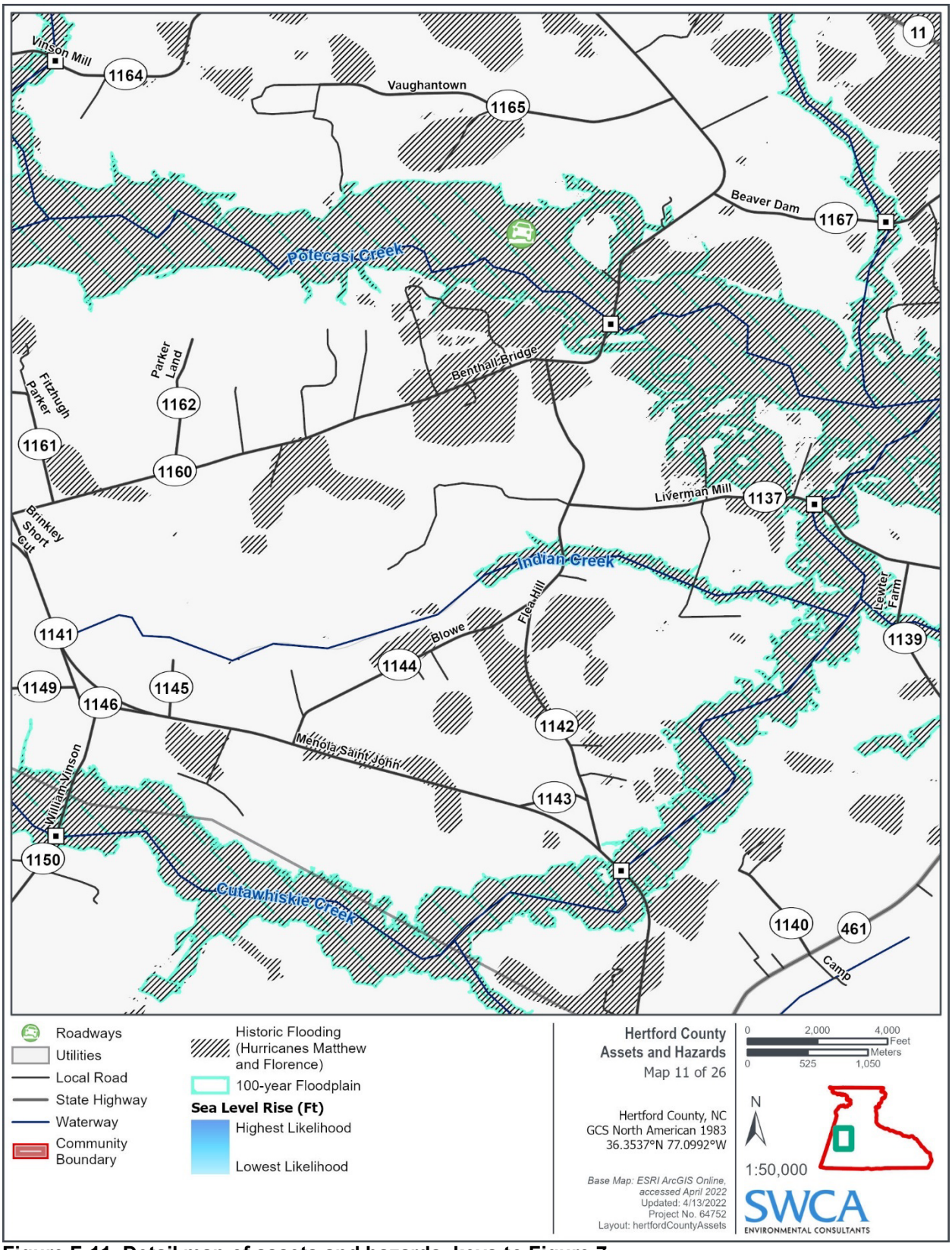



**Figure F-11. Detail map of assets and hazards, keys to Figure 7.**

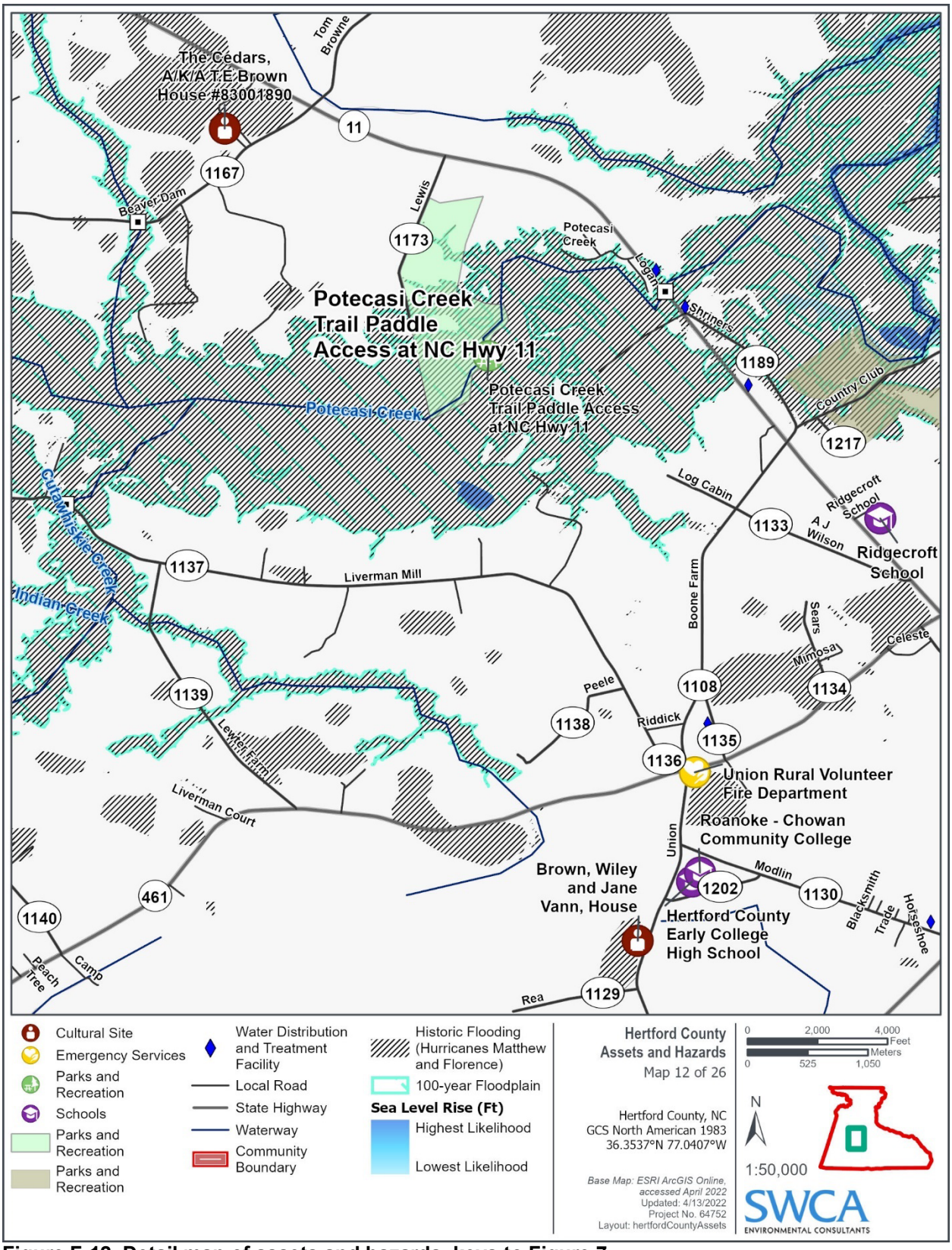



**Figure F-12. Detail map of assets and hazards, keys to Figure 7.**

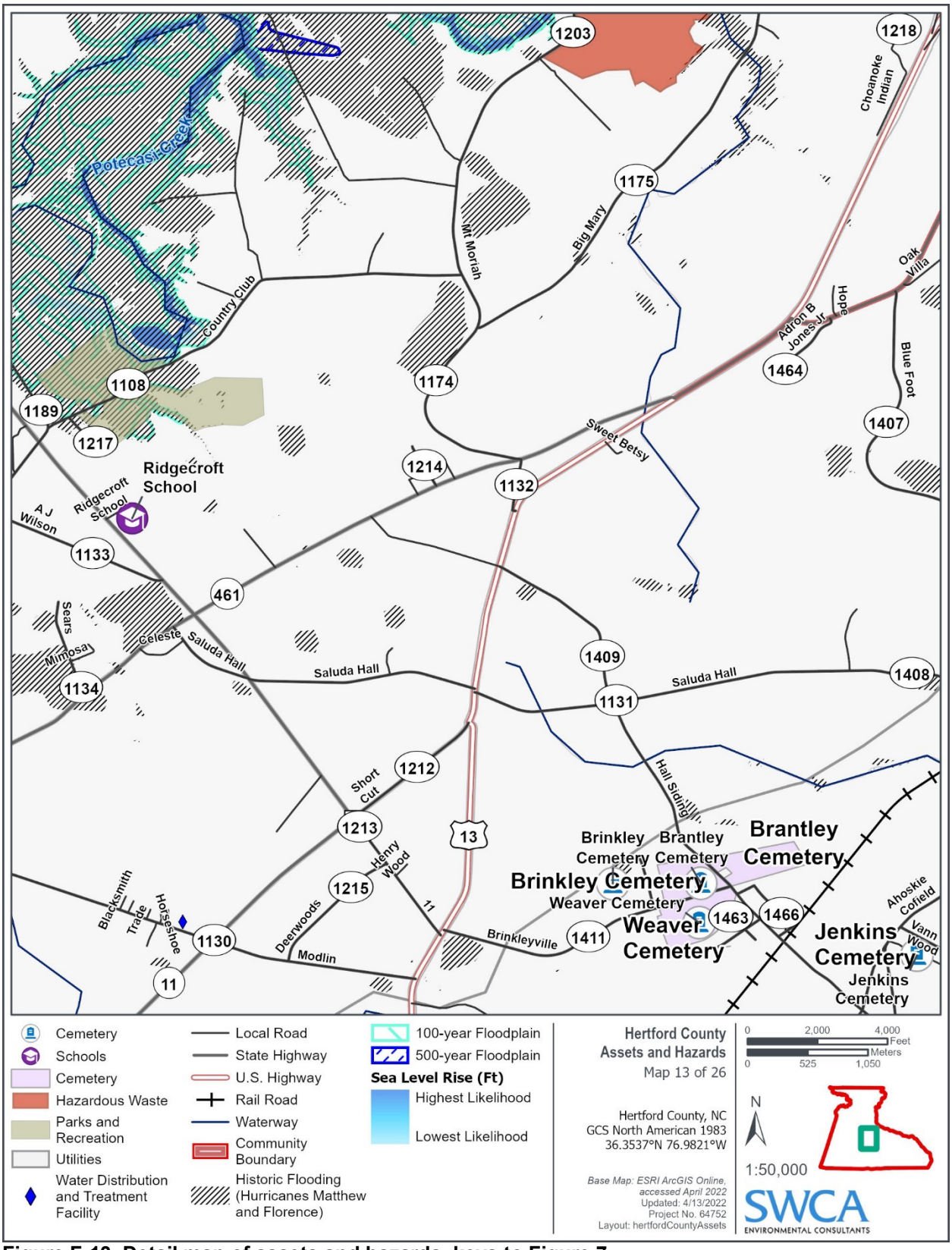



**Figure F-13. Detail map of assets and hazards, keys to Figure 7.**

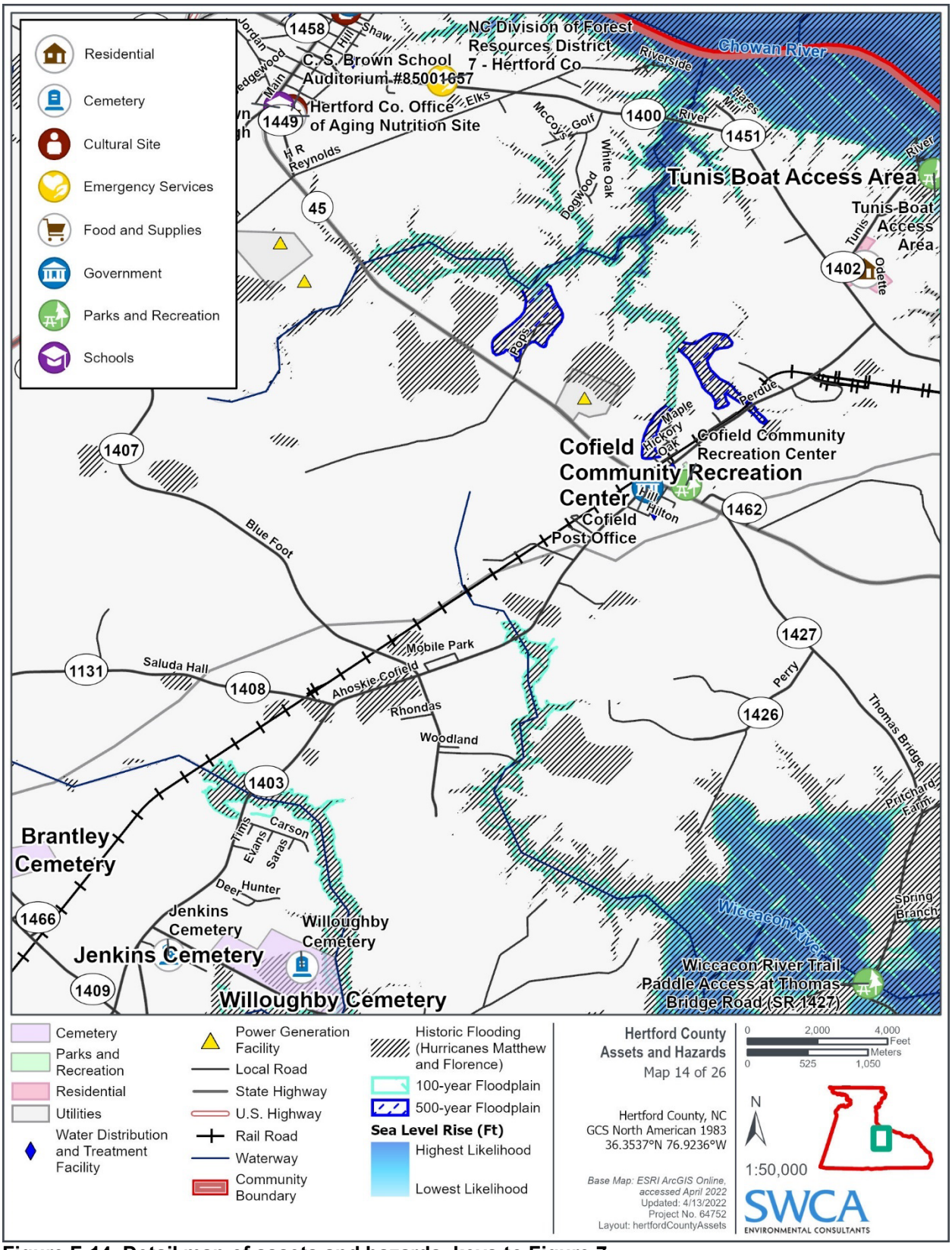



**Figure F-14. Detail map of assets and hazards, keys to Figure 7.**

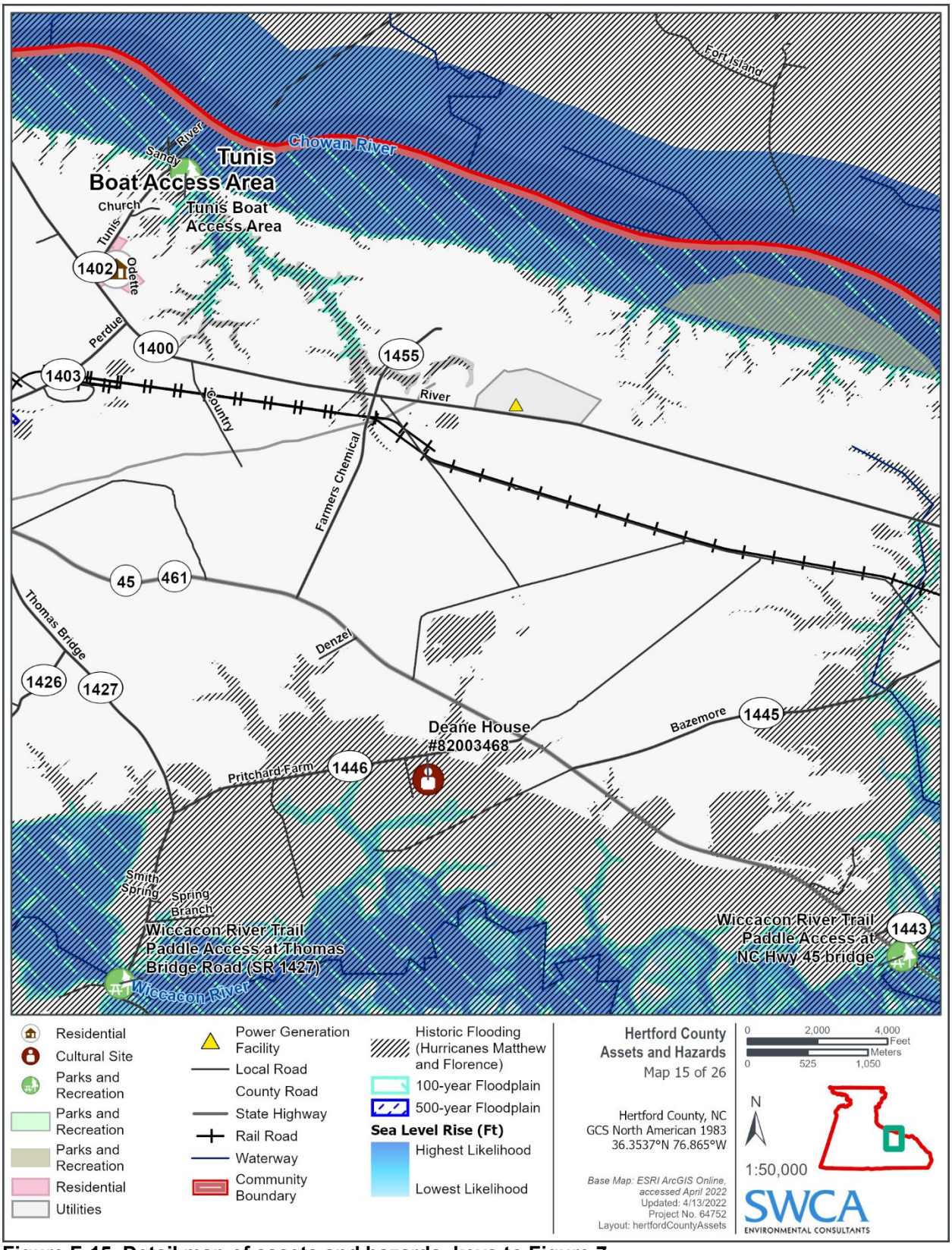



**Figure F-15. Detail map of assets and hazards, keys to Figure 7.**

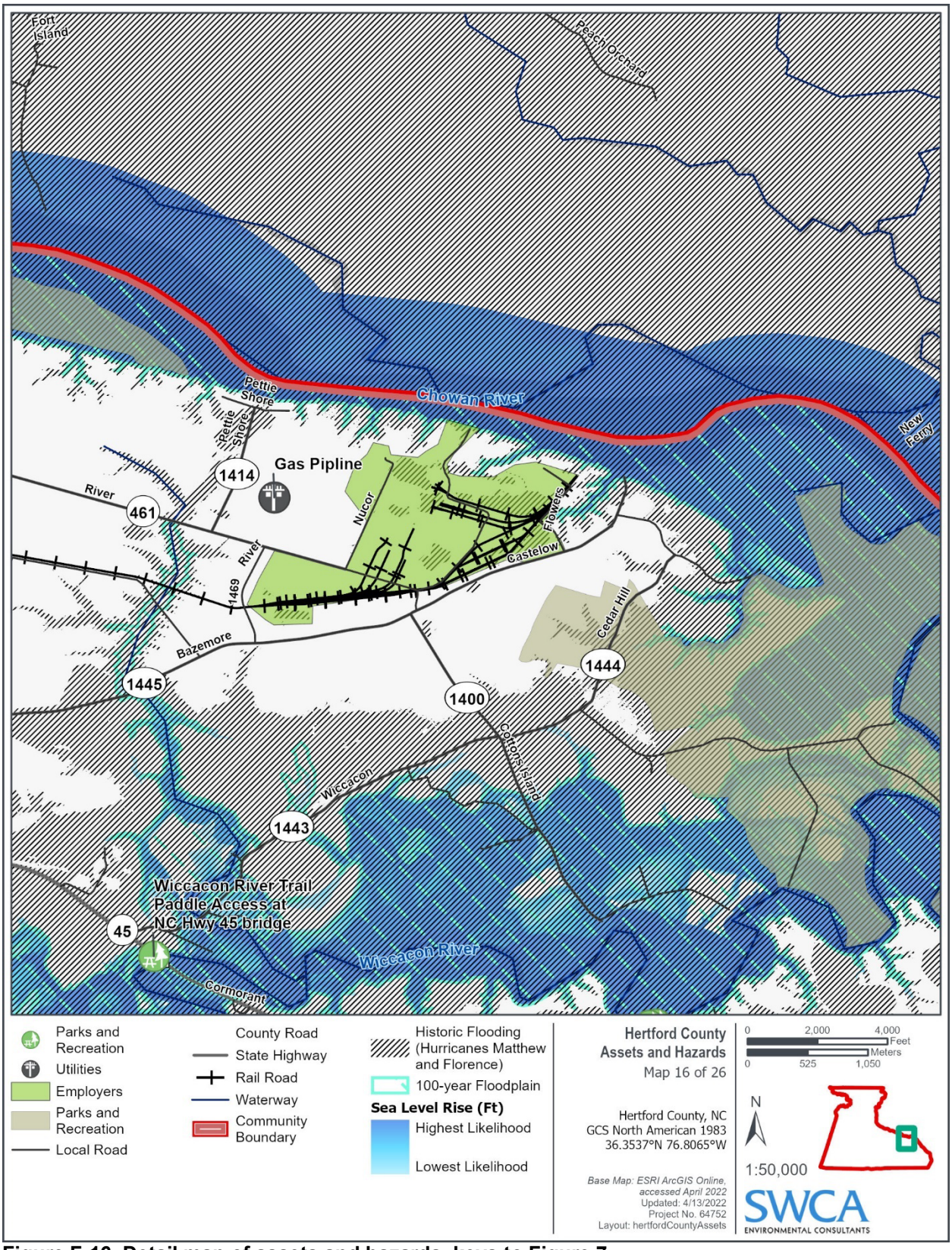



**Figure F-16. Detail map of assets and hazards, keys to Figure 7.**

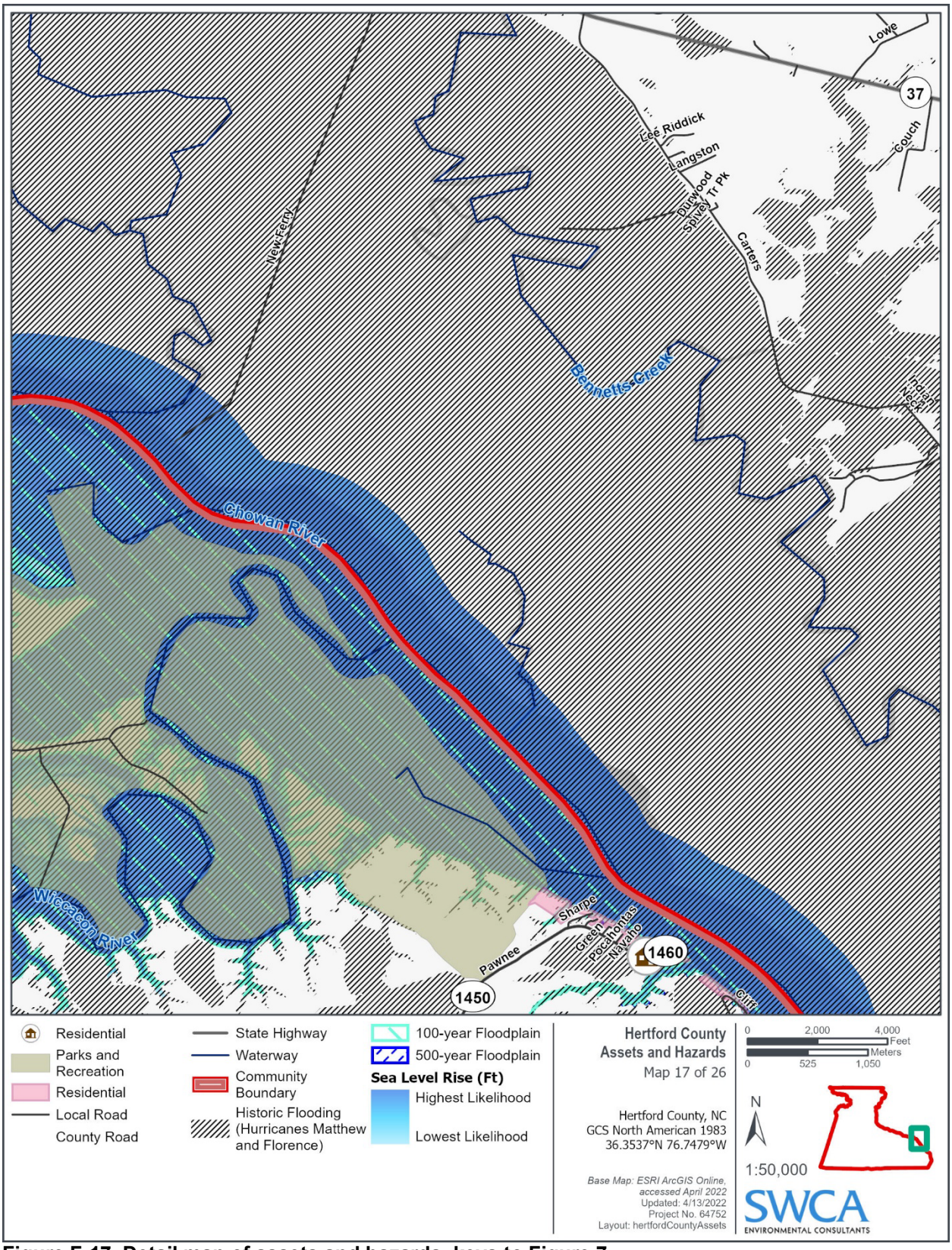



