

Foothills Regional Commission

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CLEVELAND COUNTY CONNECTIVITY REPORT

2025





TABLE OF CONTENTS

01 Introduction

02 Overview of Helene

03 Geographies/Streets
/Locations Impacted

04 Strategies to build
resilience

05 Helene Impacts to
Digital Literacy and
Digital Inclusion

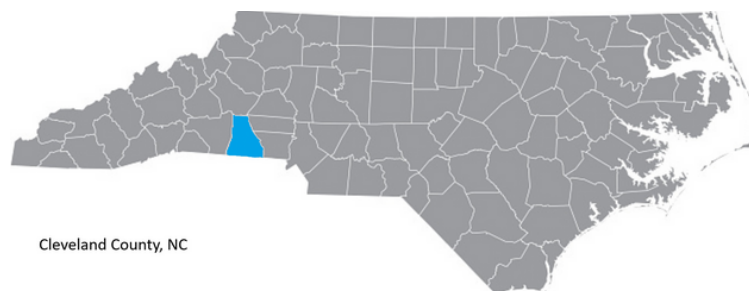
06 Helene Impacts to
infrastructure

INTRODUCTION

Cleveland County is located in Western North Carolina in the Appalachian Foothills and is home to approximately 100,000 people. Like many rural communities, it has undergone a period of transition. In the 20th century, Cleveland County was a booming textile manufacturing hub employing thousands of residents, much like its neighbor, Rutherford County.

In the 21st century, Cleveland County has slowly begun to reinvent itself by investing in modern advanced manufacturing, aided by its proximity to Charlotte. The county also has a strong agricultural tradition, which sometimes conflicts with the significant urban growth spreading from the Charlotte metro area.

Cleveland County is currently classified as a Tier 1 economically distressed county, placing it among the 40 most challenged counties in North Carolina. It holds the highest poverty rate in the Foothills region at 18.3%, with a child poverty rate of 27.3%. As the county continues its transition, promoting digital literacy, skills development, and device access is essential to ensure that no one is left behind.



Cleveland County, NC

Device access remains a concern, with roughly 25% of households reporting they do not have access to a computer. Broadband affordability is also a significant issue in Cleveland County, as most respondents to the NC Broadband Survey indicated they pay over \$125 per month for internet service—an especially high cost for an already economically distressed area. As a result, many households rely solely on cellular devices, public facilities, or simply go without internet service.

Consequently, Cleveland County has fallen behind the rest of the state in terms of digital inclusion, digital literacy, and broadband access and affordability.



OVERVIEW OF HELENE

Cleveland County and Western North Carolina were struck by Hurricane Helene on September 27, 2024. While most residents anticipated strong winds and heavy rain, they did not expect the record flooding that ultimately occurred. This caused significant damage to homes, infrastructure, farms, and businesses throughout Cleveland County. Areas such as Boiling Springs and the northern rural region of the county were hit especially hard and are still navigating recovery efforts.

Work is ongoing to fully assess the extent of the hurricane's damage and to put recovery plans in place. Internet and cellular connectivity issues also persist, complicating both immediate recovery and longer-term rebuilding strategies.

As of December 2024, Cleveland County continues its comprehensive damage assessment, with initial estimates placing total losses in the hundreds of millions of dollars. Many residents were left without power and internet for several days, and connectivity challenges persist as infrastructure remains under repair. These internet and cellular disruptions are expected to continue well into the foreseeable future, compounding the hardship for local communities and complicating recovery efforts.

“Many citizens of Cleveland County were without power and internet for several days.”

GEOGRAPHIES/STREETS/ LOCATIONS IMPACTED

The areas most disproportionately impacted by Hurricane Helene in Cleveland County include the rural northern region of the county, along with the Town of Boiling Springs and its surrounding area.

While Cleveland County did not suffer impacts as extreme as those experienced farther west, residents still faced substantial property damage, flooding, and widespread utility infrastructure destruction. The Town of Boiling Springs, in particular, sustained significant infrastructure damage but is currently on a solid path toward recovery.

Power outages lasted for several days across Cleveland County, although electricity was restored sooner than in some neighboring western counties. However, the northern part of the county endured severe flooding and wind damage, with trees, utility poles, and even homes knocked down. Because this region is extremely rural, it may take years for its communities to fully recover from Helene's effects.

Many bridges were destroyed, leaving numerous residents isolated or cut off from broadband and cellular services in an area that already struggled with connectivity.

The rest of the county also experienced significant infrastructure damage, with utility poles destroyed and lines brought down. This caused major delays in restoring power and broadband access. Even now, some areas remain without broadband service, and there is currently no estimated timeline for full restoration.

“Bridges were destroyed, isolating communities already struggling with limited connectivity.”

