

# **Hurricane Matthew Resilient Redevelopment Plan Lenoir County**



May 2017

Version 1.2

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# Change Log

Version	Date	Summary of Changes
1.1	6/15/17	Minor Revisions
1.2	8/30/17	Labor and unemployment data updated



## Executive Summary

In October 2016, Hurricane Matthew caused widespread destruction in the Caribbean and up the Eastern Seaboard of the United States. In North Carolina, at least 25 people lost their lives, and 100,000 homes, businesses, and government buildings sustained damage estimated at \$4.8 billion.<sup>1</sup> At the storm's peak, 3,744 individuals fled to 109 shelters across the region. More than 800,000 households lost power and 635 roads were closed, including the major east-west and north-south corridors.

In December 2016, the North Carolina General Assembly established the North Carolina Resilient Redevelopment Planning (NCRRP) initiative as part of the 2016 Disaster Recovery Act (*Session Law 2016-124*). The purpose of the program is to provide a roadmap for community rebuilding and revitalization assistance for the communities that were damaged by the hurricane. The program empowers communities to prepare locally driven recovery plans to identify redevelopment strategies, innovative reconstruction projects, and other needed actions to allow each community not only to survive but also to thrive in an era when natural hazards are increasing in severity and frequency.

The NCRRP consists of planning and implementation phases and is managed through North Carolina Emergency Management.

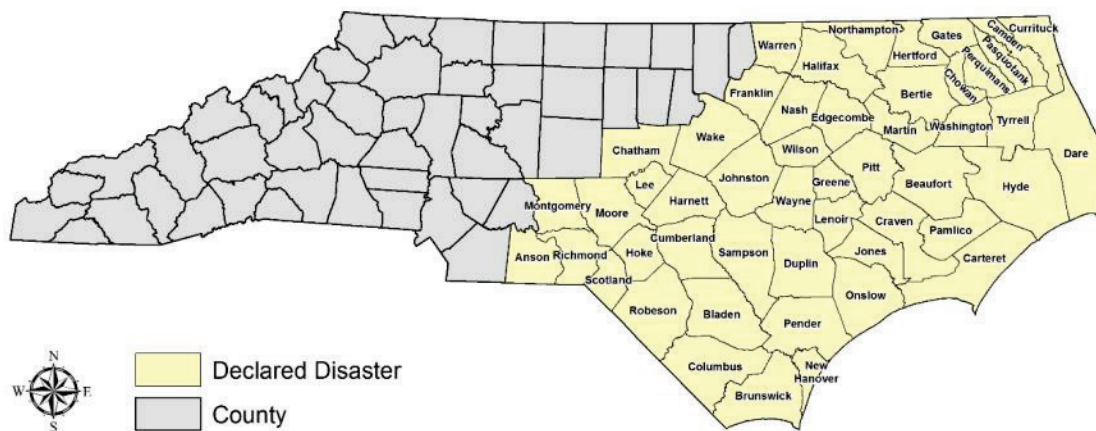


Figure 1. NCRRP Counties

This document is a snapshot of the current needs of the County regarding holistic recovery and redevelopment. The plan will evolve as the county analyzes the risk to its assets, identifies needs and opportunities, determines the potential costs and benefits of projects, and prioritizes projects. As projects are more fully defined, the potential impact on neighboring communities and the region may lead to modifications.

<sup>1</sup> State of North Carolina Supplemental Request for Federal Assistance Hurricane Matthew Recovery, <https://governor-new.s3.amazonaws.com/s3fs-public/documents/files/Hurricane%20Matthew%20Relief--2017%20Federal%20Request%20%28002%29.pdf>.

After multiple public meetings, Lenoir County has identified 25 projects in four pillars: Housing, Economic Development, Infrastructure, and Environment. Details of these projects can be found in Section 4 of this plan.

Pillar	Project/Action Count
Housing	5
Economic Development	3
Infrastructure	12
Environment	5
<b>Grand Total</b>	<b>25</b>

**Table 1. Lenoir County Summary of Projects by Pillar**





# 1. Background

# 1. Background

## Summary of Hurricane Matthew Storm Damage

Hurricane Matthew was an extraordinarily severe and sustained event that brought record-level flooding to many areas in eastern North Carolina’s coastal plain, sound, and coastal communities. Hurricane Matthew hit North Carolina on October 8, 2016, as a Category 1 storm. Communities were devastated by this slow-moving storm primarily by widespread rainfall. During a 36-hour period, up to 18 inches of heavy rainfall inundated areas in central and eastern North Carolina.

Riverine flooding began several days after Hurricane Matthew passed and lasted for more than 2 weeks. New rainfall records were set in 17 counties in the Tar, Cape Fear, Cashie, Lumber, and Neuse River watersheds. Entire towns were flooded as water levels throughout eastern North Carolina crested well beyond previously seen levels.

During the peak of the hurricane, 800,000 households lost power and 635 roads were closed, including a section of I-40 West in Johnston County that was closed for 7 days, and sections of I-95 North and South in Robeson and Cumberland Counties that were closed for 10 days.

Approximately 88,000 homes were damaged and 4,424 were completely destroyed. Losses totaled more than \$967 million, representing an economic loss as high as 68% of the damages, or \$659 million, not expected to be covered by insurance or FEMA assistance.

North Carolina Governor McCrory requested FEMA assistance on October 9, 2016, and FEMA subsequently declared a major disaster (DR-4285) for North Carolina on October 10, 2016, for 48 counties encompassing approximately 325 cities, towns, townships, and villages.

Preliminary estimates indicate more than 30,000 businesses suffered physical or economic damage, and 400,000 employees were affected as a result. Hurricane Matthew also had a significant impact on the agriculture and agribusiness economy in eastern North Carolina. The nearly 33,000 agricultural workers and 5,000 agricultural-support workers hit by the storm account for more than half of the state’s agriculture and agriculture-support workforce.

Initial economic analysis of the impacts of crop and livestock losses caused by Hurricane Matthew estimated the loss of more than 1,200 jobs and roughly \$10 million in state and local income and sales tax revenue.<sup>2</sup>

## State/Legislative Response

North Carolina’s response to Hurricane Matthew included 2,300 swift-water rescues using 79 boats and more than 90 air rescues. North Carolina also deployed over 1,000 National Guard and State Highway Patrol to assist with rescue and sheltering missions. There were 3,744 individuals transported to 109 shelters across central and eastern North Carolina during the storm’s peak.

FEMA’s disaster declaration made 50 counties eligible for FEMA assistance, 45 of which are eligible for Individual Assistance and Public Assistance and 5 of which are eligible for Public Assistance only.

- There were 81,832 individuals registered for FEMA/state assistance.

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<sup>2</sup> Governors McCrory’s Request for Federal Assistance for Hurricane Matthew Recovery, November 14, 2016



- Federal/state financial assistance in the amount of \$92.5 million was approved to help flood survivors recover.
- Small Business Administration (SBA) loans approved for individuals after Hurricane Matthew totaled \$65.6 million.
- SBA loans approved for businesses after Hurricane Matthew totaled \$23.2 million.

After the immediate response period, North Carolina Governor McCrory and the North Carolina General Assembly took the steps summarized below to obtain and allocate long-term funding for Hurricane Matthew.

**November 1:** The Hurricane Matthew Recovery Committee is established. Preliminary damage assessments are completed, and the State Emergency Response Task Force continues to administer programs and identify needs unmet by existing federal programs.

**November 14:** Governor McCrory formally submits North Carolina’s request for supplemental federal disaster assistance to the delegation as Congress returns to work.

**Late November/Early December:** Congress appropriates supplemental disaster assistance for North Carolina. After the supplemental federal disaster recovery assistance package is received, Governor McCrory submits a supplemental state disaster assistance package (House Bill 2) recommendation to the General Assembly and calls a special session. Governor McCrory then signs the Hurricane Matthew Recovery Act to fund disaster recovery efforts.

This supplemental federal assistance was to focus on housing, infrastructure, economic development, and the environment. These four pillars were to be funded through the following programs and agencies: The U.S. Department of Housing and Urban Development’s Community Development Block Grant–Disaster Recovery (CDBG-DR) program, Army Corps of Engineers Operations and Maintenance, the FEMA National Dam Safety Program, the Federal Highway Administration’s Emergency Highway Funding, and the U.S. Department of Agriculture’s Emergency Conservation and Watershed Protection programs.

## Resilient Redevelopment Planning

The purpose of the NCRRP initiative is to provide a roadmap for communities in eastern North Carolina to rebuild and revitalize after being damaged by Hurricane Matthew. The program empowers communities to prepare locally driven, resilient redevelopment plans to identify redevelopment strategies, innovative reconstruction projects, and other actions to allow each community not only to survive, but also to thrive in an era when natural hazards are increasing in severity and frequency.

The NCRRP initiative employs a holistic approach to planning that includes four pillars: housing, infrastructure, economic development, and the environment. Redevelopment strategies and reconstruction projects for each of the four pillars is included in each plan.

The NCRRP initiative consists of planning and implementation phases and is managed through North Carolina Emergency Management (NCEM).

## Scope of the Plan

This document is a snapshot of the County’s current needs for achieving holistic recovery and redevelopment. The plan will evolve as the County analyzes the risk to its assets, identifies needs and opportunities, determines

the potential costs and benefits of projects, and prioritizes the projects. As projects are more fully defined, the potential impact on neighboring communities and the region may lead to modifications.

Planning objectives are to (1) develop strategic, resilient redevelopment plans and actions, and (2) to define any unmet funding needed to implement such actions after taking into account other funding sources.

The resulting resilient redevelopment plans will be the foundation for any supplemental funding received through Congress, the North Carolina General Assembly, and other funding sources. These plans will also be the basis for the state's Recovery Action Plan, which is required by the U.S. Department of Housing and Urban Development before the state can expend funds received from the CDBG-DR program.

### **Local Participation and Public Engagement**

Stakeholder engagement and public involvement was an essential component of the NCCRP initiative. Four rounds of discovery, analysis, collaboration, and interaction were held with each affected county. Each meeting had two components: an in-depth working session with county officials, subject matter experts, and planners from the affected counties and municipalities; and a public open house. The purpose of each meeting was as follows:

**Meeting 1** – Initiated the planning process and validated the existing data pertaining to damage and impacts.

**Meeting 2** – NCEM presented draft documentation of resilient redevelopment strategies and received feedback from community leaders and the public.

**Meeting 3** – NCEM presented refined resilient redevelopment strategies based on feedback from Meeting 2 and received additional feedback.

**Meeting 4** – NCEM presented actions developed during the course of the planning process and allowed the county to rank actions; apply High, Medium, or Low Prioritization; and approve inclusion of the actions in the final plan.

Each of the 50 counties that were declared a major disaster by the President of the United States as a result of Hurricane Matthew under the Stafford Act (P.L. 93-288) participated in the resilient redevelopment planning process. Each municipality in those counties, as well as the five economic development regions that sustained damage from Hurricane Matthew, were also invited to participate. The counties impacted by the storm cover the eastern half of North Carolina and occupy parts of the piedmont, sand hills, and coastal areas of the state.

### **Data, Assumptions, and Methodologies**

NCEM has assembled a wealth of data, resources, and technical expertise from state agencies, the private sector, and the University of North Carolina system to support the development of innovative best practice strategies.

Implementation of the proposed projects and actions described in this plan is subject to applicable federal, state, and local laws and regulations. Inclusion of a project or action in this plan does not guarantee that it will be eligible for recovery funding. However, proposed projects or actions may be eligible for state or federal funding or could be accomplished with municipal, nonprofit, or private investment.

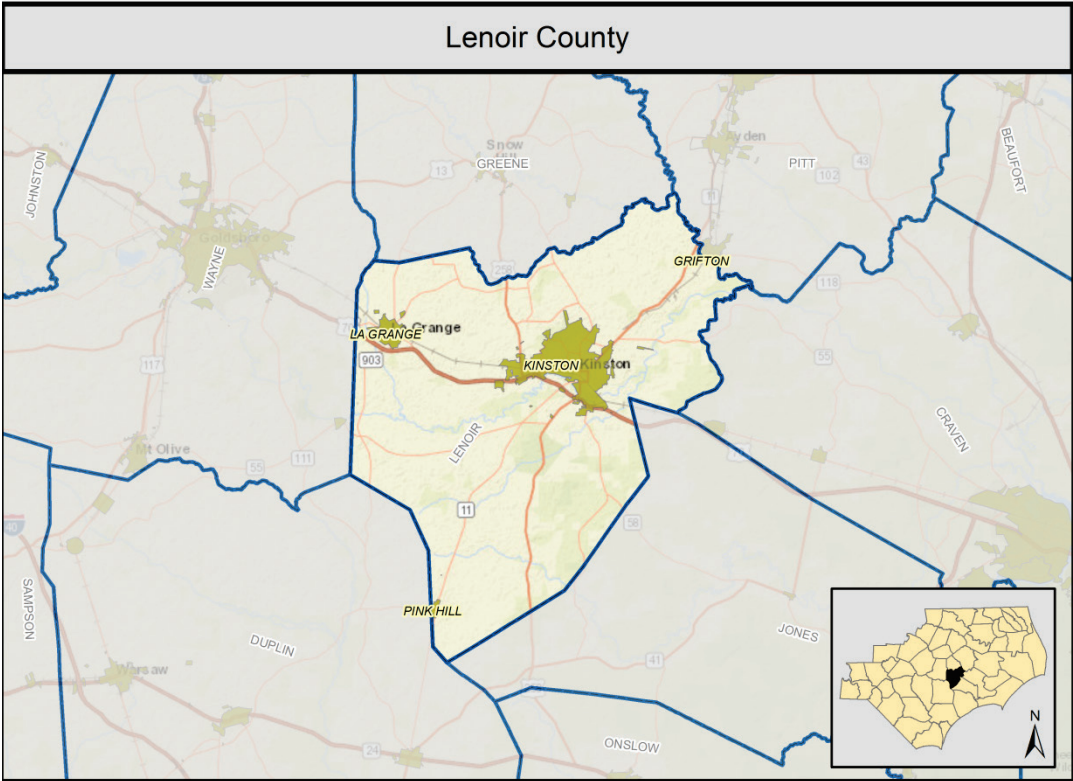


Figure 2. Lenoir County and Neighboring Counties



An aerial photograph showing a residential neighborhood severely affected by flooding. The water is a murky, brownish-yellow color, covering large areas of the landscape. Numerous houses with grey roofs are visible, some partially submerged. A network of roads crisscrosses the area, with some sections completely underwater. Dense green trees are scattered throughout, many of which are isolated in the floodwater. The overall scene depicts a significant natural disaster impact on a community.

## 2. County Profile



## 2. County Profile

Lenoir County is located in eastern North Carolina between Raleigh and New Bern. It is comprised of four census-designated places: Jackson Heights, City of Kinston, Town of LaGrange, and the Town of Pink Hill. Its current population is 58,782. This section provides a profile of housing, economics, infrastructure, environment, and administration within Lenoir County.

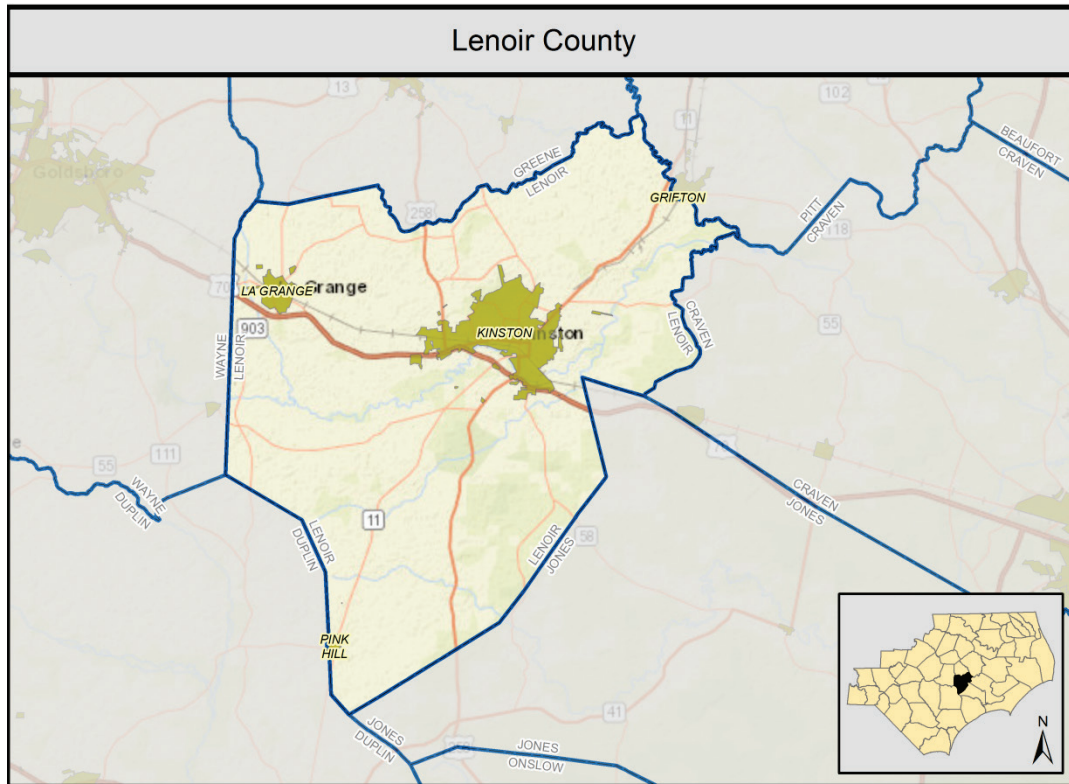


Figure 3. Lenoir Base Map

### Demographic Profile

Demographics for Lenoir County and census-designated places within the county are summarized and compared to statewide averages in this profile. The demographic data is from the 2000 Census, 2010 Census, and 2011-2015 American Community Survey five-year estimates.

