

Bladen County

North Carolina



Future Land Use Plan

2014 – 2030

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Future Land Use Plan 2014 – 2030, Bladen County, North Carolina

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Chapter 1 - Introduction



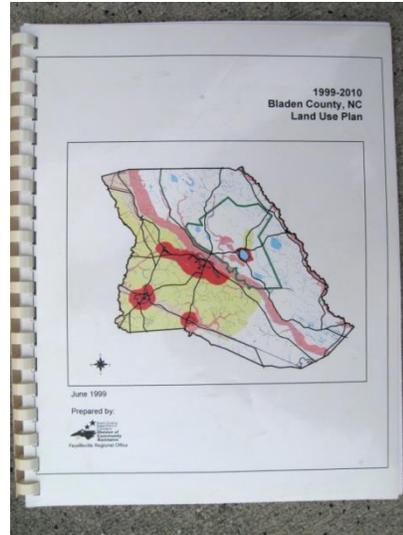
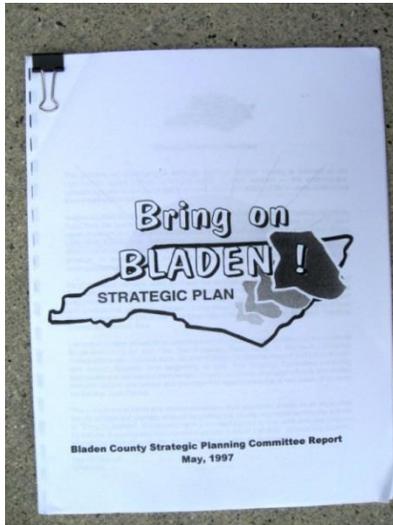
Balancing Development, Working Lands and Natural Resources

Bladen County in the last two decades saw a modest annual growth of approximately one percent per year. However, the 2008 recession slowed economic growth. And demographics in the last decade show a loss of young adults and middle aged persons, and an increase in the elderly. Therefore a slower growth trend for the County of approximately one-half percent per year for the County and towns is foreseen for the next decade and a half. This growth rate gives the opportunity for the county to grow wisely with good quality development infill in Elizabethtown and the six other smaller incorporated rural towns in the county: Bladenboro, Clarkton, Dublin, East Arcadia, Tar Heel, and White Lake; while protecting the agricultural, farming and natural assets.

In the next two decades some of the growth in the northwest portion of the county will likely be the result of growth from the metro Fayetteville area as a result of defense military base consolidation. And in the southeast portion of the county some growth will likely be influenced by being closer to the general metro Wilmington area. There is also the ongoing general national trend of population movement to the southern states because of the good climate. The county has a rich agricultural and farming heritage with an abundance of fertile land and plentiful water resources with the Cape Fear River and associated tributaries. Land use planning should be an integral part in avoiding or mitigating some of the negative side effects of development. Wise planning will improve development and protect agriculture, farming and natural assets by anticipating potential problems. The Land Use Plan goals are to try and establish courses of action and management programs to best handle land development challenges in advance.

Land Use Plan information was collected under the guidance of an appointed Steering Committee by the County Commissioners, with input from citizens, County Planning Board, County planning, County staff, and the County manager. Assistance was provided by the NC Department of Commerce, Division of Community Assistance. Plan material and citizen input from the previous 1999 County Land Use Plan was also used in the creation of this document.

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Previous planning efforts: the 1997 *Bring on Bladen!* Strategic Plan, and the 1999 *Bladen County Land Use Plan*.

The County evaluated land use growth and development trends and identified issues and impacts that are addressed in the Plan with the following:

- County profile
- Natural environment
- County resources and public facilities
- Transportation and circulation
- Current and future land use
- Putting the plan into action
- Goals and policies implementation

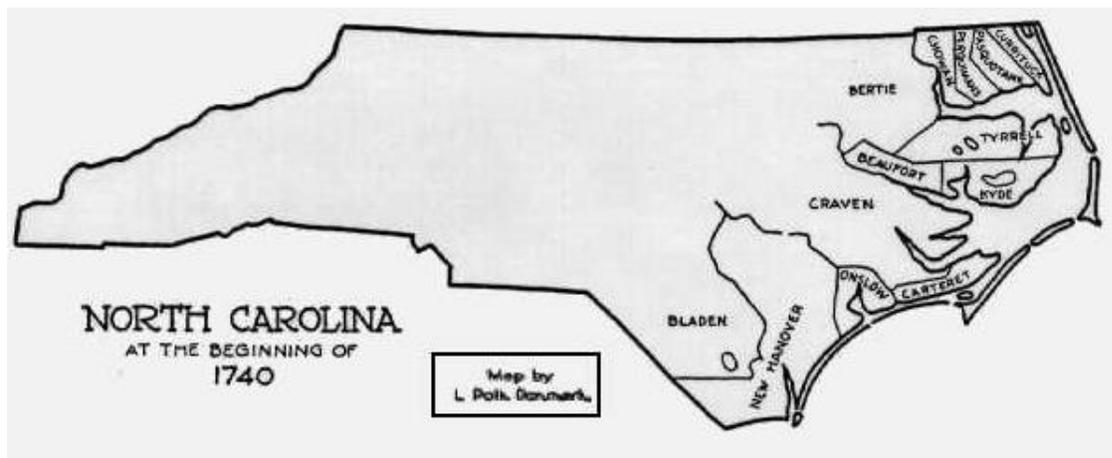
This Land Use Plan evaluated growth and development over the past 15 years from the County's last adopted Plan in 1999. The evaluation includes impacts to quality of life, property values, public safety, environment, and infrastructure of the county. The impacts identified include both those from past development as well as any potential impacts anticipated from future development. The County Land Use Plan's larger goal is to manage these impacts with the following:

- Ordinances and regulations establishing the standards and practices required of development (e.g. zoning and subdivision ordinances, and state laws).
- Other Plans of the County with issues and recommended actions are also included (e.g. parks and recreation, transportation, and working lands protection).
- County services to manage development (e.g. utilities and capital improvements with priorities for infrastructure).
- Policy statements to provide guidance for the County's development.

Brief Development History of the County

Bladen is a county rich in history and tradition. It was first settled by the Highland Scots in 1734, who came to the Cape Fear River Valley seeking religious freedom from Great Britain. The Scots settled throughout Bladen County. Families migrated northwest along the Cape Fear River where they founded Fayetteville and populated the surrounding general area. Many of the decedents of these first settlers still live in Bladen County.

Bladen County was named for Martin Bladen, Lord Commissioner of Trade and Plantation. The County's boundaries in the year 1734 were described as "...no less than man dared to travel West." Of the 100 counties in North Carolina 55 were originally part of Bladen County which accounts for the name "Bladen, The Mother County". Over the ensuing decades the Mother County was subdivided into other North Carolina counties. The present county boundary dates to the early 1800's.



An early map from colonial times of North Carolina including the large Bladen "Mother" County.

During colonial times the rivers served as highways. The Cape Fear River was used to float flour, pork, beef, rice, butter, indigo, tar, pitch, turpentine, and lumber to between the seaport of Wilmington, Bladen County, and farther inland to Fayetteville. By 1775, the manufacturing of turpentine was the principal industry. The turpentine and tar barrels were lashed together to make huge rafts which were floated down the Cape Fear River. This practice labeled North Carolina the "tar-heel" state.

Small settlements sprang up throughout the county. Landings on the river grew into communities and farms. When steamboats arrived on the river, local planters expanded their market opportunities. Bladen County soon boasted some fine southern plantation homes. Further development and growth of small towns in the 1800s occurred as a result of the railroad growth which spawned still another set of communities. By the mid-1900s the county was dotted with approximately a dozen small rural towns and communities served by county and state roads which were integrally part of the rich farming and agriculture working lands.

The county has seen modest growth in residential, commercial, industrial and farming activities in the last three decades. Most of the growth has been in Elizabethtown and the other small towns in the county or just within a few miles of their city limits. The major types of housing include traditional wooden frame built or bricks and mortar built, and manufactured. These types appear as single family homes on individual lots scattered throughout the county, as homes in subdivisions, and as homes in manufactured home parks. There are very few subdivisions developed in the county, and just a few parcels have been rezoned to commercial. Some of the rezoned property is still undeveloped while other property has developed into restaurants, convenience stores, gas stations, and business office space.

Most of the industrial growth has occurred in two industrial parks. One is located in Elizabethtown and the other in Bladenboro. There are five industries and a winery located in the Elizabethtown Industrial Park. The largest employer in the Elizabethtown Park is the North Carolina Division of Motor Vehicles call center which employs approximately 150 people. The Bladenboro Industrial Park has three industries. The largest of those industries is Birdsong Peanuts. Birdsong is the largest buyer of peanut seed in the United States. Agriculture and agribusiness continue to drive the economy in Bladen County. Smithfield Foods, located in Tar Heel is Bladen County's largest employer with approximately 4,900 employees. The Smithfield plant is the largest pork processor in the world and processes over 30,000 hogs daily. The Tar Heel plant is spread out over almost 900 acres and is one of the County's largest taxpayers.

Identification of Growth and Development Issues and Goals

The citizens reviewed growth and development issues and with general goals in the Land Use Plan with the following.

- Ensure a good quality of life for the citizens of the County.
- Ensure high quality residential, commercial and industrial development.
- Insure adequate facilities for education and planned location of schools.
- Protect farming and agriculture.
- Provide adequate roads and means for transportation.
- Insure adequate potable water, and septic fields (and sewer treatment in the municipalities).
- Provide adequate solid waste removal.
- Provide adequate services for fire, sheriff, police, and emergency medical service.
- Provide adequate government buildings and libraries.
- Encourage planned location of clinic, hospital, and medical center buildings.
- Protect natural water resources; creeks, streams, ponds, and lakes.
- Reduce property and building risks in flood plain areas.
- Provide adequate parks and recreation.
- Protect and promote archeological, cultural, and historic resources.
- Protect quality green space, open space and environmentally sensitive areas.

Vision

The following vision statement was crafted to provide overall tone and direction for the Plan.

The Future Land Use Plan will promote and support the orderly economic and aesthetically pleasing growth and development of the County while striving to maintain its historic identity and unique characteristics. The plan will encourage a healthy mixture of residential, commercial, agricultural and industrial development because the County desires to serve its citizens by providing a desirable place to live and work while reflecting the high value Bladen County citizens place on preservation of natural resources.



Members of the 2014-2030 Future Land Use Plan Steering Committee and Staff.

Growth Map

A growth map for the Land Use Plan (in Chapter 6) visually depicts the preferred future land use and development as implemented by the County Land Use Plan policies. The Future Land Use - Map 6-2 is intended to show planned future growth patterns in areas within the County. The map shows general boundaries of those respective areas to ensure that incompatible uses or types of development do not encroach.



Pictures from one of the public input meeting for the Future Land Use Plan.

Plan of Action

The Land Use Plan has a plan of action with the following elements explained in more detail in Chapter 7.

Primary Future Land Use Plan Implementation

- Zoning Ordinance
- Subdivision Ordinance
- Capital Improvements Program

Additional supporting Future Land Use Plan Implementation including:

- Airport Zoning Act
- Animal control
- Bladen Area Rural Transportation System (BARTS)
- Building Code
- Cultural Resources
- Economic Development
- Farming and Agricultural Plan
- Fire Protection and Emergency Management
- Flood Damage Prevention Ordinance
- Hazard Mitigation Planning
- Health Services and Health Assessment
- Manufactured Home Park Ordinance
- Noise Ordinance
- Potable Water Supply Plans
- Recreation and Park Plans
- School Facilities Planning
- Septic Ordinance
- Sheriff Protection
- Solid Waste Disposal and Recycling
- Transportation Planning
- Voluntary Agricultural District Ordinance
- Water Supply Watershed Ordinance
- Water Supply and System Management
- Wireless Communication Facility Ordinance

The Land Use Plan contains the County's adopted goals and policies to be implemented over approximately next decade and a half planning period. The intent of the policies and actions in the Plan are to be carried out in good faith by the elected officials, planning board, and County staff. Any public decisions by County officials regarding growth and development should remain consistent with the goals and policies in this Plan (i.e. re-zonings, land use related ordinance revisions, conditional/special use permits, capital improvement projects, and public grants). To

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allow flexibility if circumstances or county community preferences change, the Plan can be updated or amended. The County may amend the Land Use Plan at any time, but must follow the State regulations (NC Administrative Code Title 15A, Chapter 7, Subchapter 7B, Section .0900-.0901).

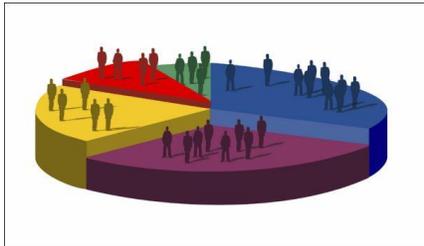
Chapter 2 - County Profile

Introduction

This Chapter presents the community profile of the County with the following:

- **Demographics**
- **Population Projection**
- **County Economy Information**
- **Housing**
- **Housing Building Permits**
- **Non-Residential Commercial and Industrial Building Permits**
- **Building Code**
- **Manufactured Home Ordinance**
- **Real Property - County**

Demographics



The population growth for Bladen County and the state is shown in the following Table 2-1. The population for Bladen County grew from 30,488 in 1980 to 35,190 in 2010. In population size, Bladen County ranked 68 of 100 counties in the State.

Table 2-1. Population Growth in Bladen County and the State

Year	Bladen Co.	% Growth / 10 yrs	North Carolina	% Growth / 10 yrs
1980	30,488	-	5,881,766	-
1990	28,663	-6.0%	6,628,637	12.7%
2000	32,278	12.6%	8,049,313	21.4%
2010	35,190	9.0%	9,535,471	18.5%

Data from the U.S. Census Bureau

From 1980 to 2010 the County population grew by 15.4% adding 4,702 new residents as shown in Table 2-2. During this time the state population grew by 38.3%.

Table 2-2. Population Growth County and State - Last 30 years

Year	Bladen Co.	% Growth / 30 yrs	North Carolina	% Growth / 30 yrs
1980- 2010	4,702	15.4%	3,653,705	37.9%

Data from the U.S. Census Bureau

The added growth was in the small towns in the County and rural areas. Bladen County experienced a moderate building growth in the 1990s until the recession occurred in 2008. Since 2008 growth slowed down in the state but recent indications for 2014 are that the U.S. and North Carolina are slowly recovering from the recession.

The following Table 2-3 shows that 1.139% was the average grow rate per year from 1990 to 2010 in Bladen County.

Table 2-3. Population Growth rate in Bladen County

Year	Bladen Co.	Total % Growth 1990 - 2010 yrs	Average % Growth per year from 1990 -2010
1990	28,663	-	-
2010	35,190	22.8%	1.139%

Data from U.S. Census Bureau

The following Table 2-4 shows the population growth for the seven incorporated Towns and three US Census designated places in Bladen County. The growth rates from 2000 to 2010 show a wide range of growth due and include such factors as episodic annexations, natural growth, and migration. Elizabethtown and East Arcadia had a drop in population during this time period.

Table 2-4. Population Growth of Towns in Bladen County 2000-2010

Municipality	Population		% Growth 2000-2010
	2000	2010	
Bladenboro	1,718	1,750	1.9%
Butters*	261	294	12.6%
Clarkton	705	837	18.7%
Dublin	250	338	35.2%
East Arcadia	524	487	-7.1%
Elizabethtown	3,698	3,583	-3.1%
Kelly*	454	544	19.8%
Tar Heel	70	117	67.1%
White Lake	529	802	51.6%
White Oak*	304	338	11.2%

*US Census designated place **

Data from U.S. Census Bureau

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White Lake and to a lesser extent some of the other lake areas of the County experience seasonal population change. However, away from these lake areas the vast majority of homes in the County are occupied year round. In areas near the County lakes are some lake front and nearby residential uses that are rented out on a seasonal basis, resulting in large seasonal population changes. Anecdotal information from Bladen County chamber of commerce is that perhaps 200,000 tourists visit the White Lake area over the course of a season. Information from the NC Division of Tourism showed that tourist overnight travel for the state in 2011 was highest in summer 37%, followed by fall 26%, spring 22% and lastly winter at 16%.

The population growth comparison of Bladen County with Cumberland County (including Fayetteville) and Brunswick County is shown in the following Table 2-5. Bladen County grew 9% from 2000 to 2010, compared with 5.4% for Cumberland County, and a large increase of 46.9% for the coastal Brunswick County during the decade. Bladen County being primarily rural between these two growth regions, may experience some spin-off growth in the upcoming decades in the northeast portion of the County from Fayetteville metro area, and similarly in the southeast and southwest portion of the County from Brunswick County and Wilmington coastal growth.

Table 2-5. Regional Population Growth

Category	2000	2010	2000-2010
Bladen County	32,278	35,190	9.0%
Cumberland Co.(and Fayetteville)	302,963	319,431	5.4%
Brunswick Co.	73,143	107,431	46.9%

Data from U.S. Census Bureau

Demographic characteristics from the 2011 Census (Table 2-6) shows that the Bladen County residents were 56.4% White, 35.4% African American, and 6.7% Hispanic.

Table 2-6. Bladen County Racial Makeup (2010)

Race	White Caucasian	Black – African American	American Indian – Alaskan Native	Asian	Some other Race	2 or more races	Hispanic or Latino
Bladen Co.	56.4%	35.4%	2.6%	0.05%	3.5%	2.1%	6.7%

Data from U.S. Census Bureau 2011 (B02001; B03001)

Bladen County saw a large increase in groups of older persons in the 2000 to 2010 decade (Table 2-7). This increase was for persons 45 and older. Table 2-7 also shows a decrease in young adults in the 25 to 44 age category. This may be an indication of younger persons having to leave the County for better employment opportunities elsewhere. In 2010, 30.4% of the County’s population was greater than 55 years old a further indicator of an aging population. Also, according to the 2010 U.S. Census the median age for the County was 40.9 years, which is older than the state

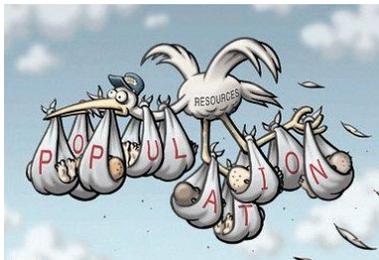
median age number of 37.4 years.

Table 2-7. Bladen County Age Distribution (2000-2010)

Age Group	2000	2010	Change 2000-2010
Under 5 years	2,138	2,131	-0.3%
5-14	4,419	4,516	2.2%
15-24	4,197	4,241	1.0%
25-34	4,065	3,976	-2.2%
35-44	4,720	4,362	-7.6%
45-54	4,761	5,255	10.4%
55-64	3,380	5,228	54.7%
65 and Older	4,598	5,481	19.2%
Total	32,278	35,190	

Data from U.S. Census Bureau

Population Projection



The historic Bladen County population growth rate from 1990 to 2010 was 1.139% per year. Because of the minus loss change in age groups from 25 to 44 years old seen in Table 2-7, and the increase in older persons (+45), it is probable that the growth in the County from 2014 to 2030 will slow. Furthermore some young adult and middle ages persons have had to leave the County for work which has put an added damper on growth. Thus a growth rate of 1.139% from 2014 to 2030 is projected as the moderate growth rate (Table 2-8). A low growth is projected at one-half this moderate rate, and a minimal rate at one-half the moderate rate. These growth estimates to the year 2030 are shown in Table 2-8 with resulting County projected population amounts.

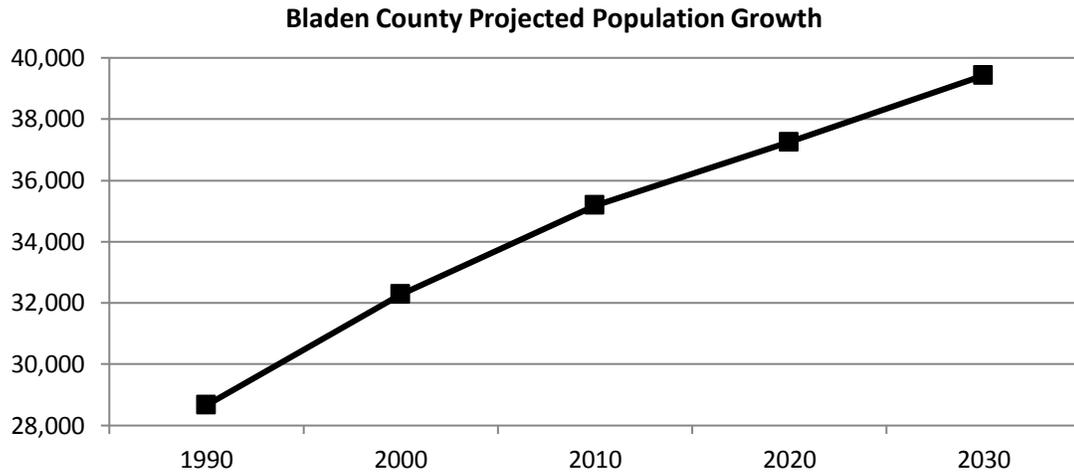
Table 2-8. Bladen County Population Growth: Historical (1990-2010), and Projected (2010-2030)

Year	Population		
1990	28,663		
2000	32,278		
2010	35,190		
Projected Scenarios	Minimal Growth** 0.285 % / yr	Low Growth* 0.570 % / yr	Moderate Growth 1.139 % / yr
2020	36,206	37,248	39,410
2030	37,251	39,427	44,136

*Projected at ½ of moderate growth. **Projected at ½ of slow growth.

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For the foreseeable future the only known large proposed highway project in Bladen County that is planned to occur in the next ten years is State Highway 87 widening from 2 to 4 lanes from Elizabethtown to Highway 74/76 in Delco. There are no other known large proposed projects slated for growth in the County such large residential subdivisions or planned unit developments; water and sewer expansions; or large commercial or industrial plants. Therefore a low growth rate would be a reasonable projection for the County from 2014 to 2030 (Table 2-8).



Graph 2-1. Bladen County population with a low growth rate projection of 0.570 %/yr. from 2010 to 2030.

A graphic illustration of historical and projected population growth with a low growth rate from Table 2-8 at 0.570% per year from 2010 to 2030 is shown in Graph 2-1. This graph reflects the historical growth from 1990 to 2010, the minus loss trend of young and middle ages persons, and an increase in older persons above 45 years old (Table 2-7).

County Economy Information



The 2011, the U.S. Census American Community Survey reported 13,188 employed persons for Bladen County with the shown percentage categories of work in Table 2-9. The top employment category for the County was business (management and professional) with approximately 27%, followed by production, and sales.

Table 2-9. Occupation Employment categories for Bladen County

Civilian employed population 16 years and over	Number Amount	%
Management professional includes: business, computer, engineering, education, health care	3,619	27%
Service	2,158	16%
Sales and office	2,266	17%
Farming, fishing, and forestry	793	6%
Construction, extraction, maintenance, and repair	1910	14%
Production, transportation, and material moving	2,442	19%
Total	13,188	100%

U.S. Census Bureau, 2011 American Community Survey (S2401)

The following Table 2-10 shows employed persons for Bladen County with the percentage categories of work. The top four industry employment categories for the County are rounded numbers: agriculture (11%); public administration (11%); wholesale trade (9%); and construction (8%).