STRATEGIES TO BUILD RESILIENCE

Cleveland County aims to strengthen its infrastructure by implementing several construction projects during the rebuilding process. These efforts can be divided into two main areas: Infrastructure and Digital Skills.

Infrastructure improvements will play a key role in enhancing resilience. Hurricane Helene demonstrated that the region's infrastructure was largely unprepared for a major weather event. As utility, sewer, and water lines are rebuilt, broadband access and resiliency must be integrated into these networks. As a significant sewer and water infrastructure must be repaired, replaced, or newly laid, this process presents an opportunity to install fiber alongside these lines. Doing so also allows for the incorporation of advanced technologies that can detect leaks, breaks, and other issues, ultimately creating more resilient fiber, water, and sewer systems.

Utility and overhead broadband services will continue to be used throughout the county, and they will remain the primary mode of delivering broadband in Western North Carolina. However, one critical issue revealed by Hurricane Helene is that most locations in Cleveland County have access to only one internet provider. When that single provider went offline for weeks, residents and businesses were left without any internet access at all—often forcing them to relocate, invest in costly alternatives such as satellite internet, or simply go without service.

This underscores the importance of offering multiple internet provider options to residents and businesses, ensuring a degree of redundancy and potentially better service and pricing through greater competition.

Digital Skills constitute another critical area for investment in Cleveland County. The county's senior population will benefit from a digital literacy instructor who will teach at its two senior centers. However, while this emphasizes the need for a dedicated digital navigator to help residents learn and utilize technology, it does not address the needs of the county's non-senior population. As a result, there is a clear need for funding dedicated to staff who can provide digital literacy and skills training to a broader range of residents.

Because Cleveland County is a Tier 1 economically distressed area, securing local funds for these projects is often challenging. Therefore, external funding is essential to expanding digital training capacity within local governments, educational institutions, and nonprofits. The most important long-term strategy lies in acquiring additional resources to enhance programming and coordinate digital literacy initiatives and events across various institutions.

STRATEGIES TO BUILD RESILIENCE CONT.

Due to the limited funding and programming currently available, Cleveland County is exploring various strategies to best serve its residents. Some pilot initiatives may be necessary to determine which approaches are most effective. Another significant gap is device access; due to the county's economic challenges, seniors and low-income community members often struggle to acquire the devices they need.

There is a clear need for an organization that can provide affordable device access within the community. This organization should ideally operate as an independent nonprofit, as the county itself currently lacks the capacity to oversee an affordable device program. The most strategic use of funding would be to provide seed money for launching this nonprofit or to expand a partnership with Through the Trees in Brevard.



HELENE IMPACTS TO DIGITAL LITERACY AND DIGITAL INCLUSION

Hurricane Helene highlighted the region’s digital equity challenges. Widespread power and internet outages forced many people to rely on cellphone towers for connectivity, which became overwhelmed by the surge in new users who lacked power and home internet. This situation has unified the community around expanding broadband resources and adding redundancy.

Cleveland County has the highest child poverty rate in the region and ranks 30th highest in North Carolina. This creates significant barriers to affordable device access for school-age children. These existing issues were compounded by the hurricane, as many residents lost their digital devices to flooding and lack the funds to replace them, further increasing the demand for affordable devices.

In Cleveland County, current digital literacy and inclusion efforts focus on ad-hoc instruction at the county library system and programs within Cleveland County Schools. Through a National Telecommunications and Information Administration (NTIA) Digital Equity Competitive Grant (DEC), the Foothills Regional Commission has partnered with Land of Sky to hire a digital literacy teacher to serve each of the five senior centers in the region. However, with uncertainty around the future of DEC, this need may go unfulfilled and is only one piece of what Cleveland County needs to address broader digital literacy and device access challenges for all segments of the population.



HELENE IMPACTS TO INFRASTRUCTURE

Hurricane Helene had a major impact on infrastructure throughout the foothills region. In Cleveland County, many roads were flooded, and power lines were knocked down.

The County aims to apply a “dig-once” mentality in its reconstruction efforts to save time and money and to foster collaboration with its partners in each of the towns, the Foothills Regional Commission, and local nonprofits. These rebuilding projects will take years to complete, and Cleveland County will need substantial funding and cooperation to fully recover from Helene’s infrastructure damage.

Hurricane Helene is now the most expensive disaster in North Carolina’s recorded history and is expected to become the most expensive in the United States’ history.



ACKNOWLEDGEMENTS

In addition to those involved in the creation of this plan, the following entities have been identified as partners essential to advancing the established goals. This is not an exhaustive list of partners, but an initial cohort of key players.

- Connect Humanity
- Reid Consulting Group
- Breaking Point Solutions



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