### Population

Lenoir County has a population of 58,782. Kinston is the most populous place within Lenoir County with a population of 21,540 and Pink Hill is the least populous place with a population of 466.<sup>3</sup>

### Population Change (2000 to 2010)

The Lenoir County population remained relatively the same between the 2000 and 2010 Census. In 2000 the population was 59,698 and in 2010 it was 59,495. The population declined by 203 people, or less than 1 percent. In comparison, North Carolina grew by 19 percent from 8,049,313 people in 2000 to 9,535,483 in 2010.<sup>4</sup>

<sup>3</sup> Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B01001, Sex by Age.

<sup>4</sup> Source: Minnesota Population Center. National Historical Geographic Information System: Version 11.0 [Database]. Minneapolis: University of Minnesota. 2016. <http://doi.org/10.18128/D050.V11.0>. Census 2000/Census 2010 Time Series Tables Geographically Standardized

## Age

The median age in Lenoir County is 42, which is the same for North Carolina. Within Lenoir County, the LaGrange population has the oldest median age, 52, and the Pink Hill population has the youngest median age, 41.<sup>3</sup>

## Race and Ethnicity

Lenoir County is mostly White (55 percent) and African American (40 percent) with other races constituting the remaining 5 percent. In comparison, North Carolina is 70 percent White, 22 percent African American, 1 percent American Indian and Alaska Native, 3 percent Asian, less than 1 percent Native Hawaiian/Pacific Islander, 3 percent Some Other Race, and 2 percent Two or More Races. Refer to the table below.<sup>5</sup>

Within Lenoir County, Jackson Heights and Pink Hill are predominantly White while LaGrange and Kinston are majority African American. In Pink Hill, 10 percent of the population identifies as Some Other Race.

The Latino population in Lenoir County is 7 percent compared to 9 percent for North Carolina. Pink Hill has the largest Latino population (16 percent) while Jackson Heights and LaGrange do not have Latino populations according to the census data. Kinston has a Latino population of 3 percent.

Geography	White	Black or African American	American Indian and Alaska Native Alone	Asian	Native Hawaiian/Pacific Islander	Some Other Race	Two or More Races	Total Non-White
Jackson Heights CDP	88.4%	10.5%	0.0%	0.0%	0.0%	0.0%	1.1%	11.6%
Kinston city	29.7%	66.7%	0.4%	1.0%	0.1%	0.4%	1.8%	70.3%
LaGrange town	47.6%	52.4%	0.0%	0.0%	0.0%	0.0%	0.0%	52.4%
Pink Hill town	59.4%	28.1%	0.0%	0.0%	0.0%	10.1%	2.4%	40.6%
<b>Lenoir County</b>	<b>55.2%</b>	<b>40.2%</b>	<b>0.3%</b>	<b>0.6%</b>	<b>0.0%</b>	<b>1.6%</b>	<b>2.0%</b>	<b>44.8%</b>
<b>North Carolina</b>	<b>69.5%</b>	<b>21.5%</b>	<b>1.2%</b>	<b>2.5%</b>	<b>0.1%</b>	<b>3.0%</b>	<b>2.4%</b>	<b>30.5%</b>

Table 2. Lenoir County Race and Ethnicity

## Limited English Proficiency

Limited English Proficiency (LEP) is defined as populations 18 years or older that speak English less than very well. In Lenoir County, most of individuals identified as LEP speak Spanish while others speak Indo-Euro, Asian/Pacific, or other languages. Similarly, the primary language group for LEP individuals in North Carolina is Spanish. Within Lenoir County, Kinston has the largest LEP population. The primary language group for LEP populations in Kinston and Pink Hill is Spanish. In Jackson Heights, the primary language group is Other while LaGrange does not have a LEP population according to census data.<sup>6</sup>

<sup>5</sup> Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B02001, Race and Table B03002, Hispanic or Latino Origin by Race

<sup>6</sup> Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B16004, Age by Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over

## Poverty

In Lenoir County, 23 percent of the population is below the poverty level compared to 17 percent of the North Carolina population. In Kinston and Pink Hill, 33 percent of the populations are below the poverty level, 15 percent in LaGrange, and 6 percent in Jackson Heights.<sup>7</sup>

## Low and Moderate Income Individuals

In Lenoir County, 42 percent of the population is classified as low and moderate income (LMI) individuals based on the US Department of Housing and Urban Development's definition. In comparison, 39 percent of the North Carolina population is classified as LMI.<sup>8</sup>

## Median Household Income

The median household income of the population 25 to 64 years old is \$38,000 in Lenoir County and \$53,000 in North Carolina. Jackson Heights has the highest median household income for this age group, \$49,000, and LaGrange has the lowest: \$27,000. Median household income was not available for Pink Hill.<sup>9</sup>

## Zero Car Households<sup>10</sup>

In Lenoir County, 11 percent of households do not have a vehicle available compared to 7 percent of North Carolina households. Within Lenoir County, Kinston has the highest percentage of households without access to a vehicle, 21 percent, while Jackson Heights has the lowest percentage: 0 percent.

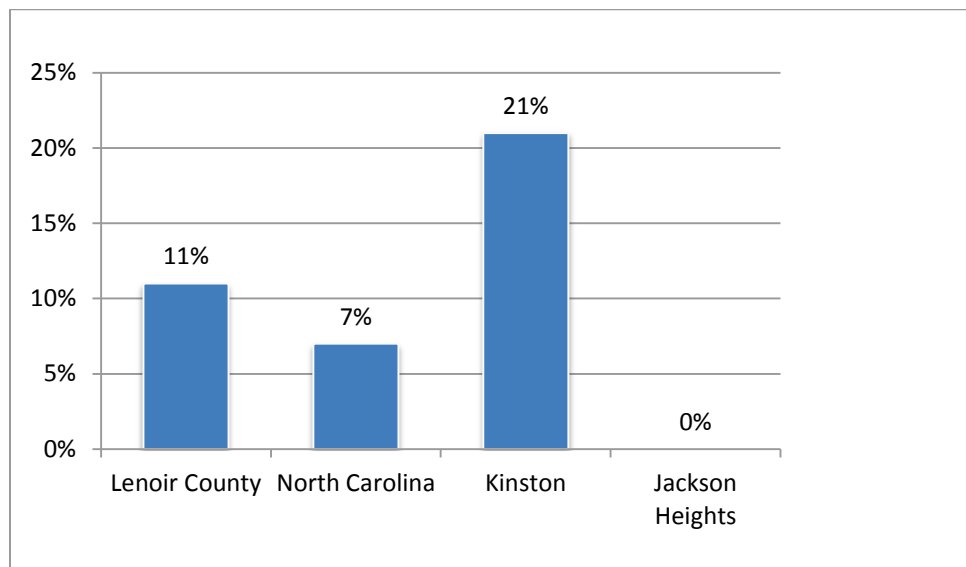


Figure 4. Zero Car Households by Percentage

7 Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table C17002, Ratio of Income to Poverty Level in the Past 12 Months

8 Source: US Department of Housing and Urban Development, Estimate of Low and Moderate Income Individuals, <https://www.hudexchange.info/programs/acs-low-mod-summary-data/acs-low-mod-summary-data-block-groups-places/>

9 Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B19094, Median Household Income in the Past 12 Months

10 Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B25044, Tenure by Vehicles Available

### Commuting: Travel Time to Work, Means of Transportation<sup>11</sup>

The majority of Lenoir County residents commute alone to work by vehicle, 78 percent, which is similar to North Carolina average of 81 percent. Within Lenoir County, Jackson Heights has the largest percentage of commuters commuting alone, 89 percent, and Kinston and Pink Hill have the least: 72 percent.

Kinston has the largest percentage of residents commuting by public transportation: 2 percent. In comparison, 1 percent of North Carolina commuters use public transportation. A greater percentage of Kinston, LaGrange, and Pink Hill residents commute by walking, bike, or motorcycle than the North Carolina average of 2 percent.

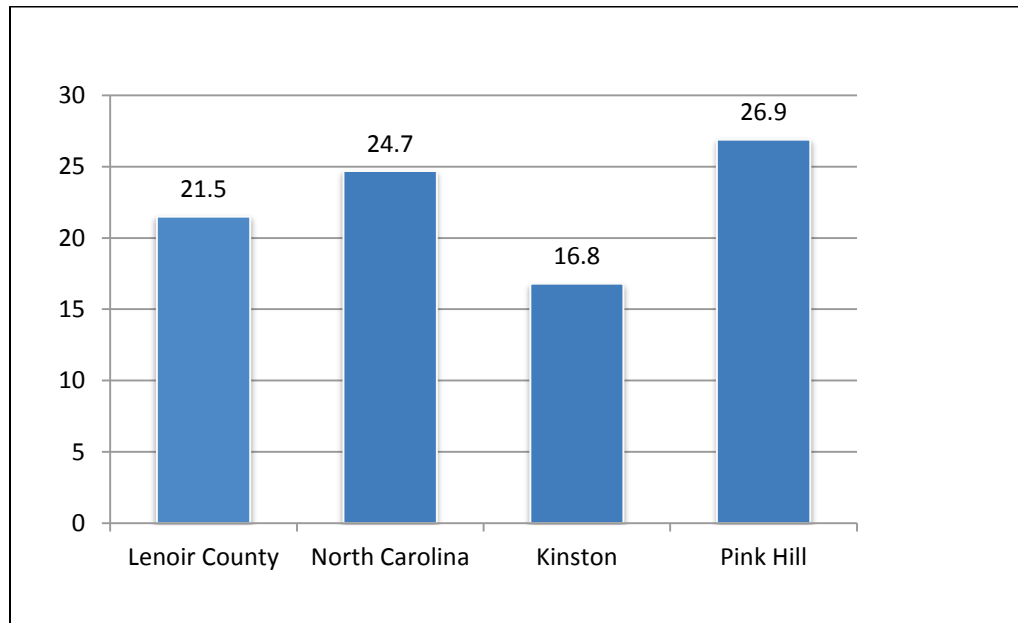


Figure 5. Mean Commute Time to Work in Minutes

### Housing Profile<sup>12</sup>

Lenoir County has approximately 27,000 housing units, 60 percent of which are single-family homes, 16 percent multi-family units, and 24 percent manufactured housing.

In Lenoir County 15 percent of housing units are vacant, which is the same percentage for North Carolina. Within Lenoir County, Pink Hill has the largest percentage of vacant housing units, 25 percent, while Jackson Heights has the least: 0 percent.

Of the occupied housing units, 60 percent are owner-occupied compared to 65 percent in North Carolina; 40 percent are renter-occupied compared to 35 percent in North Carolina.

The median housing value in Lenoir County is \$93,000. In comparison, the median housing value in North Carolina is \$140,000. Within Lenoir County, Pink Hill has the highest median housing value: \$103,000. LaGrange has the lowest median housing value: \$59,000.

<sup>11</sup> Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B08301, Means of Transportation to Work and Table GCT0801, Mean Travel Time to Work of Workers 16 Years and Over Who Did Not Work at Home (Minutes)

<sup>12</sup> Sources: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B25002, Occupancy Status; Table B25003, Tenure; Table B25024, Units in Structure; Table B25077, Median Value (Dollars); National Housing Preservation Database

According to the National Housing Preservation Database, Lenoir County has 1,076 affordable housing units. Most of the affordable housing is located within Kinston. Other units are located in LaGrange.

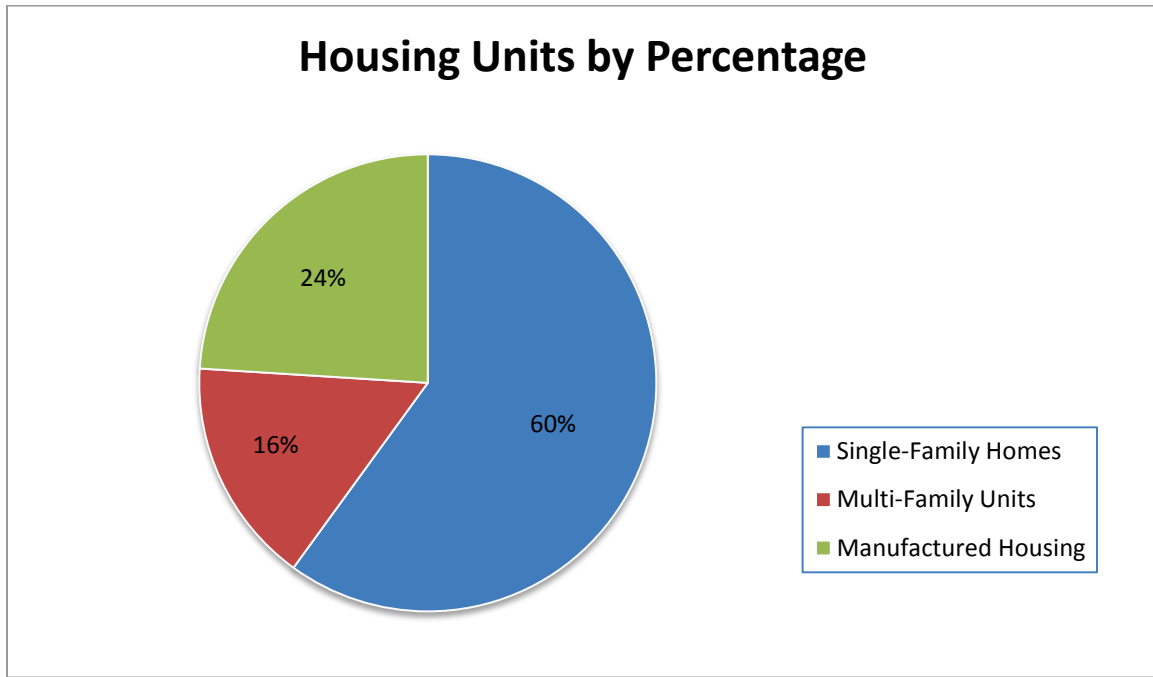


Figure 6. Housing Units by Percentage

## Economic/Business Profile

Lenoir County has historically focused on agriculture, an industry that remains a primary economic driver today. However, the county has added jobs in other industries both related to and separate from agriculture, including aerospace manufacturing, biotech, and pharmaceuticals.<sup>13</sup>

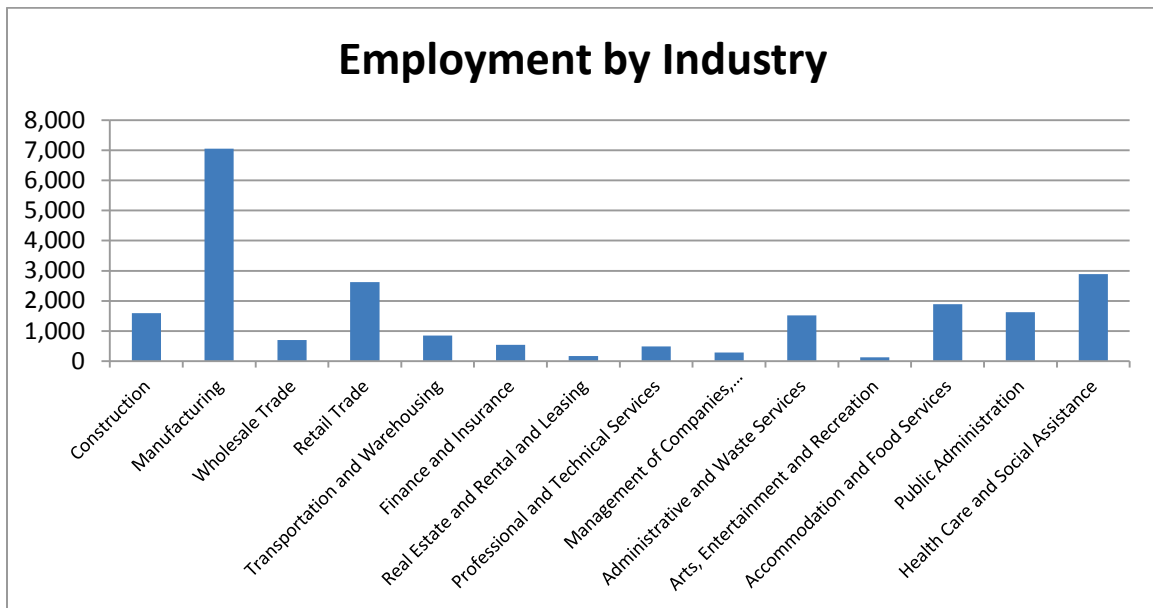


Figure 7. Employment by Industry

<sup>13</sup> Source: AccessNC – North Carolina Department of Commerce, May 2017:  
<http://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37107.pdf>