Table 2-10. Industry Employment categories for Bladen County

Civilian employed population 16 years and over	Number Amount	%
Agriculture, forestry, fishing and hunting, and mining	35,051	10.7%
Construction	26,856	8.2%
Manufacturing	25,475	7.8%
Wholesale trade	27,885	8.5%
Retail trade	19,369	5.9%
Transportation and warehousing, and utilities	22,381	6.8%
Information	24,608	7.5%
Finance and insurance, and real estate and rental and leasing	27,644	8.4%
Professional, scientific, and management, and administrative and waste management services	26,208	8.0%
Educational services, and health care and social assistance	23,916	7.3%
Arts, entertainment, and recreation, and accommodation and food services	13,518	4.1%
Other services, except public administration	19,676	6.0%
Public administration	35,212	10.7%

U.S. Census Bureau, 2011 American Community Survey (B24031)

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A comparison of occupation for persons for Bladen County and State with the shown percentage categories is shown in Table 2-11. The table shows that Bladen County, when compared with the State, had a higher percent of persons employed in the service category and a lower amount in construction category. The other employment categories; management (business), sales, farming and production show similar percentages for the County and state.

Table 2-12. Occupation Employment Comparison –Bladen County and State

Civilian employed population 16 years and over	Bladen County	State
Management, professional, business, and related	27%	25%
Service	16%	9%
Sales and office	17%	14%
Farming, fishing, and forestry	6%	8%
Construction, extraction, maintenance, and repair	14%	31%
Production, transportation, and material moving	19%	14%

U.S. Census Bureau, 2011 American Community Survey (B24011 State)



A comparison of industry employment for Bladen County and the State with the percentage categories is shown in the following Table 2-13. The table shows that Bladen County, when compared with the State, had a higher percent of persons employed in agriculture and lower percent amounts particularly in transportation, information and finance categories.

Table 2-13. Industry Employment Comparison – Bladen County and State

Civilian employed population 16 years and over	Bladen County	State
Agriculture, forestry, fishing and hunting, and mining	10.7%	5.3%
Construction	8.2%	6.5%
Manufacturing	7.8%	8.4%
Wholesale trade	8.5%	9.8%
Retail trade	5.9%	5.0%
Transportation and warehousing, and utilities	6.8%	10.0%
Information	7.5%	9.6%
Finance and insurance, and real estate and rental and leasing	8.4%	10.4%
Professional, scientific, and management, and administrative and waste management services	8.0%	8.6%
Educational services, and health care and social assistance	7.3%	7.8%
Arts, entertainment, and recreation, and accommodation and food services	4.1%	3.1%
Other services, except public administration	6.0%	5.4%
Public administration	10.7%	10.2%

U.S. Census Bureau, 2011 American Community Survey (B24031 State)

Farming



Agriculture is an important economic producer in Bladen Co.

An important part of the Bladen County economy is farming which in 2007 had 500 farms and 23% of the county was farmland (Table 2-14A). Also shown in the following Tables 2-14 B to D are crop types, cash crops, and chicken and livestock amounts. Cash farming receipts in the County totaled approximately \$368 million dollars in 2011 (Table 2-14E). When ranked with the 100 other counties in the State, Bladen ranked: 7th for peanut production; 5th for vegetables, fruits, nuts and berries; 3rd for hogs-pigs; and 4th for livestock dairy and poultry.

Table 2-14A. Farm Economy Indicators for Bladen County

Farm Economy Indicators	Item
Number of farms	500
% of County that is farmland	23%
Average farm size (ac)	254 ac
Harvested cropland (ac)	59,896 ac
Average age of farmers	57.3 yrs
Average value of farm and buildings	\$838,266
Average market value of machinery and equipment	\$108,439
Average total farm production expense	\$538,282

Bladen Farm Bureau - NC Census of Agriculture - 2007

Table 2-14B. Crops in Bladen County

Crops - 2011 in Bladen County	Acres harvested	Yield	Production	Rank out of 100 counties in NC
Corn for grain (bushel)	25,800	51	1,302,000	20
Hay and other (tons)	4,200	2.15	9,000	58
Peanuts (pounds)	5,500	3,182	17,500,000	7
Soybeans (bushel)	162,000	21	344,000	42

Bladen Farm Bureau - NC Census of Agriculture – 2007

Table 2-14C. Cash Crops in Bladen County

Baden County Important Cash Crops - 2011	Dollar (\$) Value Amount	Rank out of 100 counties in NC
Nursery (\$): greenhouse, floriculture, Christmas trees	\$4,982,000	34
Vegetables, fruits, nuts, berries (\$)	\$23,460,000	5

Bladen Farm Bureau



Swine production is an important economic asset in the County.

Table 2-14D. Chicken Broilers and Livestock in Bladen County

Chickens and Livestock	Number	Rank out of 100 counties in NC
Chicken broilers (2011)	16,300,000	18
Cattle (2012)	5,600	47
Beef cows (2012)	3,600	43
Hogs-pigs (2011)	840,000	3
Turkeys (2011)	885,000	9

Bladen Farm Bureau



Poultry farm in the County.



Beef cow production is an important economic revenue source for the County.

Table 2-14E. Cash Farming Receipts in Bladen County

Cash Receipts - 2011	Dollars	Rank out of 100 counties in NC
Livestock, dairy, poultry	\$314,528,000	4
Crops	\$46,938,000	21
Government farming payments	\$6,843,058	23
Total	\$368,309,058	5

Bladen Farm Bureau

Work Commuting Time

The 2009 American Community Survey reports that the mean (average) commuting time for workers in Bladen County was 24.3 minutes which was close to the state average of 23.4 minutes.

Tourism

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Area attractions in Bladen County include Jones Lake and Singletary Lake State Parks, Bladen Lakes Educational State Forest, and White Lake; all of which provide ample opportunities for swimming, boating, camping, hiking, fishing and golf. Domestic tourism in Bladen County generated an economic impact of \$34.25 million in 2011 (Table 2-15). This was a 9.3 % change from 2010. In 2011, The County ranked 66th in travel impact among North Carolina's 100 Counties, and more than 180 jobs in the County were directly attributable to travel and tourism. Travel generated a \$3.51 million in payroll in 2011, and state and local tax revenues from travel to Bladen County amounted to \$2.94 million. This represented an \$84.17 tax saving to each county resident.



Jones Lake State Park.



Recreation facilities.

Table 2-15. Bladen County Tourism Revenue

Year	Revenues \$ (millions)	Change from previous year
2007	\$30.61	1.2 %
2008	\$32.25	5.4 %
2009	\$29.34	-9.0 %
2010	\$31.34	6.8 %
2011	\$34.25	9.3 %

NC Department of Commerce

Poverty

Poverty statistics (Table 2-16) indicate that Bladen County, when compared with the state had a higher amount of families living below the poverty level. And individuals below the poverty level in the County were higher than the nation.

Table 2-16. Poverty Comparison – County, State, and United States

Category	Bladen County	State	U.S.
Families below poverty level	17.8 %	12.7 %	11.1 %
Individuals below poverty level	23.2 %	17.2 %	15.2 %

U.S. Census Bureau, 2011 American Community Survey (S1702, S1701)

Workforce

In Bladen County, private wage and salary workers comprised 74.8% of the work force, government workers made-up about 20.4%, and self-employed workers comprised about 4.8% of the work force (2011 American Community Survey (DP03)). A comparison of people above the age of 16 in the labor force shows that Bladen County was lower compared to the state (Table 2-17).

Table 2-17. In Labor Force Comparison – County, and State

Population 16 yrs and older	Bladen County	State
In labor force	54.3 %	64.0 %
Employed	47.1 %	55.5 %

2011 American Community Survey (DP03)

An unemployment comparison (Table 2-18) shows that Bladen County has had higher unemployment than the State over the last seven years. The most recent recession began in 2008 with a slow continuing improved economy in 2014. This is reflected in the higher unemployment percent for the County and State than before the recession.

Table 2-18. Unemployment Comparison – County, and State

Year	Bladen County	State
2007	6.2%	4.8%
2008	7.9%	6.3%
2009	12.0%	10.4%
2010	12.9%	10.8%
2011	12.8%	10.2%
2012	12.1%	9.2%
2013	11.2%	8.0%
2014*	10.0%	6.7%

**Jan., Feb. Mar.*

NC State Employment Security Commission

Education



Residents of Bladen County are generally less educated than the state as a whole (Table 2-19A). Approximately 74% of all adults in the County have a high school or higher education, compared to about 84% for the state. Approximately 9% of residents have a bachelor’s degree or higher compared to approximately 27% for the state. The education completed shown in Table 2-19B reveals a similar pattern.

Table 2-19A. Educational Attainment

	High School or Higher	Bachelor’s Degree or Higher
Bladen County	74.4%	9.1%
State	84.5%	26.6%

U.S. Census Bureau, 2011 American Community Survey (S1501)

Table 2-19B. Education Completed

Educated Completed	Bladen Co. % Total	State % Total
Less than 9th grade	8.8%	5.8%
9 – 12 no diploma	16.8%	9.7%
HS Graduate	35.1%	27.4%
College No degree	21.2%	21.9%
Associate degree	9.0%	8.6%
Bachelor’s degree	7.0%	17.7%
Graduate or professional degree	2.1%	8.9%
Total	100%	100%

U.S. Census Bureau, 2011 American Community Survey (S1501)

Income

In 2011, the Bladen County median household income was \$29,211, which was lower than Fayetteville, Wilmington, and the State (Table 2-20). Median income is the value which divides income distribution into two equal groups, half having income above that value, and half having income below that value.

Table 2-20. Median Household Income

Bladen County	Fayetteville	Wilmington	State
\$29,211	\$43,300	\$39,764	\$43,916

U.S. Census Bureau, 2011 American Community Survey (B19013)

Housing



Single family housing in the County.

Bladen County is composed of predominantly single-family residential types of dwellings (Table 2-21) and the 2011 survey showed 17,731 housing units in the County. Approximately 58.8% of the units in the County were single family one-unit detached structures, 0.6% were duplexes, 4.8% were three or more unit (multi-family) structures, and the remaining 35.2% were mobile (manufactured) homes.



Multi-family housing.

Manufactured home housing.

Table 2-21. Housing Unit Comparisons

	Bladen County	
1-unit, detached	10,432	58.8%
1-unit, attached	88	0.5%
2 units	107	0.6%
3 or more units	857	4.8%
Mobile home	6,247	35.2%
Total housing units	17,731	100.0%

U.S. Census Bureau, 2011 American Community Survey (DP04)

The 2010 census revealed that of 17,718 housing units in the County, 88.4% were occupied, and 11.6% were vacant (U.S. Census Bureau, 2010 (DP-1)). According to census data from 2000 to 2011 (Tables 2-22 A and B), the number of total units increased from 15,316 to 17,731 and the amount of manufactured homes increased from 30.6% to 35.2%. The survey found that there was a decrease of duplex units from 202 in 2000 and to 107 units in 2011. Multifamily housing in the County with 3 or more units adjoining increased from 3.5% to 4.8% during the eleven year period.

Table 2-22A. Housing Unit Comparison of Bladen County 2000-2011

Bladen County	2000	2011
Single family units	9,897	10,520
Duplex units	202	107
Multi-family units	529	857
Manufactured (mobile) homes	4,688	6,247
Total units	15,316	17,731

2000 US Census; and 2011 American Community Survey (DP04)

Table 2-22B. Housing Type Percent Comparison of Bladen County 2000-2011

Bladen County	2000	2011
Percent Single family	64.6%	59.3%
Percent Duplex	1.3%	0.6%
Multi-family	3.5%	4.8%
Percent Manufactured Homes	30.6%	35.2%
Total	100%	100%

2000 US Census; and 2011 American Community Survey (DP04)

The US Census also shows that the average household size in the County decreased from 2.45 in 2000 to 2.40 in 2010 (US Census: H0-18; H12). There has been a similar trend in the state and nation with decreasing household size. The following Table 2-23 shows the distribution of owner occupied housing in the County and that the median value was \$79,000 in 2011.

Table 2-23. Housing Value Distribution – Owner Occupied

Housing Value	Number of Units	Percent of Units
Less than \$50,000	2,520	25.6%
\$50,000 to \$99,999	3,281	33.4%
\$100,000 to \$149,999	1,568	16.0%
\$150,000 to \$199,999	789	8.0%
\$200,000 or more	1,669	17.0%
Median (dollars)	\$79,000	100.0%

U.S. Census Bureau, 2011 American Community Survey (DP04)

The median value of owner occupied housing (Table 2-24) in 2011 in Bladen County at \$79,000 was approximately one-half the value of the state. Median housing value is a numerical value which divides housing values into two equal groups, half of which has value above the median value, and half of which have a value below that median value. This table shows that the County has much less expensive housing (almost one-half the cost) compared with the state.

Table 2-24. Housing Median Value (\$) – Single Family Owner Occupied

	Median value of housing
Bladen County	\$79,000
State	\$153,700

U.S. Census Bureau, 2011 American Community Survey (B25077)

Housing Building Permits

An analysis of Bladen County building-housing permits (Table 2-25) indicates that between 2002 and 2013: 802 permits were issued for construction of residential single family houses; 2,546 permits for manufactured homes; 87 permits for duplex units; and 20 permits for multi-family units.



The data shows that a large portion of the new residential homes within the County consist of manufactured homes (mobile homes). A concern of the County and residents is that manufactured homes tend to be more vulnerable to natural hazards such as hurricanes. Inspection of Table 2-25 shows that the County had the highest number of building permits issued from 2002 to 2008. Generally there has been and a cooling off period since 2008 as a result of the recession and following slower economy.

Table 2-25. County Housing Building Permits 2002-2013

Bladen Co.	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Single-Family	101	90	115	87	68	78	61	40	38	48	43	33	802
Manuf. Home	372	303	286	208	219	199	262	159	152	156	117	113	2,546
Duplex	0	0	0	4	45	0	0	0	2	0	8	28	87
Multi Family	0	0	0	0	0	8	0	0	5	0	7	0	20

Bladen County: Residential Building Permit Data.

An analysis of County non-residential permits (Table 2-25) indicates that the number of permits issues per year has been approximately: 66.8 single family permits per year; 212.2 manufactured home permits per year; 7.3 duplex unit permits per year; and 1.7 multi-family unit permits per year.

Non-Residential, Commercial and Industrial Building Permits

An analysis of Bladen County non-residential permits (Table 2-26) indicates that the number of permits issues per year has been approximately: 3.5 church permits per year; 5.1 industrial permits per year; 12.1 commercial permits per year; and 2.8 school permits per year. Similarly to the residential activity in the above Table 2-26 generally the highest number of non-residential permits issues was generally prior to 2008. And after 2008 as a result of the recession there have be fewer permits issued annually.



Retail supermarket in Elizabethtown.

Commercial development in the County.



Elizabethtown commercial development.

Table 2-26. County Non-Residential, Commercial and Industrial Building Permits 2002-2013

Bladen Co.	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Churches and other religious buildings	9	6	4	6	3	2	1	2	2	1	4	2	42
Industrial	11	2	4	0	0	9	12	4	7	5	5	2	61
Commercial	26	17	17	5	44	13	10	4	5	2	2	1	146
Schools and other educational facilities	9	4	7	2	0	3	2	1	1	1	2	1	33

Bladen County: Non-Residential Commercial and Industrial Building Permit Data.

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Birdsong Peanuts processing plant in Bladen County.



Southern Peanut Company and Peanut Processors, Inc. in Dublin.



DuPont industry an employer in the County.



Smithfield pork packing plant in Tar Heel.

Building Code

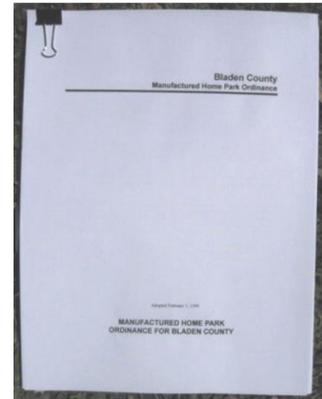
The Building Inspections Department of the County implements a building code which has standards for construction or repair of buildings. The purpose of the code is to ensure the safety of new and existing structures. The County uses the North Carolina State Minimum Standards as the official building code.

The building code should be used with the Zoning Ordinance and other ordinances mentioned in this Chapter to ensure the development meets the County’s adopted standards. Building permits are issued along with zoning compliance. A certificate of occupancy, which is legally required before a building is occupied, is not issued until the County determines that all of the requirements of the building code and zoning ordinance have been met. The building code should be reviewed in order to ensure it is coordinated with the Zoning Ordinance, Subdivision Ordinance, and the Future Land Use Plan.

Manufactured Home Park Ordinance

Bladen County regulates Manufactured Home Parks. The purpose of the ordinance is to guide the establishment of parks in order to promote the public health, safety and general welfare of the citizens. The ordinance objectives are the following:

- Further an orderly layout.
- Secure safety from fire, panic, and other danger.
- Provide adequate light and air.
- Ensure that facilities for transportation, parking, water, sewage, and recreation are provided for residents and visitors.



Real Property - County

Bladen County real property is shown in the following Table 2-27. There was a 2.8% increase from 2007 to 2013. Real property is composed of land and buildings.

Table 2-27. Real Property Amount in Bladen County

2007	2013	\$ Increase '07-'13	% Change
\$ 1,889,445,095	\$ 1,944,317,221	\$ 54,872,126	2.8%

Source: Bladen County – Tax Administration Office

Chapter 3 - Natural Environment

Introduction and Rural Character

Analysis of Bladen County's natural environment is an important part of the land use plan. The physical characteristics of land and natural constraints, such as wetlands and nearness to the floodplain and river areas, will help the County guide where development should occur or should not occur. The natural resources help define the character of the County, contribute to the local economy, and provide places for recreation. The County desires to plan and protect the natural areas, maintain clean water and air, provide open space, and grow with a quality built environment. A high quality natural and built environment will provide the County with a distinctive rural feel and maintain a sense of place. Bladen County values its rural character and does not want to lose the natural landscape to poorly planned development and strip development – common to many towns, counties and roads in America. The County desires to maintain a positive image and quality of life for residents and visitors.

Natural Resource Inventory

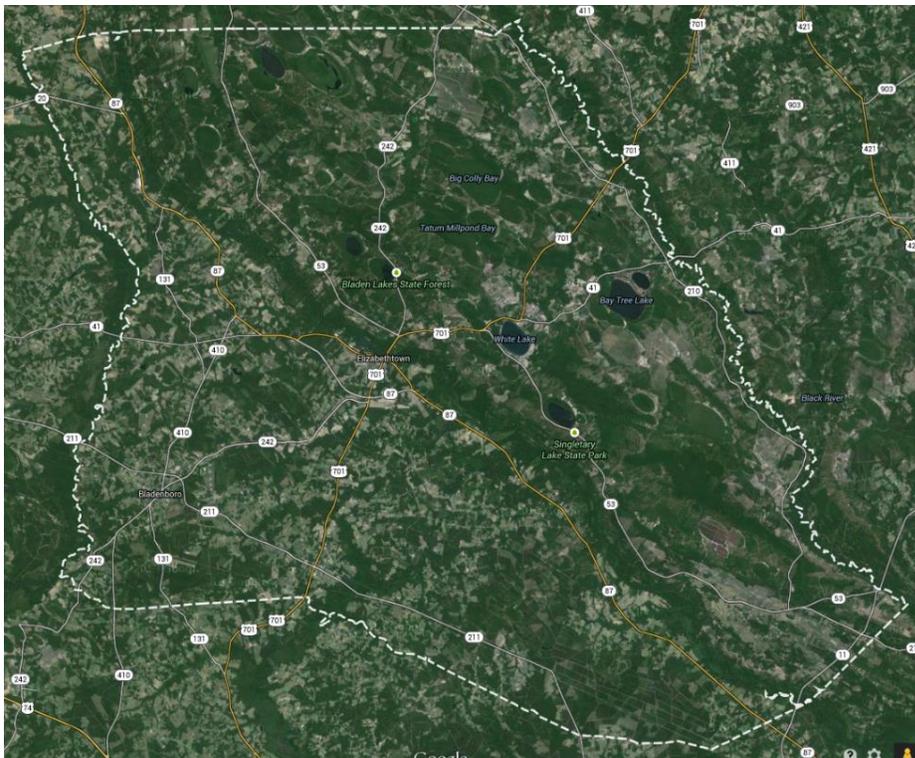
The natural resources inventory of this chapter will help Bladen County to identify areas that are suitable for development, other areas that can support only limited development, and areas that should be protected from development. Natural resources in this chapter are presented with Geographic Information System (GIS) data layers in the data and map program. Placed one on top of another, these layers form a composite picture of the natural resources on each parcel of land in the County. These maps are helpful in characterizing a desired future land use, avoiding problems, and evaluating the impacts of proposed development on the environment.

This chapter presents information regarding the following:

- **Topography**
- **Soils and Septic Quality**
- **Prime Farm Land Soils**
- **Farming and Agricultural Plan**
- **Land Cover**
- **Biodiversity and Wildlife Habitat**
- **Ground Water**
- **Water Supply Watershed Ordinance**
- **Wetlands**
- **Floodplains**
- **Flood Damage Prevention Ordinance**
- **Water Quality**
- **Natural Hazards - Hurricanes**
- **Fish and Game**
- **Industrial Sites and Environmental Concerns**
- **Large Scale Animal Farming: Poultry, Swine, and Cattle**

Topography

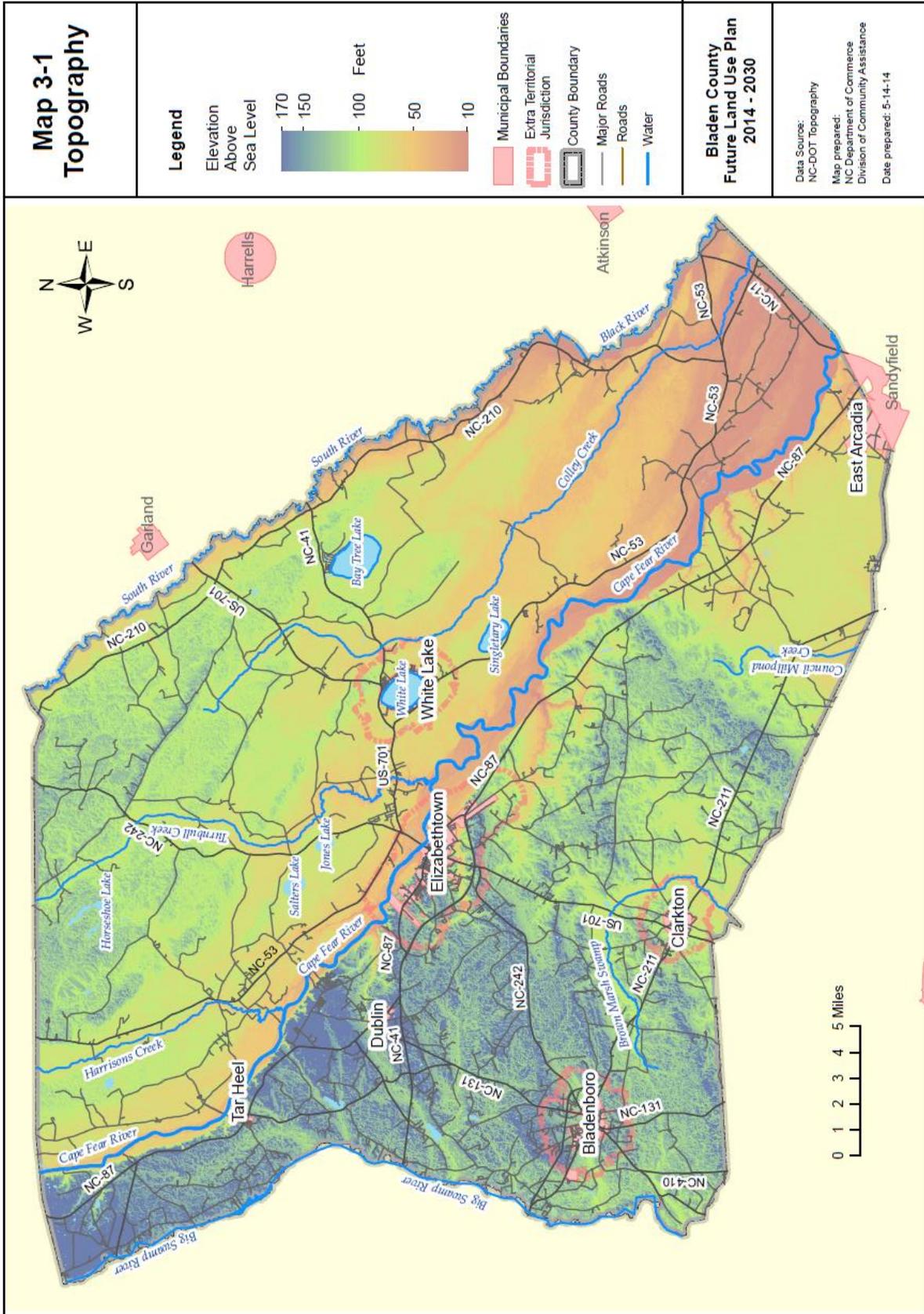
Inspection of the Topography relief Map 3-1 of the County shows a fairly flat landscape east of the Cape Fear River. In the west portion of the County the land has more topographic relief and generally drains into the Big Swamp River which drains to the Lumber River basin. The southeast portion of the County on the south side of the Cape Fear River is fairly flat as well in the vicinity of East Arcadia. A number of tributary creeks flow into the Cape Fear River and Big Swamp River. The land in the County does not exceed approximately 170 feet above sea level. The greater proportion of the County, lying between the Cape Fear River and South River, is predominately flat and level, though broken here and there by low ridges and knolls. Approximately half a dozen “Carolina Bay” lakes are present east of the Cape Fear River in the County.



