FINDING OF NO SIGNIFICANT IMPACT
AND ENVIRONMENTAL ASSESSMENT

CITY OF BREVARD

NEELY ROAD PUMP STATION AND EQUALIZATION IMPROVEMENTS

RESPONSIBLE AGENCY: NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

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FINDING OF NO SIGNIFICANT IMPACT

Article I, Chapter 113A of the North Carolina General Statutes requires an action to be subject to the requirements of the North Carolina Environmental Policy Act (NCEPA) if it involves the expenditure of public funds and if a potential impact is anticipated to the environment. The project has been evaluated for compliance with the NCEPA and is determined to be a major agency action, which will affect the environment.

Project Applicant:	City of Brevard, North Carolina
Project Description:	The project will abandon the existing 2,900 gallons per minute (gpm) Neely Road Pump Station and construct a new 4,760 gpm pump station adjacent to the existing pump station and will include 13,500 linear feet of new 20-inch forcemain to convey flows from the new pump station to the City's Wastewater Treatment Plant (WWTP). The project will also include a 4.5 million gallon equalization tank at the WWTP.
Project Number:	CS370476-08
Project Cost:	$13,933,200
Clean Water State Revolving Loan Fund:	$13,660,000
Local Funds:	$273,200

The review process indicated that significant adverse environmental impacts should not occur if mitigative measures are implemented, and an environmental impact statement will not be required. The decision was based on information in the Engineering Report and reviews by governmental agencies. The attached Environmental Assessment supports this action and outlines mitigative measures that must be followed. This Finding of No Significant Impact (FONSI) completes the environmental review record, which is available for inspection at the State Clearinghouse.

No administrative action will be taken on the proposed project for at least 30 days after notification that the FONSI has been published in the North Carolina Environmental Bulletin.

Sincerely,

FOR

Seth Robertson, P.E., Chief
State Revolving Fund Section
Division of Water Infrastructure

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ENVIRONMENTAL ASSESSMENT

A. Proposed Facilities and Actions

The proposed project will abandon the existing 2,900 gallons per minute (gpm) Neely Road Pump Station and construct a new 4,760 gpm pump station adjacent to the existing pump station. The project will also include construction of 13,500 linear feet (LF) of 20-inch forcemain to convey flows from the new pump station to the City's existing Wastewater Treatment Plant (WWTP).

The project will also construct a 4.5 million gallon (MG) equalization tank at the WWTP to store peak flows in excess of the plant's 4.4 million gallon per day (MGD) peak capacity. The WWTP's effluent pipe will be relocated around the proposed equalization tank.

Funding Status: The estimated total cost for the project is $13,933,200. The City is applying for a Clean Water State Revolving Fund (CWSRF) loan of $13,660,000. The loan fee of $273,200 will be covered by local funds.

B. Existing Environment

Topography and Soils. Transylvania County is located in the Blue Ridge Mountains Physiographical Province. Elevations in the project area range from approximately 2,092 feet to 2,164 feet above mean sea level. The Brevard Fault divides the Transylvania County into two distinct geological zones: The Piedmont Terrane and the Blue Ridge. The project area is located in the southeast of this fault where elevations are typically lower and topography is gentler.

Soils in the project area vary from frequently flooded soils along surface waters to extremely steep Unaka-Porters Complex on the south side of the WWTP. Frequently flooded loams are typical along streams and do not pose a problem for forcemain construction. The equalization tank will be constructed on Toxaway loam and Saunook loam. The location of the tank was chosen to avoid the steep Unaka-Porters Complex soils. The pump station will be constructed Rosman and Toxaway loams with zero- to two-percent slopes.

Surface Water. The project area is located primarily in the Upper French Broad River Sub-Basin (HUC 06010105). Streams in the project area include Lambo Creek, Gilbreath Branch, Lamb Creek, and French Broad River. The French Broad River is Class B and the others are Class C waters. Lambo and Lamb Creeks are designated Trout Waters.

Water Supply. The City provides drinking water drawn from Cathey's Creek, a tributary to the French Broad River located southwest of the City.

C. Existing Wastewater Facilities

The City's wastewater collection system serves 3,491 customers with approximately 291,000 LF of gravity sewer and 36,000 LF of forcemain. It was mostly constructed in the 1920s and 1930s. The City also owns and operates a WWTP that currently receives average daily flows of 1.6 MGD and is rated for an average daily treatment capacity of 2.6 MGD. Peak hour hydraulic flows are estimated to be 4.4 MGD. The plant was constructed in 1984 as a secondary treatment facility, and significant upgrades were made to the plant in 2013.