According to the US Census Bureau’s Longitudinal-Employer Household Dynamics Program, the largest concentrations of jobs within Lenoir County are in in downtown Kinston, at the C.F. Harvey Parkway interchange with US 70, and near the intersection of NC 58 and Airport Rd.<sup>14</sup>

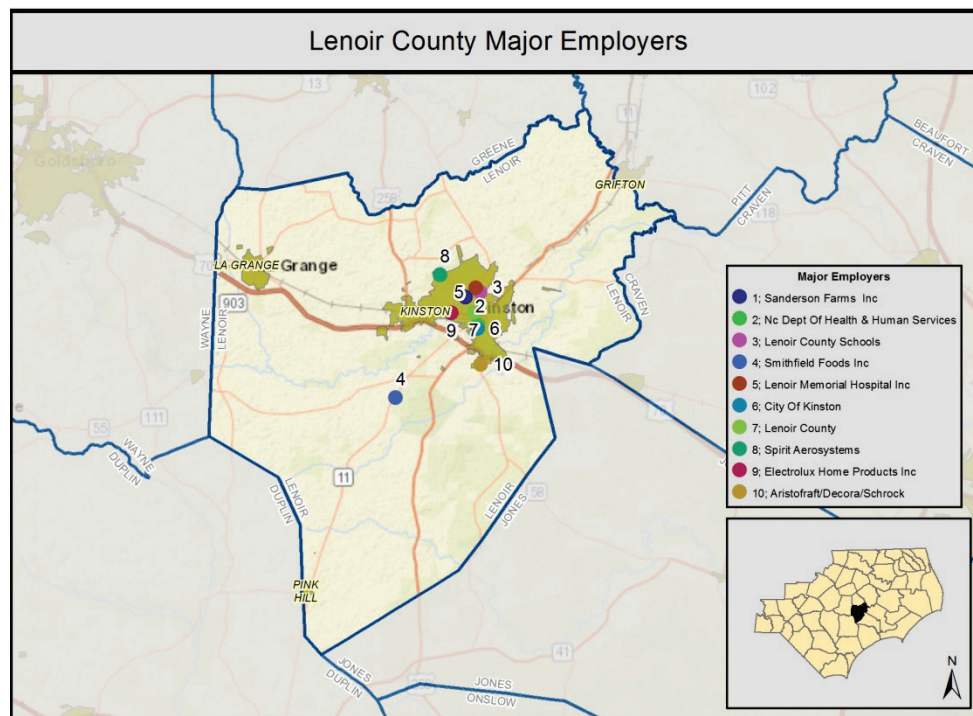
## Labor Force

According to the local area unemployment statistics (LAUS) from the Labor and Economic Analysis Division (LEAD) for the unadjusted data for all periods in 2016, the civilian labor force population of Lenoir County is 27,855.<sup>15</sup> Within Lenoir County, Pink Hill has the largest percentage of residents 16 years or over in the labor force, 61 percent, while Jackson Heights has the smallest: 53 percent.<sup>16</sup>

The civilian unemployment rate in Lenoir County is 5.9 percent. In comparison, the North Carolina civilian unemployment rate is 5.1 percent.<sup>15</sup> Within Lenoir County, Pink Hill has the smallest civilian unemployment rate at 12 percent while Kinston has the largest: 16 percent.<sup>16</sup>

## Major Employers

The top ten employers in Lenoir County<sup>17</sup> represent the manufacturing, public administration, education and health service industries, and are listed in order of total employees.



**Figure 8. Major Employers by Number of Employees**

14 Source: US Census Bureau Longitudinal-Employer Household Dynamics Program

15 Source: Civilian Population and Unemployment Rate - Labor and Economic Division (LEAD) of North Carolina Department of Commerce – Local Area Unemployment Statistics <http://d4.nccommerce.com/LausSelection.aspx>

16 Source: US Census Bureau, American Community Survey 5-year Estimates (2011-2015), Table B23025, "Employment Status For The Population 16 Years And Over"

17 Source: NC Department of Commerce



## Economic Development<sup>18</sup>

The North Carolina Global TransPark (GTP) is located north of Kinston in Lenoir County. The GTP includes 2,500 acres with an 11,500 foot runway as well as rail and road access to two deep water ports. Several aerospace and logistics companies are currently located in the GTP and there is ample space for future growth.

Lenoir County Economic Development is an organization aimed at “improving the economy of Lenoir County by attracting or creating investment to expand the tax base; and by creating jobs, wages and personal incomes.” The organization has established goals, which include working with the GTP to attract additional industry.

The Lenoir Community College, offers a Small Business Center devoted to developing long-term strategic partnerships with business and industry leaders and assisting in small business start-ups and expansions. Lenoir Community College also offers employment, training, and job placement services through the Workforce Innovation and Opportunity Act.

Visit North Carolina, a unit of the public-private organization contracted to lead North Carolina's marketing programs, estimates that in 2015, Lenoir County had \$81 million in tourism expenditures, resulting in \$1.6 million in local tax receipts.

## Infrastructure Profile

Transportation, health, education, water, and power infrastructure are summarized for Lenoir County in the sections that follow.

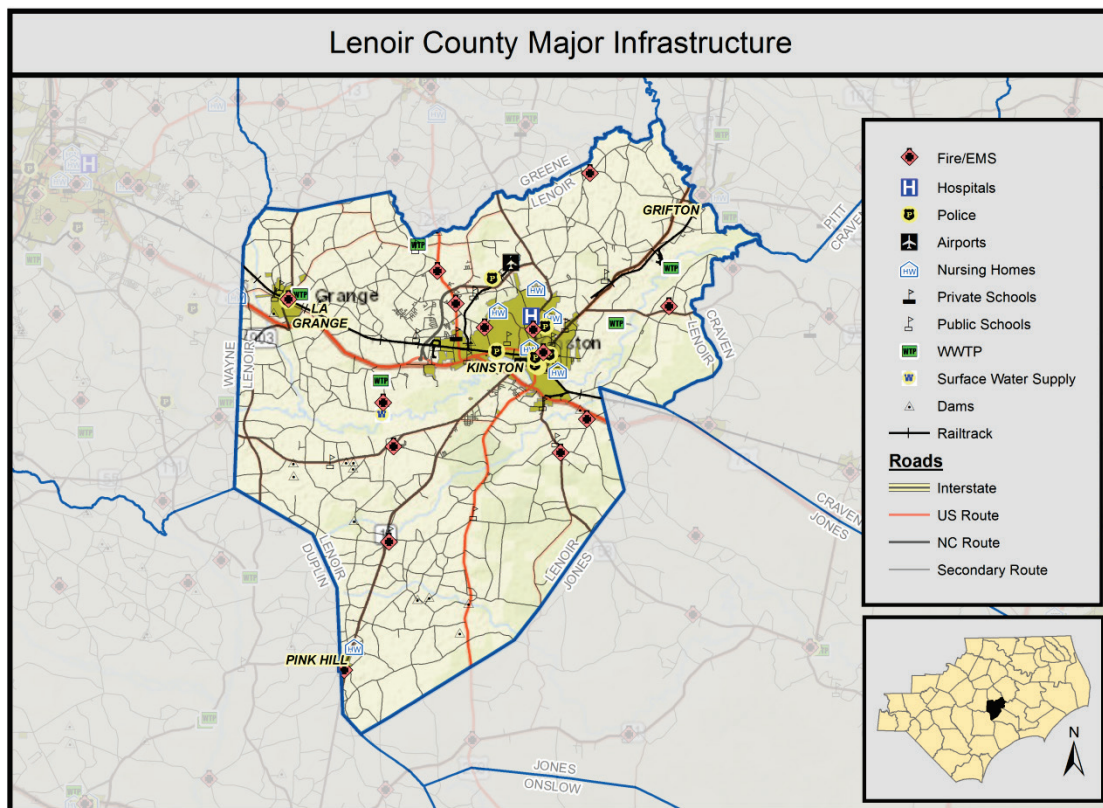


Figure 9. Lenoir County Major Infrastructure

<sup>18</sup> Sources: NC Global TransPark, Lenoir Community College, and Visit North Carolina

## Transportation

Lenoir County’s multi-modal transportation assets include rail, air, and road access. US Highway 70 directly connects the county with Interstate 95, which is the US eastern seaboard’s major north-south thoroughfare, connects the county with major cities and communities across the eastern seaboard. US 70 also connects the area with the Port of Morehead City.

The county also hosts the Kinston Regional Jetport Airport at Stallings Field, a general aviation facility with an 11,500-foot paved and lighted runway, is home to commercial, military, and general aviation flights. The closest commercial passenger service is provided by Pitt-Greenville Airport (PGV).

Though the county has no port facilities, it is approximately 70 miles from the port at Morehead City, North Carolina; 90 miles from the port of Wilmington in North Carolina; and 165 miles from the Virginia Ports of the Hampton Roads, Virginia area.

The area is serviced by both CSX and Norfolk Southern for freight rail. No passenger rail service is available.

## Health

Lenoir County is serviced by UNC Health Care System’s Lenoir Memorial Hospital, a 261-bed acute care facility in Kinston. In addition to general medical, surgical, and obstetrical and gynecological care, Lenoir Memorial offers specialized services including cardiology, pulmonology, oncology, radiology and urology, as well as a 24 hour emergency department.<sup>19</sup>

## Education<sup>20</sup>

Public education is provided by the Lenoir County Public School district, which offers education to pre-K through 12th grade. As of the 2016-2017 school year, the school district had a total of 8,707 students in 17 schools. There are eight elementary schools, three middle schools, three high schools, two nontraditional schools, and one school that serve students from K through 8.

The County also has a community college, Lenoir Community College (LCC), which has nine locations, with the main campus located in Kinston. LCC educates 4,300 curriculum students and 14,000 extension students annually.

As a part of the North Carolina Community College System, LCC is able to provide customized workforce development programs through the NCWorks Customized Training Program.

## Water

The Neuse Regional Water and Sewer Authority operates the Neuse Regional Water Plant, which provides drinking water to Lenoir County. Its permitted capacity is 15 million gallons per day. Municipal wastewater is treated at the Kinston Regional Water Reclamation Facility and LaGrange Wastewater Treatment Plant.<sup>21</sup>

## Power

Kinston Public Services and Duke Energy provide electric service to residential, commercial, and industrial customers in Lenoir County. Piedmont Natural Gas provides natural gas service in Lenoir County.

<sup>19</sup> Source: Lenoir Memorial Hospital. <http://www.lenoirmemorial.org/index.php/hospital/overview/>

<sup>20</sup> Source: Lenoir County Public Schools and Lenoir Community College

<sup>21</sup> Source: NC Division of Water Resources, Local Water Supply Plans; and the Neuse Regional Water and Sewer Authority



There are several solar farms located within Lenoir County along US 70 and north. These power plants have a net summer capacity of 5 megawatts each.<sup>22</sup>

## Environmental Profile

Water resources, natural areas, managed areas, biodiversity, wildlife habitat, and recreation are summarized for Lenoir County in the sections that follow.

### Water Resources

The Neuse River flows east-west through the middle of Lenoir County. Wetlands are present along the Neuse River and its tributaries. The most common wetland type in Lenoir County is freshwater forested/shrub wetland.<sup>23</sup>

### Natural and Managed Areas

According to the NC Natural Heritage Program, there are no natural areas of high, very high, or exceptional value in Lenoir County. There are several managed areas under state ownership within Lenoir County. Managed areas are properties and easements where natural resource conservation is one of the current primary management goals, or are of conservation interest. These areas in Lenoir County include: the Caswell Research Farm and Cunningham Research Station in the vicinity of the C.F. Harvey Parkway and NC Department of Transportation mitigation sites throughout the county.<sup>23</sup>

### Biodiversity and Wildlife Habitat

The NC Natural Heritage Program produces a biodiversity and wildlife habitat assessment for the state. According to this assessment, areas with the highest rating for biodiversity and wildlife habitat are along the Neuse River and its tributaries. These areas rank between a 7 and 10, with 10 being the highest possible score. Other areas of the county rank 5 to 6. Most of the county is unrated.<sup>23</sup>

### Parks and Recreation

The Kinston/Lenoir County Parks and Recreation Department maintains multiple parks and recreation facilities in Lenoir County. The Neuseway Nature Park is located on 55 acres adjacent to the Neuse River south of downtown Kinston. The park includes a planetarium, health and science museum, nature center, and campground. Grainger Stadium is a baseball stadium located in Kinston where the Down East Wood Ducks play. The recreation department also offers several neighborhood parks, community centers, gyms, a golf course, and tennis courts. Most of these facilities are located in Kinston.<sup>24</sup>

### Administrative Profile

The administrative capabilities of Lenoir County and the municipalities within the County are discussed in great detail within Section 4 of the Neuse River Regional Hazard Mitigation Plan 2015-2020. The assessment evaluates the capabilities of the County and municipalities to implement mitigation actions across the areas of administrative and technical capabilities, planning and regulatory capabilities, financial capabilities, educational

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<sup>22</sup> Source: US Department of Energy, US Energy Mapping System

<sup>23</sup> Source: NC Natural Heritage Program

<sup>24</sup> Source: Kinston/Lenoir Parks and Recreation Department

and outreach capabilities and legal and political capabilities. Many more details about the capabilities of Lenoir County and the municipalities can be found in that document.

In terms of administrative capabilities, the County has many of the staff and the necessary plans, policies and procedures in place that are found in communities with “high” capabilities. Lenoir County has Emergency Services and Planning departments with the capacities to assist in implementing the resilience strategies proposed in this plan. Some of the other indicators of capability for the County include the following: Comprehensive Land Use Plan, Zoning Ordinance, Subdivision Regulations, Floodplain Management Ordinance, and Stormwater Management Plan. These plans, policies and procedures help ensure that new development in the County will be done in a responsible manner and in non-hazardous areas.

The City of Kinston has a Planning department and other key departments, plans, and ordinances that are similar to those in Lenoir County. As such, the City of Kinston is considered to have “high” capabilities. While the Town of LaGrange does have a Planning department that would likely be able to assist with implementing the strategies in this plan; their capabilities may not be quite as robust as those at the County level they would still be considered to have “moderate” to “moderate-high” capabilities. For example, LaGrange does participate in the Community Rating System which indicates their willingness to go above and beyond the minimum standard of the NFIP.



An aerial photograph showing a residential neighborhood severely impacted by flooding. The scene is dominated by murky, brown floodwater that has inundated the area. In the upper half of the image, a large body of water surrounds a dense cluster of trees. Below this, a residential street is visible, with several houses partially submerged. The houses have light-colored roofs and walls, and some are surrounded by water. The lower half of the image shows a large, dense forest of green trees, which appears to be a natural barrier or a park area. The overall scene depicts the significant impact of a storm on a community.

# **3. Storm Impact**



### 3. Storm Impact

#### Rainfall Summary

Hurricane Matthew officially made landfall as a Category 1 storm southeast of McClellanville, South Carolina early on October 8, 2016. The track and speed of the storm resulted in nearly two days of heavy precipitation over much of North Carolina that caused major flooding in parts of the eastern Piedmont and Coastal Plain. The storm produced widespread rainfall of 3-8 inches in the central regions of North Carolina and 8 to more than 15 inches in parts of eastern North Carolina. A number of locations received all-time record, one-day rainfall amounts. Many locations in the Coastal Plain of North Carolina had received above normal rainfall in the month of September leading to wet antecedent conditions prior to Hurricane Matthew. Total rainfall depth for Lenoir County is highlighted graphically in the figure below.