An aerial photo of Bladen County.

The Cape Fear River over geologic time has eroded a low sloping valley through the County that trends in a northwest to southeast direction. This eroded floodplain along its course is narrower and approximately 2 miles in width at the northwest end of the County, and approximately 4 miles wide at the southeast end of the County. Along the Cape Fear River on the southwest side is hilly topography that slopes upward approximately up to 100 feet high above the river in the vicinity of Elizabethtown to north of Tar Heel. The Big Swamp, Cape Fear, South, and Black rivers, and Colley Creek with their tributaries carry most of the drainage of the County in the general southeast direction.

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Soils and Septic Quality

Soil information indicates the ability to support buildings, the septic quality, and growing crops. The County soil survey and maps by the US Department of Agriculture – Soil Conservation Service show potential limitations for development. The Soils and Septic Quality Map 3-2 shows the different types of soils and septic quality in the County (Soil Survey of Bladen County, North Carolina). Many natural changes affect soils and create a number of different types. These differences include color, topography, drainage, and crop adaptation. In general, the sandy and coarser textured soils are found northeast of the Cape Fear River, and that the finer textured soils are confined more to the southern part of the county.

The below Table 3-1 and the Soil and Septic Quality Map 3-2 show the draining and septic ability of the County soils. Soils with limitations for septic systems are identified on the soil map. Upland sandy soils tend to have moderate and slight septic quality and this means that the soils may be suitable for septic use as listed in Table 3-1. Typically riverine mucky soils, and sand and loam, have poor septic quality. Much of the County contains soils that have severe limitations for septic tanks. The US Department of Agriculture County soil report lists 52 different soils with poor septic qualities. While flooding is a factor, slow percolation and poor filtration are major factors leading to the severe septic limitation.

Table 3-1. County Soil Survey Summary Qualities and shown on Soils Map 3-2

Upland sandy soils	Soil abbreviation	Septic quality
Blanton	BnB	Moderate
Butters	BuA	Moderate
Kalmia	KaA	Slight
Kenansville	KeA	Slight
Norfolk	NoA, NoB, NuB	Moderate
Wagram	WaB, WbB	Slight
Wickham	WmB	Moderate

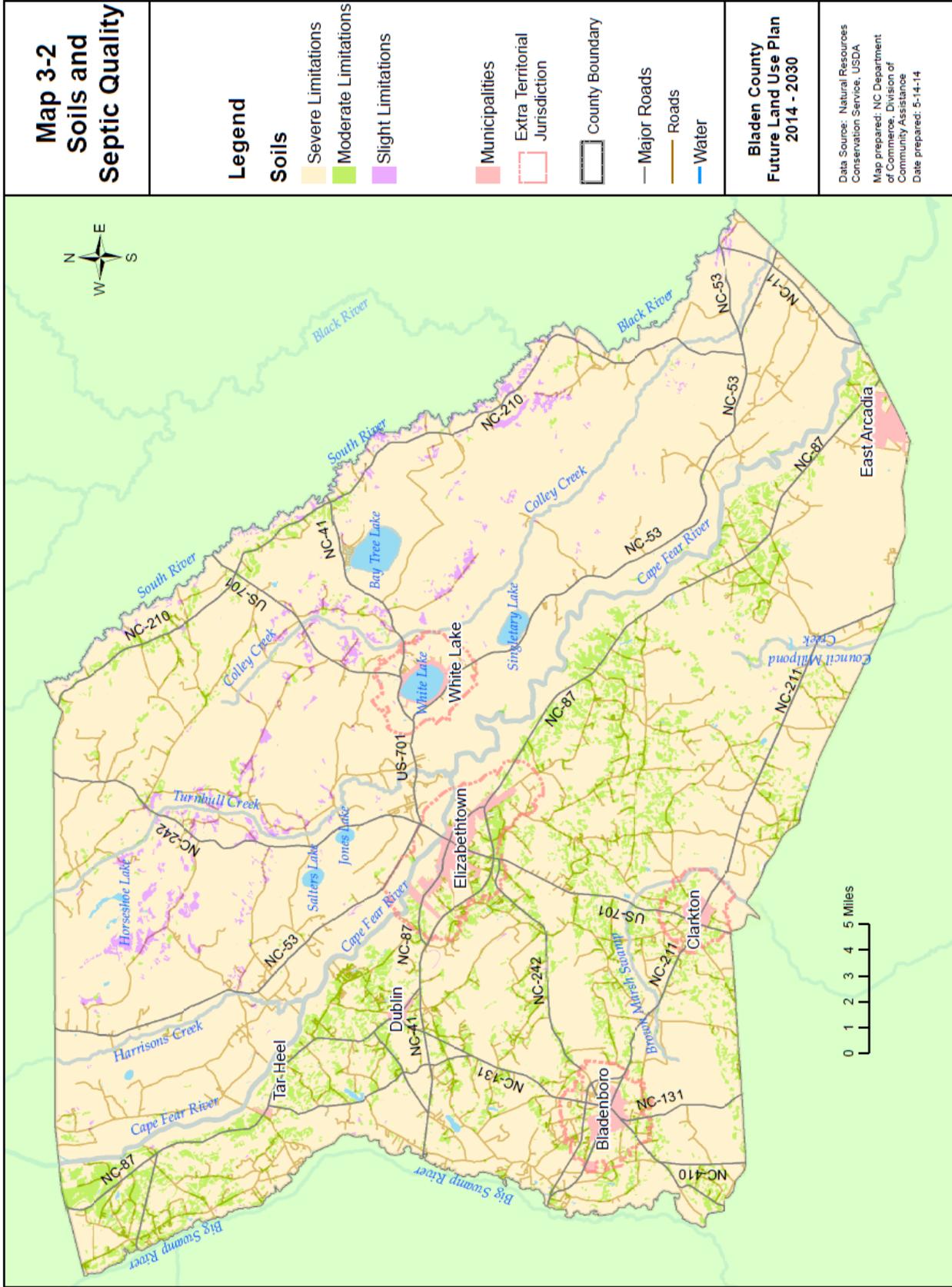
Data for this Soils section from: US Department of Agriculture – Soil Conservation Service, *Soil Survey of Bladen County, North Carolina*.

Prime Farm Land Soils



Prime farmland soils are best suited for producing food, feed, forage, fiber and oil seed crops. They have properties that are favorable for the economic production of sustained high yield of crops. To be productive these soils need only to be treated and managed using accept-

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able farming methods. These soils are fertile and with adequate moisture and can provide good crops during the growing season. Prime farmland soils may be used for cropland, pasture, or woodland. Bladen County has temperatures, rainfall and a growing season that are very favorable for farming. Prime farm land soils usually have a good acidity level, have no rocks, and are permeable to water and air. They also tend not to be excessively erodible and are not subject to frequent flooding during the growing season. The slopes of these soils mainly range from 0 to 6 percent. There are a total of 560,000 acres in Bladen County. Of that, 127,100 acres are in farms (NCDA Agricultural Statistics 2007). The NC Division of Forest Resources states that 393,100 acres are in forestry production with the majority in private ownership. Commercial forestry constitutes 36,400 acres, and private landowners 324,800 acres.



Blueberry crop in Bladen County.



Cotton crop in the County.

Soil is a primary ingredient for healthy and valuable crops. Soil scientists have identified the types of soil that are most productive for crops. Soil types are rated, classified, and mapped to reveal the pattern of capability. Soil capability is higher in the western part of the county. The diversity of soils in Bladen County ranges from muck soils to flooded soils to well drained to excessively drained soils. The uses of these different soil types vary widely. A map of detailed Soils Capability Rating and Prime Farm Land areas in the County is shown on Map 3-3. Prime farmland soils are listed in Table 3-2 and generally these are found southwest of the Cape Fear River. Eastern areas of land within the County are generally not classified as prime farm land due to low lying land, adverse soil conditions, and the Carolina Bays.

Table 3-2. Prime Farmland Soils in Bladen County shown on Map 3-3.

Soil Type	Abbreviation	General composition	Soil Type	Abbreviation	General composition
Altavita	AaA	Fine sandy loam	Goldsboro	GbA	Sandy loam
Augusta	At	Sandy loam	Johns	Jh	Fine sandy loam
Aycock	AyB	Very fine sandy loam	Kalmia	KaA	Loamy fine sand
Dogue	DgA	Sandy loam	Norfolk	NoA	Loamy fine sand
Duplin	DuA	Sandy loam	Norfolk	NoB	Loamy fine sand
Exum	ExA	Very fine sandy loam	Wickham	WmB	Fine sandy loam
Foreston	Fo	Loamy sand			

Growth and development typically result in a loss of prime farm land. The loss of prime farm land to other uses puts pressure on marginal lands, which generally are more erodible and less productive. Prime farmland soils, as defined by the US Department of Agriculture, are soils that are best suited to producing food, feed, forage, fiber, and oilseed crops. Such soils have

properties that are favorable for the economic production of sustained high yields of crops.

Information for this Prime Farmland Soils section is from the US Department of Agriculture – Soil Conservation Service, “Soil Survey of Bladen County, North Carolina”; and “Bladen County Working Lands Protection Plan”, February 2010 by Grace Lawrence.

Farming and Agricultural Plan

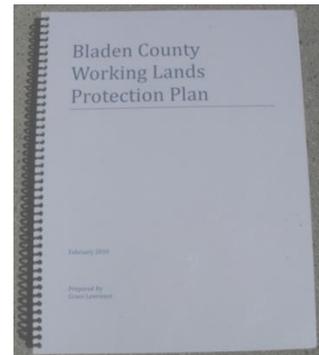
A *Working Lands Protection Plan* was prepared for the County in 2010 with the support of the following groups.

Bladen County Working Lands Protection Plan: Supporting Groups

N.C. Cooperative Extension	Bladen Co. Planning Department
Bladen Co. Voluntary Agricultural District Board	Bladen Co. Soil and Water Conservation District
Bladen Co. Economic Development	N.C. Wildlife Resources Commission
Bladen Co. Farm Bureau	Cape Fear Farm Credit
N.C. Department of Agriculture	

The *Working Lands Protection Plan* recommends the following:

- Support and adopt farm-friendly, county based, land use policies and programs.
- Expand county land preservation programs.
- Promote an appreciation of agriculture to all public audiences.
- Through training and education efforts, develop a strategy for retaining and expanding agriculture and agribusiness.



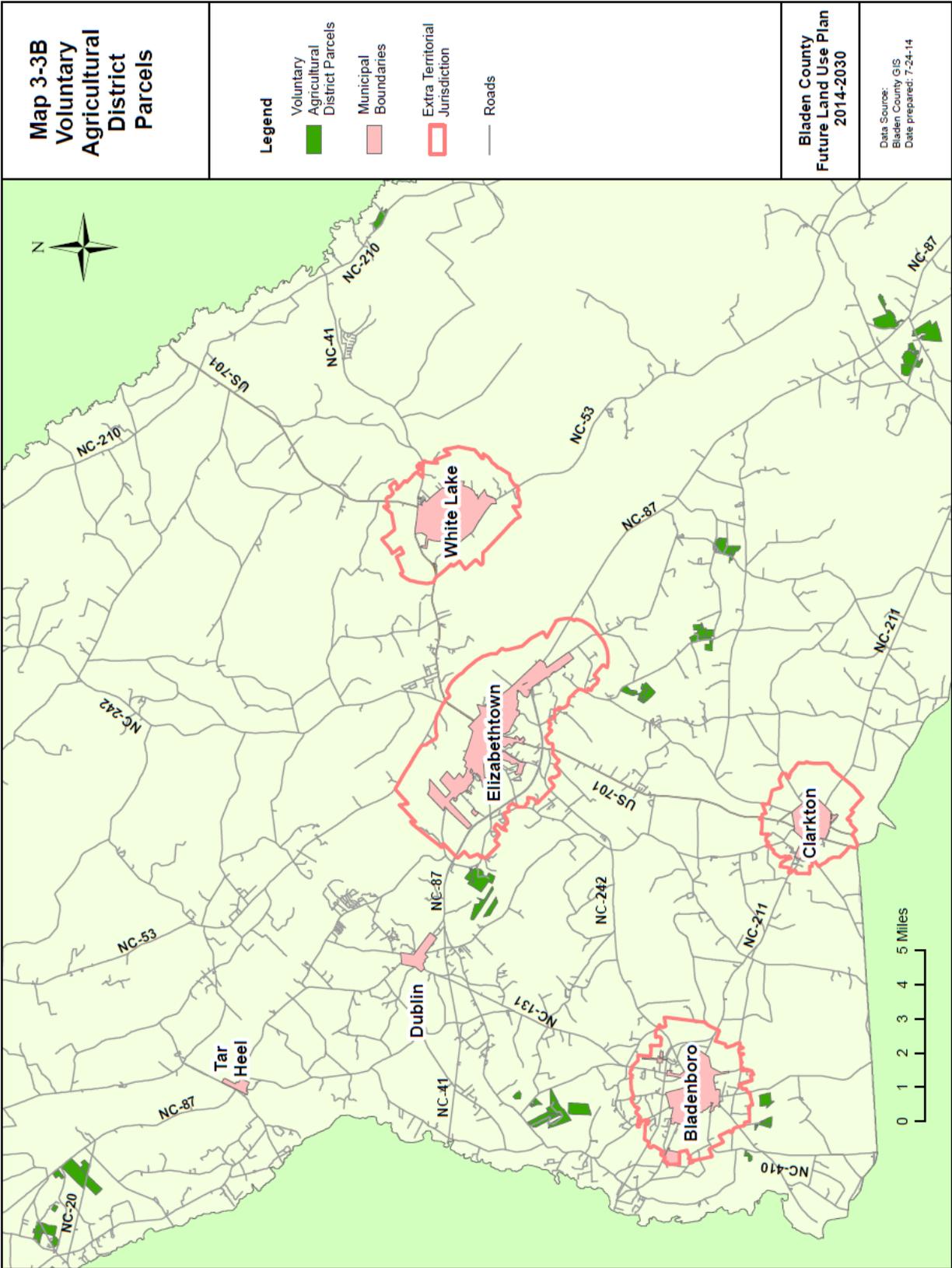
A County **Voluntary Agricultural District Ordinance** was adopted with the following purpose:

- Promote the health, safety, rural agricultural values, and general welfare of the County.
- Increase identity and pride in the agricultural community and its way of life.
- Encourage the economic and financial health of agriculture.
- Increase protection from non-farm development.
- Increase the protection of farms from suits and other negative impacts on properly managed farms.



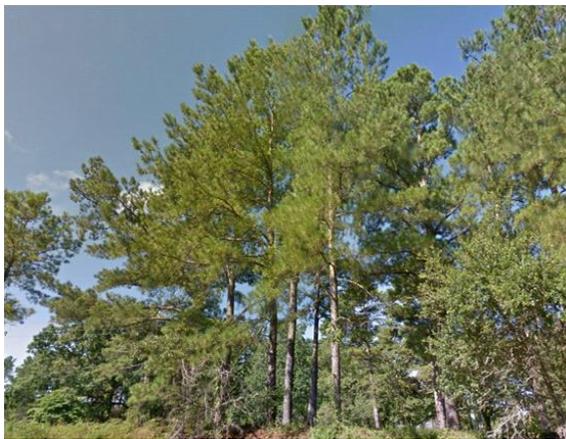
Map 3-3B shows the location of the Voluntary Agricultural District parcels in the County. In 2014 there were 59 parcels.

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Land Cover

The County Land Cover is shown in Map 3-4 and listed in Table 3-3 with information from the National Land Cover Database. The land cover is also coded with identification numbers. East of the Cape Fear River are large areas of swampy wetlands (light green color), rivers and lakes (blue color). West of the Cape Fear River are lesser amounts of wetlands and river features. Cultivated crops shown in medium green on the map are found throughout the County away from the river and swamp areas. Forested areas are shown in darker green in the map are found throughout the County and are composed of evergreen forest (pine trees), deciduous forest (i.e. maples and oaks), and numerous other tree species. A lesser amount of shrub and scrub land, and grass land, and pasture areas are also seen on the map. The developed Towns with residential, commercial, and industrial areas are also seen on the map in pink color.



The County is rich in forest resources.

Table 3-3. Land Cover in Bladen County shown on Map 3-4.

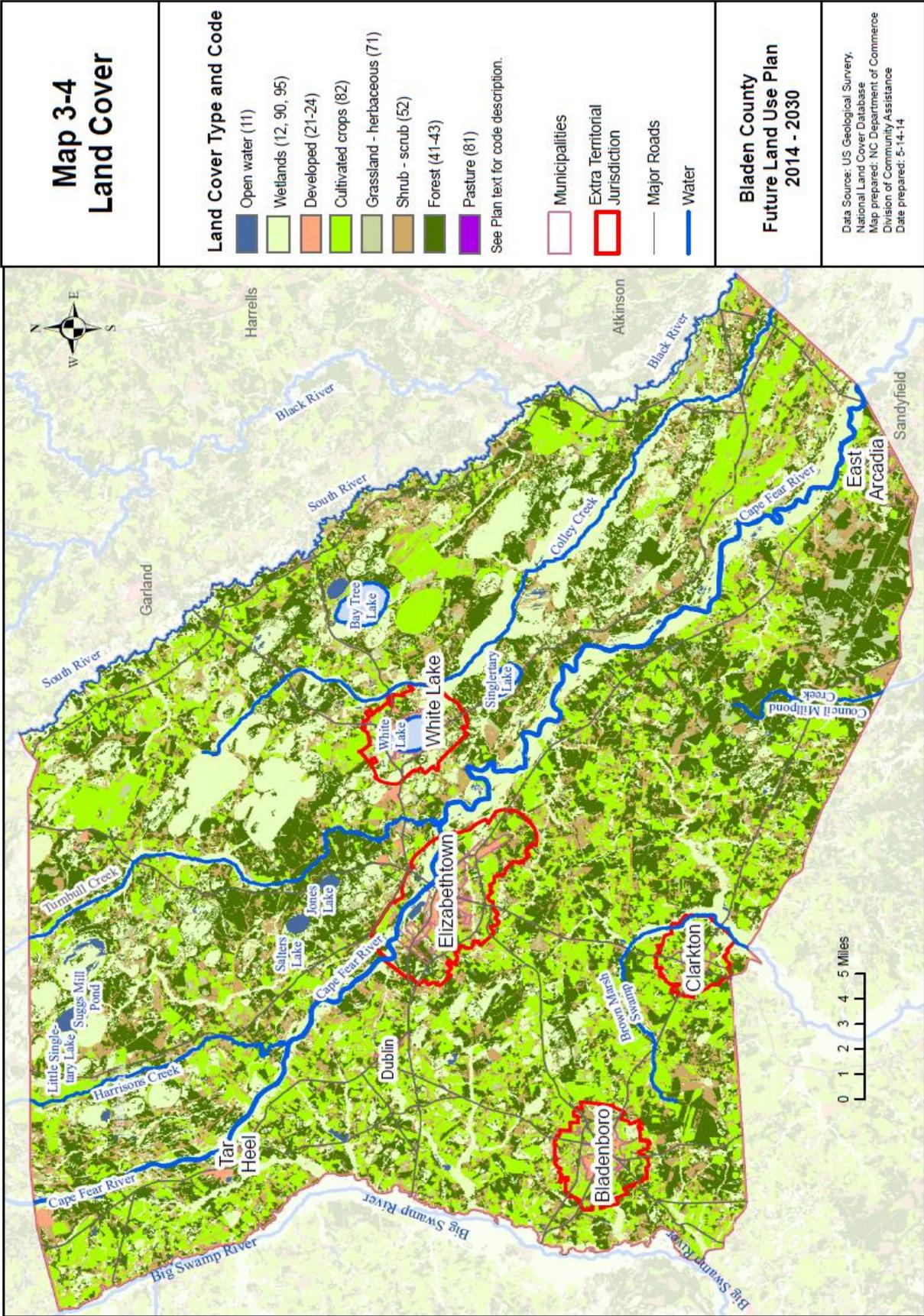
○ Water: creeks, rivers, ponds, lakes	○ Grassland, herbaceous	○ Pasture, hay
○ Wetlands	○ Shrub, scrub	○ Cultivated crops
○ Developed	○ Forested	

From: National Land Cover Database

Biodiversity and Wildlife Habitat

The highest ranking areas of Biodiversity and Wildlife Habitat in the County are shown on Map 3-5 (from the North Carolina Conservation Commission). The map also shows the managed land areas of the county indicated as federal, state, local and private. Bladen County is considered an exceptionally rich biodiverse area compared to other areas in the state and the United States. The county hosts many different habitat types supporting numerous species of plants and ani-

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imals. Some of these species are considered “endemic” meaning they are found nowhere else in the world.