D. Need for Proposed Facilities and Actions

The City has recorded 66 sanitary sewer overflow (SSO) events in the past five years and has entered into a Settlement Agreement with the NC Environmental Management Commission to address these issues. As part of the agreement, a Wastewater System Improvements Plan was developed and concluded that the SSOs are caused by a combination of high peak flows, excessive inflow/infiltration (I/I), and pump station capacity constraints. System modeling indicates that the Neely Road Pump Station and associated forcemain are undersized for wet weather flows, thus SSOs would continue even with aggressive efforts to reduce I/I. Additionally, the WWTP does not have the hydraulic capacity to handle wet weather flows.

E. Alternatives Analysis

No-Action Alternative: The No-Action Alternative would mean continuing to operate existing equipment. This alternative would result in continued SSOs due to excessive I/I and hydraulic limitations. This alternative was considered infeasible and therefore rejected.

Optimum Performance of Existing Facilities: This alternative would mean optimizing operation of existing equipment. It would not address the hydraulic limitations and would allow for continued SSOs. This alternative was considered infeasible and therefore rejected.

Pump Configuration: This alternative evaluated pump configuration and determined that three pumps would likely be needed to handle the range of flows during dry and wet weather events. The existing pump station is not large enough to accommodate the addition of a third pump. Additionally, optimizing the pump station and sending increased flows through the existing forcemain would exacerbate known structural deficiencies with that forcemain. This alternative was considered infeasible and therefore rejected.

Gravity Sewer Option: This option would install a new 30-inch gravity sewer interceptor from the abandoned Neely Road Pump Station across numerous agricultural properties to a new influent pump station near the WWTP. The influent pump station would convey wastewater underneath the French Broad River and Wilson Road to the WWTP via a 20-inch forcemain. This pump station would need to be sized to handle 4,760 gpm. This alternative would also include construction of a 4.5 MGD equalization tank at the WWTP. Due to surrounding topography, much of the sewer interceptor would have to be located in the floodway and in close proximity to the French Broad River. This location could make accessibility difficult during flooding conditions and could increase the risk of contamination of the river in the event of

SSOs. This alternative was considered not practical because of high costs, anticipated difficulty obtaining necessary easements, and potentially negative impacts associated with the sewer location in the floodway and close to the river. Therefore this alternative was rejected.

Force Main Option: This alternative will construct a new pump station adjacent to the existing Neely Road Pump Station designed to convey a peak flow of 4,760 gpm to the Brevard WWTP via a new 13,500 LF 20-inch forcemain. The forcemain will travel north along Neely Road, east along Old Hendersonville Highway, and then south along Wilson Road. The forcemain will be constructed within travel lanes of these roads and will exit the travel lane and cross onto City of Brevard property. Horizontal directional drilling technology will be used to install the forcemain below the French Broad River. After crossing the river, the forcemain will continue to the WWTP. A 4.5 MG equalization tank will also be constructed at the WWTP. Existing infrastructure will be utilized during construction to minimize the need for bypass pumping. This is the preferred alternative because it meets the need for the project by reducing SSOs with lower environmental impacts and capital cost than other feasible alternatives.

F. Environmental Consequences and Mitigative Measures

Topography and Soils: Construction of the forcemain will have temporary impacts to topography and soils, as disturbed areas will be restored upon completion of construction. Construction of the pump station and equalization basin will have permanent impacts only in the immediate areas of construction. Impacts will be minimized by implementing a North Carolina Department of Environment and Natural Resources (NCDENR)-approved and county-approved erosion and sedimentation control plan and other provisions of the Sedimentation and Pollution Control Act of 1973. The equalization tank will be constructed in the 100-year floodplain but any impact is expected to be insignificant. A no-rise certification will be completed to document the impact. A small portion of the new pump station site is within the 100-year floodplain, but the pump station itself will not be constructed within the floodplain. Minor grading may be required within the floodplain area, and a no-rise certification will be completed if required by the City Floodplain Administrator.

Land Use: Minimal changes or impacts to land use are expected. The equalization basin will be constructed within the existing WWTP site. The forcemain will be installed within existing roadways with few, if any, easements required. The new pump station will be constructed on a site adjacent to the existing pump station that is already cleared.

Wetlands: Construction of the pump station will not impact wetlands. Construction of the equalization tank will impact less than 0.10 acre of wetlands at the WWTP site. The forcemain will cross wetland areas in two locations within the WWTP site but will have only temporary impacts. Disturbed areas will be restored with native vegetation upon completion of construction. Construction will be in accordance with a NCDENR-approved and county-approved erosion and sedimentation control plan and other provisions of the Sedimentation Pollution Control Act of 1973 to minimize impacts from erosion and sedimentation. A Section 404 permit will be obtained from the US Army Corps of Engineers, and a 401 Water Quality Certification will be obtained from the Division of Water Resources. The U.S. Army Corps of Engineers was consulted and did not object to the project (March 12, 2015).