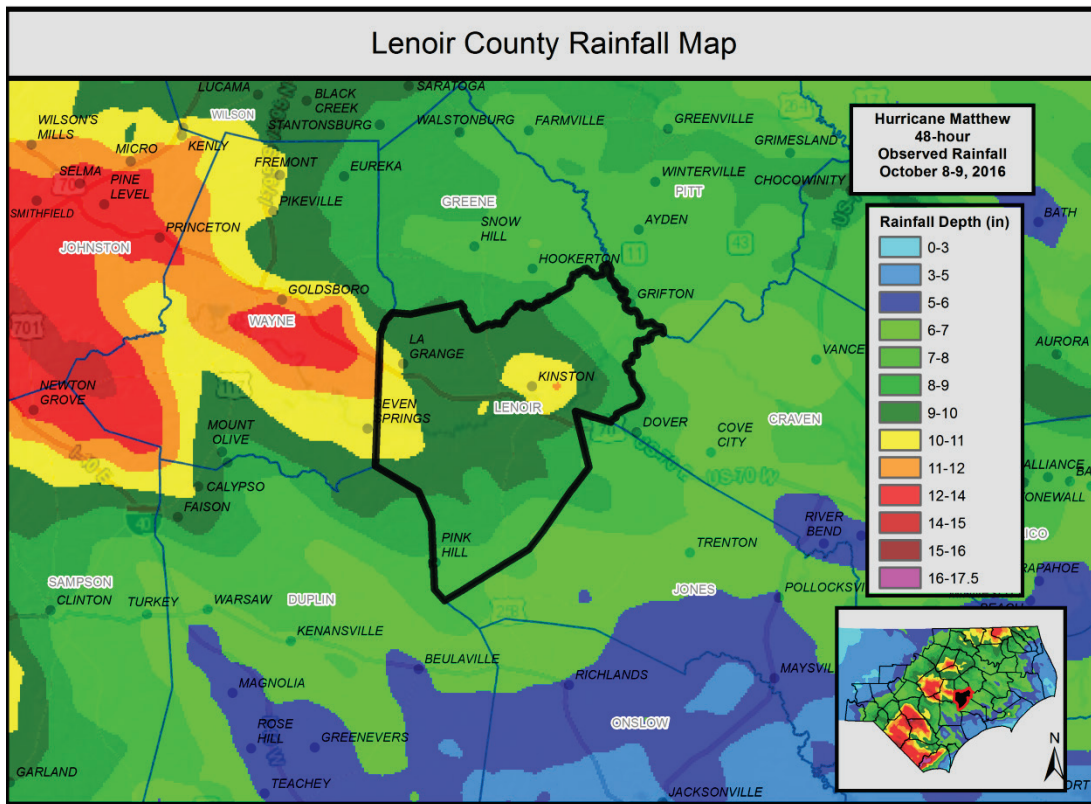


Figure 10. 48-hour Observed Rainfall Depth (October 8-9, 2016)

#### Riverine Flooding Summary

USGS documented stream gage data in the report "Preliminary Peak Stage and Streamflow Data at Selected Stream gaging Stations in North Carolina and South Carolina for Flooding Following Hurricane Matthew, October 2016". Stream gage data from the USGS report for Lenoir County and nearby gages is summarized in Table 3.

USGS Gage	County	River Name and Location	Drainage Area (sq mi)	Peak Matthew Elevation (ft)	Previous Record (ft)
02089500	Lenoir	Neuse River at Kinston, NC	2692.0	28.31	27.71

Table 3. Lenoir County USGS Stream gage Data

The USGS data validates what was experienced in the county. Details of impacts categorized under housing, economic, infrastructure, and environment are included in the following sub-sections.

## Housing

According to Individual Assistance claims as of March 2017, there were 3,291 impacted houses and \$4.2 million in claims in Lenoir County, because of flooding and damage from Hurricane Matthew. It should be noted that additional claims from Hurricane Matthew may still be pending, so this number may not reflect the final claims data from the event. This also does not take into account other historic impacts to the county or other areas of concern for flooding that may not have occurred during this storm. With that in mind, the planning team attempted to take a comprehensive look at both Hurricane Matthew impacts and any historic impacts that local officials felt would validate areas that should be considered at high risk to future flooding.

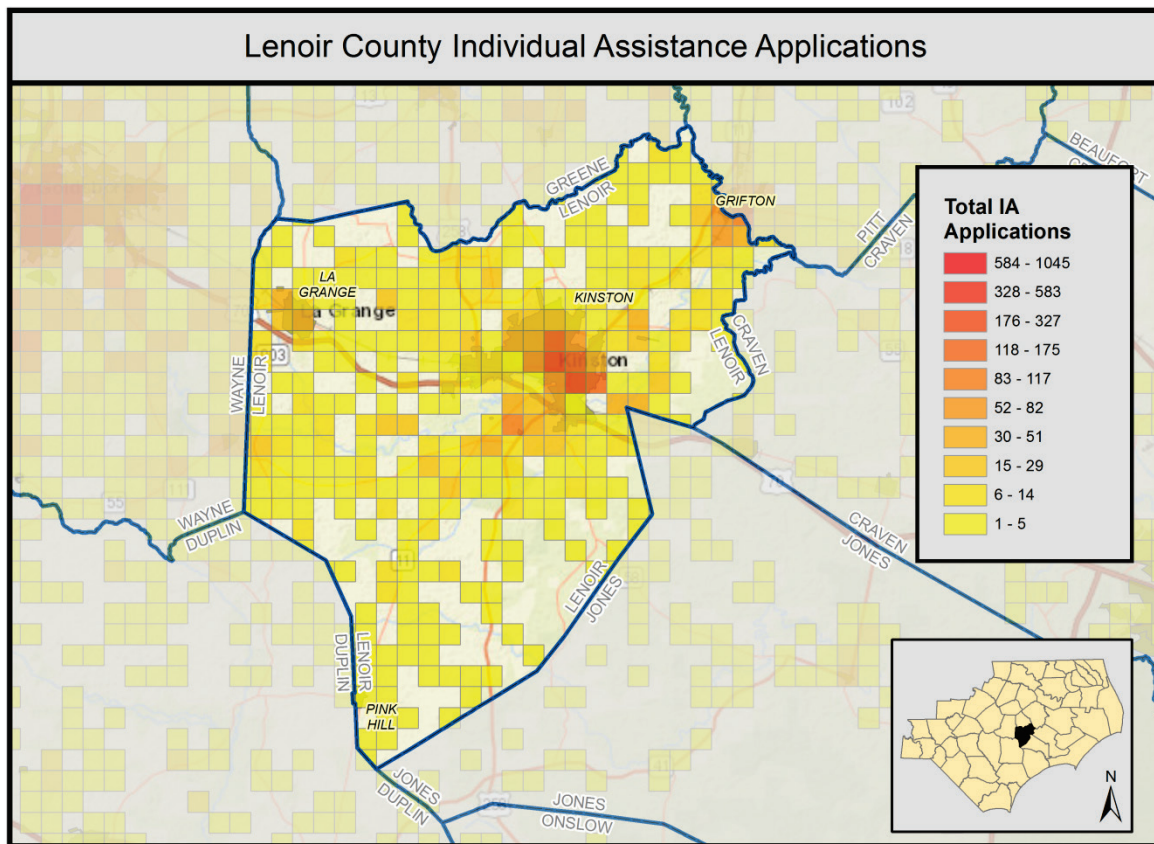


Figure 11. Lenoir County IA Applications by Area

The bullets below summarize some of the major impacts to housing identified by local officials in multiple meetings.

- **Homes Flooded from Hurricane Matthew:** There are many flood-prone properties in the county that experienced flooding during Hurricane Matthew as well as during previous storm events. Based on historic flooding information, these communities include a significant amount of repetitive loss properties. Over 200 of such properties have applied for the Hazard Mitigation Grant Program (HMGP) for buyouts. The majority of the flooded homes were mobile homes, most being rental units. While flooded housing occurred throughout the county, specific areas noted as being impacted are:
  - Lenoir Mobile Estates (located off of NC 11/NC 55 South near Fairgrounds Road)

- Tick Bite community along Contentnea Creek (south of Grifton and Pitt County)

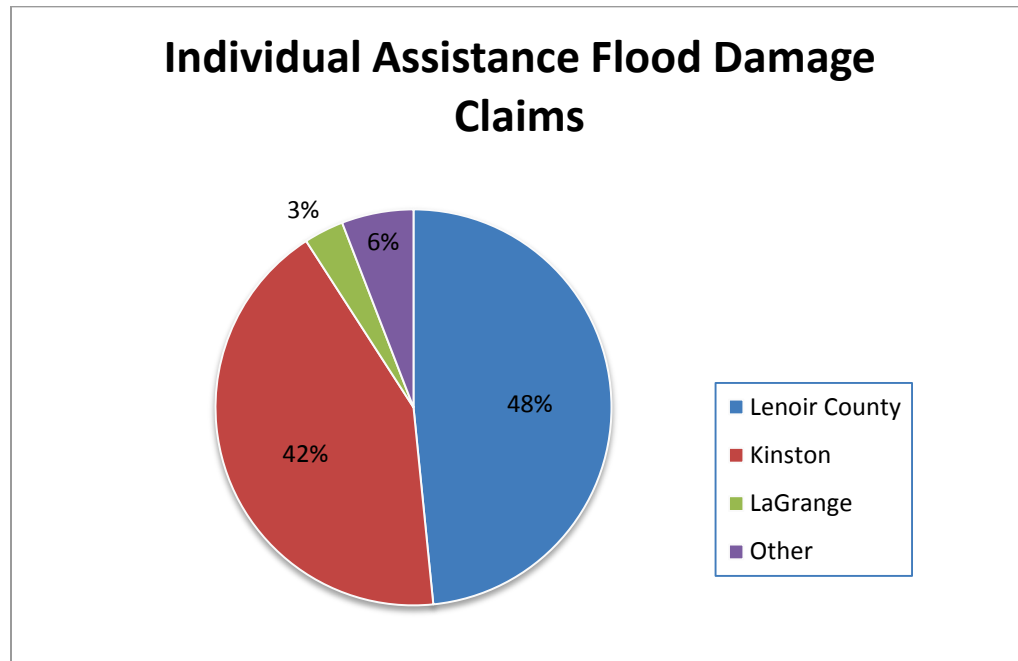


Figure 12. IA Flood Damage Claims by Area

- **Homes at Risk of Future Flooding:** Officials noted that flooding has become more frequent in recent years, which puts the residential neighborhoods in flood zones at greater risk for repetitive losses.
- **Displaced Residents and Tax Base Impacts:** County officials noted over 200 property owners have applied for HMGP buy-out program in Lenoir County. The number of households that will be looking for new housing is higher when you consider that some of these applicants contain multi-family housing, including a mobile home park with nearly 90 residences. There is concern for population loss as residents are unable to return to their homes and eventually relocate in other towns or counties thereby depleting the local tax base. This limits the services and effectiveness of municipalities and Lenoir County.
- **Limited Temporary Housing Options:** A limited supply of affordable rental housing was available in Lenoir County before Hurricane Matthew. The storm further exacerbated this problem, but not only damaging available units, but also damaging several hotels and motels, which have subsequently closed.
- **Shortage of Resilient Affordable Housing Units:** There is a shortage of affordable housing in Lenoir County, which means that a wait list has been implemented for those wishing to access these units. There is also a specific need for affordable senior citizen housing. Because these individuals may be limited in mobility and face challenges in relocating after storm-induced flooding, there is additional incentive to ensure their homes are resilient against future events.

### Economics / Business / Jobs

The local economy of Lenoir County experienced significant impacts by Hurricane Matthew. The following bullets summarize some of the impacts to the economy/businesses/jobs that were identified by local officials from the event.

- **US 70 Impacted:** The commercial corridor of US 70 was flooded and closed for over two weeks following Hurricane Matthew. Nearly all of the businesses along the stretch of US 70 from US 258 North to NC 58 South were flooded as a result of the hurricane and experienced a loss of goods, damages to their buildings, and loss of business due to no access to their business for approximately two weeks. Multiple businesses that were flooded, including three hotels, have decided not to reopen.
- **Crop Losses:** Over \$15 million of lost crops were estimated to Lenoir County farmers.
- **Cardinal Chemicals:** received flood damage.
- **Mills International:** received flood damage.
- **All Businesses and Industry:** Nearly every business and place of employment in Lenoir County experienced losses and setbacks during the two-week period that US 70 and the North Carolina Railroad was closed in Lenoir County. This closure limited people’s ability to reach places of employment and for those businesses to operate at normal capacity. In addition, it affected the ability of businesses to receive shipments or to ship out goods or products produced via trucking or rail.

## Infrastructure

Lenoir County’s Public Assistance claims were not represented on the FEMA County Summary for March 2017; therefore, the costs associated with the claims are unknown at this time.

County infrastructure was one of the greatest areas of concern in the wake of Hurricane Matthew as there were several types of infrastructure that were damaged in multiple locations. The bullets below summarize some of the major impacts to infrastructure from Hurricane Matthew identified by local officials.

- **Damages to Transportation Infrastructure:** A number of roads and bridges were flooded/overtopped during Hurricane Matthew. In some places, water rose so quickly that motorists were stranded and needed assistance from emergency personnel. Roads that were closed due to flooding included many of the major highways that pass through Lenoir County, which limited the ability of people to have access to emergency services, medical care, shelters, and other essential services. The major transportation infrastructure that was closed due to flooding included:
  - US 70 from NC 258 North to NC 58 South
  - Along NC 55 at the following locations: Burncoat Road, Jessie Bryan Road, Hardy Mill Road, and between Kinston and Sandy Bottom area (Greene Haynes Road); East of Kinston, NC 55 runs parallel to the Neuse River’s 100-year floodplain with base flood elevation; at Neuse River near Neuse Road
  - US 70 Business – Vernon Avenue
  - NC 11 in Kinston and at the Pitt County line
  - Tick Bite Road
  - Alexander Rouse Road south of Kinston
  - Falling Creek Road northwest of Kinston
  - Hillcrest Road near Sandy Clay Road
  - Old Jason Road north of LaGrange
  - Queen Street bridge
  - NC 11 bridge



- US 258 interchange
- Herbert Drive
- NC Rail Road (operated by Norfolk Southern) near the Craven County Line

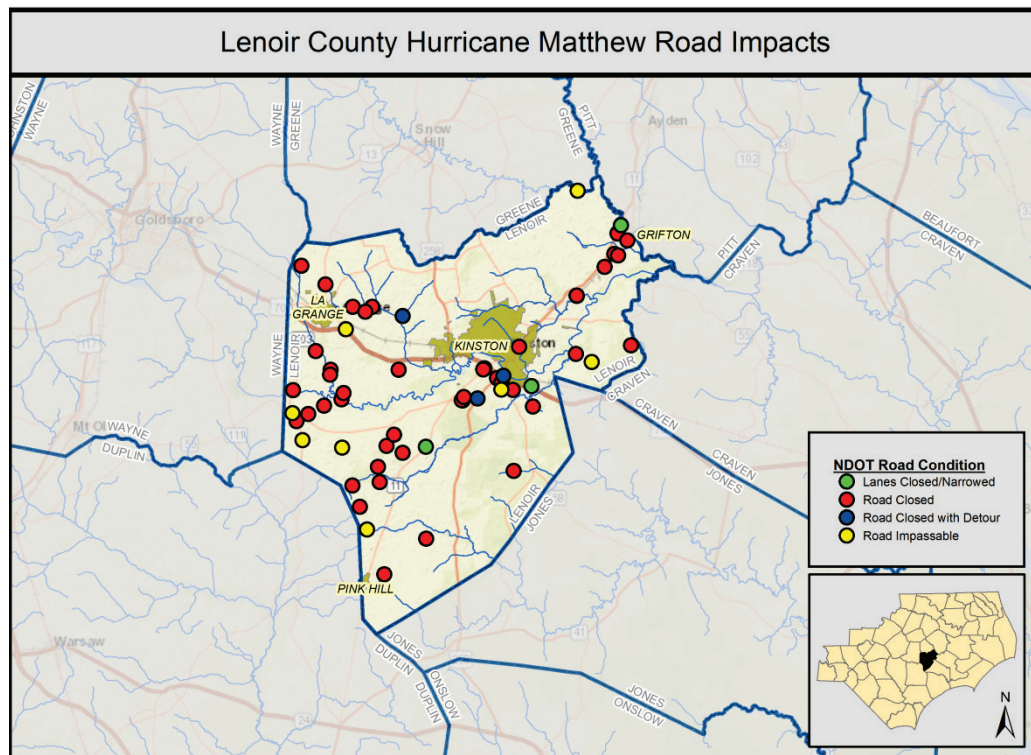


Figure 13. Impacted NCDOT Structures in Lenoir County

- **The North Carolina Cooperative Extension Office:** This office and associated outbuildings experienced flood damage following the storm and have been forced to operate out of temporary quarters.
- **Lenoir County Sheriff's Department:** Local officials stated that the basement of the Lenoir County Sheriff's Department floods with heavy rains. This can impact operations of emergency services.
- **Town of LaGrange Wastewater Treatment Lift Stations** – There are ten lift stations in the Town of LaGrange that lack back up power supplies. Following Hurricane Matthew, the ten lift stations lost power and were not operational.
- **City of Kinston Pump Station** – A pump station for wastewater treatment was compromised following Hurricane Matthew.
- **County High Schools** – The three high schools – North Lenoir, South Lenoir and Kinston, serve as shelters and lack backup generators.
- **Lenoir Community College** – is used as a shelter; however, it was at risk of flooding, and several roads used to access it were closed due to flooding



## Ecosystems / Environment

Hurricane Matthew had negative impacts on the natural environment in Lenoir County. A summary of some of the more significant issues and damages because of the storm are summarized below:

- **Natural Debris Buildup:** Several low-water bridges across the county experienced a significant amount of debris buildup in streams. This debris was often comprised of downed trees and other organic material. Some of the debris was attributed to beaver dams or beaver damage; which inhibited the natural flow of water. Some debris became dislodged and then trapped underneath bridges and in culverts, inhibiting the flow of the river and resulting in flooding.
- **Chemical leakages from flooding:** Due to intense flooding of some businesses, chemical spills are likely to have occurred. Cardinal chemical and Mills International reported flood damage.
- **Runoff from adjacent farmlands:** Agricultural use of pesticides and herbicides may attribute to the pollutants in floodwaters. Most of the land adjacent to the Neuse River's riparian buffer north of NC 55 is farmland. The 2012 Census of Agriculture in Lenoir County notes 401 farms, totaling 122,000 acres.