The assessed biodiverse and habitat areas in Map 3-5 are rated on a scale of 1 (moderate) to 10 (high). The highest rated areas in the 7 to 10 range (green colors on the map) are generally found along the main rivers and tributary feeder creeks east of the Cape Fear River. Interspersed are patches of middle rated habitat areas with tan and brown colors which are generally east of the Cape Fear River and rated in the 5 and 6 range. The lower rated habitat areas in the 1 to 4 range are yellow and also generally found east of the Cape Fear River and in the southeast portion of the County. Town areas with commercial and industrial uses are show in gray color with the lowest rating at -1. White areas on the map have not assessed.

An assessment of biodiversity was completed by the state and commission with prioritized terrestrial (land) habitats based on the presence and quality of significant natural areas, rare species, important bird areas, high quality wildlife habitat, and wetlands. Aquatic habitats were assessed based on: aquatic significant natural heritage areas, native trout waters, fish spawning areas, high quality waters, outstanding resource waters, fish nursery areas, submerged aquatic vegetation, and stream buffers.

Information for the above section from: North Carolina Conservation Commission

The US Fish and Wildlife Service in 2008 identified 36 animal and plant types in Bladen County that are either threatened, endangered, or species of special interest or concern (Tables 3-4 A, B and C). These plants and animals have various levels of Federal and State protection.

Tables 3-4 A. Vertebrates with Federal special interest in Bladen County.

American alligator - T-SA	American eel - FSC	Bachman’s sparrow – FSC
Bald eagle - BGPA	Black-throated green warbler - FSC	Broadtail madtom - FSC
Carolina crawfish frog - FSC	Mimic glass lizard – FSC	Rafinesque’s big-eared – FSC
Red-cockaded woodpecker – E	Short-nose sturgeon - E	Southeastern myotis - FSC
Southern hognose snake - FSC		

Federal status code: T-SA threatened due to similarity of appearance; FSC Federal species of concern; BGPA Bald and golden eagle protection act; and E – Endangered.

Carolina Bog Mint.



Carolina Crawfish Frog.



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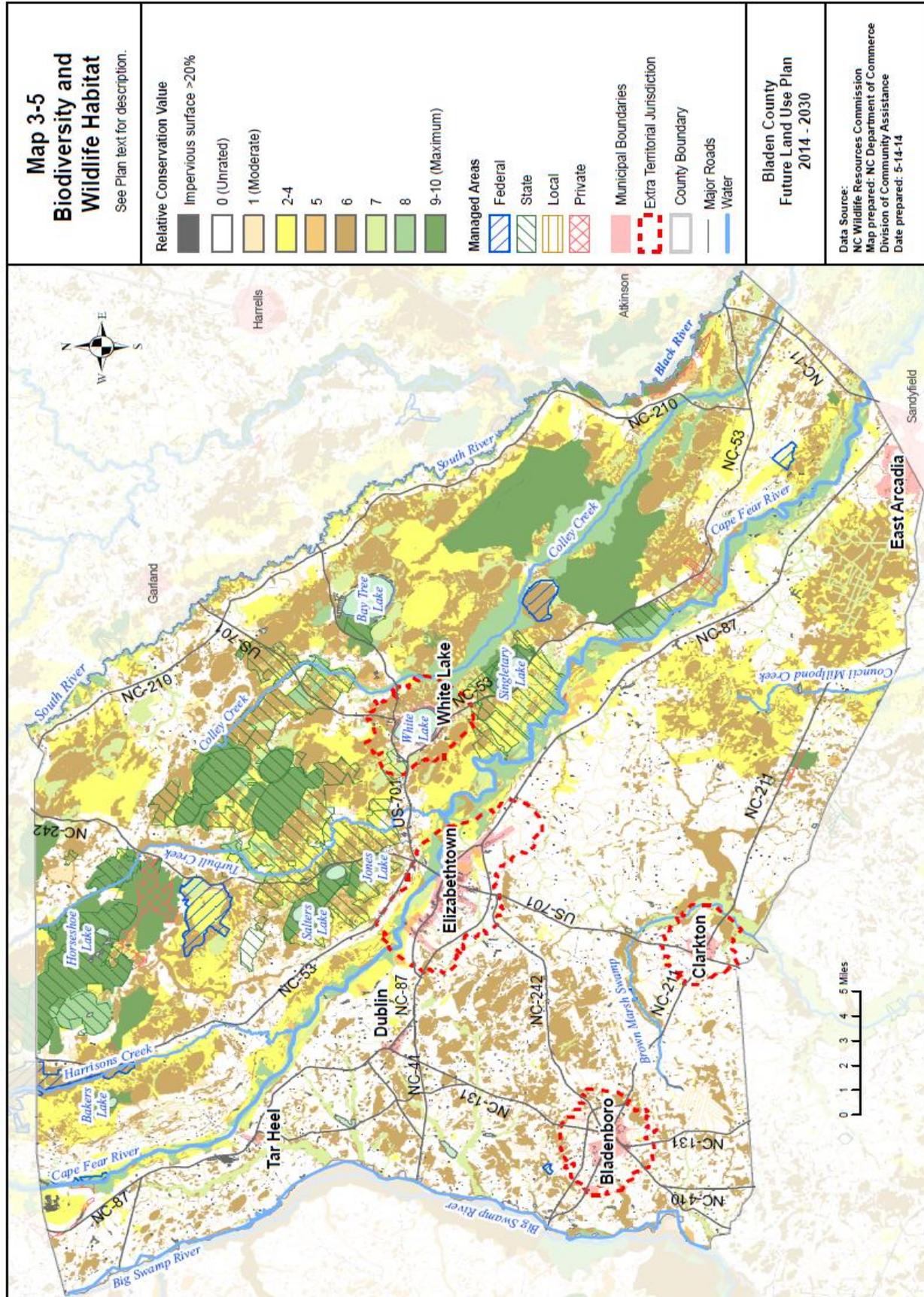


Table 3-4 C. Vascular plants with Federal species of concern status and three endangered – E in Bladen County.

American chaff-seed – E	Awnead meadow beauty	Boykin’s lobelia
Carolina bog-mint	Carolina grass of parnassus	Carolina lead plant
False coco	Grassleaf arrowhead	Pickering’s dawn flower
Pineland plantain	Pond-berry – E	Pond-spice
Rough leaved loosestrife – E	Sandhills milk vetch	Spring flowering goldenrod
Venus’ fly trap	Wagner’s spleenwort	

Table 3-4 B. Invertebrates with Federal species of concern status in Bladen County.

Atlantic pig-toe	Carter’s noctuid moth	Venus flytrap cutworm
Buchholz’s dart moth	Variiegated club tail	Yellow lamp muss

Ground Water

Ground water is an important natural resource for residents, farms, businesses and industry of Bladen County. A simplified water cycle for the County is shown in Figure 3-1. Of the approximately 50 inches of typical annual rainfall, 33 inches of the water evaporates, about 12 inches recharges the water table aquifer and streams, and 5 inches is over-land flow. Only approximately 1 inch of the 50 inches seeps as recharge into the deeper aquifers. Because this small amount of water recharges the lower aquifers it takes a long time to recharge them. This is why the lower aquifers should be seen as a finite water resource and therefore need to be managed and protected from overuse and contamination.

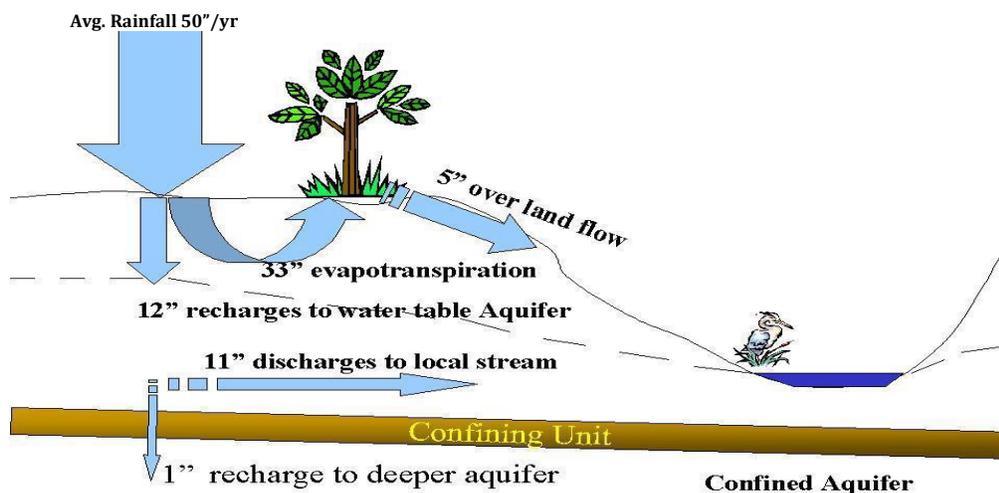


Figure 3-1. General diagram of the water budget for Bladen County in the coastal plain of North Carolina.

Information from: 1) North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section report: “Groundwater quality within the surficial aquifer and first confined aquifer in six

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counties of the Southern Coastal Plain”, November 2003; and 2) Lumber River Council of Governments, Regional Ground Water Advisory Council, 2004 Comprehensive Ground Water Report.

The following Figure 3-2 shows the hydro-geology and aquifer layers beneath Bladen County. Below the surficial aquifer the main aquifers are the Pee Dee, Black Creek, and Upper and Lower Cape Fear.

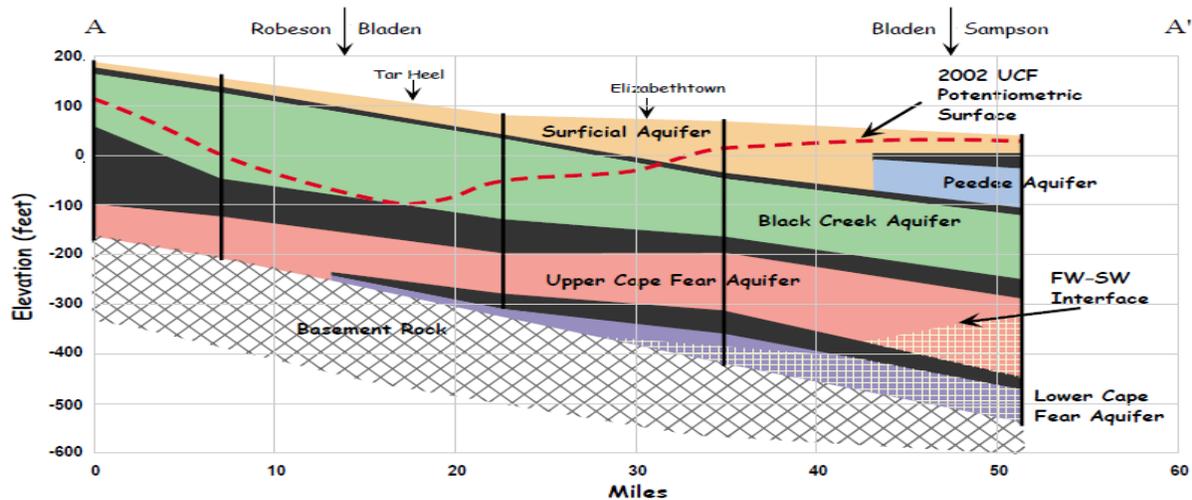


Figure 3-2. Generalized cross section of hydrogeology and aquifers underlying Bladen County.

From: NC Division of Water Resources, 2002 report “Bladen County preliminary capacity use assessment.”

The following Table 3-4 shows the municipalities in the County and aquifer ground water consumption by them. As seen in the table Elizabethtown, Clarkton, White Lake and Bladenboro are the biggest users.

Table 3-4. Municipal ground water withdrawals by aquifer in gallons per day in 1997 (NC Division of Water Resources, 2004).

Town	Gallons/day Withdrawal	Aquifer(s) Drawn From
Bladenboro	213,000	Surficial Peedee
Clarkton	382,000	Peedee, Black Creek
Dublin	50,000	Black Creek
East Arcadia	52,000	Black Creek
Elizabethtown	903,000	Lower and Upper Cape Fear, Black Creek
Tar Heel	26,000	Black Creek
White Lake	276,000	Upper Cape Fear, Black Creek
White Oak	79,000	Black Creek

From: North Carolina Department of Environment and Natural Resources, Division of Water Resources, Environmental Management Commission, “Southern coastal plain capacity use investigation”, June 2004.

The largest private user of ground water in the County is the Smithfield Foods pork processing plant (Table 3-5) located in Tar Heel which uses approximately 2.5 million gallons of

water per day.

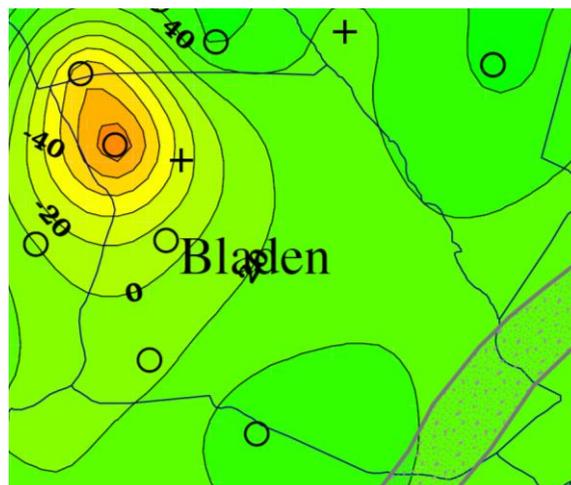
Table 3-5. Smithfield Foods processing plant ground water withdrawal by aquifer in gallons per day in 1997 (NC Division of Water Resources, 2004).

Entity	Gallons/day Withdrawal	Aquifers Drawn From
Smithfield Foods at Tar Heel	2,500,000	Upper Cape Fear, Black Creek

The state Division of Water Quality in 2004 reported ground water lowering with a cone of depression and salt water intrusion from ground water withdrawal by the Smithfield plant. The state report recommended close monitoring of the underlying aquifers to prevent over pumping as well as municipal use by Elizabethtown and White Lake.

Figure 3- 3. The effects pumping the Cape Fear Aquifer by the Smithfield Foods processing plant in Tar Heel in 2009. A depression cone of 100 feet vertically of water drawn is shown. The radius of drawdown out from the center of the pumping is approximately 7 to 10 miles to the 0' contour.

From NC Division of Water Resources, "Upper Cape Fear Aquifer Potentiometric Surface Map".



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In 2012 the Lower Cape Fear Water and Sewer Authority constructed a surface water treatment plant which is now being used by Smithfield Foods as their primary water source. This plant also represents the future alternative water source for Bladen County and surrounding counties.

The following Table 3-6 shows the estimated daily amount of surface and ground water use in Bladen County. Industry is by far the biggest user of water in the County followed by livestock use. Agriculture and domestic use comparatively less water.

Table 3-6. Daily Bladen County surface and ground water use in 2001 (NC Division of Water Resources 2004).

Type	Gallons per day		
	Surface Water	Ground water	Total
Industrial	12,910,000	1,950,000	14,860,000
Livestock	150,000	2,850,000	3,000,000
Agriculture crops	870,000	400,000	1,280,000
Domestic self supplied*	310,000	890,000	1,200,000

* Includes golf course irrigation and aquaculture.

The Southern Coastal Plain Ground Water Advisory Council is a coalition of local government representatives from six counties in the southeast part of the state including Bladen County to monitor groundwater availability and quality issues. The Advisory Council is independent and staffed by the Lumber River Council of Governments. Their comprehensive ground water report in 2004 was used to convince the Environmental Management Commission to not establish a capacity use area, and to allow local stakeholders to manage groundwater issues locally. The comprehensive report offers detailed maps of the hydrogeology of the aquifer system, and ground water measurements, including potentiometric maps of the region's cones of depression. In most areas of coastal plain in North Carolina groundwater is being removed from the deep confined aquifers at rates that exceed natural recharge. The Advisory Council is evaluating water sources for future use that have not historically been used by public water systems and in the future shallow groundwater may need to be an increased source of use.

Important functions and objectives of the state groundwater program including Bladen County are to:

- Describe the occurrence and distribution of groundwater aquifers.
- Obtain groundwater quality information of the aquifers.
- Provide information of known groundwater contamination incidents.
- Provide information of land uses that have potential to impact the groundwater quality.
- Provide groundwater protection recommendations for use by local governments.

A ground water report by the North Carolina Department of Environment and Natural Resources in 2003 recommended steps and actions to protect water quality resources in the southeast part of the state including Bladen County. These recommendations are the following.

- Land use planning should consider soil permeability and groundwater recharge rates when siting potential pollution sources.
- Although any of the three terrains described in this report may be selected for a shallow well location, areas located near any of the following activities should be carefully considered or avoided:
 - Areas of known groundwater contamination resulting from industrial or commercial releases of chemicals.
 - Proximity to onsite domestic waste systems.
 - Areas where there is or will be land spreading of municipal and/or industrial waste.
 - Areas where there are lagoon or spray fields used for the handling of animal waste.
 - Sanitary landfills and other solid waste disposal sites.
 - Quarries and borrow pits.
- A County well construction ordinance should be developed and employed to promote proper well construction standards and prevent contamination in the well or water supply zone(s).
- Develop a program to provide assistance for properly abandoning unused and/or improperly constructed wells. Continue to monitor groundwater quality by use of a comprehensive monitoring network.
- Research the effects of land use and growth.
- Properly locate and maintain septic systems.
- To adequately protect/preserve groundwater quality, an aquifer sensitivity evaluation should be conducted.
- Further groundwater quality investigations should be conducted to adequately characterize the shallow groundwater system. Additional research stations should be added to the established network and monitored over a period of time. The underlying geology at each station should also be evaluated to identify any depositional environment and groundwater signature correlations.

North Carolina Department of Environment and Natural Resources, Division of Water Quality, Groundwater Section report: *“Groundwater quality within the surficial aquifer and first confined aquifer in six counties of the Southern Coastal Plain”*, November 2003.

Water Supply Watershed Ordinance

The Water Supply Watershed Ordinance goal is to protect ground and surface water use in the County. The watershed mapped areas (Chapter 3, Map 3-8) by the state have regulations which apply to new subdivisions and development. The regulations are in coordination and compliance with the NC Department of Environment and Natural Resources. These water regulations are carried out with a permit process that is administered by the County watershed administrator and review board.



Wetlands

The wetlands in Bladen County are shown on Map 3-6, and provide a valuable natural resource. These areas are important to protect and maintain productivity and environmental quality of the land, creeks, rivers and lakes of the County. The State classifies and rates wetlands as exceptional, substantial, or beneficial based on the ability to provide water quality, hydrologic and wildlife habitat functions. This assessment is shown in Map 3-6.



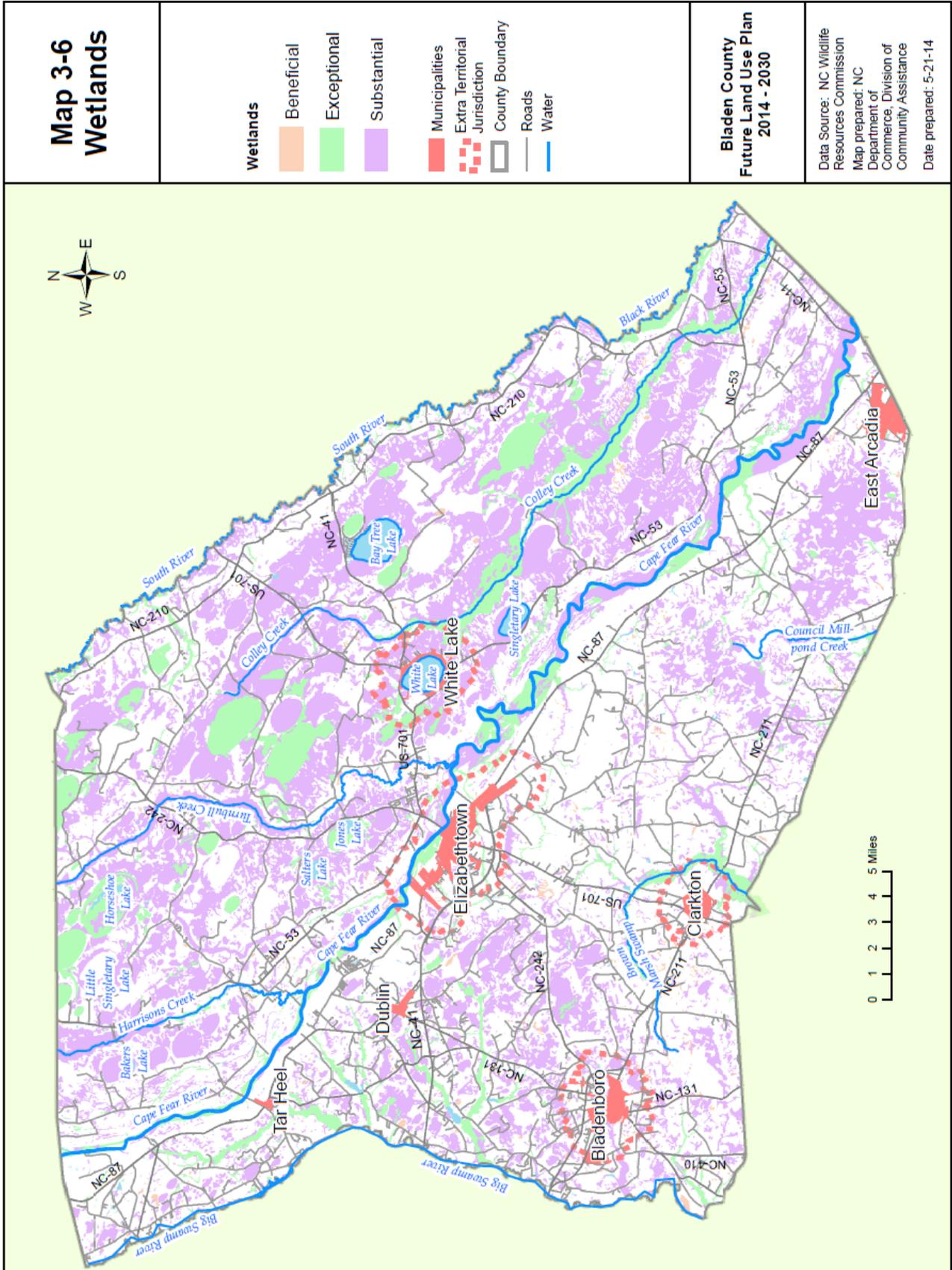
Wetlands in Bladen County.

Exceptional wetlands are located along Cape Fear River, Big Swamp River, Colley Creek, lakes, as well as along other river and creek tributaries. These wetlands maintain high water quality, hydrology and wildlife habitat functions at well above normal levels. Substantial wetlands are scattered throughout the County along feeder creeks to the Big Swamp River, Cape Fear River, Colley Creek, South River, and Black River. These wetlands are functioning at normal levels. Generally, in the County there are few wetlands which function below normal levels in the beneficial category usually caused by land development activities.

Information for this section from: North Carolina Conservation Commission

The US Army Corps of Engineers and the NC Department of Environment and Natural Resources handle wetland permitting and regulation in Bladen County regarding land development.

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Floodplains

The floodplains in Bladen County shown on Map 3-7 are primarily located along the Cape Fear River, Big Swamp River, South River, Black River, Colley Creek and other streams and creeks. The Federal Emergency Management Agency (FEMA) in coordination with state and local governments conducted an updated Flood Insurance Study for Bladen County in 2007. This study produced maps of the 100 and 500-year flood boundaries for each stream studied. Also the study and flood maps help the County to implement floodplain management, a flood prevention ordinance, and lower insurance rates. The FEMA Floodplain maps are part of the County geographical information system.