Important Farmlands: There will be no direct impacts to important farmlands. The pump station and equalization tank will not be located on agricultural lands. The forcemain will be constructed within existing roads.

Public Lands and Scenic, Recreational, and State Natural Areas: There will be no direct impacts to public lands or scenic, recreational, or state natural areas as no such areas are located within the immediate project area.

Cultural Resources: In a memorandum dated October 23, 2014, (No. ER 14-2336), the North Carolina State Historic Preservation Office (SHPO) stated that no archaeological resources are likely to be affected by the project. SHPO noted several significant properties in the project vicinity but impacts are unlikely because construction will occur within roadways. As requested, the City will consult with SHPO if any significant landscape features will be impacted by the proposed project.

Air Quality: Temporary impacts to air quality, including particulates and vehicle exhaust emissions, will result from construction activities. Proper vehicle maintenance, wetting of exposed soil, temporary gravel entrances will minimize these impacts. The new pump station will include an emergency generator that will have minimal and temporary impacts only.

Noise Levels: There will be a temporary increase in noise related to construction equipment. Construction activities will be limited to daylight hours except when road closures require nighttime work. The operation of the new pump station is not expected to have any increase in noise compared to the existing pump station.

Water Resources: Negative operational impacts to water resources are not anticipated. There is the potential for temporary impacts due to erosion and sedimentation during construction. To minimize such impacts, all construction will be in accordance with a NCDENR-approved and county-approved erosion and sedimentation control plan and other provisions of the Sedimentation Pollution Control Act of 1973. The project will improve water quality in the project area by reducing sanitary sewer overflows.

Forest Resources: Impacts to forest resources are not expected to be significant. The pump station and equalization tank will be constructed on sites that are already cleared. The forcemain will be installed primarily in road ways. A few trees may need to be cleared for some portions of the forcemain and for piping associated with the equalization tank, but tree clearing will be minimized to the extent possible.

Shellfish or Fish and Their Habitats: Impacts to shellfish, fish, and their habitats are not expected to be significant. Construction impacts will be minimized through adherence to a NCDENR-approved and county-approved erosion and sedimentation control plan and other provisions of the Sedimentation Pollution Control Act of 1973. As requested by U.S. Fish and Wildlife Service (November 7, 2014), the sediment and erosion control plan will include temporary and permanent herbaceous material, including native annual small grains and herbs

appropriate for the season to control erosion immediately following any ground disturbing activities.

Wildlife and Natural Vegetation: Impacts to wildlife and natural vegetation will be temporary due to construction activities. Representatives of the U.S. Fish and Wildlife Service and the NC Wildlife Resources Commission visited the project sites in October 2014 and noted that no protected species habitat was present in any of the proposed construction areas.

Introduction of Toxic Substances: Introduction of toxic substances from construction activities is possible from vehicle fluids. Such impacts will be minimized by proper vehicle maintenance and proper collection of and disposal of fluids.

The U.S. Fish and Wildlife Service reviewed the proposed project and concluded that the requirements of Section 7(a)(2) of the Endangered Species Act have been fulfilled (November 7, 2014, Log No. 4-2-14-394). The North Carolina Wildlife Resources Commission, Natural Heritage Program, and DWR Winston-Salem Regional Office, and U.S. Army Corps of Engineers concur with the proposed project. The North Carolina Department of Cultural Resources is not aware of any properties of architectural, historical, or archaeological significance that would be affected by the project.

G. Public Participation, Sources Consulted

A public meeting was held on April 27, 2015 including an informational presentation about the meeting. There were no objections to the project. The current user charge for a typical customer is $79.80 per month for 5,000 gallons for sewer and water combined. The proposed project is expected to cause an increase of $23.50 per month for a total of $103.30.

Sources consulted about this project for information or concurrence included

1) City of Brevard
2) North Carolina Department of Environment and Natural Resources
   - -Wildlife Resources Commission
   - -Natural Heritage Program
   - -DWR Asheville Regional Office
   - -Division of Air Quality
   - -Division of Water Resources
   - -Division of Forest Resources
   - -Division of Environmental Assistance and Customer Service
   - -Division of Waste Management
3) North Carolina Department of Cultural Resources
4) North Carolina State Clearinghouse
5) North Carolina Department of Public Safety
6) U.S. Fish and Wildlife Service
7) U.S. Army Corps of Engineers