An aerial photograph showing a residential neighborhood severely affected by flooding. The houses, which are mostly two-story structures with grey roofs, are surrounded by deep, muddy brown floodwater. The water has inundated the yards and streets, leaving only the roofs and some upper floors of the buildings visible. In the background, a large area of trees is also submerged, with only the tops of the trees protruding from the water. The foreground shows a dense forest of green trees, providing a stark contrast to the flooded area. The overall scene depicts a significant natural disaster impact on a community.

# **4. Strategies for Resilient Redevelopment**



## 4. Strategies for Resilient Redevelopment

This section provides details about the resilience and revitalization strategies and actions identified in Lenoir County. These actions were identified and refined during three public meetings with local officials and county residents held in March and April 2017. The actions are tied to impacts from Hurricane Matthew and organized by the pillars of housing, economic development, infrastructure and environment. In addition to the public meetings, frequent coordination calls with County officials and data gathered from state agencies and organizations were utilized to formulate the actions listed below.

Meeting 1 was designed to introduce the community and County points of contact to the Resilient Redevelopment Planning process and goals. This meeting allowed the planning team to capture areas within the county that were damaged during Hurricane Matthew and to hear what potential mitigation actions had already been considered. Draft resilience actions were then presented at Meeting 2 of the planning process. This was done to garner general buy-in on the draft actions from the County-level planning teams and residents. More details on the actions were collected between Meetings 2 and 3 through research and follow-up phone calls and emails with the primary points of contact. Meeting 3 provided the opportunity to collect and finalize details for the draft actions. Meeting 4, scheduled in early May 2017, allowed the County points of contact to rank the identified actions, group them into High, Medium, and Low Priorities, and to approve their inclusion in the plan.

Pillar	Project/Action Count
Housing	5
Economic Development	3
Infrastructure	12
Environment	5
<b>Grand Total</b>	<b>25</b>

**Table 4. Lenoir County Summary of Projects by Pillar**

The following table is ordered by the rankings and priorities provided by Lenoir County during Meeting 4:

Pillar	Action Name	Priority	Overall Ranking
Housing	Housing Action 1: Housing study	High	1
Housing	Housing Action 2: Increase affordable housing options	High	2
Housing	Housing Action 3: Construct Housing at Sites previously prepped for Development after Hurricane Floyd	High	3
Housing	Housing Action 4: Infill development	High	4
Housing	Housing Action 5: Senior housing	High	5
Environment	Environment Action 1: Neuse River regional plan	High	6
Environment	Environment Action 2: Stream and drainage clean up	High	7
Infrastructure	Infrastructure Action 1: Stormwater improvements in LaGrange	High	8
Infrastructure	Infrastructure Action 2: Stormwater improvements in Kinston	High	9

Pillar	Action Name	Priority	Overall Ranking
Infrastructure	Infrastructure Action 3: Backup generators	High	10
Environment	Environment Action 3: Expand beaver management program	High	11
Environment	Environment Action 4: Management plan for HMGP properties	High	12
Infrastructure	Infrastructure Action 4: Develop recreation facilities on HMGP properties	High	13
Infrastructure	Infrastructure Action 5: Flood-proof Lenoir County Sheriff's Office	High	14
Economic Development	Economic Development Action 1: Business relocation program	High	15
Infrastructure	Infrastructure Action 6: Repair dam at Tull's Mill Pond	Medium	16
Infrastructure	Infrastructure Action 7: Relocate Lenoir County Center for the NC Cooperative Extension	Medium	17
Economic Development	Economic Development Action 2: Expand small farms and specialty crop programs	Medium	18
Economic Development	Economic Development Action 3: Small business program	Medium	19
Environment	Environment Action 5: Riparian buffer program	Low	20
Infrastructure	Infrastructure Action 8: Phase II of the Riverwalk	Low	21
Infrastructure	Infrastructure Action 9: Kinston Bypass Project	Low	22
Infrastructure	Infrastructure Action 10: Carey Road Extension	Low	23
Infrastructure	Infrastructure Action 11: GTP Rail Spur	Low	24
Infrastructure	Infrastructure Action 12: Stormwater improvements in Tick Bite	Low	25

Table 5. Projects by Rank

On the following pages, we have organized the projects and actions by pillar. Within each pillar, the projects are grouped by county priority. Please note that maps are provided for all projects that have a specific location within the county. Projects without maps are county-wide projects that will benefit citizens throughout the county.

## Housing Strategies

### High Priority Housing Strategies

Pillar	Action Name	Priority	Overall Ranking
Housing	Housing Action 1: Housing study	High	1
Housing	Housing Action 2: Increase affordable housing options	High	2
Housing	Housing Action 3: Construct Housing at Sites previously prepped for Development after Hurricane Floyd	High	3
Housing	Housing Action 4: Infill development	High	4
Housing	Housing Action 5: Senior housing	High	5

**Table 6. Lenoir High Priority Housing Summary**

These five projects represent the housing strategies that Lenoir County indicated are the highest priority to address. Additional detail on the projects can be found below:

- **Conduct Housing Study:** This project would involve conducting a housing study of Lenoir County to determine gaps in housing needs. Such a study would allow the County to develop programs and policies to help address unmet housing needs.
- **This is a county-wide project, so no project area map has been included.**

## Housing Action 1: Housing Study

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 1

**Project Timeframe:** 0-1 years

**Location:** Countywide

**Project Summary:** Conduct housing study to determine gaps in housing needs in the county. The outcome of this project would be a list of action items related to programs, policies, and projects that the county could implement to address housing issues.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Many homes damaged by Hurricane Matthew are older and do not meet current building standards; however residents do not want to apply for buyouts because they cannot afford to relocate within Lenoir County due to the lack of housing options.	N/A
Consistent with existing plans (describe points of intersection/departure)	Unknown	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	A better understanding of local housing issues will allow the County to help direct attention on the most pressing housing needs and develop policies and plans to better address the biggest issues. Improving housing issues will help the county retain and attract residents.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	>200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	High	Agree
What is the financial range of this project?	\$0- \$50K	Agree
What is the level of public support for this project?	Unknown	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

- **Increase Affordable Housing Options:** This project includes funding to identify suitable sites and development partners for affordable housing. This would be meant to address both short-term and long-term housing needs and could include cottage style development, similar to the "Katrina Cottages" featured in the Gulf Coast following Hurricane Katrina. Funding could also be used to offset development costs (e.g., funding for purchase of land, infrastructure investments, and relocation assistance).
- **This is a county-wide project, so no project area map has been included.**

## Housing Action 2: Increase Affordable Housing Options

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 2

**Project Timeframe:** 1-3 years

**Location:** Countywide

**Project Summary:** Increase affordable housing options: This project includes funding to identify suitable sites and development partners for affordable housing. This would be meant to address both short-term and long-term housing needs and could include cottage style development, similar to the "Katrina Cottages" featured in the Gulf Coast following Hurricane Katrina. Funding could also be used to offset development AND OTHER costs (e.g., funding for purchase of land, infrastructure investments, and relocation assistance).

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Many homes damaged by Hurricane Matthew are older and do not meet current building standards; however residents do not want to apply for buyouts because they cannot afford to relocate within Lenoir County due to the lack of housing options.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes the county and city land use plans support increasing housing options.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Expanding housing options in Lenoir County would help keep relocates in Lenoir County for the long-term which would help the county and local governments maintain and grow their population and local tax base.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	>200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	High	Agree
What is the financial range of this project?	\$1M+	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree



- **Construct Housing at Sites previously prepped for Development after Hurricane Floyd:** Develop housing options at the seven subdivision sites that were funded through the Crisis Housing Assistance Fund (CHAF) grant program in 2002 following Hurricane Floyd and Hurricane Fran. Each of the seven sites was prepared for development, but few houses have been constructed to date. This project will help fund a range of housing options at these sites that have already been prepared for development. The sites include: Aspen Ridge, Beaver Creek, Harvest Ridge, Windsor Farm, Danfield Estates, Will Baker Road, and Herbert Road.
- **This is a county-wide project, so no project area map has been included.**

## Housing Action 3: Construct Housing at Sites previously prepped for Development after Hurricane Floyd

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 3

**Project Timeframe:** 0-2 years

**Location:** Lenoir County

**Project Summary:** This project will help fund a range of housing options at these sites that have already been prepared for development. Sites include: Aspen Ridge, Beaver Creek, Harvest Ridge, Windsor Farm, Danfield Estates, Will Baker Road, and Herbert Road. This project would assess the current status of these sites and determine the most suitable types and amount of housing for each site.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Hurricane Matthew resulted in flooding to homes farms businesses and infrastructure in Lenoir and adjacent counties and relocating and assisting displaced residents to areas outside of the floodplain will address the unmet need of housing residents in resilient areas not prone to flooding.	N/A
Consistent with existing plans (describe points of intersection/departure)	The proposed project is consistent with county and local plans and has been appropriately zoned.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Expanding housing options would help keep relocatees in the county for the long-term in turn, helping the county and local governments maintain and grow their population and local tax base.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	>200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	Minimum	Agree
What is the financial range of this project?	\$1M+	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

- **Infill Development:** This project would identify vacant lots or tracts of land and dilapidated housing that need repairs to provide new housing options within the existing communities to provide access to city services and reduce costs associated with expanding infrastructure. This project would involve working with non-governmental organizations, such as Habitat for Humanity or the Baptist Men's Group to construct new housing and/or repair existing housing to benefit relocated families.
- **This is a county-wide project, so no project area map has been included.**

## Housing Action 4: Infill Development

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 4

**Project Timeframe:** 1-2 years

**Location:** Kinston, LaGrange

**Project Summary:** Infill Development: identify vacant lots or tracks of land and DETERIORATED housing that needs repairs to provide new housing options within the existing communities that provide access to city services and reduce costs associated with the need for expanding infrastructure. This project would benefit the community by helping to reestablish existing neighborhoods. This project would involve working with non-governmental organizations, such as Habitat for Humanity or the Baptist Men's Group to construct new housing and or repair existing housing to benefit relocates.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Many homes damaged by Hurricane Matthew are older and do not meet current building standards; however residents do not want to apply for buyouts because they cannot afford to relocate within Lenoir County due to the lack of housing options.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes the City and County land use plans support infill development.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Expanding housing options in Lenoir County would help keep relocates in Lenoir County for the long-term which would help the county and local governments maintain and grow their population and local tax base.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	>200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	High	Agree
What is the financial range of this project?	\$501K - \$1M	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

- **Develop Senior Housing Options:** The purpose of this project is to develop housing options that meet the needs of senior citizens. This project would help retain older residents in the county that currently must move outside of Lenoir County to find more senior-oriented housing options that address mobility concerns and the need for assisted living. The project would provide funding for the County to partner with a non-governmental organization focused on senior housing. Opportunities for senior housing include redevelopment opportunities, apartments, or assisted living facilities. This project could include a feasibility study of converting a portion of the old Courthouse Square Hotel in Kinston into apartments for senior citizens.
- **This is a county-wide project, so no project area map has been included.**

## Housing Action 5: Senior Housing

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 5

**Project Timeframe:** 2-3 years

**Location:** Countywide

**Project Summary:** This project would help retain residents in the county that are older and currently must move outside of Lenoir County to find more senior-oriented housing options that address mobility concerns and the need for assisted living. The project would provide funding for the County to partner with a non-governmental organization focused on senior housing. Opportunities for senior housing could include redevelopment opportunities, apartments, or assisted living facilities.

This project would identify partner organizations or provide seed money to help initiate a senior-focused housing organization that would develop senior housing. This project would also look at the feasibility of converting the old Courthouse Square Hotel into apartments.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Many seniors in Lenoir County have a desire to stay in their community near family and friends and established networks (i.e. doctors care providers etc.). However they may need to relocate due to damage from the storm but lack reasonable options within Lenoir County to stay there.	N/A
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Expanding housing options in Lenoir County would help RELOCATEES in Lenoir County for the long-term which would help the county and local governments maintain and grow their population and local tax base.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	>200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	High	Agree
What is the financial range of this project?	\$1M+	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree



## Economic Development Strategies

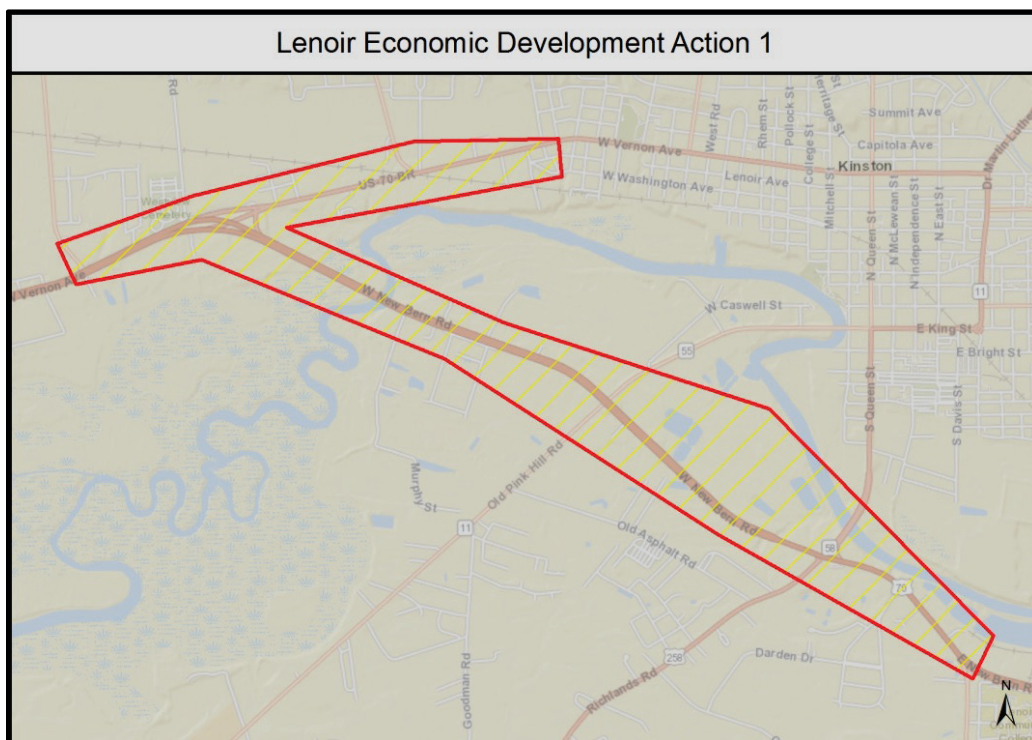
### High Priority Economic Development Strategies

Pillar	Action Name	Priority	Overall Ranking
Economic Development	Economic Development Action 1: Business relocation program	High	15

**Table 7. Lenoir High Priority Economic Development Summary**

This project represents the economic development strategy that Lenoir County indicated is the highest priority to address. Additional detail on the project can be found below:

- Business Relocation Program:** This project would target businesses along US 70 that were impacted by the flood waters following Hurricane Matthew. This project would identify suitable/comparable commercial sites for businesses to relocate. In addition, the project would help create financial incentives that could include tax incentives, installation of infrastructure, and assistance with relocation costs. The project could utilize the state's tax increment financing program.