The Cape Fear River provides an important water resource for the County.

Flood hazard areas identified on Flood Insurance Rate Maps are identified as a Special Flood Hazard Area (SFHA). This defined area will be inundated by the flood event having a 1% chance of being equaled or exceeded in any given year. The 1% annual chance flood is also referred to as the base flood or 100-year flood. Special Flood Hazard Areas located in Bladen County are Zone AE and Zone A. Almost all the area is the Zone AE (100 year flood) and there are very few areas of Zone A. Moderate flood hazard areas are the areas between the limits of the base flood and the 0.2% annual chance (or 500-year) flood. The map shows almost no areas in the 500 year flood zone. Large areas of the County are in areas of minimal flood hazard are labeled Zone X. These areas are outside the Special Flood Hazard Areas and higher than the elevation than the 0.2% annual chance flood zone.

Flood Damage Prevention Ordinance

Bladen County has an adopted Flood Damage Prevention Ordinance. The purpose of the ordinance is to promote public health, safety, and general welfare. The ordinance goal is to minimize public and private losses due to flood conditions within flood prone areas as follows:

- Restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion hazards or that result in damaging increases in erosion, flood heights or velocities.
- Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction.
- Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters.
- Control filling, grading, dredging, and all other development that may increase erosion or flood damage.
- Prevent or regulate the construction of flood barriers that will unnaturally divert floodwaters or which may increase flood hazards to other lands.

Water Quality

Overview

The state Division of Water Quality is responsible for Bladen County regulatory surface and ground water protection. The mission is to protect and enhance the County surface and ground water resources for citizens and future generations. Implementation is with water quality monitoring, permitting, management, enforcement. The division issues pollution control permits, monitors permit compliance, evaluates environmental quality and carries out enforcement. The agency administers the laws, policies and rules established by the state, which are designed to support resource protection, management and regulatory efforts.



The beautiful White Lake.

Examples of water quality programs and monitoring in Bladen County by the state are the following.

- Aquifer protection with regard to animal feeding operations in the County. See the *Large Scale Animal Farming: Poultry, Swine, and Cattle* section at the end of this Chapter 3 for more information.
- Aquifer protection with regard to land application of: waste water irrigation, sludge residual management, reclaimed water, and ground water remediation. Operations include: waste water treatment plants for Elizabethtown, Clarkton, and Bladenboro; private industry with swine production and packing i.e. Smithfield Packing and Murphrey Brown; and other industry such as Dupont Company and Alamac Knit Fabrics.
- Ambient monitoring of water in the Cape Fear River and Turnbull Creek.
- Ambient lake water monitoring: Jones Lake, Singletary Lake, Bay Tree Lake, and White Lake.
- Monitoring fish kill activity such as occurred in Bay Tree Lake and White Lake in 2012.
- Watershed and water quality planning efforts in the Cape Fear River basin in 2005 and the Lumber River basin in 2010.
- Waste water (point source) treatment facilities in Elizabethtown, Clarkton, and Bladenboro.

Storm Water

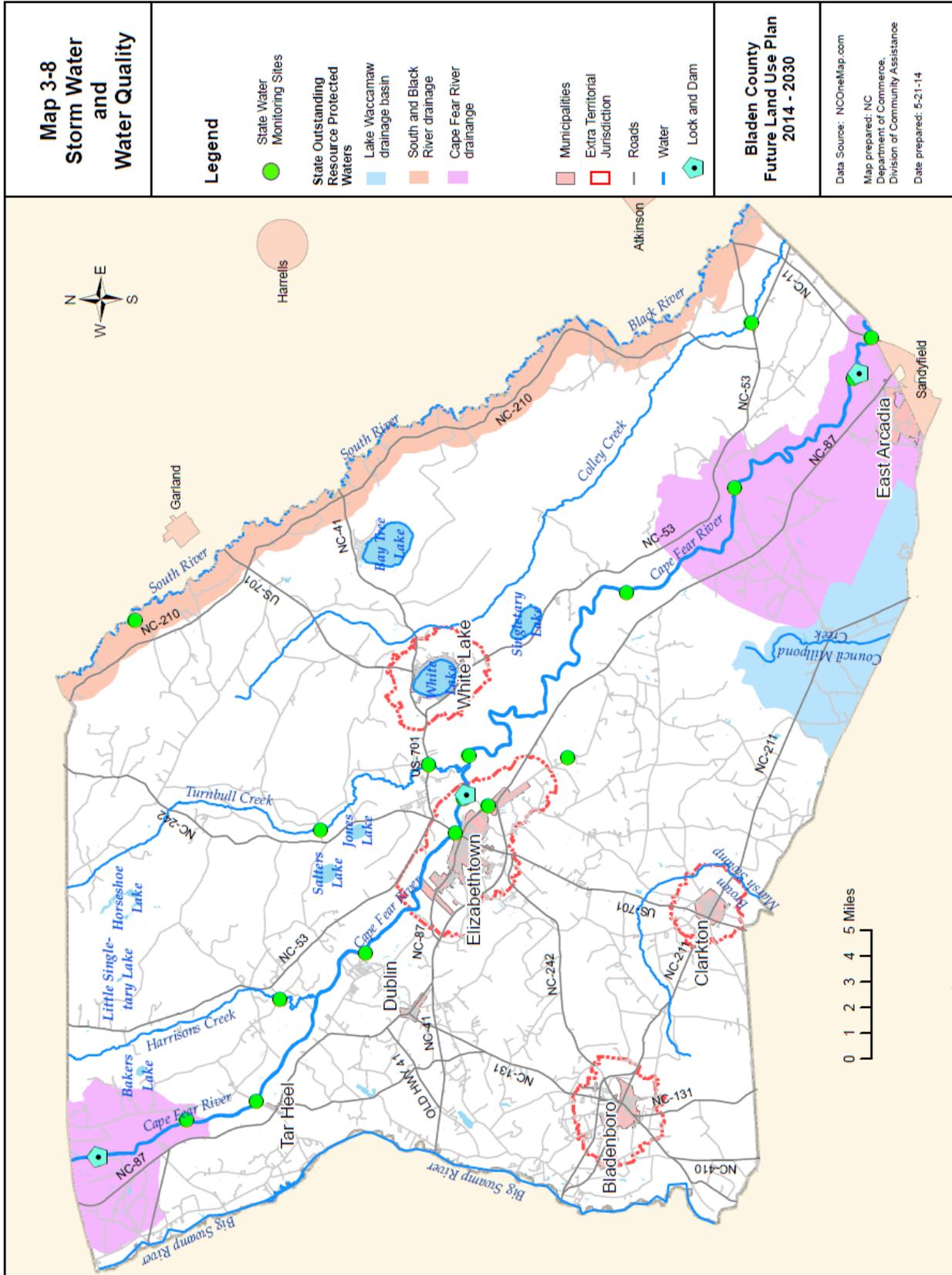
The purpose of storm water management is to reduce and treat pollutant discharge from public and private land in the County into rivers, streams and creeks. To the maximum extent practical the intent is to protect water quality. Increased impervious areas and other site features of development and redevelopment alter increase storm water runoff, flooding, soil erosion, stream channel erosion, pollution, and sedimentation. These changes in storm water runoff may contribute to increased quantities of water-borne pollutants and to altered hydrology that are harmful to public health and safety and the natural environment. These effects can be managed and minimized by applying proper design and well-planned controls to manage storm water runoff from development sites.

Map 3-8 shows the location of the State ambient monitoring site for water quality. The map also shows the location of the State classified watershed planning areas in the County which are:

- In two north and south sections along the Cape Fear River are Outstanding Resource Waters (ORW) watershed areas.
- Along the South River and Black River on the east boundary of the County is an Outstanding Resource Waters watershed area.
- In the southeast portion of the County in area of Slap Swamp, Buck Head Branch and Boggy Branch is a Special Strategy watershed. This area drains to Lake Waccamaw.

The NC Division of Water Quality administers storm water permitting in the County. These permits authorize the storm water discharge from development projects to receiving waters of the State, such as the Cape Fear River, Lumber River and associated tributaries, and the lakes in the County. The state storm water regulations are designed and implemented with best management practices to reduce the discharge of pollutants to the maximum extent practical in receiving water bodies. The state handles storm water permitting in Bladen County for industrial, municipal, and post-construction for development projects. The program also provides technical assistance to the regulated projects, engineers, industry, citizens, and the county.

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Clean Water Management Trust Fund

The Clean Water Management Trust Fund operated by the State has had twelve projects in Bladen County with a total funding of \$8.4 million leveraged to \$11.5 million since 1997. The Trust Fund goals are to enhance or restore degraded waters i.e. creeks, streams, lakes, protect unpolluted waters, and contribute toward a network of riparian buffers and greenways for environmental, educational, and recreational benefits.

Clean Water Projects in the Bladen County since 1997 have been the following.

Wastewater \$3.5 million

- ✓ Bladenboro - Land application and acquisition for Bryant Swamp (2001)
- ✓ Clarkton - Brown Marsh Swamp (2003)
- ✓ Clarkton - Upgrades and septic tanks at Brown Marsh Swamp (2008)
- ✓ Elizabethtown - Rehabilitation at Browns Creek (2006)

Acquisition \$4.7 million

- ✓ Bladen Lakes St. Forest at Mulford Creek (2001)
- ✓ Boyette Tract at Turnbull Creek (2007)
- ✓ Little Lake Singletary (1999)
- ✓ Turnbull Creek (2005)
- ✓ Suggs Mill Pond (1997)

Planning and Mini-Grants \$105k

- ✓ Bladenboro - Big Swamp (2006)
- ✓ Elizabethtown - Browns and Hammonds Creeks (2005)
- ✓ Donated Lee-Clark Tract at South River (2007)

Natural Hazards – Hurricanes

Bladen County has occasionally been impacted by hurricanes, tornadoes, and flooding in low lying areas. Other natural weather events have included severe seasonal storms i.e. nor'easters, and wildfires during times of drought. Fortunately the frequency of these weather events has generally been low and the damage has generally not been severe. Unincorporated Bladen County and municipalities have approximately 16,700 buildings with a current value of almost \$1.3 billion dollars according to tax records. To protect these assets the County has an adopted 2009 multi-jurisdictional Hazard Mitigation Plan. The intention of this Plan is to have a mitigation framework for prevention and reaction to disasters if and when they occur.



Generally the purpose of the **County Hazard Mitigation Plan** is to:

- Promote the public health, safety, and general welfare of residents and minimize public and private losses due to natural disasters.
- Reduce the risk and impact of future natural disasters by regulating development in known high hazard areas.
- Pursue funds to reduce the risk of natural hazards to existing developments where such hazards are clearly identified and the mitigation efforts are cost effective.
- Effectively expedite post – disaster reconstruction.
- Provide education to citizens that empower them to protect themselves and their families from natural disasters.
- Protect fragile natural and scenic areas within the planning jurisdiction.

Information for this section is from: *“2009 Bladen County Hazard Mitigation Plan.”*

Fish and Game

Fish

The Cape Fear River and Lumber River basins have a diverse range of fish habitats in the County. Habitats include creeks, streams, impoundments, ponds and lakes that support recreational fishing. Management of fisheries resources in the County has been a joint effort by the: North Carolina Wildlife Resources Commission; North Carolina Division of Inland Fisheries; and US Army Corps of Engineers. Management of freshwater fisheries resources within the river basins has been implemented with creel (fish basket) catch and size limits. A total of approximately 100 fish species are found in the County and 80 of these are indigenous. The Cape Fear River and Lumber River and tributaries have historically provided good fishing for largemouth bass, bluegill, flier, pumpkinseed, redbreast sunfish, red-ear sunfish, warmouth, channel catfish, blue catfish, flathead catfish, chain pickerel, and red-fin pickerel.

Unfortunately in the last few decades several factors within the rivers of the State and in Bladen County have negatively impacted the fish catch and habitat and has lead to some threatened species. These impacts have been a result of a reduction in water quality and sediment run-off from development, agricultural and forestry operations, and over fishing. Increased sedimentation and turbidity is particularly damaging to fish spawning habitat, egg, and larval life stages. Impacts with loss of wetlands and vegetation along creeks and rivers has also affected fish habitat. Another concern has been decreased river flow due to municipal water withdrawal use. Because of the above challenges a Cape Fear River Fisheries management plan was prepared in 2001 with defined goals and objectives for future management of fisheries resources.

Fish Information From: *“Fisheries Management Plan for the Cape Fear River Basin,”* by the North Carolina Wildlife Resources Commission and NC Division of Inland Fisheries, Raleigh, NC, 2001.

Fish resources have also been impacted by the three locks and dams on the Cape Fear River in the County (Map 3-8). These structures were constructed by the U.S. Army Corps of Engineers in the early 20th century and have impeded fish migration from the Atlantic Ocean to spawning in inland waters including Bladen County, especially during periods of low flow. A fish ladder (also called a rock arch ramp) was installed in 2012 by the Corps at Lock and Dam No. 1 near East Arcadia which has helped to allow anadromous fish past this point north to Elizabethtown. Anadromous fish are born and need to breed in freshwater but live their lives in salt water. However, the problem remains unresolved with no fish ladders at Lock and Dam No. 2 in Elizabethtown and Lock and Dam No. 3 north of Tar Heel.

Information from: “Fish ladder finished on Cape Fear”, 2012, Whiteville.com News

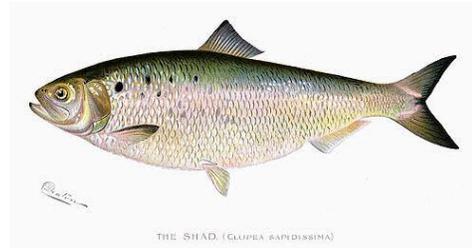
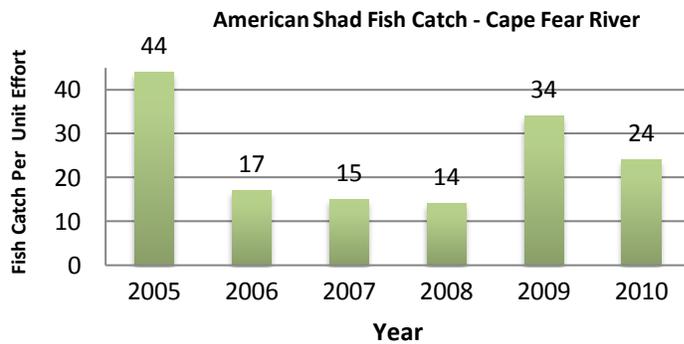


Figure 3-4. From 2005 to 2010 there was a decreasing amount of American shad fish caught in the Cape Fear River. Source: NC Wildlife Resources Commission and NC Division of Inland Fisheries “Fisheries research summary: American shad – highly prized sport fish in Cape Fear River,” 2011.’

Game

The NC Wildlife Resources Commission handles game concerns including hunting in the State and Bladen County. The Commission provides hunting licenses, information regarding hunting seasons, limits, safety, laws and enforcement. Typical recreational hunting game in the County includes ducks, doves, turkeys and deer.



White Tail deer.

Industrial Sites and Environmental Concerns

Large Industrial Sites

Two large industrial sites in Bladen County are the DuPont Fayetteville industrial plant located at the north end of County just south of the Cumberland County line, and the Smithfield plant in Tar Heel (Table 3-7). The DuPont plant produces chemical components for solar panels and Tedlar film. Smithfield Foods is a large pork meat processing and packing plant. The plants are regulated by the NC Department of Environmental and Natural Resources.

Table 3-7. Two large industrial sites in the Bladen County.

Site Name	Location – Road	Area - Town	File Number
DuPont Fayetteville Plant	22828 NC Highway 87 West	North Bladen Co.	NONCD-000-1647
Smithfield Foods	15855 NC Highway 87 West	Tar Heel	EPA-ID-1100-0737-7338

Source: Federal Environmental Protection Agency and North Carolina Department of Environmental and Natural Resources

Industrial Hazardous Waste

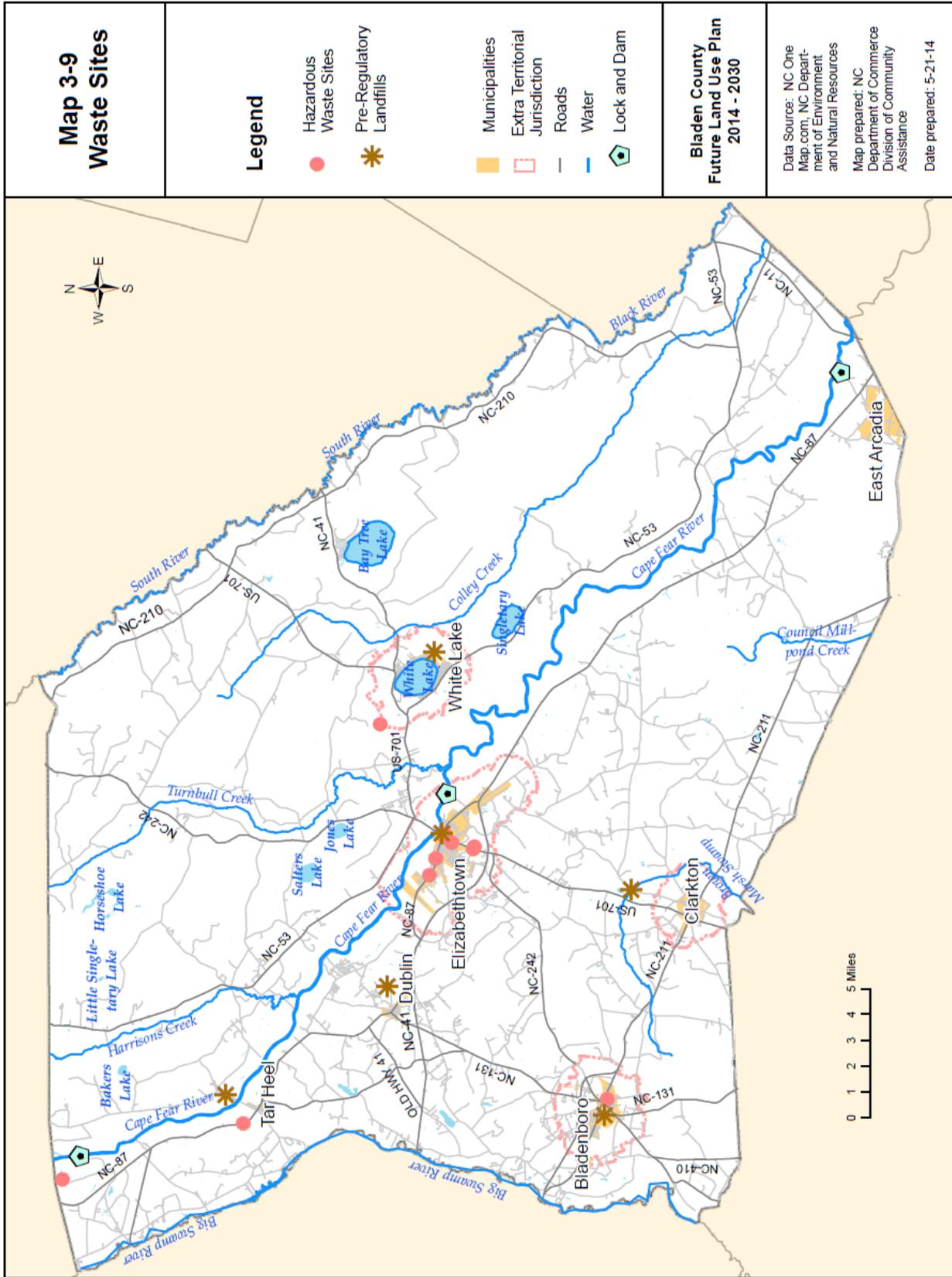
There are 107 sites are that are listed by the federal Environmental Protection Agency as generators of environmental waste in Bladen County (April 2013). The types of facilities are listed in Table 3-8. Map 3-9 shows the location of pre-regulatory landfills, and hazardous waste sites listed by the NC Division of Waste Management. There are no Superfund sites in Bladen County designated under the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) environmental law.

Table 3-8. Active Generators of Environmental Hazardous Waste in the County

Facility Type	Number of Sites - Case Files
Farm – including swine	52
Textile plant	6
Town and government	5
Wastewater treatment plant	4
Food processing and packing plant	4
Dry cleaner	2
Other commercial and industrial including: salvage yard, oil processing, chemical plants	34
Total	107

Source: Federal Environmental Protection Agency.

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Farm and above ground storage tanks.

There are five inactive hazardous sites in Bladen County listed in the following Table 3-9. These sites have a no further action status by the State.

Table 3-9. Inactive hazardous and pollutant sites in Bladen County

Site Name	Address	Town	Case Id. Number
Butler Farm	Center Road	Bladenboro	NONCD-000-1408
Cape Fear Chemicals - Brice	Highway 701 S	Elizabethtown	NONCD-000-0082
Congentrix	3100 West Broad Street	Elizabethtown	NONCD-000-1539
CSX-Rosindale	7 miles east of Clarkton	Clarkton	NONCD-000-2776
Greif, Inc.	409 E Elm Street	Bladenboro	NCD-98-192-2362

Source: NC Department of Environmental and Natural Resources

In 2010 a tanker truck was in an accident near Tar Heel on and spilled 3,000 gallons of methanol (Table 3-10). The site was cleaned up with oversight by the North Carolina Department of Environmental and Natural Resources.

Table 3-10. An incident of cleaned-up hazardous chemical spill in the County

Site Name	Road Name - Location	Case File Number
Methanol spill	Highway 87 near Tar Heel	NONCD-000-2467

Source: North Carolina Department of Environmental and Natural Resources

Bladen County has one former industrial site in Elizabethtown that was a furniture manufacturer and is a brown field site (Table 3-11). It is hoped that the site will be redeveloped or reused. A brown field refers to a site that is an abandoned or underused industrial and commercial facility available for re-use and in the process of being cleaned up to meet state and federal guidelines.

Table 3-11. One brown field program site in the County

Site Name	Road Name - Location	NC-DENR Case File Number
Southern Furniture	415 Peanut Road, Elizabethtown	Brown field # 10005-06-09

Source: North Carolina Department of Environmental and Natural Resources

Storage Tanks

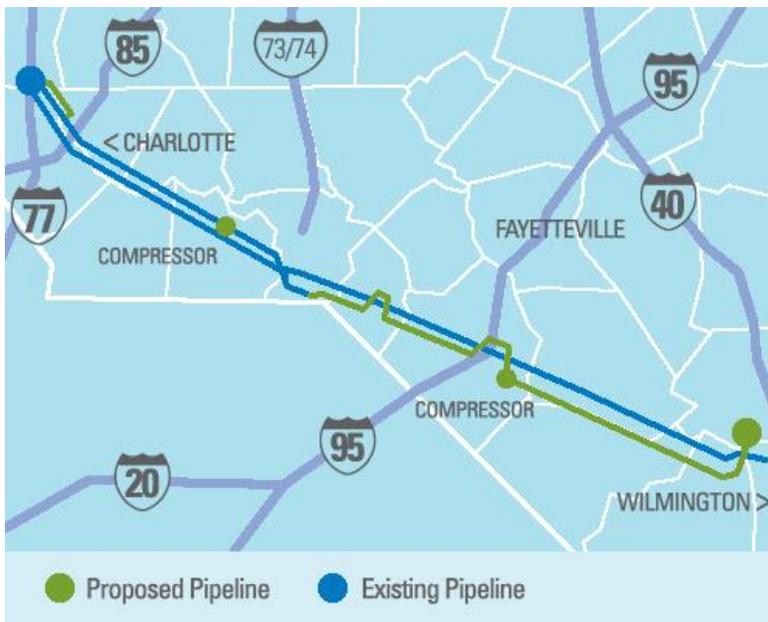
A review of the State tank program in Bladen County showed 35 underground storage cases and 10 above ground storage tank cases. The sites include the following types of uses; grocery store, gas station, restaurant, general store, marina, rail road, warehouse, vehicle dealer, and trucking company.