**Figure F-17. Detail map of assets and hazards, keys to Figure 7.**

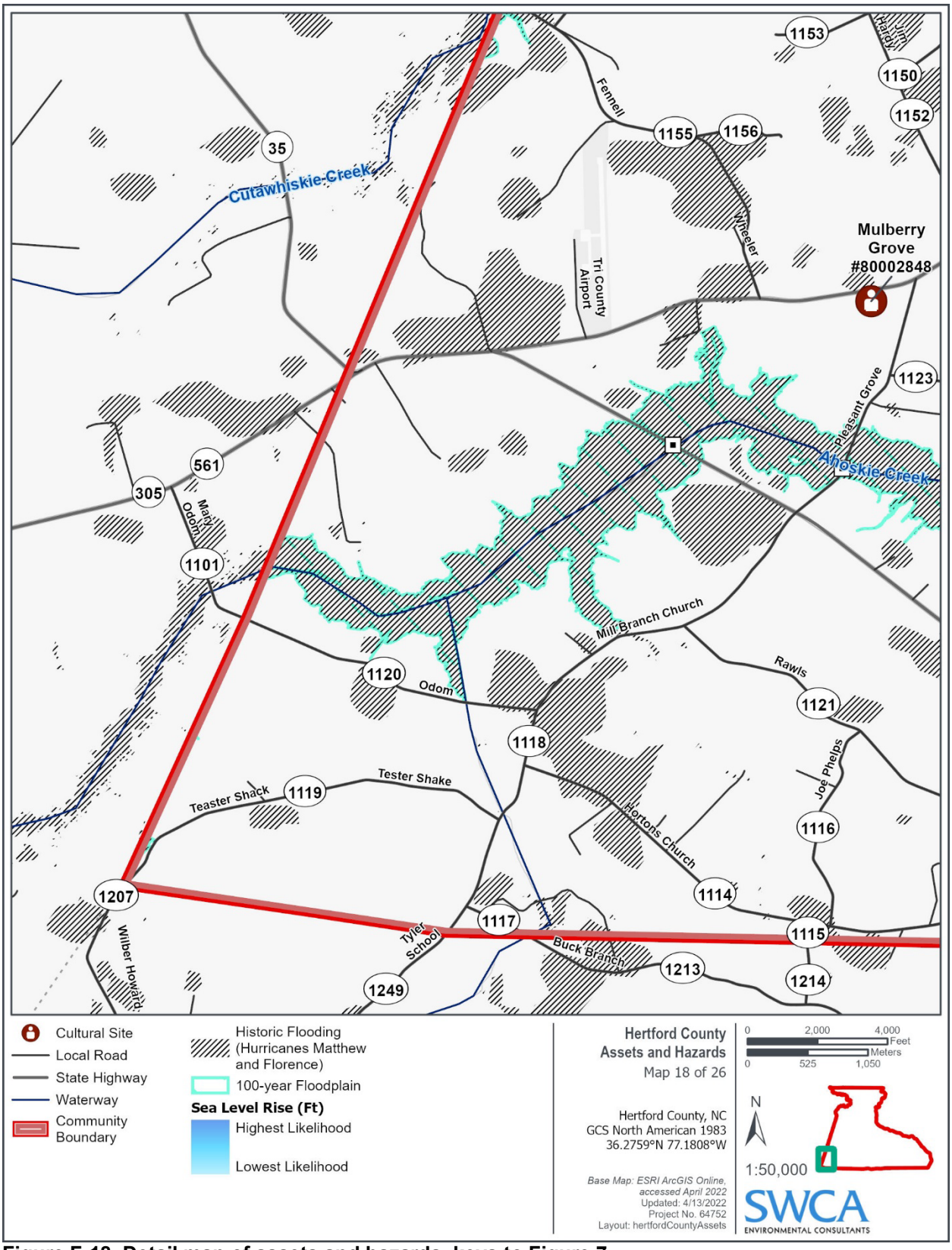



**Figure F-18. Detail map of assets and hazards, keys to Figure 7.**

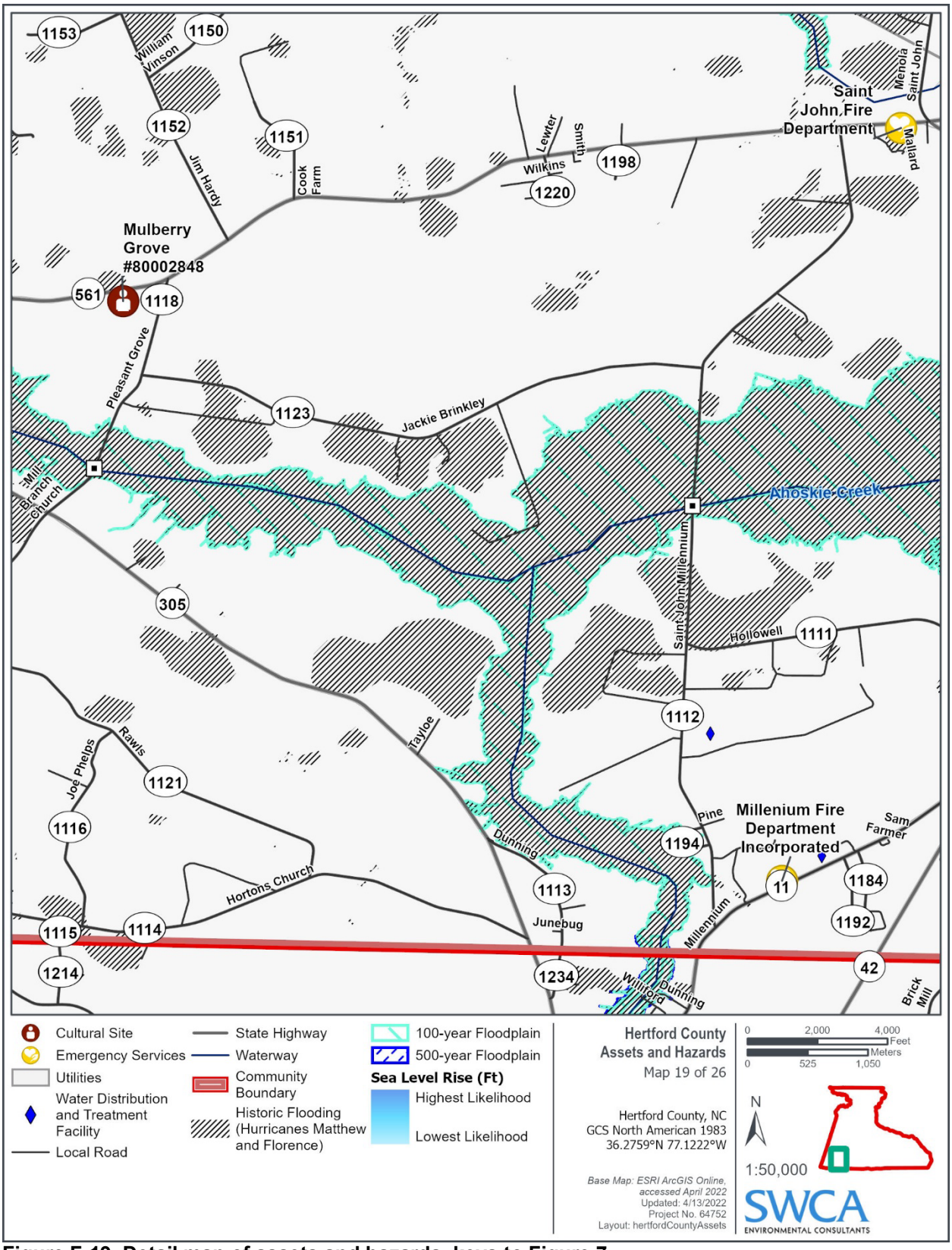



**Figure F-19. Detail map of assets and hazards, keys to Figure 7.**

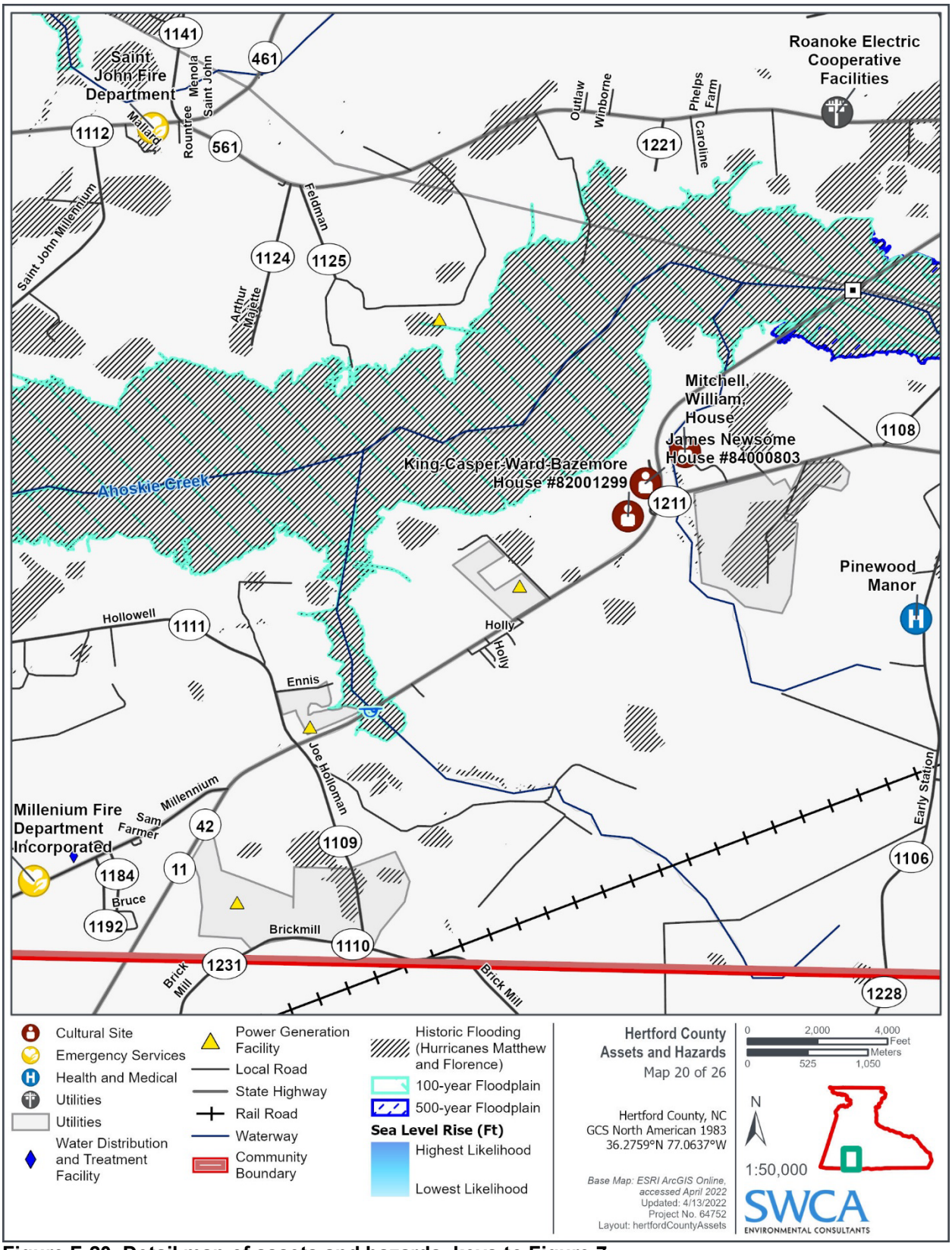



**Figure F-20. Detail map of assets and hazards, keys to Figure 7.**

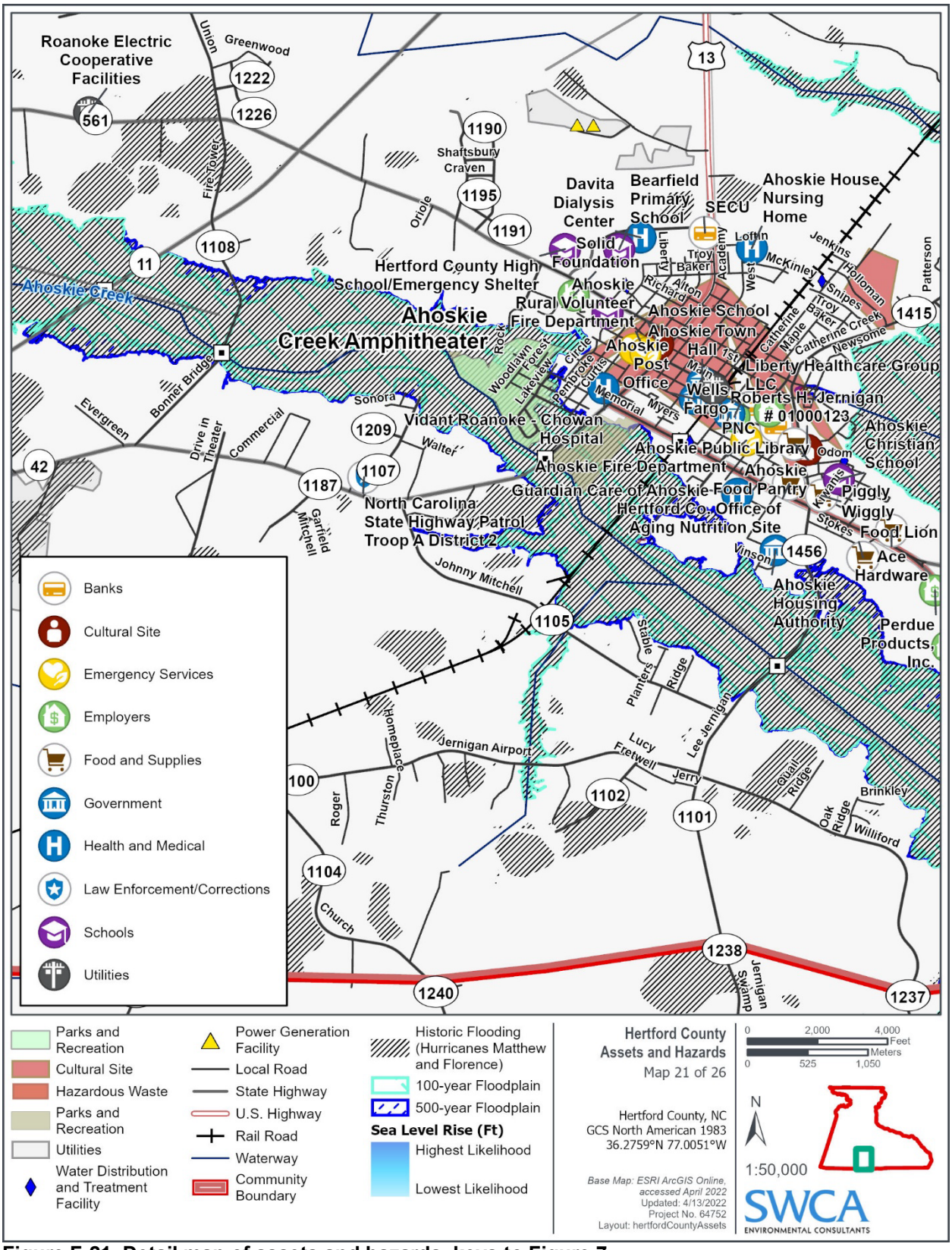



**Figure F-21. Detail map of assets and hazards, keys to Figure 7.**

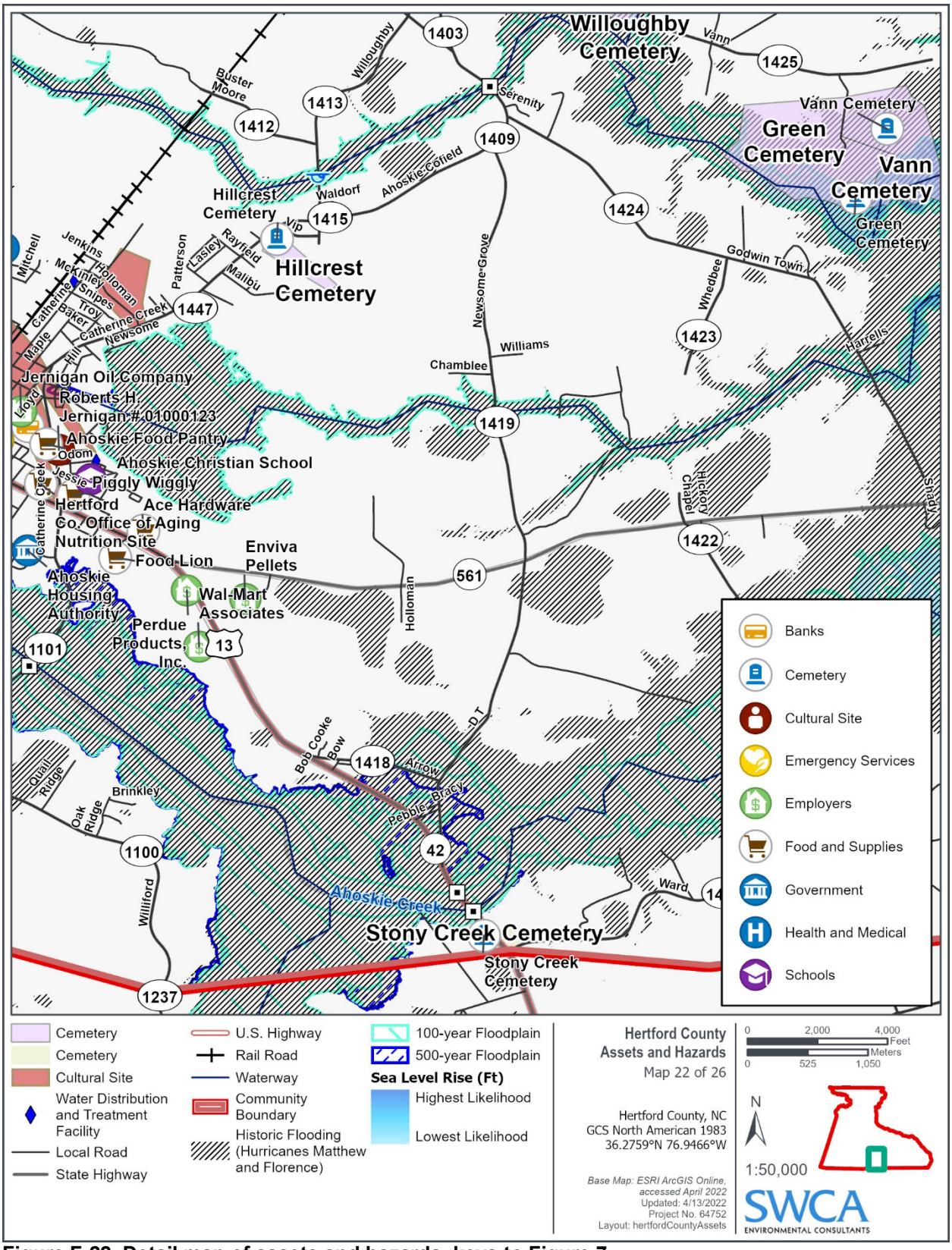



**Figure F-22. Detail map of assets and hazards, keys to Figure 7.**

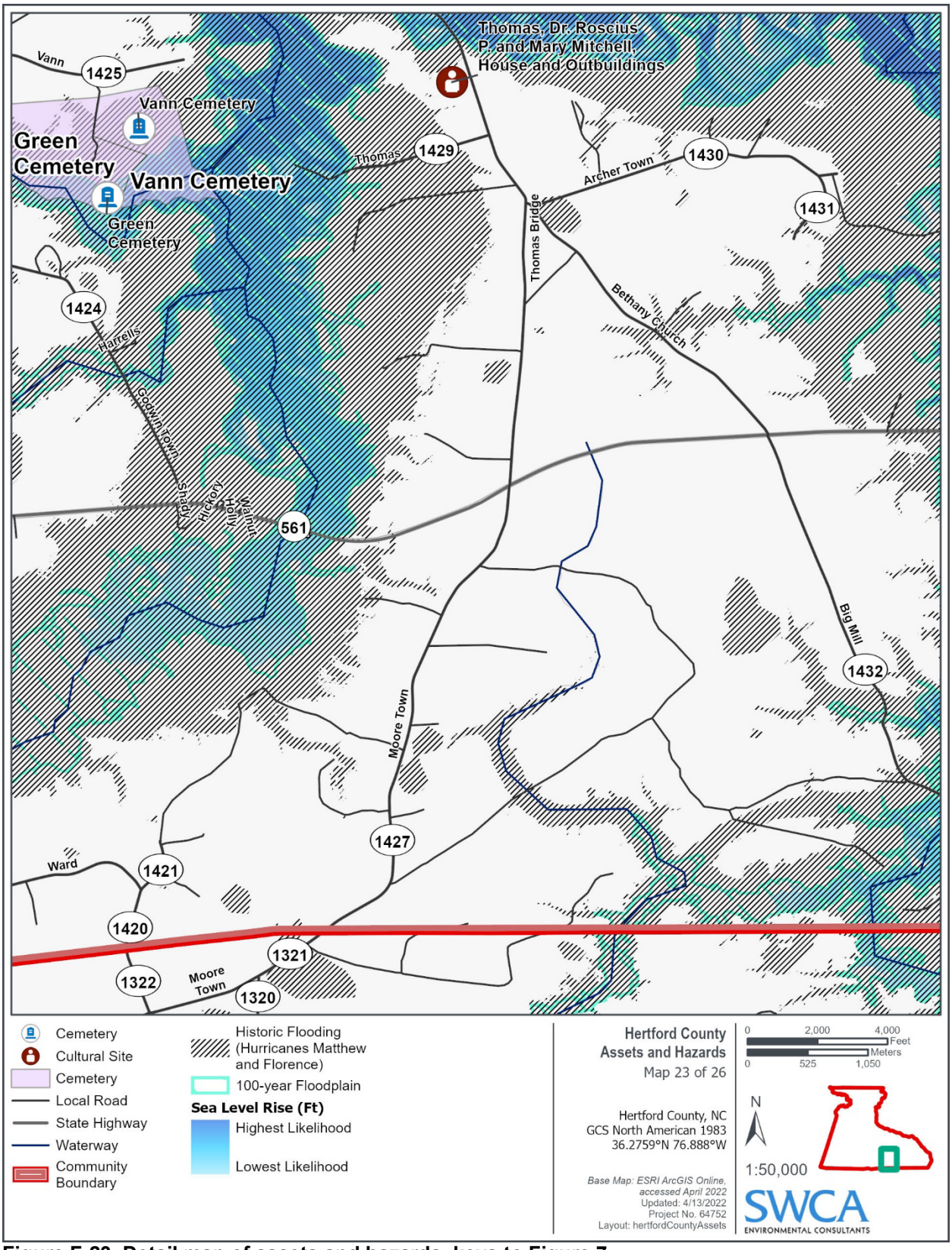



**Figure F-23. Detail map of assets and hazards, keys to Figure 7.**

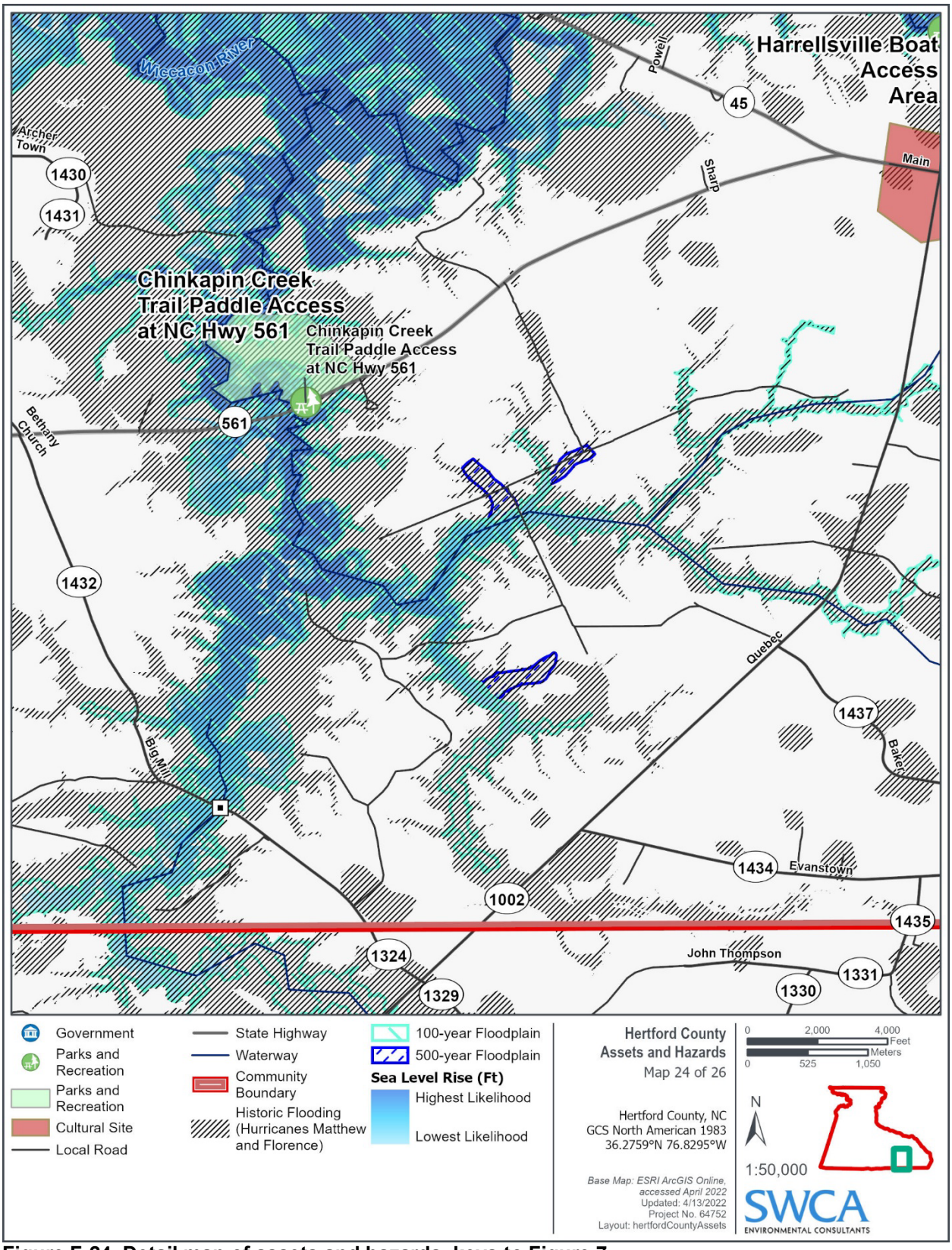