**Figure 14. Business Relocation Program**

## Economic Development Action 1: Business Relocation Program

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 15

**Project Timeframe:** 0-2 years

**Location:** US 70 Corridor

**Project Summary:** Business Relocation Program: This project would target businesses along US 70 that were impacted by the flood waters following Hurricane Matthew. This project would identify suitable/comparable commercial sites for businesses to relocate. In addition, the project would help create financial incentives that could include tax incentives, installation of infrastructure, and assistance with relocation costs. The project could utilize the state's tax increment financing program.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Many businesses in the community that were impacted by flooding from Hurricane Matthew have closed and may not reopen. The creation of viable sites to relocate to may help retain some of these lost businesses.	N/A
Consistent with existing plans (describe points of intersection/departure)	Local plans include desire to keep existing businesses in Lenoir County and to expand and improve opportunities for businesses to expand and grow in Lenoir County.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Will help the county maintain its tax base and local businesses that are a vital part of the local and regional economy.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	<50 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	Several businesses impacted by flooding caused chemicals and other contaminants to be spread into the floodwaters.	N/A
What is the capability of the local government to administer this project?	High	Agree
What is the financial range of this project?	\$501K - \$1M	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

### Medium Priority Economic Development Strategies

Pillar	Action Name	Priority	Overall Ranking
Economic Development	Economic Development Action 2: Expand small farms and specialty crop programs	Medium	18
Economic Development	Economic Development Action 3: Small business program	Medium	19

**Table 8. Lenoir Medium Priority Economic Development Summary**

These two projects represent the economic development strategies that Lenoir County indicated are of a medium priority to address. Additional detail on the projects can be found below:

- **Expand Small Farms and Specialty Crop Programs:** This project would work with the NC Cooperative Extension to help both existing small farms and to develop additional small farms in the county. This project would help connect farmers with resources aimed at assisting with unmet needs from Hurricane Matthew as well as target new opportunities to increase jobs and agricultural productivity in Lenoir County. This project could target use by local restaurants and breweries.
- **This is a county-wide project, so no project area map has been included.**

## Economic Development Action 2: Expand Small Farm and Specialty Crop programs

**County:** Lenoir

**Priority Grouping:** Medium Priority

**Priority Ranking:** 18

**Project Timeframe:** 12 months

**Location:** Countywide

**Project Summary:** Expand Small Farms and Specialty Crop Program in Lenoir County. This project would work with the NC Cooperative Extension to help both existing small farms and to develop additional small farms in the county. This project would help connect farmers with resources aimed at assisting with unmet needs from Hurricane Matthew as well as target new opportunities to increase jobs and agricultural productivity in Lenoir County. This project could target use by local restaurants and breweries.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Farmers were impacted by Hurricane Matthew and experienced loss of crops income and damage to farming infrastructure. This program will help impacted farmers reestablish their farming activities.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Increases in farmland productivity in the county will increase jobs increase agriculture exports and positively contribute to the tax base. The project could be included on tours associated with the local restaurants breweries and distilleries.	Agree
For how long will this solution be effective?	Between 11 and 30 years	Agree
How effective is the risk reduction?	Unknown	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$51K - \$100K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree



- **Small Business Assistance Program:** This project involves the development of a small business program that will work to help existing small businesses and promote new small businesses in the County. This program will include training for business owners and/or potential business owners, identify ideal sites for new businesses, and identify new business opportunities where gaps in the local business offerings exist. Impacted businesses included several hotels, Cardinal Chemicals, and Mills International.
- **This is a county-wide project, so no project area map has been included.**

## Economic Development Action 3: Small Business Program

**County:** Lenoir

**Priority Grouping:** Medium Priority

**Priority Ranking:** 19

**Project Timeframe:** 12 months

**Location:** Countywide

**Project Summary:** Develop a small business program that will work help existing small businesses and promote new small businesses in the County. This program will include training for business owners and/or potential business owners, identify ideal sites for new businesses, and identify new business opportunities where gaps in the local business offerings exist. Impacted businesses included several hotels, Cardinal Chemicals, and Mills International.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	The project will help existing businesses that were impacted by Hurricane Matthew identify resources to help them recover from storm related losses and other impacts to their businesses.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Will aid in business retention and expansion of businesses in the county which will help maintain and increase employment opportunities in the county. This will positively contribute to the local tax base.	Agree
For how long will this solution be effective?	Between 11 and 30 years	Agree
How effective is the risk reduction?	Unknown	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	High confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	High	Agree
What is the financial range of this project?	\$101K - \$250K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

## Infrastructure Strategies

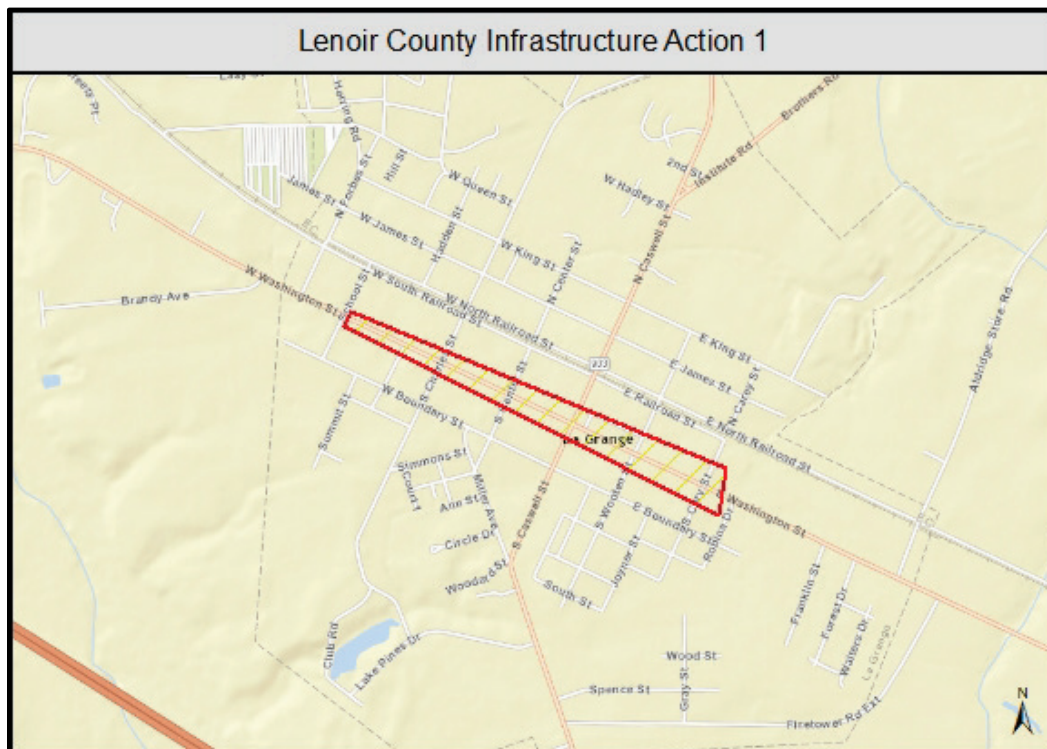
### High Priority Infrastructure Strategies

Pillar	Action Name	Priority	Overall Ranking
Infrastructure	Infrastructure Action 1: Stormwater improvements in LaGrange	High	8
Infrastructure	Infrastructure Action 2: Stormwater improvements in Kinston	High	9
Infrastructure	Infrastructure Action 3: Backup generators	High	10
Infrastructure	Infrastructure Action 4: Develop recreation facilities on HMGP properties	High	13
Infrastructure	Infrastructure Action 5: Flood-proof Lenoir County Sheriff's Office	High	14

**Table 9. Lenoir High Priority Infrastructure Summary**

These projects represent the infrastructure strategies that Lenoir County indicated are the highest priority to address. Additional detail can be found below:

- Stormwater Improvements in LaGrange:** Inefficient stormwater systems along Washington Street in LaGrange exacerbated flooding and flood-related damages from Hurricane Matthew. Opportunities should also be evaluated for enhancements that would benefit pedestrians, cyclists, and aesthetics along this gateway.



**Figure 155. Stormwater Improvements in LaGrange**

## Infrastructure Action 1: Stormwater Improvements in LaGrange

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 8

**Project Timeframe:** 2 years

**Location:** LaGrange

**Project Summary:** Stormwater Infrastructure Improvements on Washington Street in LaGrange. Currently, there is poor drainage along Washington Street in LaGrange, which results in high water on the road. This leads to road closures and property damage. This project would improve stormwater control measures along this roadway. Opportunities should also be evaluated for enhancements that would benefit pedestrians, cyclists, and aesthetics along this gateway.

This project will design and construct mitigation measures to minimize or prevent future flooding

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Washington Street is a roadway that routinely floods in LaGrange. This limits mobility in the community and the ability of first responders to reach those in need.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	The project would implement improvements that could reduce flood risk to roads homes businesses and farmland.	Agree
For how long will this solution be effective?	Between 31 and 50 years	Agree
How effective is the risk reduction?	100-200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	Yes	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	N/A
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	Agree
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	The project would implement solutions that could improve water flow and stormwater runoff.	N/A
What is the capability of the local government to administer this project?	Unknown	Agree
What is the financial range of this project?	\$101K - \$250K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	State	Agree

- **Stormwater Improvements in Kinston:** Inefficient stormwater systems throughout Kinston exacerbated flooding and flood-related damages from Hurricane Matthew. Opportunities should also be evaluated for enhancements that would benefit pedestrians, cyclists, and aesthetics along roadways.

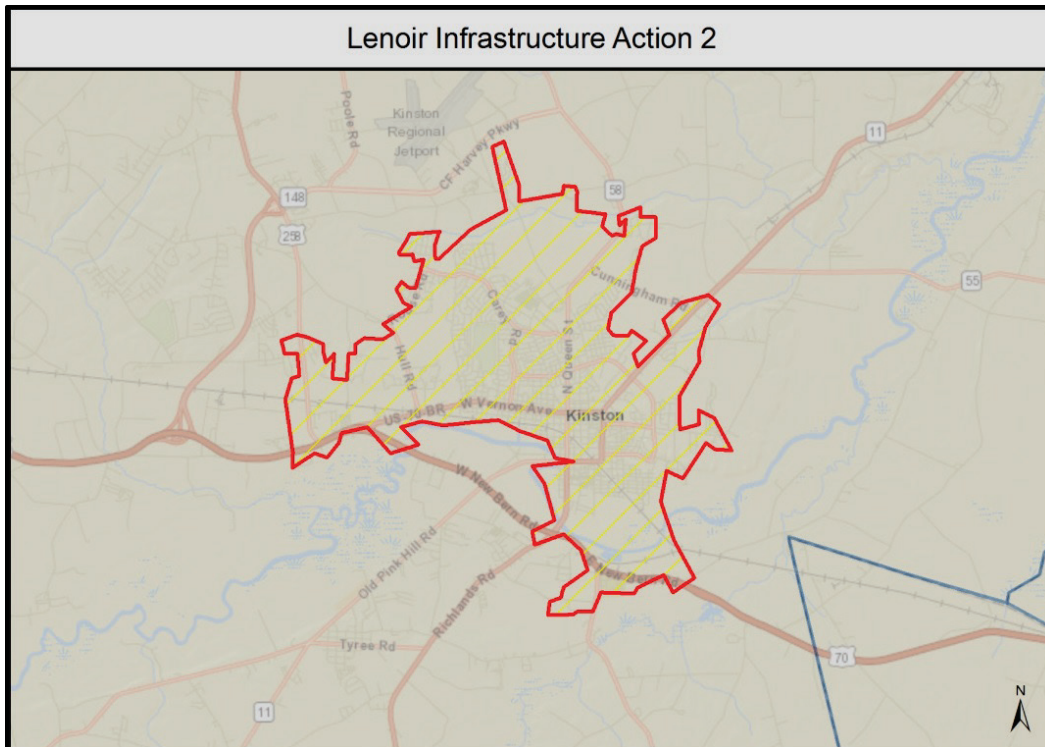


Figure 16. Stormwater Improvements in Kinston



## Infrastructure Action 2: Stormwater Improvements in Kinston

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 9

**Project Timeframe:** 2-3 years

**Location:** Kinston

**Project Summary:** Stormwater Improvements: Following Hurricane Matthew, the City of Kinston was inundated with floodwater. Improving stormwater management in the City is important to protecting infrastructure and utilities, to prevent infiltration of stormwater into the sewer system. Projects to rectify the situation are needed throughout the city.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Many of the water and sewer utilities in Kinston remain at risk of damage from flood waters during future flood events.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes would support the hazard mitigation plan. It is also a high priority for the City of Kinston.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Reducing flooding and damage to local utilities will benefit local businesses by helping them maintain continuity of operation during flood events.	Agree
For how long will this solution be effective?	Between 31 and 50 years	Agree
How effective is the risk reduction?	<50 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	>6	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	High confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	The environment will be positively benefited if breaks in sewer lines are prevented.	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$501K - \$1M	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	Local	Agree

- **Backup Generators:** This project would install backup generators at critical facilities in Lenoir County. This includes ten (10) pump stations in LaGrange, the three (3) high schools in the county (Kinston High School, North Lenoir High School, and South Lenoir High School), and fourteen (14) volunteer fire departments and EMS stations. The pump stations help to provide drinking water in LaGrange and the high schools are designated emergency shelters for Lenoir County. The fire departments and EMS stations require reliable power to ensure their operations are not interrupted during emergencies.
- **This is a county-wide project, so no project area map has been included.**

## Infrastructure Action 3: Backup Generators

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 10

**Project Timeframe:** 1 year

**Location:** Lenoir County, LaGrange

**Project Summary:** Backup generators: Back-up generators can supply power to critical facilities during power outages. This project will purchase and install back-up generators for 31 critical facilities that lack back-up power supplies in Lenoir County. The locations in need of back-up generators include: ten pump stations in the Town of LaGrange, three emergency shelters (Kinston High School, North Lenoir High School, and South Lenoir High School), and eighteen volunteer fire departments/EMS facilities. Note that two of the volunteer fire departments are located in adjacent counties, but serve portions of Lenoir County (Seven Springs VFD is located in Wayne County and Wyse Fork VFD is located in Jones County).

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Electricity is necessary to maintaining operation of the pump station and the water system in LaGrange. In addition electricity is vital to the operations of the emergency shelters.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Backup generators at the pump stations will allow businesses to remain open or in operation. It will also allow residents to have access to drinking water.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	>200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	>6	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	Unknown	Agree
What is the financial range of this project?	\$51K - \$100K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	Unknown	Agree

- **Recreation Facilities on HMGP Properties:** This project would fund the development of soccer fields, a campground, an amphitheater, and greenway trails. The locations were previously identified in local plans on properties that were acquired, as a result of previous storms, in conjunction with FEMA's Hazard Mitigation Grant Program (HMGP).
- **This is a county-wide project, so no project area map has been included.**

## Infrastructure Action 4: Develop Recreation Facilities on HMGP Properties

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 13

**Project Timeframe:** 2-3 years

**Location:** Lenoir County

**Project Summary:** Fund the development of soccer fields, camp ground, amphitheater, greenway trails, restore natural wetlands, and recognize cultural heritage with markers that were previously identified in local plans on properties that were acquired as a part of FEMA Hazard Mitigation Grant Program as a result of previous storms.

This project will implement these ideas by conducting a feasibility study, site selection, cost estimates, and construction of these facilities.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Soccer fields were previously identified in local planning efforts following Hurricane Fran and Hurricane Floyd. The project never received funding for implementation.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	This project will improve the quality of life for local residents. The land is currently vacant and has become an eye sore. The community lacks any regulation size soccer fields. This project will increase the recreational opportunities in the community and help bring visitors and people to Lenoir County.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	Positive	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$101K - \$250K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree



- **Flood-Proof Lenoir County Sheriff's Department:** This project will evaluate ways to keep the basement of the Lenoir County Sheriff's Office from flooding, as it has during several previous storm events. Options for this project include hardening of the building and/or evaluating methods to direct stormwater away from the building.



Figure 17. Flood-proof Lenoir County Sheriff's Office

## Infrastructure Action 5: Flood-proof Lenoir County Sheriff's Department

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 14

**Project Timeframe:** 1-2 years

**Location:** Kinston

**Project Summary:** Flood Prevention Measures for the Lenoir County Sheriff's Department: This project will evaluate ways to keep the basement of the Lenoir County Sheriff's Office from flooding. Options for this project include hardening of the building, water proofing, and/or evaluating methods to direct stormwater away from the building.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	The Lenoir County Sheriff's Department has long faced flooding issues during major rain events. It previously housed the County Jail but that has been relocated and now only houses storage of files. These files have to be relocated during flooding events.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	The proposed project would reduce potential impacts from future flooding events.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	100-200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	N/A	N/A
What is the capability of the local government to administer this project?	Unknown	Agree
What is the financial range of this project?	\$51K - \$100K	Agree
What is the level of public support for this project?	Low	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

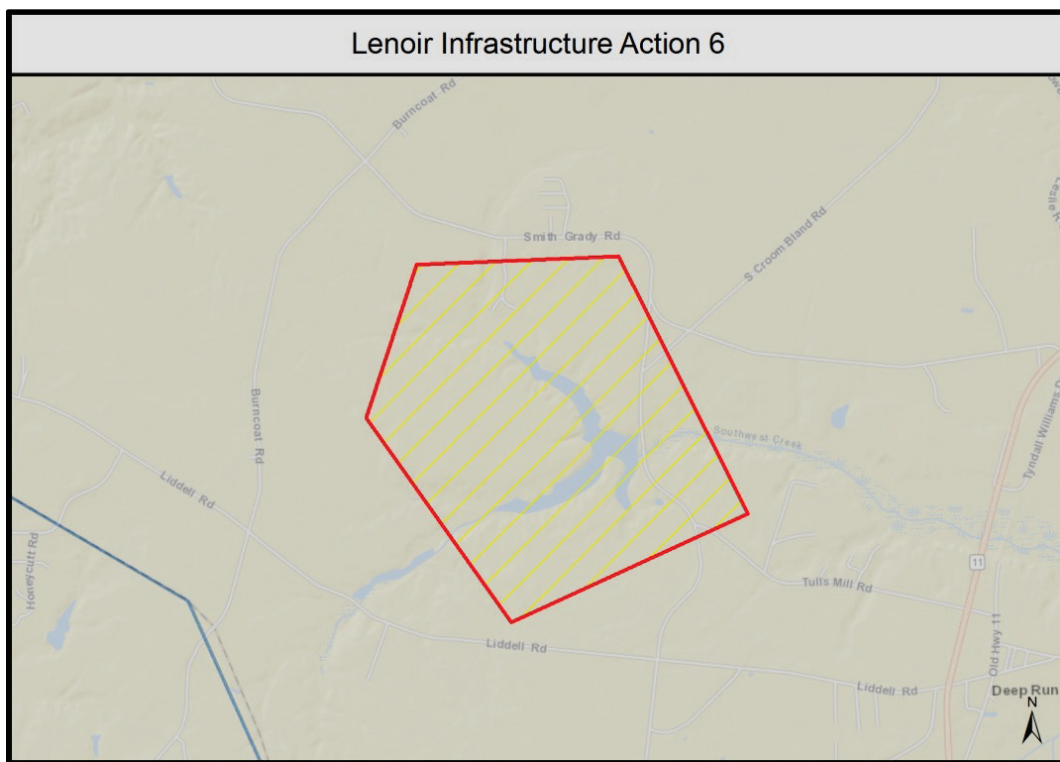
## Medium Priority Infrastructure Strategies

Pillar	Action Name	Priority	Overall Ranking
Infrastructure	Infrastructure Action 6: Repair dam at Tull's Mill Pond	Medium	16
Infrastructure	Infrastructure Action 7: Relocate Lenoir County Center for the NC Cooperative Extension	Medium	17

**Table 10. Lenoir Medium Priority Infrastructure Summary**

These projects represent the infrastructure strategies that Lenoir County indicated are of a medium priority to address. Additional detail can be found below:

- **Repair Dam at Tull's Mill Pond:** Prior to Hurricane Matthew, Tull's Mill Pond in southern Lenoir County served as a 100-acre mill pond with a dam. The Lenoir County recreation department leases this property for outdoor recreation like boating, fishing, etc. This project would repair the dam and spillway so that the land could be used for recreational purposes again.