Source: Underground Storage Tank Section, Division of Waste Management, North Carolina Department of Environmental and Natural Resources



Natural Gas Pipeline

Piedmont Natural Gas Company, in 2012, constructed a 110 mile long and 20-inch diameter natural gas pipeline between the town of Hamlet (south west of Fayetteville), to the Wilmington Sutton Power Plant. The pipeline goes through Bladen County approximately along the south County line parallel to the CSX railroad line. The pipeline delivers gas to a new 620 mega-watt, natural gas-fired, combined-cycle combustion turbine power plant that to replaced the coal-fired units at the Duke-Progress Energy L.V. Sutton Plant.



Map of new Piedmont Natural Gas pipeline route from Hamlet to Wilmington that goes through Bladen County.

Large Scale Animal Farming: Poultry, Swine, and Cattle

Federal, state, and local environmental regulations govern North Carolina and Bladen County swine (hog) farms. Map 3-10 shows the hog farms in Bladen County and Table 3-12 shows the number of poultry, swine, and cattle farms in the County. Areas of regulation for hog farms include: surface water, air quality, animal and manure disposal, land and soil quality, land use, and odor. As with other industries, pork producers must meet or exceed all local, state, and federal worker health and safety requirements. Each year the NC Department of Environment and Natural Resources conducts two inspections at each hog farm in the state and in the County. Since 1997 there has been a new hog farm State moratorium. However some hog houses have increased in size as allowed by State rules.

Table 3-12. Number of state inspected poultry, swine, and cattle farms in Bladen County.

Farm Type	Number of Farms
Poultry	52
Swine	156
Cattle	125



Hog houses and waste lagoons.

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The following is a summary of the state and county rules and regulations that apply to hog farmers in Bladen County:

- A minimum setback of 1,500 feet from an occupied residence.
- A minimum setback of 2,500 feet from a school, hospital, church, park, or historic property.
- A minimum setback of 100 feet from perennial waters.
- A minimum setback of 500 feet from any property boundary.
- A minimum setback of 500 feet from any well supplying water for human consumption.
- No component of the manure management system within the 100 year floodplain.
- Effluent must be applied at agronomic rates: i.e. nutrients are applied at rates at which they will be utilized by crops so that nutrients do not runoff into waters of the state.
- Notice must be given to all adjoining property owners, owners across a road, and local health department.



Hog house farm

Chapter 4 - County Resources and Public Facilities

Introduction

An important part of this future land use plan is County infrastructure. County resources and public facilities are composed of service delivery, programs, and physical facilities. Infrastructure and services are necessary to support and maintain the quality of social, physical and economic health, safety, comfort, and general well being of County residents. The infrastructure capacity and its ability to handle projected growth planned for the County is presented in this chapter.

This chapter presents information regarding the following:

- **Solid Waste Disposal and Recycling**
- **Water Supply and System Management**
- **Potable Water Supply Plans**
- **Septic and Sewage Disposal**
- **Septic Ordinance**
- **Sheriff Protection**
- **Fire Protection and Emergency Services**
- **Animal Control**
- **Parks and Recreation**
- **Cultural Resources**
- **School Facilities**
- **Health Services**
- **Health Assessment**
- **Wireless Communication Facility Ordinance**
- **Noise Ordinance**
- **Economic Development**

Solid Waste Disposal and Recycling

The Bladen County Solid Waste Management Department ten year plan (2012 to 2022) is updated every three years. The County is directed by state statutes and the plan guides solid waste collection, disposal capacity, and the adequacy of collection services to meet County needs. Bladen County solid waste planning area includes the unincorporated County as well as the municipalities of Bladenboro, Clarkton, Dublin, East Arcadia, Elizabethtown, Tar Heel, and White Lake.



The **goals of the County ten year solid waste management plan** are the following.

- To protect public health and the environment.
- To provide planning area residents with waste disposal capacity, waste collection services, waste reduction, and recycling opportunities.
- To decrease improper waste disposal.
- To work toward the State waste reduction goal as recognized by the County.
- To increase the efficiency and cost-effectiveness of solid waste programs.

The amount of waste and types generated by the County is shown in the following Table 4-1. The waste reduction goal in the plan is to reduce the amount of waste per person in the next ten years by 23% from 1.12 tons per person to 0.86 tons per person.

Table 4-1. Estimated waste types of Bladen County (FY 2010-11).

Waste Type	% of Waste Stream	Waste Volume in Tons
Paper	21%	8,798
Glass	3%	1,209
Plastic	4%	1,751
Metals	2%	1,001
Pallets and wood crates	5%	1,918
Food Wastes	9%	3,669
Textiles - post consumer	2%	792
Electronics	1%	208
Construction, demolition debris	31%	12,718
Other	23%	9,634
Total	100%	41,698

Bladen County operates solid waste collection, disposal, and recycling programs through the County Enterprise Fund. Residential solid waste generated by rural households from single family and multifamily dwelling residents is accepted at the county convenience and recycling centers. This waste is collected in an enclosed compactor in thirty yard sized open top roll-off containers. Waste is hauled from the convenience centers to a transfer station by three of the County owned roll-off trucks. The County operates front loading trucks that collect waste from fifty six-cubic yard sized dumpsters located at schools and government buildings.



As of 2013 households were charged annual user fees of \$60 for collection and \$70 for disposal. Construction and demolition waste is also accepted at the transfer station with a \$45

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per ton tipping fee. The incorporated towns in the County contract their curbside municipal solid waste collection through monthly waste management user fees. The towns of Tar Heel and East Arcadia depend on the County operated programs. Bladen County operated a landfill until 1996 when it was closed, and as of 2013 all County and municipal solid waste is hauled to Sampson County Disposal, Inc. a private land fill facility located near Roseboro. Seventeen convenience and recycling centers are in full operation and are located throughout the County (Figure 4-1). All centers accept yard waste: small limbs, straw, grass clippings and shrubbery. Recycling and reuse items collected at the centers are typically the following (Table 4-2).

Table 4-2. County recycled items.

Tires: car, truck	Cans: steel, tin, aluminum	Card board: corrugated
Motor oil - used	Scrap metals	Paperboard
Oil filters	Appliances “white goods”	Newspaper, magazines
Batteries: lead and acid	Plastic bottles and containers	Oyster shells
Pesticide containers - rinsed	Glass (all colors) bottles, jars	

Bladen County partners with the Keep America Beautiful organization to help educate citizens on handling solid waste, reduction, reuse, recycling, and litter prevention. The County long range vision is to continue implementing an ongoing comprehensive waste management program. The direction and mission is to collect, recycle, and dispose of solid waste in the most economically and environmentally sound way possible.

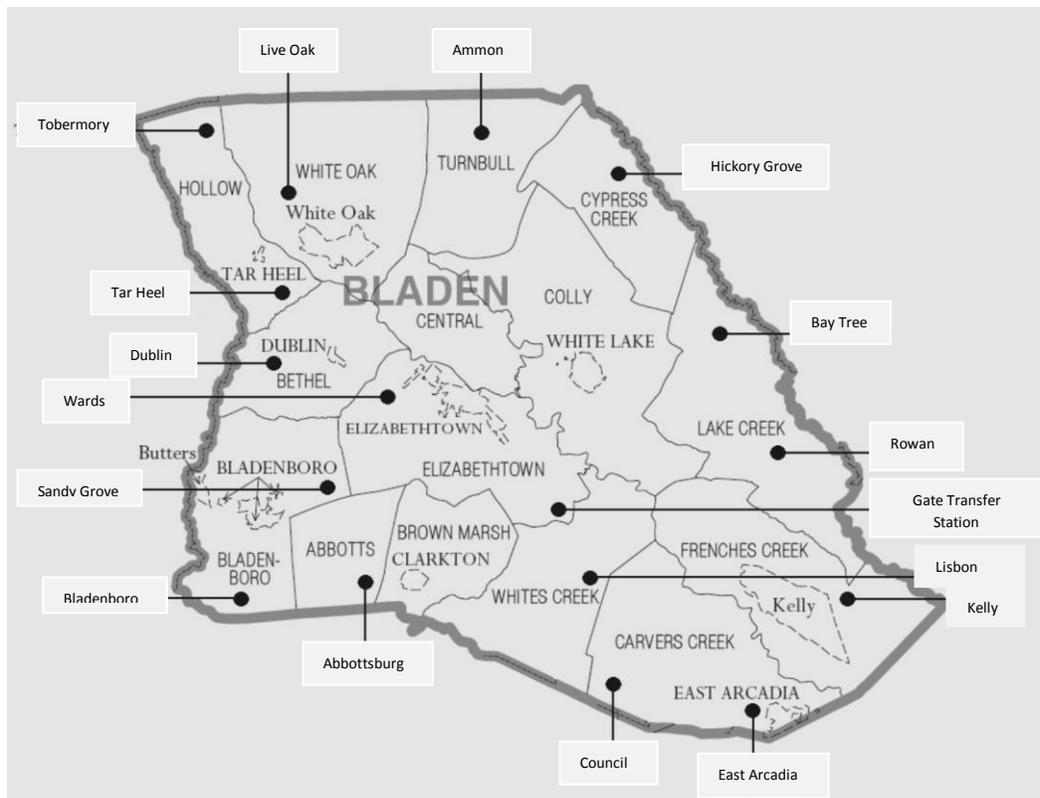


Figure 4-1. Bladen County seventeen recycling centers.

Water Supply and System Management

The Bladen County Water District was formed in 1984 for the unincorporated County. The location of the water systems in the county are shown in Map 4-1A. Since 1984 the following improvements have been made. The 1989 first phase was an economic development project in the district that included an elevated storage water tank, and a 12 inch water main to provide water service and fire protection to serve Harriet and Henderson Yarns. Water for this project was purchased from the Town of Clarkton. The next improvements in the district included Phase I-A with 9 miles of water main, and Phase I-B with 83 miles of water main. Phase I-A and I-B in 1990 were structured so that Bladen County Water District could purchase bulk water from the surrounding municipalities.

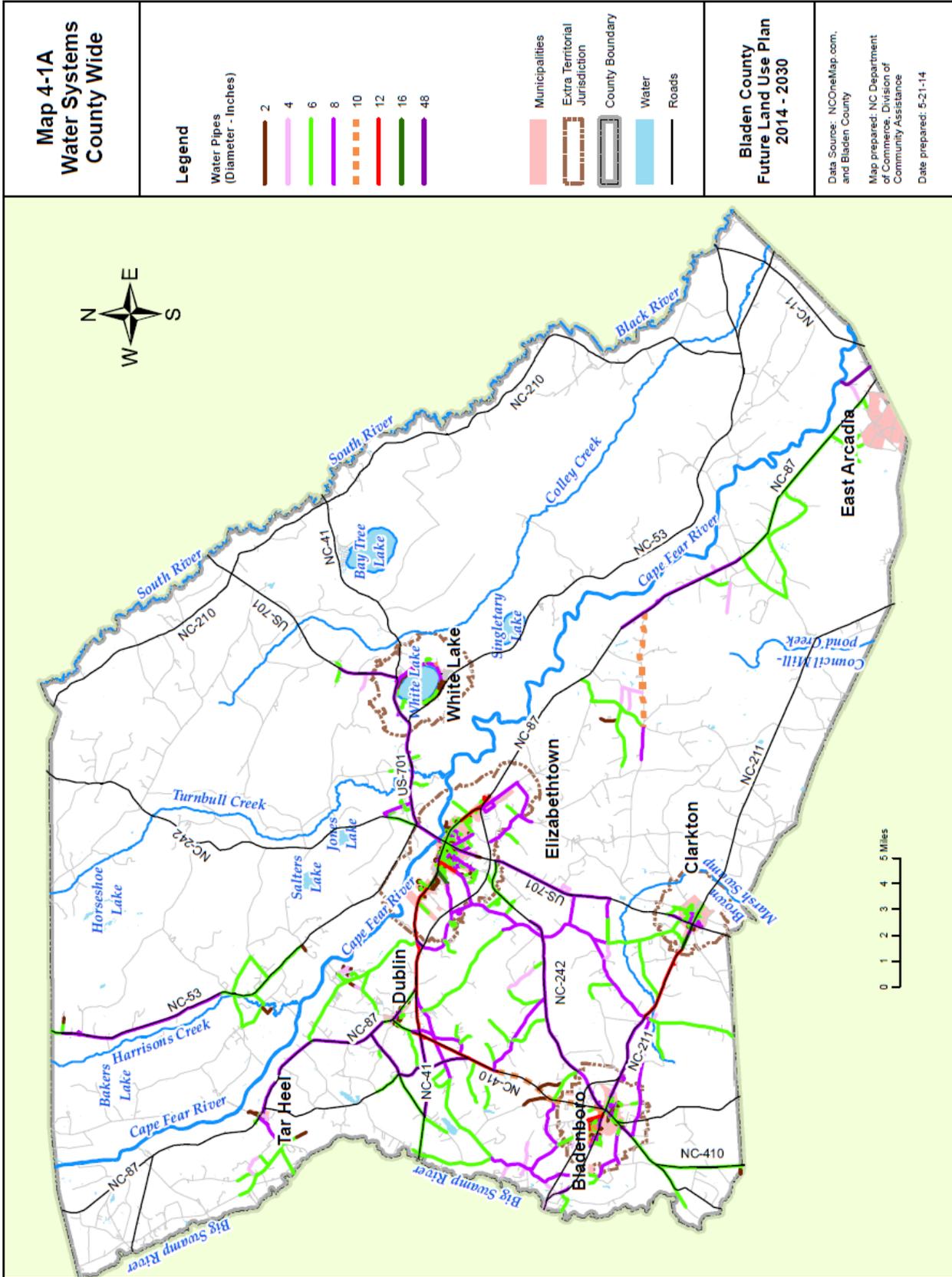
The next improvements of the district included Phase II-A in 1994 with 85 miles of water main, Phase II-B in 1998 with 90 miles of water main, and Phase II-C in 2000 with 95 miles of water main. The Phase II projects drilled ground water supply wells so that the Bladen County Water District could begin supplying customers with water. Once Phase II-C was completed, the Bladen County Water District became independent of any other bulk water supplier in the County and maintained connectivity to all municipalities within the County. As of 2013 the District still purchased relatively small amounts of water from Elizabethtown.



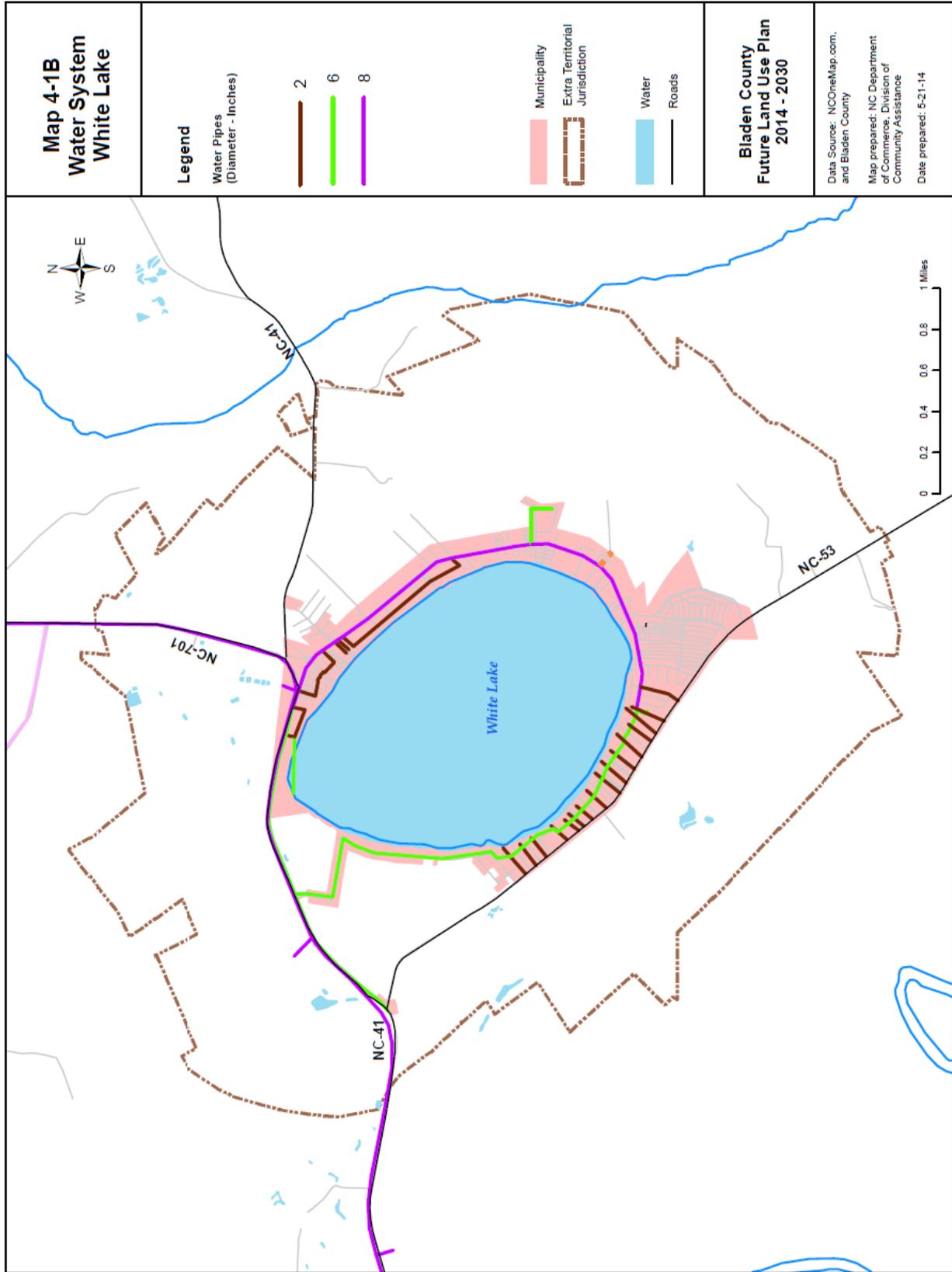
Phase III-A of the Water District finished construction in the summer of 2010. This phase in the Council area consisted of approximately 45 miles of 8 inch and 6 inch water mains, one 200,000-gallon elevated tank, and a new 270 gallons per minute production well. A new production well was also installed in Mount Horeb. Phase III-B consisted of approximately 50 miles of 6 inch, 8 inch, and 10 inch water mains, one 300,000 gallon elevated storage tank, and a new production well. Phase III-B completed in 2013 is primarily located in the northern and central part of the County between the US-701 and NC-242 corridors.

In total, the Bladen County Water District owns and operates over 450 miles of water lines, 8 elevated storage tanks, 9 production wells serving over 5,800 customers and 48 commercial users, and two bulk water customers. The quality of the water supply from the production wells is generally very good and meets State standards. Most of the wells use an iron sequestering chemical to improve water quality use, and three of the nine wells use a filtration system to remove iron. The following Table 4-3 shows the number of water use customers in the unincorporated County and the municipalities. The location of the municipal water systems are shown on the following maps: White Lake (Map 4-1B); Elizabethtown (Map 4-1C); Bladenboro (Map 4-1D); and Clarkton (Map 4-1E).