**Figure F-24. Detail map of assets and hazards, keys to Figure 7.**

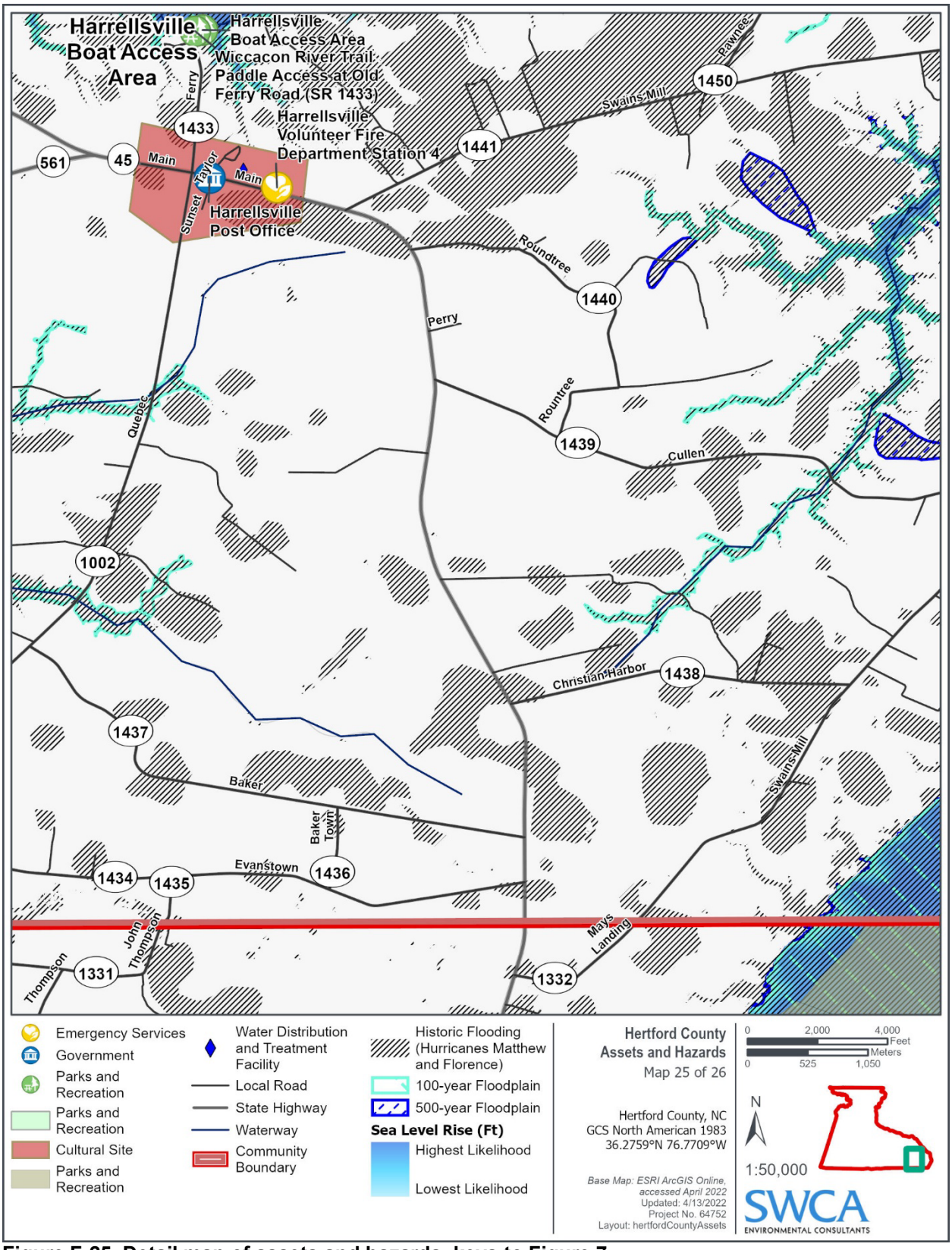



**Figure F-25. Detail map of assets and hazards, keys to Figure 7.**

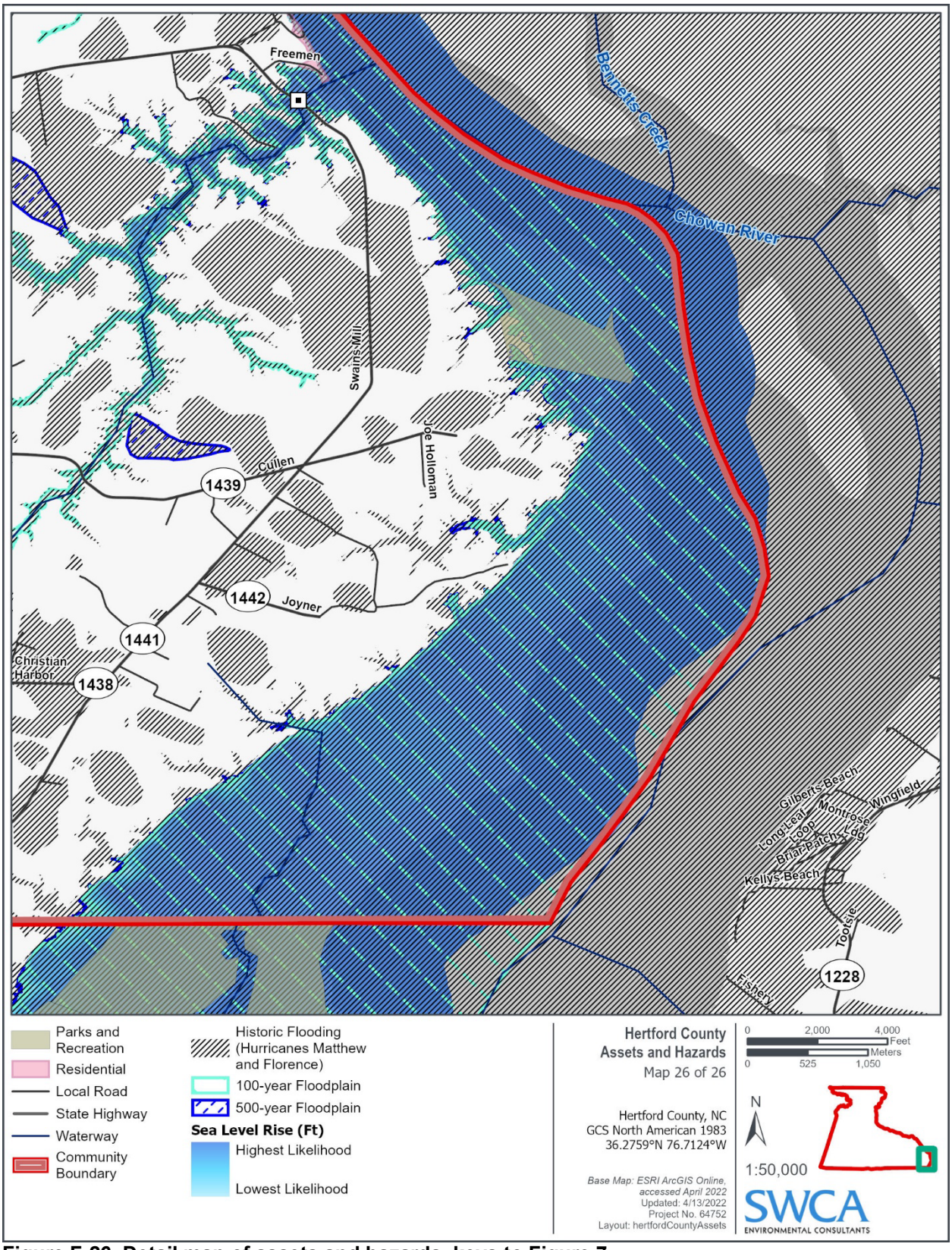



**Figure F-26. Detail map of assets and hazards, keys to Figure 7.**

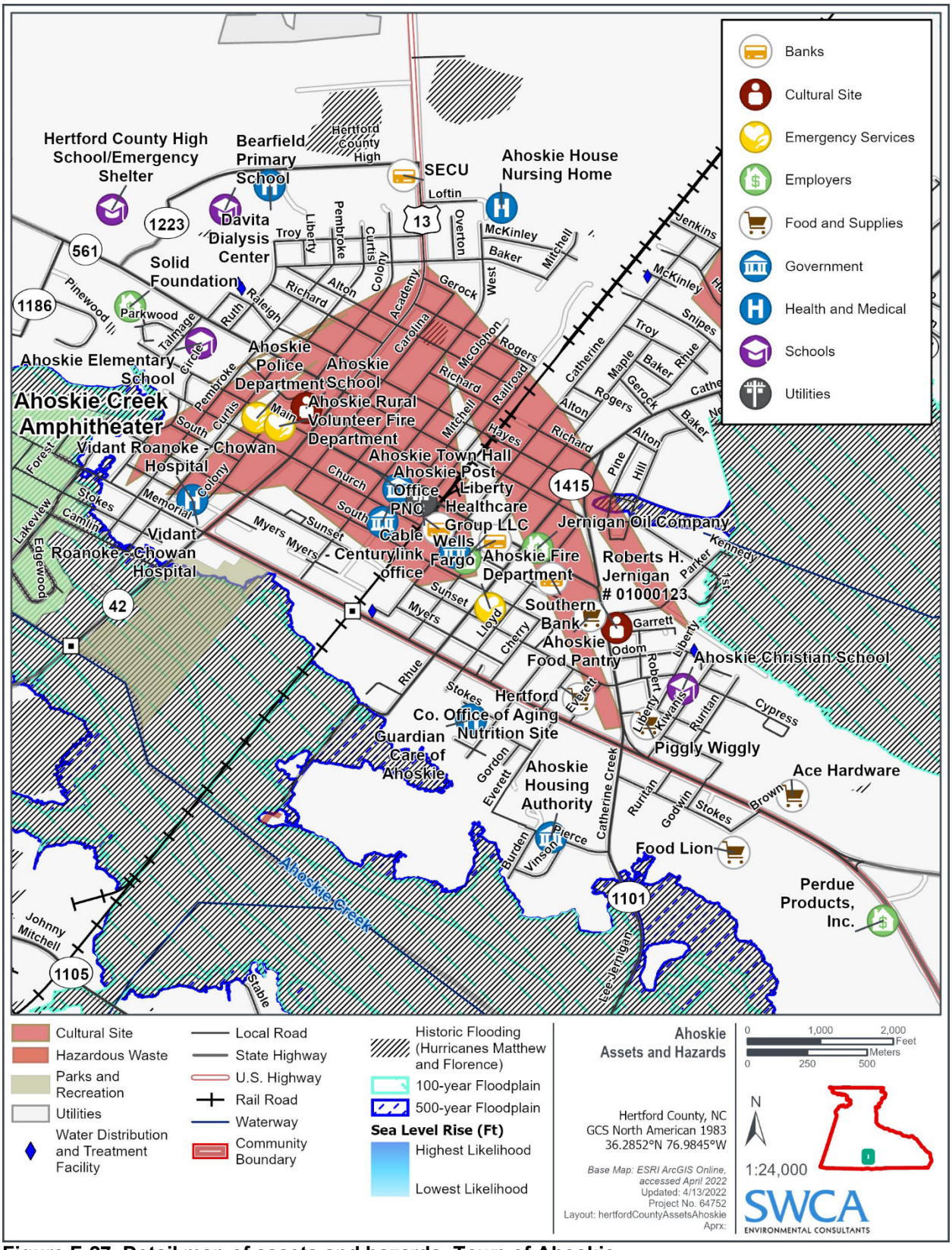



**Figure F-27. Detail map of assets and hazards, Town of Ahoskie.**

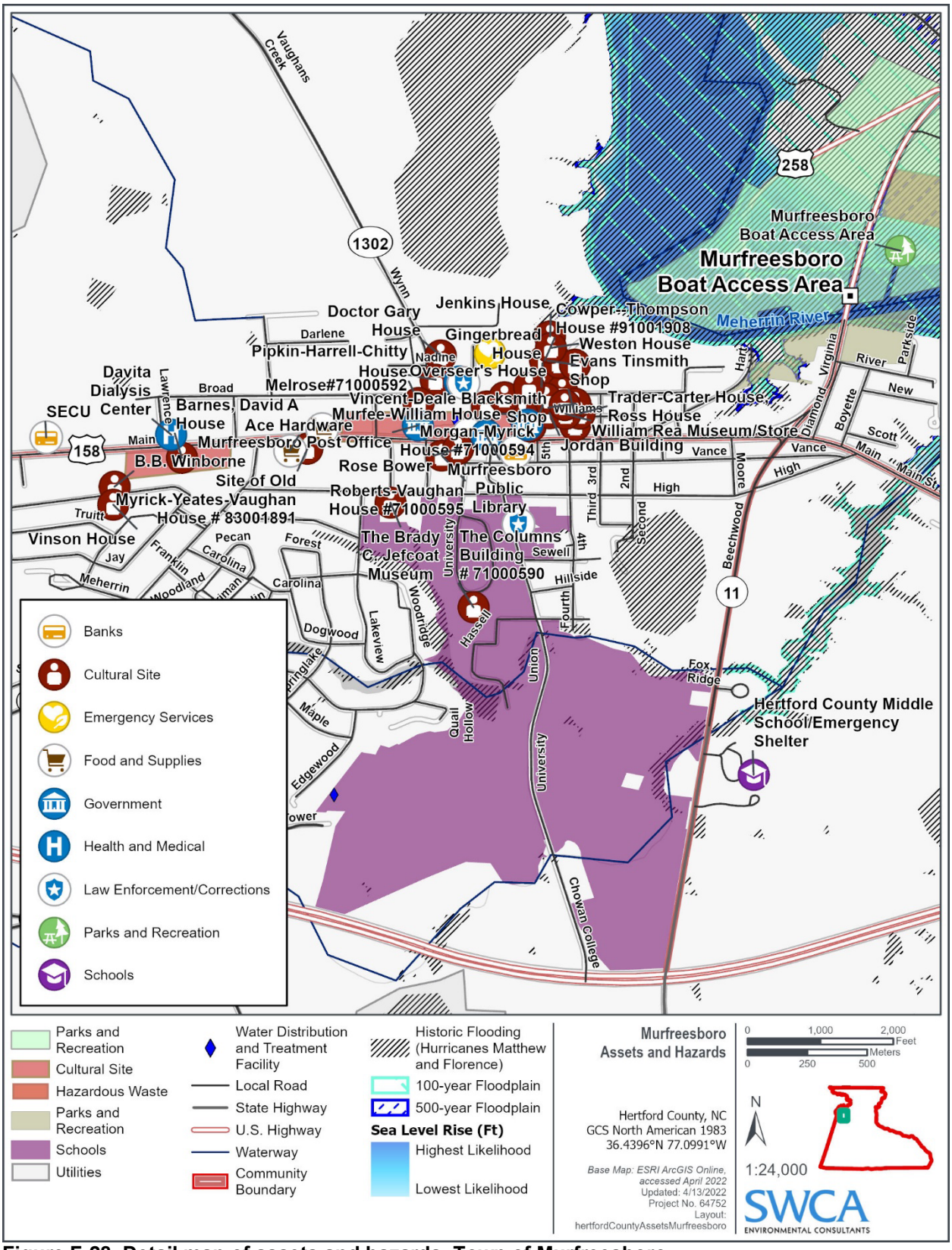



**Figure F-28. Detail map of assets and hazards, Town of Murfreesboro.**

# APPENDIX G

# Other Projects Considered

**Table G-1. Other Projects Considered for Hertford County, North Carolina**

| Project Name | Project Description | Source |
|---|---|---|