**Figure 18. Repair Dam at Tull's Mill Pond**

## Infrastructure Action 6: Repair Dam at Tull's Mill Pond

**County:** Lenoir

**Priority Grouping:** Medium Priority

**Priority Ranking:** 16

**Project Timeframe:** 1 year

**Location:** Lenoir County

**Project Summary:** Repairs to dam and spillway at Tull's Mill Pond in southern Lenoir County. Prior to Hurricane Matthew, Tull's Mill Pond served as a 100 acre mill pond with a dam. The Lenoir County recreation department leases this property for outdoor recreation like boating, fishing, etc. This project would repair the dam and spillway so that the land could be used for recreational purposes again.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Yes this dam was damaged by the storm and has not yet been repaired.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	This project restores a recreational site used by local residents. This project contributes to an improved quality of life.	Agree
For how long will this solution be effective?	Between 11 and 30 years	Agree
How effective is the risk reduction?	Unknown	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	Unknown	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	Unknown	N/A
What is the capability of the local government to administer this project?	Low	Agree
What is the financial range of this project?	\$51K - \$100K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

- **Relocate Lenoir County Center for the North Carolina Cooperative Extension:** The Lenoir County Center for the North Carolina Cooperative Extension Office was damaged by floodwaters from Hurricane Matthew. The staff of the Lenoir County Center has been operating out of temporary space in Kinston until a permanent solution can be found. This project will identify a new permanent location for the Lenoir County Center from which the North Carolina Cooperative Extension can operate.

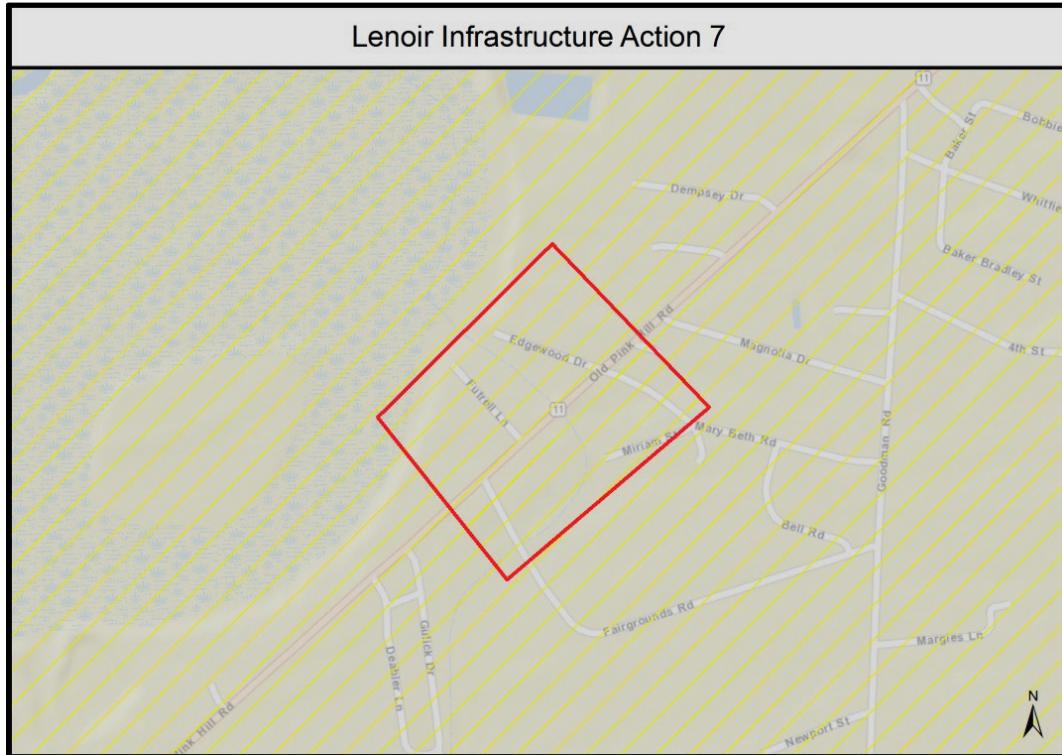


Figure 19. Relocate Lenoir County Center for the NC Cooperative Extension



## Infrastructure Action 7: Relocate Lenoir County Center for the NC Cooperative Extension

**County:** Lenoir

**Priority Grouping:** Medium Priority

**Priority Ranking:** 17

**Project Timeframe:** 12 to 18 months

**Location:** Countywide

**Project Summary:** This project will identify a new permanent location for the Lenoir County Center for the North Carolina Cooperative Extension to operate from and includes the site selection process that will evaluate refurbishing an existing building and/or constructing a new facility.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	The existing office building was not usable following Hurricane Matthew and the Lenoir County Center has been operating out of a temporary office space. There is still a need for a permanent solution.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	This project will help the Lenoir County Center of the NC Cooperative Extension to continue to provide the valuable services and programs to the agricultural community. These services contribute to the success of farming operations in Lenoir County that contribute to the local and regional economy.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	Unknown	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	Positive impacts will occur by making the community center accessible to all citizens again.	N/A
What is the capability of the local government to administer this project?	Unknown	Agree
What is the financial range of this project?	\$51K - \$100K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	State	Agree

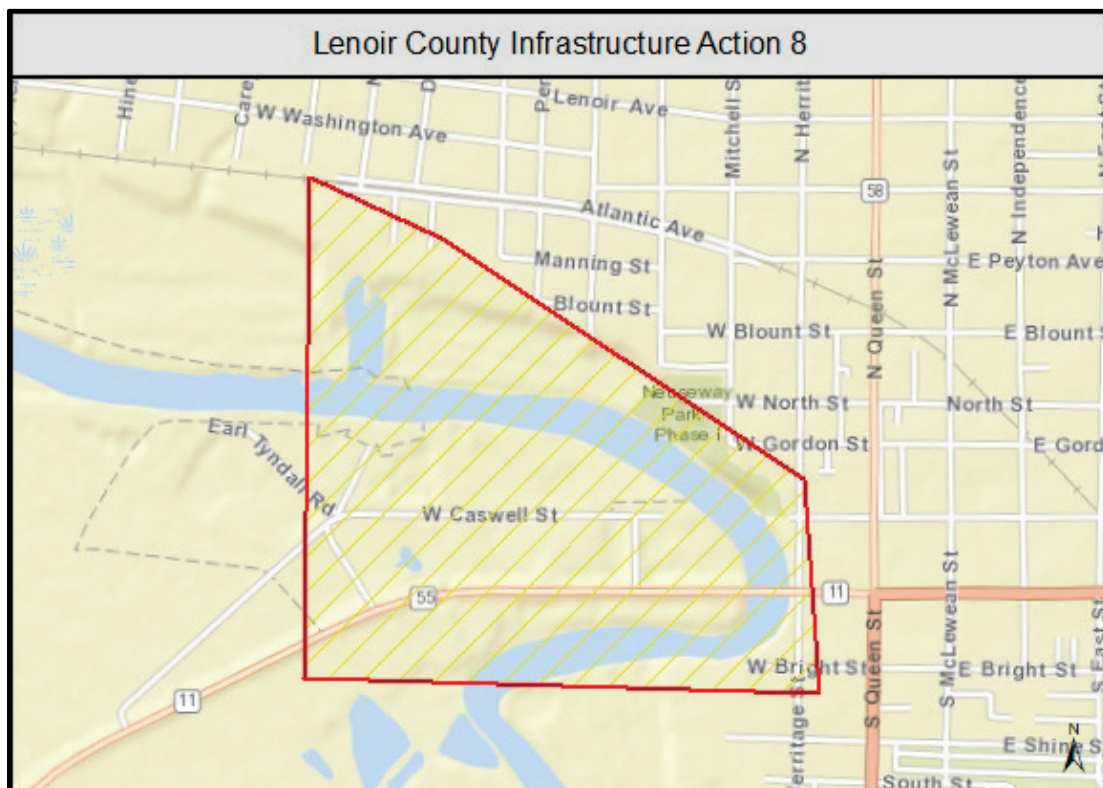
## Low Priority Infrastructure Strategies

Pillar	Action Name	Priority	Overall Ranking
Infrastructure	Infrastructure Action 8: Phase II of the Riverwalk	Low	21
Infrastructure	Infrastructure Action 9: Kinston Bypass Project	Low	22
Infrastructure	Infrastructure Action 10: Carey Road Extension	Low	23
Infrastructure	Infrastructure Action 11: GTP Rail Spur	Low	24
Infrastructure	Infrastructure Action 12: Stormwater improvements in Tick Bite	Low	25

**Table 11. Lenoir Low Priority Infrastructure Summary**

These projects represent the infrastructure strategies that Lenoir County indicated are of a lower priority to address. Additional details can be found below:

- Phase II of the Riverwalk Project:** This project would construct the second phase of a greenway project along the Neuse River in the City of Kinston. Note that final designs have been completed for this project.



**Figure 20. Phase II of the Riverwalk**

## Infrastructure Action 8: Phase II of the Riverwalk

**County:** Lenoir

**Priority Grouping:** Low Priority

**Priority Ranking:** 21

**Project Timeframe:** 1-2 years

**Location:** Kinston

**Project Summary:** Phase II of the Riverwalk Project: This project would construct the second phase of a greenway project along the Neuse River in the City of Kinston. Note that final designs have been completed for this project.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Trails and greenways help improve air and water quality. By protecting land along rivers and streams greenways prevent soil erosion and filter pollution caused by agricultural and road runoff. Greenways also serve as natural floodplains. By restoring developed floodplains to their natural state many riverside communities are preventing potential flood damage.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Trails and greenways provide countless opportunities for economic renewal and growth. Increased property values and tourism and recreation-related spending positively impact community economies.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	Unknown	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$501K - \$1M	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	Local	Agree

- **US 70/Kinston Bypass Project:** Following Hurricane Matthew, US 70 was closed from US 258 North to NC 58 South for more than two weeks. This project would construct the planned Kinston Bypass (STIP No. R-2553), which would be constructed outside of, or above, flood levels so that the roadway would not have to be closed in future flood events.

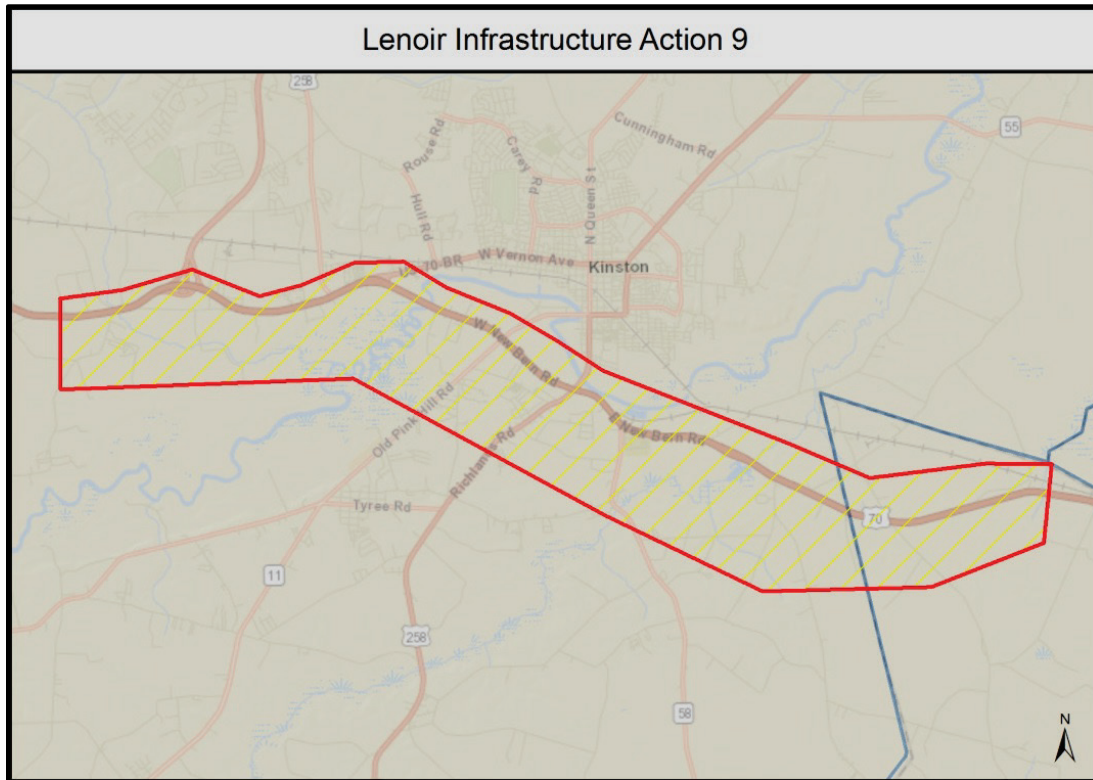


Figure 21. Kinston Bypass Project

## Infrastructure Action 9: Kinston Bypass Project

**County:** Lenoir

**Priority Grouping:** Low Priority

**Priority Ranking:** 22

**Project Timeframe:** 5-7 years

**Location:** Lenoir County

**Project Summary:** This project would construct the planned Kinston Bypass (STIP No. R-2553), which would be constructed outside of or above flood levels so that roadway would not have to be closed during future flooding events.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	The closure of US 70 due to flood waters for over two weeks was one of the biggest issues that faced Eastern North Carolina following Hurricane Matthew. Keeping this facility operational during future flood events is critical to the health safety and welfare of the citizens as well as to the local and regional economy.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes the project is included in the Kinston Comprehensive Transportation Plan.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	The road closure caused many businesses to operate at reduced levels, unable to operate at full capacity. Farmers were unable to transport harvested crops to distributors. Residents were unable to reach their places of employment.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	>6	Agree
Is coordination with other communities/counties needed to complete this project?	Yes	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	Unknown	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Between 26 and 50%	Agree
What impacts to the environment of the county will result from this project?	There will be some effects on the environment.	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$1M+	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	State	Agree



- Carey Road Extension Project:** Following Hurricane Matthew, multiple roadways, including US 70 and other local roads, such as Vernon Avenue were closed due to flooding. This project would extend Carey Road from Hull Road to US 258. This project would provide an alternative east-west connection between Kinston and US 258.