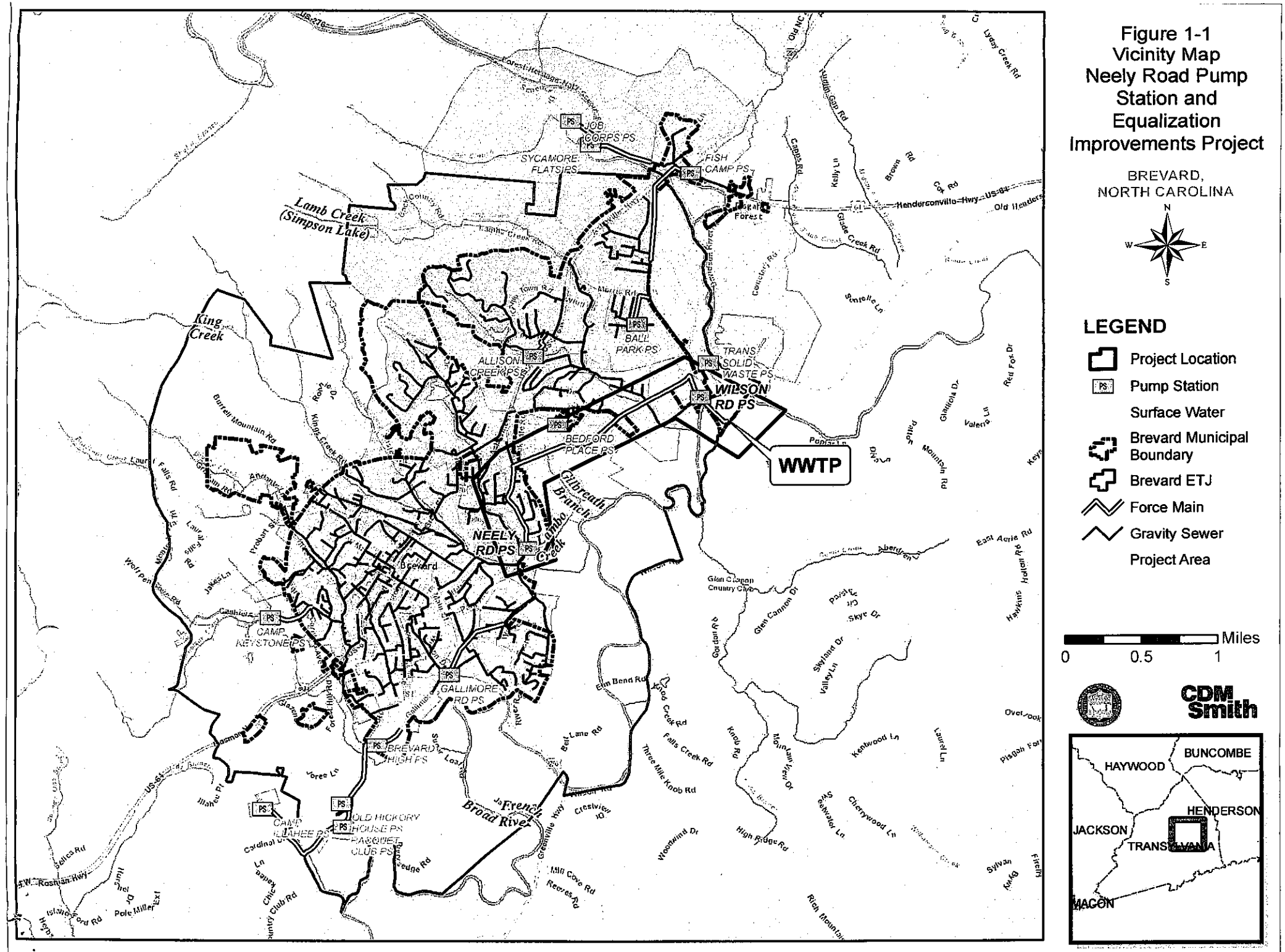
Figure 1-1
Vicinity Map
Neely Road Pump Station and Equalization Improvements Project
BREVARD, NORTH CAROLINA
N
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E
S
LEGEND
Project Location
Pump Station
Surface Water
Brevard Municipal Boundary
Brevard ETJ
Force Main
Gravity Sewer
Project Area
WWTP
JOB CORPS PS
SYCAMORE FLATS PS
FISH CAMP PS
BALL PARK PS
ALLISON CREEK PS
TRANS SOLID WASTE PS
WILSON RD PS
BEDFORD PLACE PS
NEELY RD PS
CAMP KEYSTONE PS
GALLIMORE RD PS
BREVARD HIGH PS
CAMP LAHEE PS
OLD HICKORY HOUSE PS
PARQUET CLUB PS
Lamb Creek (Simpson Lake)
King Creek
Gibreath Branch
Lamb Creek
French Broad River
Miles
0
0.5
1
CDM Smith
HAYWOOD
BUNCOMBE
HENDERSON
JACKSON
TRANSYLVANIA
MACON