| Harrellsville "Island" | Increase the resiliency of NC 45 and NC 561 by elevating major low water crossings (such as Chinkapin Creek and Wiccacon River) and creating a regular maintenance program for culverts. | Hurricane Matthew Resilient Redevelopment Plan – Hertford County |
| Ahoskie Creek and DT Road | Regular debris removal and consistent maintenance of this portion of Ahoskie Creek to improve hydraulic efficiency and minimize the risk of flooding during future storm events. | Hurricane Matthew Resilient Redevelopment Plan – Hertford County |
| Murfreesboro Drainage & Culverts | Implement a program for regular culvert and ditch maintenance in town (4th Street, Jay Trail, Union Street, High Street, Spring Avenue). | Hurricane Matthew Resilient Redevelopment Plan – Hertford County |
| Ebo Road Drainage & Culverts | Implement a program for regular culvert and ditch maintenance along Ebo Road near Como. | Hurricane Matthew Resilient Redevelopment Plan – Hertford County |
| Como Drainage & Culverts | Implement a program for regular culvert and ditch maintenance along Buckhorn Church Road at Highway 258. | Hurricane Matthew Resilient Redevelopment Plan – Hertford County |
| US 13 at Ahoskie Creek | Flooding cuts off access from Hertford County to Bertie County and other points south, presenting challenges for emergency access and commerce. Elevation of roadways, especially over Ahoskie Creek, and a regular culvert maintenance program to address this flooding. | Hurricane Matthew Resilient Redevelopment Plan – Hertford County |