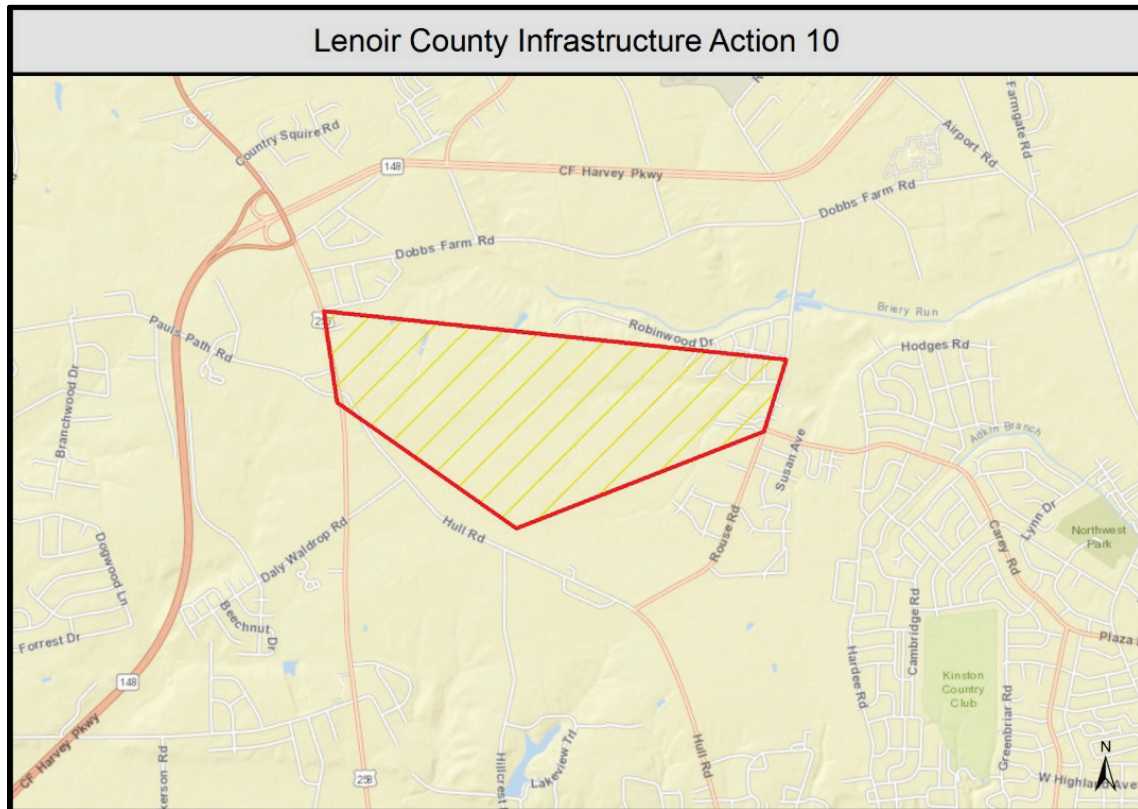


Figure 22. Carey Road Extension

## Infrastructure Action 10: Carey Road Extension Project

**County:** Lenoir

**Priority Grouping:** Low Priority

**Priority Ranking:** 23

**Project Timeframe:** 3 -5 years

**Location:** Lenoir County

**Project Summary:** Carey Road Extension Project: Following Hurricane Matthew, multiple roadways, including US 70 and other local roads, such as Vernon Avenue were closed due to flooding. This project would extend Carey Road from Hull Road to US 258. This project would provide an alternative east-west connection between Kinston and US 258.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Two fire houses are located near this project. This project will improve response times from these fire houses by fire and EMS.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes the project is included in the Kinston Comprehensive Transportation Plan.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	This project would provide an alternative transportation facility for east-west connections in Lenoir County. Local officials also indicated that this facility would open up new land to economic development opportunities.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	>200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	Unknown	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	There would be some impacts to the environment from this transportation project.	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$1M+	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	State	Agree

- **GTP Rail Spur from GTP to CSX line (near NC 11):** Following Hurricane Matthew, the NC Railroad line operated by Norfolk Southern, that runs parallel to US 70 near Kinston, was closed for several weeks due to the floodwaters. This project would involve the construction of a new rail spur to the CSX line. This project would provide alternative access to a Class I railroad for the businesses in Lenoir County and the greater region.
- **This is a county-wide project, so no project area map has been included.**

## Infrastructure Action 11: GTP Rail Spur Project

**County:** Lenoir

**Priority Grouping:** Low Priority

**Priority Ranking:** 24

**Project Timeframe:** 3-5 years

**Location:** Lenoir County

**Project Summary:** This project would involve the construction of a new rail spur to the CSX line. This project would provide alternative access to a Class I railroad for the businesses in Lenoir County and the greater region.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Businesses that rely on the existing NC Railroad to transport their goods were unable to do so for the several weeks that this railroad was closed during the storm. This project would provide alternative access to rail during future flooding events.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes this project has been included in the plans for Global TransPark and in the Kinston Comprehensive Transportation Plan.	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	The project would enhance the economic competitiveness of the Global TransPark by providing access to a second Class I railroad. In addition it would create alternative access to markets for existing businesses and/or potential new businesses for their goods or services.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	Unknown	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	There would be some environmental impacts from this transportation project.	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$1M+	Agree
What is the level of public support for this project?	Medium	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	State	Agree

- **Stormwater Improvements in the Tick Bite community (south of Grifton and east of NC 118):** This low-lying area had flooding issues following Hurricane Matthew, but also routinely floods during heavy rain events. This project will evaluate potential stormwater improvements that will help minimize flooding events along the roads.

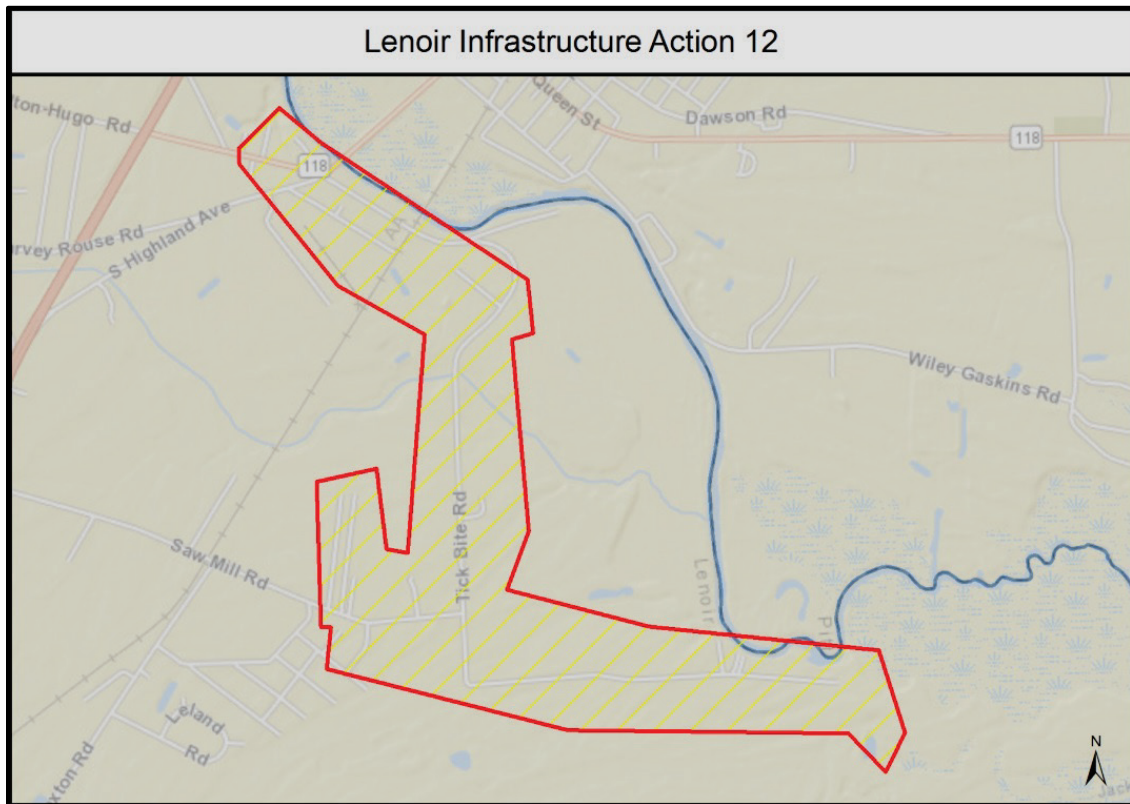


Figure 23. Stormwater Improvements in Tick Bite



## Infrastructure Action 12: Stormwater Improvements in Tick Bite

**County:** Lenoir

**Priority Grouping:** Low Priority

**Priority Ranking:** 25

**Project Timeframe:** 2 years

**Location:** Tick Bite

**Project Summary:** Stormwater Infrastructure Improvements in the Tick Bite community (south of Grifton and east of NC 11). This low-lying area had flooding issues following Hurricane Matthew, but also routinely floods during heavy rain events. This project will evaluate potential stormwater improvements that will help minimize flooding events along the roads.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Washington Street is a roadway that routinely floods in LaGrange. This limits mobility in the community and the ability of first responders to reach those in need.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	The project would implement improvements that could reduce flood risk to roads homes businesses and farmland.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	100-200 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	1-3	Agree
Is coordination with other communities/counties needed to complete this project?	Yes	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	The project would implement solutions that could improve water flow and stormwater runoff.	N/A
What is the capability of the local government to administer this project?	Unknown	Agree
What is the financial range of this project?	\$101K - \$250K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	State	Agree

## Environmental, Ecosystem and Agricultural Strategies

### High Priority Environmental Strategies

Pillar	Action Name	Priority	Overall Ranking
Environment	Environment Action 1: Neuse River regional plan	High	6
Environment	Environment Action 2: Stream and drainage clean up	High	7
Environment	Environment Action 3: Expand beaver management program	High	11
Environment	Environment Action 4: Management plan for HMGP properties	High	12

**Table 12. Lenoir High Priority Environmental Summary**

These projects represent the environmental strategies that Lenoir County indicated are the highest priority to address. Additional detail can be found below:

- **Neuse River Regional Plan:** Major flooding events in the Neuse River Basin have been occurring with greater frequency in recent years. This regional project would study the contributing causes to the increase in flood events and develop flood prevention strategies to mitigate these causes. This project would involve all counties located in the Neuse River Basin.
- **This is a county-wide project, so no project area map has been included.**

## Environment Action 1: Neuse River Regional Plan

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 6

**Project Timeframe:** >5 years

**Location:** Lenoir County

**Project Summary:** Prepare a Neuse River Basin Regional Plan to identify the causes of flooding and to identify preventive measures for flood prevention. The county recognizes that flooding in the area has increased over the last decade and there are likely many causes that need to be addressed regionally.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	No long term solutions to flooding have been proposed	N/A
Consistent with existing plans (describe points of intersection/departure)	Consistent with the goal of the mitigation plan to reduce effects of natural hazards	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Reduced flooding will positively impact economy	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	Unknown	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	>6	Agree
Is coordination with other communities/counties needed to complete this project?	Yes	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	Unknown	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$101K - \$250K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	State	Agree

- **Stream and Drainage Clean Up:** Partner with the North Carolina Department of Agriculture Division of Soil and Water Conservation's Stream Debris Removal Project to remove storm debris blocking streams and drainage systems. This project would involve collaboration with the statewide Big Sweep cleanup to remove debris and provide funding for necessary tools and equipment.
- **This is a county-wide project, so no project area map has been included.**

## Environment Action 2: Stream and Drainage Clean Up

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 7

**Project Timeframe:** 0 to 1 year

**Location:** Countywide

**Project Summary:** Stream and Drainage Clean Up. Partner with the North Carolina Department of Agriculture Division of Soil and Water Conservation's Stream Debris Removal Project to remove storm debris blocking streams and drainage systems. This project would involve collaboration with statewide Big Sweep cleanup to remove debris, provide funding for necessary tools and equipment.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Storm debris in the creeks waterways and ditches exacerbate flooding issues and contribute to flooding issues of individual properties.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Will improve access and usability of the waterways in Lenoir County	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	Yes	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	Increased efficiency in waterways	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$101K - \$250K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	Unknown	Agree



- **Expand Beaver Management Program:** Currently Lenoir County only funds a part-time employee for beaver management and this project would expand this to a full-time employee dedicated to beaver management.
- **This is a county-wide project, so no project area map has been included.**

## Environment Action 3: Expand Beaver Management Program

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 11

**Project Timeframe:** 0 to 1 year

**Location:** Countywide

**Project Summary:** Expand Beaver Management Program. Currently Lenoir County only funds a part-time employee for beaver management and this project would expand this to a full time employee dedicated to beaver management.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Beaver dams exacerbated flooding during Hurricane Matthew and will continue to do so during future storm events unless the project is implemented.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	Will reduce localized flooding impacts.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	Improved efficiency in waterways	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$51K - \$100K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	Unknown	Agree

- **Management Plan for HMGP Properties:** Lenoir County is responsible for maintaining vacant properties acquired through the FEMA Hazard Mitigation Grant Program. The county currently maintains over 800 such properties, and applications have been submitted for over 200 additional buyouts. The county is seeking funding to complete a management plan to evaluate potential uses for these vacant properties, particularly to further hazard mitigation for neighboring areas. The plan would include a study to identify and select strategic properties for reuse as public spaces, parks, passive recreational areas, and community gardens. Indoor Air and Toxin Quality Assessment and Remediation: Due to the flooding of Hurricane Matthew, some homes and buildings may have indoor air quality and toxin issues, such as mold, especially in homes that were repaired in-kind rather than replaced. This project would assess the homes and buildings needing further remediation to address these concerns, and provide remediation services for those impacted houses.
- **This is a county-wide project, so no project area map has been included.**

## Environment Action 4: Management Plan for HMGP Properties

**County:** Lenoir

**Priority Grouping:** High Priority

**Priority Ranking:** 12

**Project Timeframe:** 12 months

**Location:** Countywide

**Project Summary:** The county currently maintains over 800 such properties, and applications have been submitted for over 200 additional buyouts. The county is seeking funding to complete a management plan to evaluate potential uses for these vacant properties, particularly to further hazard mitigation for neighboring areas. The plan would include a study to identify and select strategic properties for reuse as public spaces, parks, passive recreational areas, and community gardens.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	As a result of Hurricane Matthew there are 200 applications for acquisition in Lenoir County. The county will be responsible for maintaining these properties once the buyout is complete in addition to 800 properties the county currently maintains.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	N/A	N/A
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Low to moderate confidence	N/A
What impact will this action have on the local economy/tax base?	No Impact	Agree
What impacts to the environment of the county will result from this project?	The plan could identify hazard mitigation or best management practices to be implemented on buyout properties that could allow for increase flood storage potential decreased stormwater runoff and reduced flooding to adjacent properties.	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$0- \$50K	Agree
What is the level of public support for this project?	Unknown	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

### Low Priority Environmental Strategies

Pillar	Action Name	Priority	Overall Ranking
Environment	Environment Action 5: Riparian buffer program	Low	20

**Table 13. Lenoir Low Priority Environmental Summary**

This project represents the environmental strategy that Lenoir County indicated is of a lower priority to address. Additional detail can be found below:

- **Riparian Buffer Program:** This project would provide funding for the county to implement riparian buffers and wetland restoration along waterways, including the Neuse River and Adkins Branch. Riparian buffers improve water quality by filtering runoff and nutrients and provide a larger buffer for flooding.
- **This is a county-wide project, so no project area map has been included.**



## Environment Action 5: Riparian Buffer Program

**County:** Lenoir

**Priority Grouping:** Low Priority

**Priority Ranking:** 20

**Project Timeframe:** 5 to 10 years

**Location:** Countywide

**Project Summary:** Implement Riparian Buffers: This project would provide funding for the county to implement riparian buffers and wetland restoration along waterways, including the Neuse River and Adkins Branch. Riparian buffers improve water quality by filtering runoff and nutrients and provide a larger buffer for flooding.

This project would provide funding for a riparian buffer plan that would identify areas along rivers and streams in Lenoir County that could be targeted for expanded riparian buffers. In addition, the project would provide funding to help implement the expanded riparian buffers.

Question	Response	Disposition
Articulate how this project addresses an unmet need that has been created by damage from Hurricane Matthew.	Lack of riparian buffer contributed to the severity of flooding during Hurricane Matthew.	N/A
Consistent with existing plans (describe points of intersection/departure)	Yes	Agree
Does this project comply with existing Local and State authority (codes, plan and ordinance)?	Yes	Agree
Does this project meet the intents and goals for the Hurricane Matthew Recovery Act?	Yes	Agree
Explain any benefits or impacts to the economy of the county from this project.	This project will improve water quality.	Agree
For how long will this solution be effective?	More than 50 years	Agree
How effective is the risk reduction?	50-100 year event	Agree
How many public facilities are involved in this project (buildings and infrastructure)?	0	Agree
Is coordination with other communities/counties needed to complete this project?	No	Agree
Is this project consistent with Federal Laws	Yes	Agree
To what degree does this project adversely impact local floodplain/coastal zone management?	No Impact	Agree
To what degree will it be possible to positively quantify the environmental benefits and ROI of this project?	Medium to high confidence	N/A
What impact will this action have on the local economy/tax base?	Less than 25%	Agree
What impacts to the environment of the county will result from this project?	This project will improve water quality.	N/A
What is the capability of the local government to administer this project?	Medium	Agree
What is the financial range of this project?	\$101K - \$250K	Agree
What is the level of public support for this project?	High	Agree
What is the technical feasibility of this project?	Higher than 75%	Agree
Who will administer this project?	County	Agree

## Summary

Implementation has already begun for some of these actions but for those that have not already been funded, the State of North Carolina will begin a process of prioritizing the actions and seeking to match a funding stream to each action. Those that are not matched with a funding source will be added to the State's Unmet Needs Report. Funding for Unmet Needs will be sought through additional funding from Congress and from the North Carolina General Assembly. Any action that cannot be matched to a funding source should be incorporated into the County's Hazard Mitigation Plan for consideration for future funding. It is important to seek to implement as many of these actions as feasible. Doing so will significantly contribute to helping improve the resiliency of North Carolina's communities.