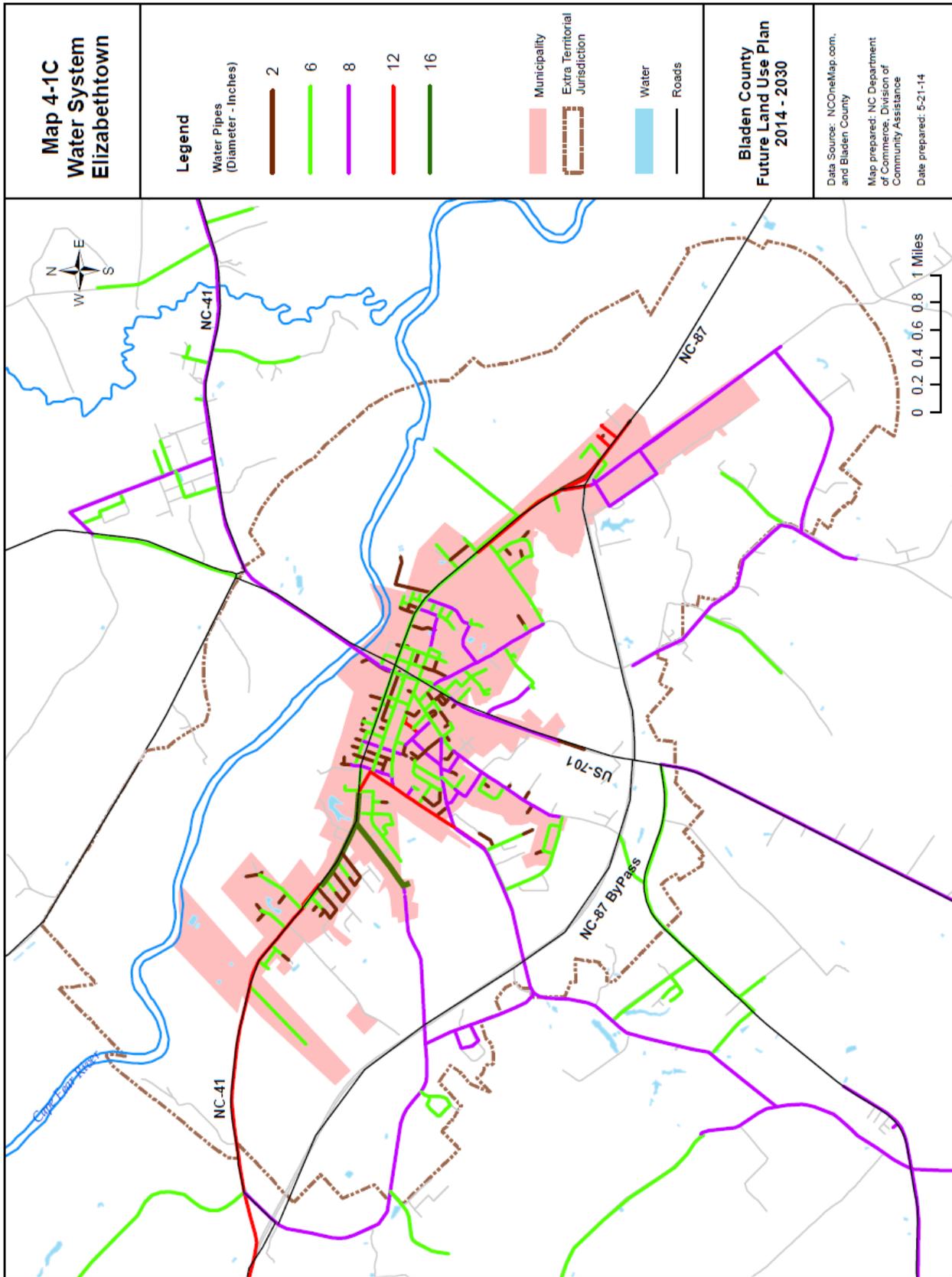
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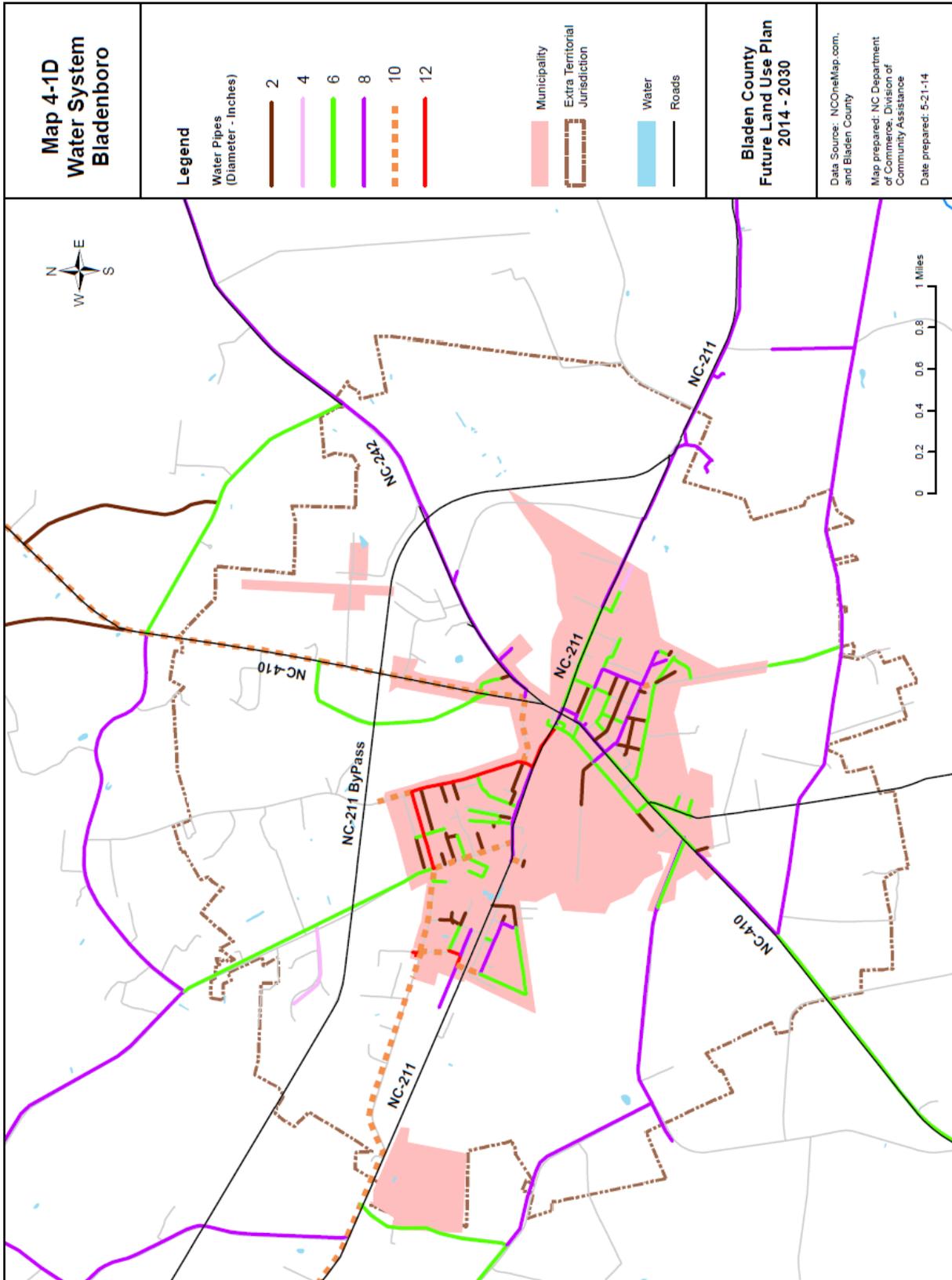
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Bladen County – Future Land Use Plan 2014-2030



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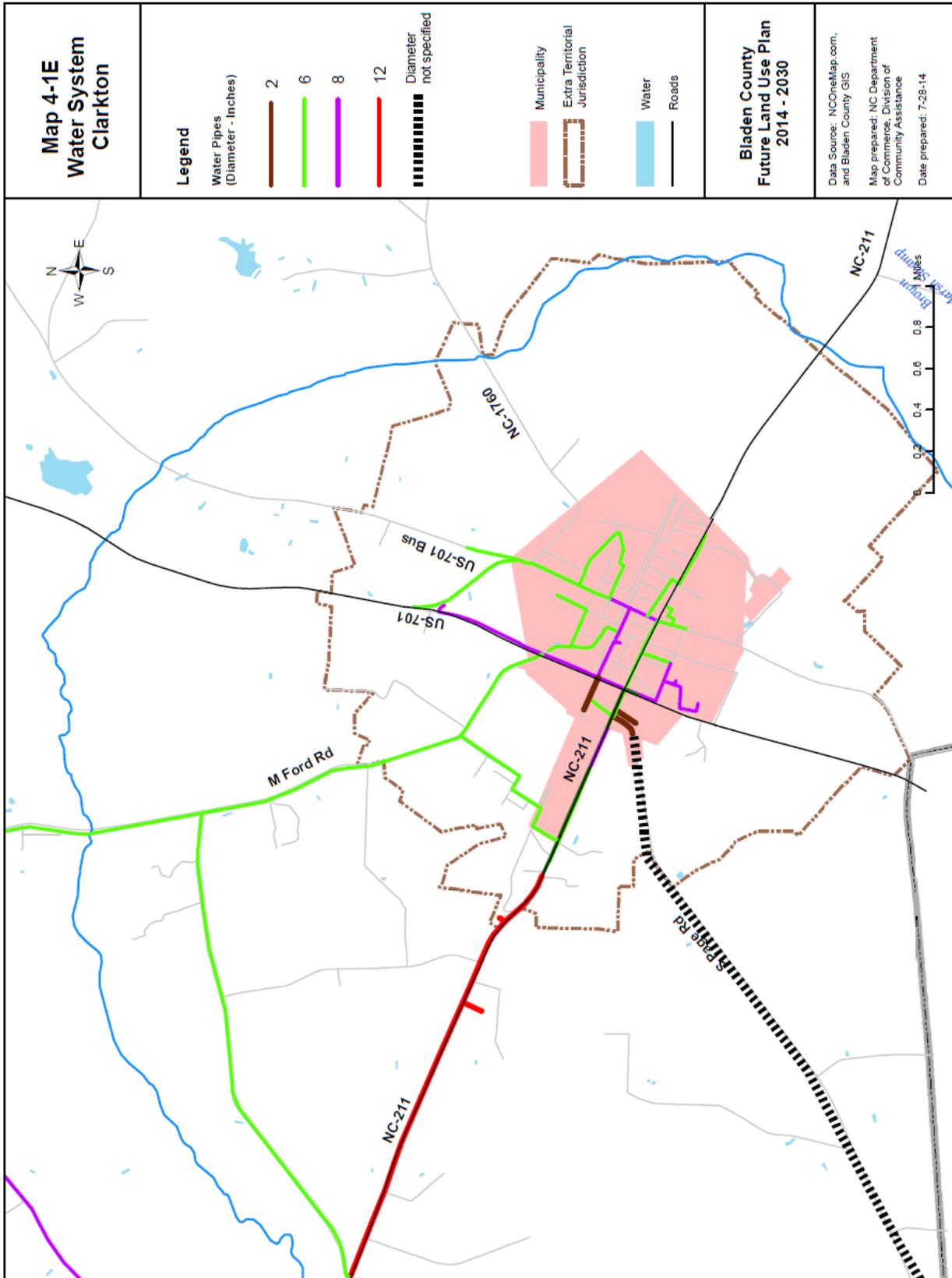


Table 4-3. County and Municipal Public Providers of Water in 2011.

Provider	Number of Customers
Unincorporated Bladen County	5,800
Bladenboro	1,200
Clarkton	527
Dublin	250
East Arcadia	235
Elizabethtown	2,300
Tar Heel	120
White Lake	1,100

A comparison of average household size and the 2010 census population of the Towns in Table 4-3 shows that most to all residents in the Towns are served by public water. Similarly an estimated 40% of the unincorporated County residents are served by public water and 60% are served by private well water use.

Potable Water Supply Plans

Bladen County has potable (drinking) water supply plans with an authority, districts, and municipalities. Each water plan has detailed information regarding water supply and use. Plan system information concerns distribution, programs, and water conservation. Water use information includes of water use by type and water sales. Water supply sources list monthly with-drawls and purchases, surface water sources, and water treatment plants. Water supply planning includes projections and demand versus percent of supply. The plans are prepared in coordination with the NC Department of Environment and Natural Resources, and updated as required.

Bladen County Potable Water Supply Plans

Authority: Bladen Bluffs.

Bladen County Water District: East Bladen, West Bladen.

Municipalities: Bladenboro; Clarkton; Dublin; East Arcadia; Elizabethtown; White Lake.

Septic and Sewage Disposal

Due to the rural character the unincorporated County relies on private septic systems for waste treatment and does not have or operate a public sewer system. This pattern will likely continue for unincorporated County residents using septic systems as needed. Conversely, the incorporated towns in the County generally provide municipal sewer systems and management and have a less or limited the need for septic systems (Table 4-4). Map 4-2 Sewer Systems show the sewer pipe locations in the five municipalities in the County.

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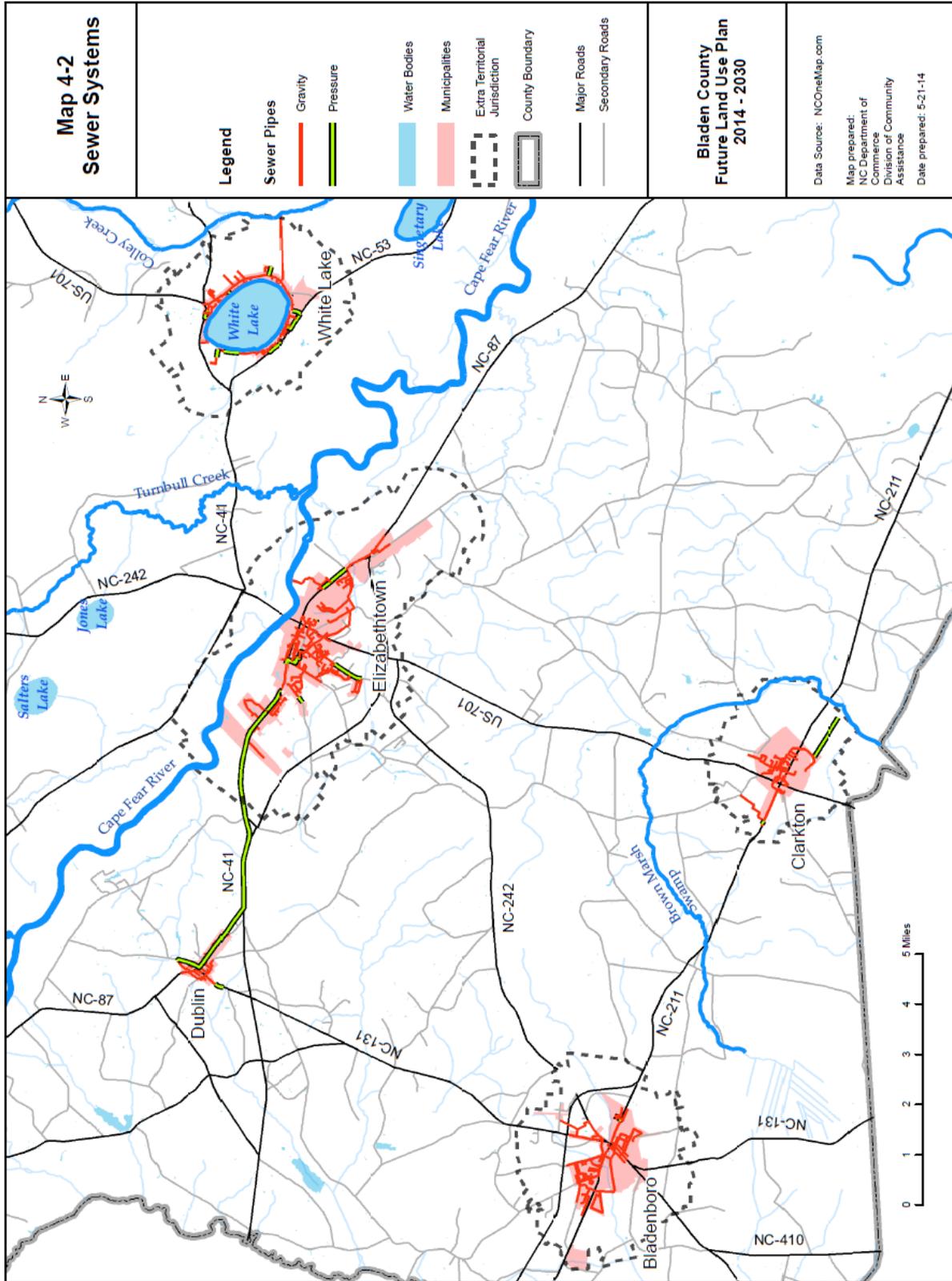


Table 4-4. Municipal sewer systems in Bladen County (see Map 4-2).

- Elizabethtown
- White Lake
- Bladenboro
- Clarkton
- Dublin

Septic Ordinance

Bladen County through the Health Department permits septic systems that are new installations, existing systems, as well as repair of failing systems. A goal of the North Carolina law with regard to septic systems, are to promote public health and safety of residents, and prevent the spread of diseases associated with failing or failed on-site septic systems. State laws and rules for sewage treatment require that a system is properly operated, inspected, and maintained.

The County should maintain the location and number of septic uses, and that they conform to the intent of the goals and policies (Chapter 8) of the Future Land Use Plan.



Typical residential septic system with tank and drain field system.

Sheriff Protection

The Bladen County Sheriff's Office has responsibility in three areas of the criminal justice system; law enforcement, the courts and corrections; and is responsible for County communications. The office is responsible to enforce North Carolina laws in the County. The responsibilities include County patrols, investigating crime and apprehending suspects. The office has 46 full-time sworn deputies, who made over 1,500 arrests in 2012, along with responding to over 4,500 calls from the public. The office also processed over 3,000 civil documents in 2012.



County Sheriff squad

The Sheriff's Office is responsible for maintaining the safety and security of the court and a deputy acts as bailiff when court is in session. The office is responsible to take charge of juries when they are outside the courtroom; to serve court papers such as subpoenas, summonses, warrants, writs, or civil process; and to extradite prisoners. The office maintains and operates the county jail.

County communications is administered by the Sheriff's Office. Responsibility includes taking emergency 911 calls and dispatching law enforcement, EMS, fire department, forest service and/or wildlife personnel to take appropriate action. The office also handles communication between law enforcement and other emergency personnel. The following Table 4-5 shows the reported 2012 County offenses from the Sheriff's Office.

Table 4-5. Summarized 2012 offenses reported by County Sheriff's Office.

Crime Category	Offenses	Percent
Violent Murder, rape, robbery, and assault.	100	4%
Property Burglary, larceny, auto theft, and arson.	1,047	45%
Behavior Drug, simple assault, weapons, prostitution, sex offences, family offences, gambling, d.w.i., liquor, disorderly conduct, obscenity, and kidnap.	584	26%
Monetary Forgery, counterfeit, fraud, embezzlement, stolen property, and vandalism.	379	16%
All other offenses	219	4%
Total	2,349	100%

Fire Protection and Emergency Services

The Bladen County Emergency Services department provides the following fire and rescue services for the County (Table 4-6). The department provides services that include alert and notification information with local TV and radio stations, six emergency shelters at public schools buildings, and disaster supplies and security. There are sixteen fire departments for the entire County.



Bladen County Emergency Services department.

Table 4-6. Bladen County Emergency Services

- E-911 addressing and mapping
- Emergency management
- Emergency medical service and non-emergency transport
- Fire marshal and protection

Fire protection services are provided through fire tax and service districts in the County, which contracts with municipalities and rural fire volunteer departments to provide fire protection services to the districts. Rescue services are provided primarily by these municipal fire departments: Elizabethtown, Tar Heel and Clarkton. While other municipal fire departments have basic rescue equipment. The Bladen County Emergency Services department evaluates and adds fire hydrant coverage as needed in conformance with the State insurance rating and standards for the County. Fire-fighting equipment for the County is listed in Table 4-7.



Table 4-7. Equipment for Bladen County fire services

Equipment	Number of	Equipment	Number of
Bush trucks	16	K-12 saws	10
Cascade mobile systems	5	Ladders	3
Chain saws	27	Service vehicles	5
Engines	30	Tanker – water tenders	19
Generators	30	Thermal imaging cameras	7

Animal Control

Bladen County Health Department has an Animal Control office and operates an animal shelter. The program picks up unwanted or stray animals, especially those with no tags, investigates animal bites, provides for adoption of homeless animals, enforces the state rabies statute, and partners with local veterinarians for community rabies vaccination clinics. Emergency responses by Animal Control may typically involve an animal that has bitten a person, or is rabid, or is a vicious dog complaint.

Parks and Recreation

Recreation and park facilities provide recreation opportunities and open space for County residents and visitors. Recreation and park facilities add to the quality of life in the County and provide places for community gatherings. In 2009 the County prepared two recreation and park

plans with a survey and inventory of current park facilities. The plans have recommendations for future needs. The County should use the recreation and park plans to ensure that their recommendations and implementation are consistent with the goals and policies (Chapter 8) of this Future Land Use Plan.



Bladen County Park.

The Bladen County 2009 Parks and Recreation Plan guides fitness and leisure activities for the County. The Plan has an inventory, citizen input, survey, discusses funding, user fee system, and short term and long term goals. The following are plan summary recommendations.

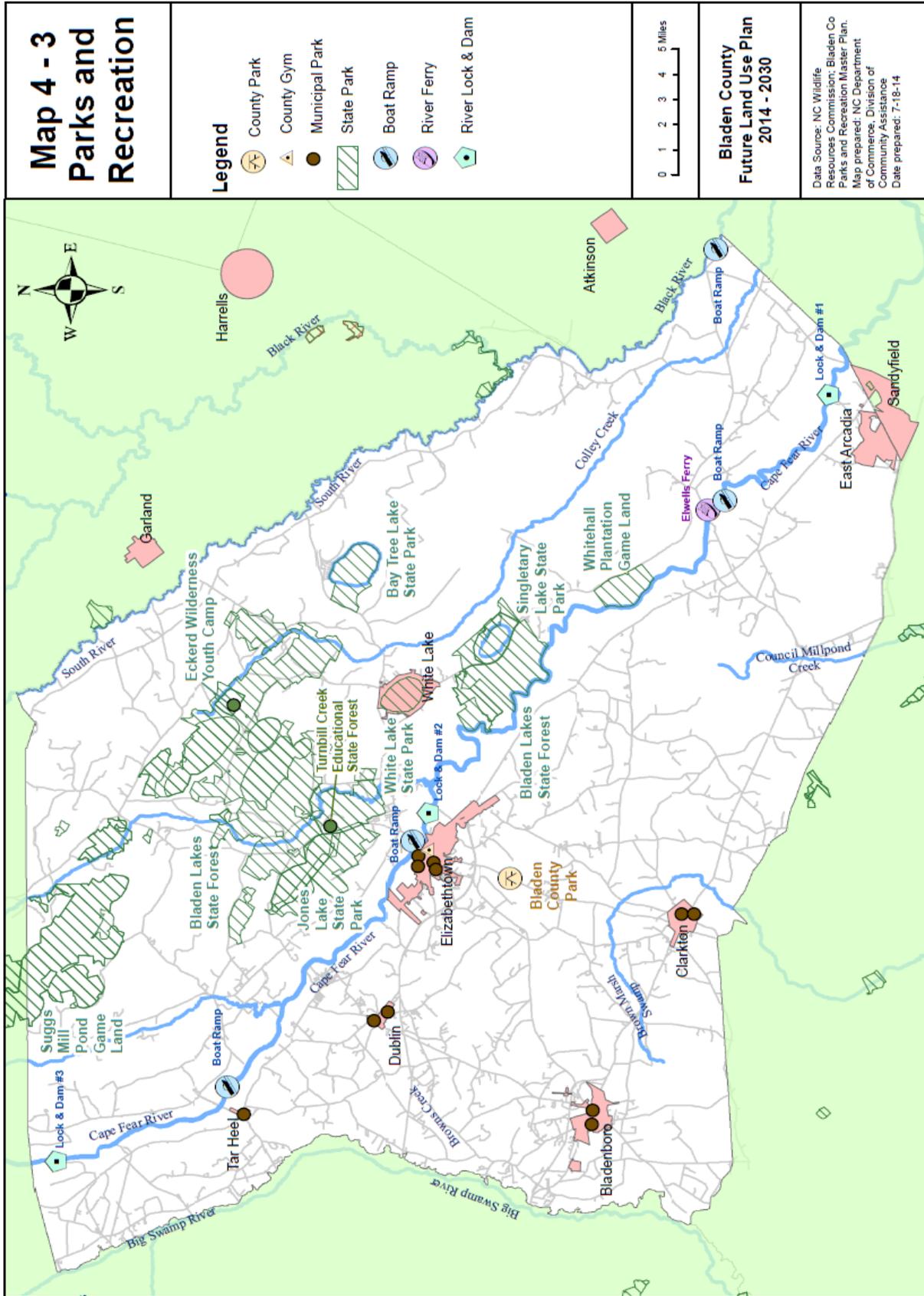
2009 County Recreation and Parks Plan Recommendation Summary

- There is citizen support for department service expansion.
- Increase the department operating and capital improvement budgets.
- Develop and/or maintain cooperative working partnerships including; schools, public agencies e.g. County Health Department, municipalities, churches, 4-H program, private and commercial businesses; e.g. fitness gym, golf, hunting.
- Marketing and advertizing.



The County is also served by the 2009 Master Plan for the Bladen County Park. Similarly the Master Plan has a site analysis, needs assessment, and citizen input. Recommendations include future facility programs, program descriptions for youth, adults and seniors, and proposed capital improvements. The location of the Bladen County park, municipal parks, and the state parks are shown on Map 4-3 and listed in Tables 4-8 A and B.

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Table 4-8 A. County and Municipal Parks and Recreation Facilities

- Bladen County Park, Doug Evans Rd.
- County Public School facilities
- Clarkton Dixie Youth Complex
- Dublin City Park
- King Street Gym
- Martin L. King Park
- Rupert Johnson Park
- Tar Heel Park
- Troy Hole Park
- W.S. Leinwand Park
- Wateree Park
- E. J. Cox Park

Table 4-8 B. State and Federal Parks and Recreation Facilities in Bladen County.