| Ahoskie Business District | Regular debris removal and consistent maintenance in this portion of Ahoskie Creek to improve hydraulic efficiency and minimize the risk of flooding during future storm events. | Hurricane Matthew Resilient Redevelopment Plan – Hertford County |
| Funding via Grants to Alleviate Flooding | Actively work with federal, state, local and private partners to identify mitigation measures and secure funding via grants to alleviate flooding. Focus on the following areas: US 13 at Ahoskie Creek, Harrellsville Island, Ahoskie Creek and DT Road, Murfreesboro drainage and culverts, Ebo Road drainage and culverts, and Como drainage and culverts. | Albemarle Region Hazard Mitigation Plan 2020 |
| Identify Drainage Problem Areas | At the local government staff level, work with the North Carolina Department of Transportation (NCDOT) and the Regional Planning Organization to identify drainage problem areas; develop resolutions for drainage issues created by NCDOT facilities, including inspections of channels, retention basins; and pursue debris removal as needed. | Albemarle Region Hazard Mitigation Plan 2020 |
| Albemarle Regional Health Department - Ahoskie Facility | Identify a suitable replacement site and relocating all facilities and services of the health department to the new site. See agreement by and between Hertford County and Albemarle Regional Health Services, Section 3: Agreement, F(1)(c) Health Department Buildings, which details the obligation of Hertford County to design and construct a new public health building on or before July 1st, 2028. A specific location is not identified in the agreement. The County Board may want the building returned to Winton (County Seat). The orientation of the Courthouse and County Administration would accommodate a new Health Department opposite of County Administration. Regardless of the final location, the new Health Department is anticipated to be designed and constructed on a parcel less prone to flooding. | Hurricane Matthew Resilient Redevelopment Plan - Hertford County |
| Wetland Restoration and Expansion | Protecting and expanding wetlands to increase flood capacity. | Public Meeting #1 |