- Bay Tree Lake State Park
- Bladen Lakes State Forest
- Jones Lake State Park
- Singletary Lake State Park
- Turnbull Education State Forest
- Four NC Wildlife Boat Access Areas
- NC Wildlife Suggs Mill Pond Game Land
- Three Locks and Dams, Cape Fear River – US Army Corps of Engineers

Seven Carolina Bay formed lakes are important recreational areas and tourist attractions for the County. Bladen contains over 1,000 of these oval shaped Carolina Bay landscape forms which are similarly shaped and orientated. They are thought to have possibly formed from a meteorite shower impact 100,000 years ago. Over geologic time many of these lakes have filled in with sediment and are now forested, swampy or agricultural fields. There are opportunities to canoe, boat, fish and camp on the Cape Fear, Black and South rivers, White Lake, Jones Lake State Park and Singletary Lake. Recreation areas also include the three locks and dams along the Cape Fear River in the County. Many people in Bladen hunt as a recreational sport and there are many private sites throughout the County leased to hunting clubs.



Jones Lake State Park.



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Lake Singletary Lake State Park.



The Bladen County Parks and Recreation Department offers a variety of year-round activities for all age groups and encourages community participation, including persons with disabilities. The department provides support services to assist in meeting individual accessibility needs of persons wishing to participate in the programs. Over 100 volunteers are recruited by the department each year to assist with the programs. Recreational facilities and equipment are available for rental to the public and these include the gymnasium, ball fields, tennis courts, and picnic shelters. The 2009 County Parks and Recreation Plan discusses the obesity and health challenges that have occurred in the last few years and the need for facilities and programs.



Bladen County has many scenic rural landscapes, views, and sites east of the Cape Fear River which is low country, and west of the Cape Fear which has more relief with low rolling topography. The Cape Fear River also has areas of steep banks with scenic overlooks. Similarly the South and Black rivers provide several scenic views from the water. Outside of the small towns the rural character of the County has farmland, swamps, forests, various Carolina Bay lakes, streams and creeks.

Parks and Recreation information: "Comprehensive system wide recreation and park plan for Bladen County, North Carolina" 2009; and "Master Plan for Bladen County Park, Bladen County, NC" 2009.

Cultural Resources

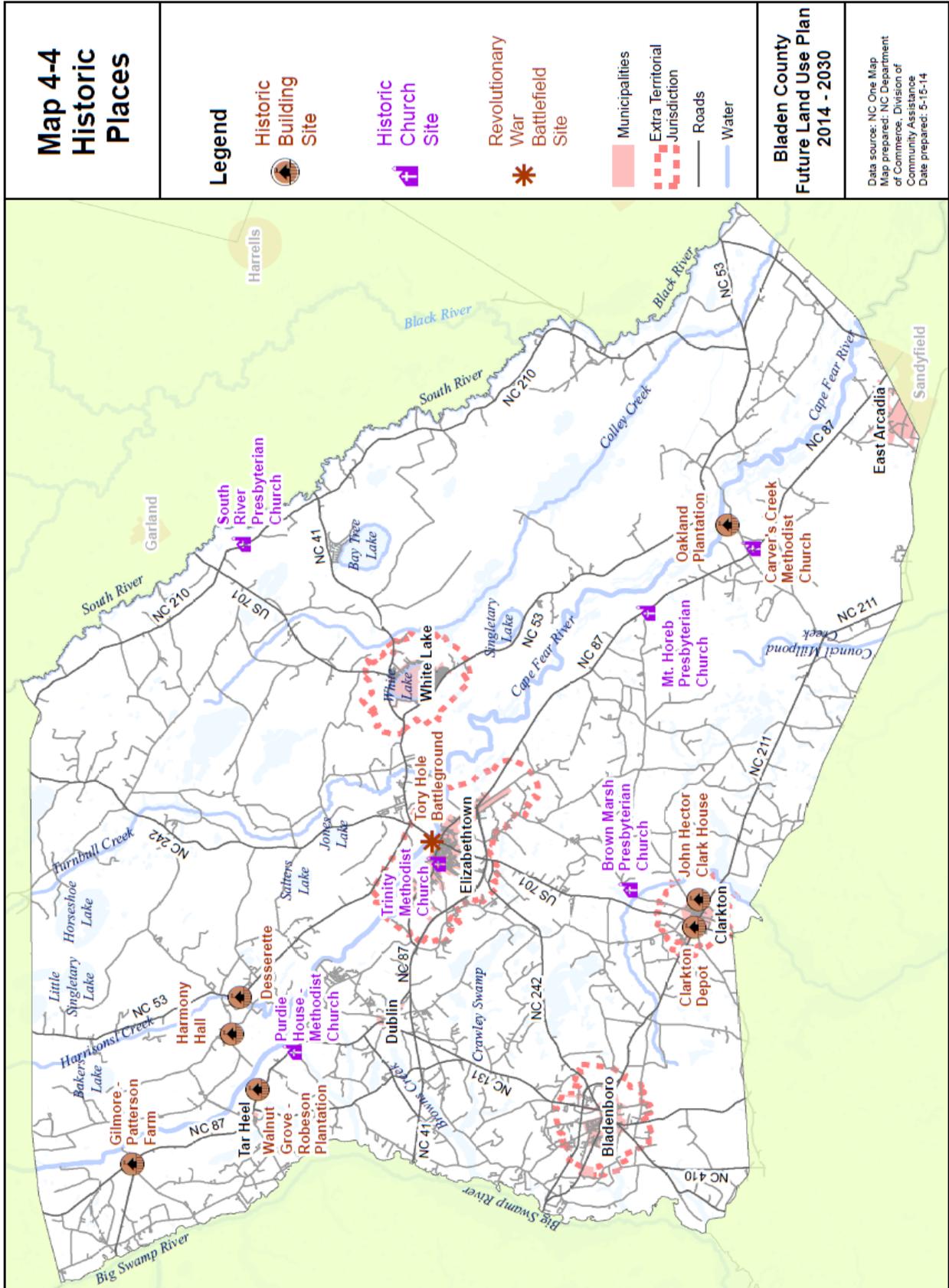
Bladen County has over 140 recorded archaeological sites with the State Historic Preservation Office in Raleigh. The County 1978 Land Use Plan identified 119 historical and cultural places throughout the County with a reconnaissance survey. Discovered and preserved artifacts include seven historic, circa 1400s-1700s Native American canoes, which are housed in the White Lake and Bladen Lake State Park. A past investigation included the sunken remains of the Thelma, a 1913 steam paddle wheel riverboat, which was the last passenger steamboat to operate on the Cape Fear River. One of the more popular places is Tory Hole Park and Amphitheater which is located on the banks of the Cape Fear River in Elizabethtown. The amphitheater and park in 2013 was undergoing renovations and will be used for plays and other stage events. Also a cultural reminder from past historical times is the Elwell Cable Ferry at Carvers Creek which is the only remaining operating ferry in Bladen County that crosses the Cape Fear River.

Bladen County as of 2013 had thirteen properties in the National Register of Historic Places including six churches and several large plantations as shown in Table 4-9 and Map 4-4. The State Historic Preservation Office has provided technical assistance for renovations to the County for projects including Harmony Hall Plantation, Trinity Methodist Church, and Bladenboro Elementary School.

Table 4-9. National Register of Historic Places in Bladen County.

Building - Property	Vicinity	Register Date
Brown Marsh Presbyterian Church	Clarkton	09/02/75
Carver's Creek Methodist Church	Council	5/20/87
John Hector Clark House	Clarkton	05/20/87
Clarkton Depot	Clarkton	12/23/86
Desserette	White Oak	10/07/87
Gilmore-Patterson Farm	St. Paul's	7/28/99
Harmony Hall	White Oak	03/24/72
Mt. Horeb Presbyterian Church and Cemetery	Council – Whites Creek	05/13/87
Oakland Plantation	Carvers	04/25/72
Purdie House and Methodist Church	Tar Heel	04/13/77
South River Presbyterian Church	Garland	05/23/96
Trinity Methodist Church	Elizabethtown	09/14/89
Walnut Grove (Robeson) Plantation	Tar Heel	05/29/75

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The following is information of six important National Register of Historic Places in the County listed in Table 4-9 and the revolutionary war Tory Hole Battleground site.

Brown Marsh Presbyterian Church and cemetery in Clarkton was organized circa 1756. The first two buildings were made of logs and until 1848 the church was also used for secular education. The present structure was built in 1818 and is a frame house with hand-dressed cypress weather-boarding. The church was constructed entirely with handmade iron nails and the building is supported by pillars made from heart pine.



Brown Marsh Church.

The Brown Marsh church has 18 small panes of glass in each window and the wooden shutters are attached by handmade hinges in the shape of a carpenter's square. The pews, pulpit, wooden window closings, rough cedar siding and cedar shingle roof are original.

Carvers Creek Methodist Church in Council is an active present-day church. It is located on the site used by Quakers as early as 1734. Circuit rider Francis Asbury established the Methodist church in 1790 and the present building was built in 1859. The building is 60 ft. by 40 ft. by 39 ft. from the base to the eaves. There are two aisles, original pews and siding, and a cemetery. A large slave gallery is across one end and two sides. The entrance to the gallery is in the front of the building and the church was built with large timbers. The sills are made of heart pine and the weather-boarding and floors were dressed by hand.

Harmony Hall in White Oak is a simple but stately circa 1768 home of Colonel James Richardson built on a 12,000 acre tract of land. The property is bordered on the south by the Cape Fear River, and was acquired in part by a grant from King George III. It was constructed as a two-story A-Gable form with two-story galleries. The foundation is tall in keeping with building traditions of the period and has rather unusual flared ventilator holes, and accommodates storage space under the house.



Harmony Hall built circa 1768.

Stairs from the second floor lead to a full attic. Inside the home, some of the

walls are paneled with wide pine boards, some have chair rails, and some are plastered above a paneled dado. The mantels are of the Adam design. During the latter part of the Revolutionary War, Lord Cornwallis passed through on his way into South Carolina and he and several of his offices demanded quarters at Harmony Hall for a few weeks.

Mt. Horeb Presbyterian Church in Council was built in 1845 and is still in use today. It has handmade pews and pulpit, original siding, and a cemetery.

Purdie House and Methodist Church in Tar Heel is an original structure and to this day is used for church services. It has former slave balconies, lath and plaster interior, louvered shutters, and a cemetery. The house overlooks the Cape Fear River from a bluff.

Trinity Methodist Church in Elizabethtown was built in 1834 and is the original structure. A slave balcony exists on three walls of the structure. In the adjacent cemetery the oldest marked grave belongs to Mr. William Trapp who died on August 5, 1788. Church services are still held in this facility.

Tory Hole Battleground in Elizabethtown is where the American Whigs broke British Tory power in Bladen County in August of 1781 during the Revolutionary War. Fleeing Tories were retreating from the Whigs and cornered and attacked in the ravine next to the Cape Fear River. The battleground is located near the main street of Elizabethtown. A park, exercise trail, picnic shelter, playground, and amphitheatre are on the site.



Other historical sites in the County are shown in the following Table 4-10. They are not nationally registered but are still culturally important.

Table 4-10. Additional historical sites in Bladen County.

Building - Property	Location
Beth Car Presbyterian Church	Tar Heel
Haw Bluff Baptist Church	East Kelly
Masonic Building	Ammon
Windsor Methodist Church	Ammon

The following annual festivals and events occur in the County attracting residents and tourists (Table 4-11). There are additional sporting events and fund raising events not listed.

Table 4-11. Festival events in Bladen County.

- Battle of Elizabethtown re-enactment
- Beast of Bladenboro festival
- Bladenboro Christmas parade
- Blueberry festival—Ammon
- Elizabethtown Christmas parade
- Elizabethtown M.L. King parade
- Harmony Hall Christmas – White Oak
- May day festival—East Arcadia
- Old fashioned planters day—Ammon
- Peanut festival—Dublin
- Spring and Grow festival – Lu-Mil Vineyard, Dublin
- Spring festival—Kelly
- Water festival—White Lake

School Facilities



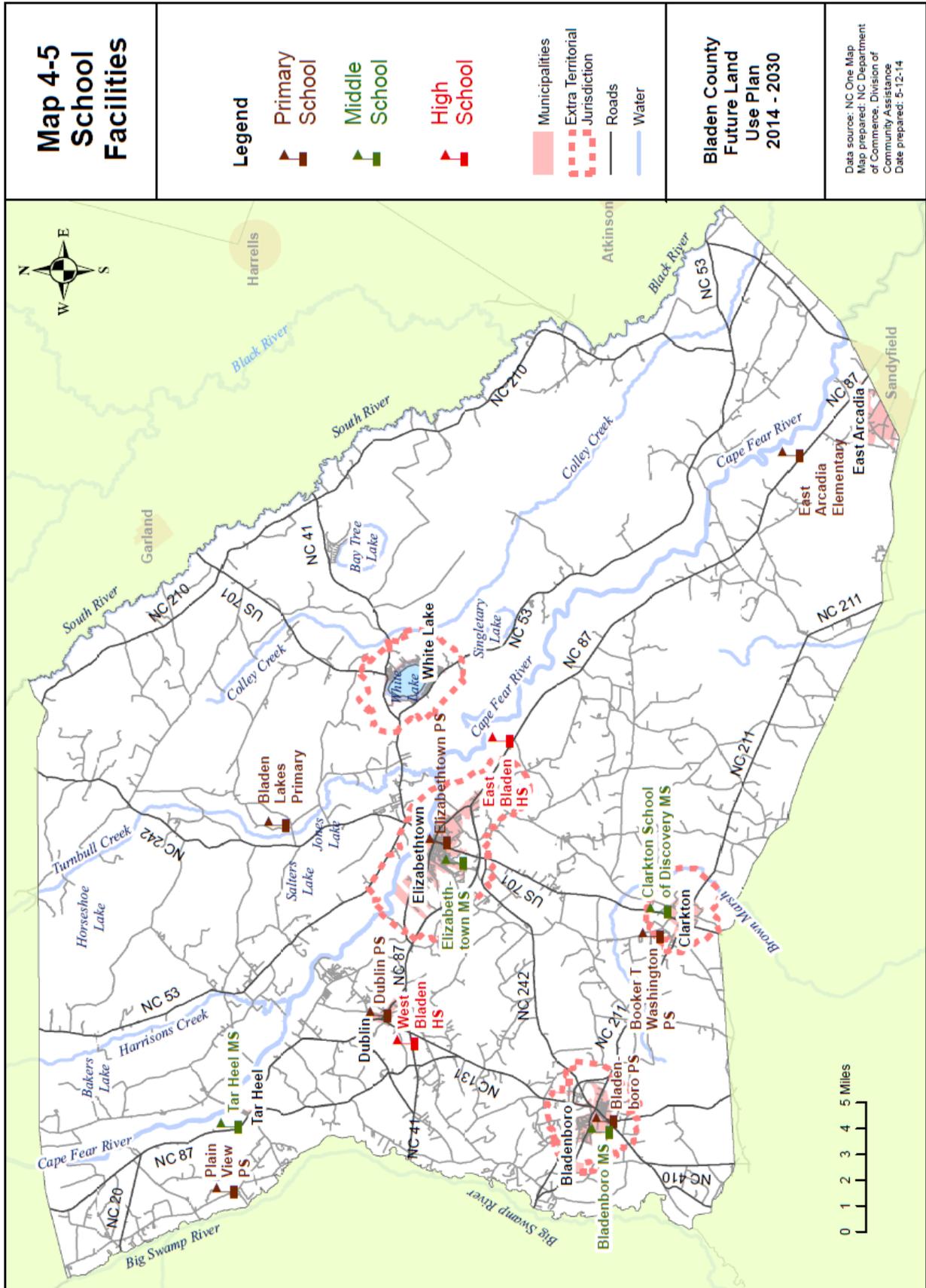
Buildings, Teachers, Students and Digital Learning

Bladen County schools have three administration buildings consisting of a central office, transportation department, and a maintenance department. The district owns an additional building on Martin Luther King Drive in Elizabethtown which is currently leased to Paul R. Brown Leadership Academy. This facility will be used as an Educational Resource Facility (ERC) at the end of the lease. There are thirteen public schools in the county consisting of elementary, middle and high schools as show in Table 4-12 and Map 4-5. In 2013 there were approximately 725 school employees.

Table 4-12. Bladen County public schools.

Type	Number of Schools
Elementary	7
Middle	4
High school	2

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Bladen County has 13 public schools shown in the following Table 4-13 with the respective number of students.

Table 4-13. Bladen County public school student numbers – 2013/14.

School	Number of Students
West Bladen High School	792
Dublin Primary	287
Clarkton School of Discovery	310
Booker T. Washington Primary	212
East Arcadia Elementary	134
Bladen Lakes Primary	299
Elizabethtown Middle	401
Elizabethtown Primary	504
East Bladen High School	702
Plain View Primary	189
Tar Heel Middle	362
Bladenboro Primary	436
Bladenboro Middle	392



East Bladen high school.

In 2012 the County installed a wide-area computer network system (WLAN) in all school classrooms and administration buildings. Wi-Fi connectivity is also available district-wide. The wide-area computer network system was installed to meet the demands of a laptop project in the high schools. This laptop project received funding from the Golden Leaf Foundation and the federal Race-to-the-Top program. Every teacher and high school student is a loaned owner of a laptop for use in the classroom, at home, or wherever access to digital learning is needed.

School Facilities Planning

School buildings and facilities that are as much as 90 years old was the catalyst which prompted the Bladen County Board of Education to request that school Superintendent commission a master facilities plan. An Ad-hoc community focus group convened in 2013 to begin the process of developing the plan.

The County School Superintendent's 21st Century Facilities Planning Committee is comprised of community members, representatives from community agencies, school personnel, district office personnel, and elected officials. The group has been tasked with developing a plan of action in regards to addressing facility needs both currently and in the near future. The Superintendent has asked the committee to look at census data, school programs, current condition of buildings, economic impact, and financial impact that existing facilities have on Bladen County. The Superintendent also asked the group to determine what, if any, new facilities and programs should be considered for the school system.

Subcommittee members, comprised of the large group committee, will be collecting information regarding transportation, funding, environmental impact, student population, birth rates, construction cost, population location, school location, program offerings and expansions, and technology. The Board and the Superintendent think the best way to develop the school plan, is to engage the community in outlining how the facilities are used, including the existing condition of the buildings, and what areas of instruction will best prepare the students to be college and career ready. School planning will involve stakeholders including, business and industry, parents, students, and anyone interested in the future of school children and the school system.

The committee worked much of the 2013-14 school year, meeting monthly, gathering information to determine the learning environments and facilities needed to support them. Once the plan is complete, the Superintendent will make a recommendation based on the final results to the Board of Education and the County Commissioners as to what will best support the educational needs and requirements of Bladen County students.

Health Services

The Cape Fear Valley - Bladen County Hospital is located in downtown Elizabethtown. This 58-bed facility has: a 24-hour emergency department; is staffed on a full-time basis with specially trained physicians and nurses; a 40-bed medical-surgical unit; an Intensive care unit; and an up-to-date birthing center. In addition to the main hospital, there are several clinics throughout the area which provide a host of services for all types of patients. Since 2012 the hospital has invested more than \$19 million in upgraded improvements.



The Cape Fear Valley - Bladen County Hospital.

The Bladen County Department of Public Health serves the people in the County. The mission is to protect and improve the health and quality of life. A 2010 County health report identified main program efforts and concerns including: parenting classes, teen pregnancy, tobacco prevention, healthy lifestyles, diabetes education, obesity, and the need for walkable communities for exercise.

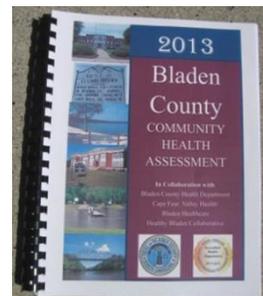
Health Assessment

In 2013 a Bladen County Community Health Assessment report was prepared in collaboration with the following groups:

Bladen County Community Health Assessment Collaborators

- Bladen County Health Department
- Cape Fear Valley Health – Bladen Healthcare (Bladen County Hospital)
- Healthy Bladen Collaborative

The report with a survey finds the priority County health chronic diseases concern: the heart; diabetes; respiratory; and cancer. Also a County community concern is obesity, substance abuse, and motor vehicle accidents. In addition to the health care provided by the County Health Department and Bladen County Hospital, health outreach programs in the report include the following.



Health Programs in the Health Assessment Report

Bladen County Health Department

- “Young moms connect”
- “Communities healthy activities project”
- “Safe kids”
- Diabetes educational support group meetings

NC Cooperative Extension

- “Eat smart, move more, weigh less” program

Bladen County Schools

- Abstinence education approach and prevention: “Making proud choices. A safer sex approach to STDs, Teen Pregnancy and HIV”
- “Puberty – the wonder years” education program
- “Girls on the run” and “Boys stride” programs

Wireless Communication Facility Ordinance

The County has wireless communication facility development ordinance standards. They apply to facility installation, construction, attachment, removal, and alteration. The ordinance sets criteria for evaluating proposed activities. And there is a procedure for the suitability, certification and accomplishing related purposes.

The purpose of the ordinance is to encourage orderly development of wireless communication technology for the benefit of citizens while recognizing the character of the communities. The County encourages the delivery of new wireless technologies while controlling unnecessary proliferation of communication towers. These activities are to promote and protect the health, safety, prosperity and general welfare of persons living in the County.



Noise Ordinance

The County Sheriff’s office and Planning Department administer a noise protection ordinance with enforcement regarding violations, restrictions, and permits.



Economic Development

Two groups work with Economic Development in Bladen County and are listed below. These organizations actively promote the area, try to foster economic growth, and facilitate companies to relocate to the County.

Economic Development Bladen County

- Bladen County Economic Development Commission
- North Carolina's Southeast

The Bladen County Economic Development Commission works with Bladen's Bloomin' Agri-Industrial, Inc., a non-profit real estate development and revolving loan fund board, to create new jobs, tax base, and agri-business opportunities in Bladen County. Recent successes of the partners have been the expansion of the NC Division of Motor Vehicles call center (50 jobs), a new healthcare facility in Bladenboro (40 jobs), and a fourth industrial incubator in the Elizabethtown Airport Industrial Park (12-15 jobs). The incubator network now boasts seven industrial bays ranging from 4,500 square feet to 10,800 square feet. All bays are currently leased to small, growing businesses.

The Bladen County Economic Development Commission has worked to attract and foster growth of large industries such as Smithfield Packing (4,852 employees), DuPont (465 employees and over 320 contractors), and Danaher Controls (340 employees). Gildan Yarns is investing approximately \$15 million and creating 25 new jobs and retaining 130 jobs in Clarkton. Superior Media is moving into a new 50,000 square foot manufacturing plant and investing \$2 million in new machinery and equipment. The project will save 26 Bladen County jobs and create approximately 7 new jobs in Bladenboro.

Additional programs regarding economic development are the: NC Small Town Main Street program with the NC Department of Commerce; and the NC Rural Economic Development Center based in Raleigh. For example Elizabethtown has a participant in the Main Street program during 2012-14.

Chapter 5 - Transportation and Circulation

Introduction

Transportation and circulation is an important part of the future economic growth and development for the County. The road network for vehicles provides: transportation of goods, and services; access to employment; and an improved quality of life. The County roadway network is the primary means of transportation for community residents and visitors. Also important are: rail access; pedestrian sidewalks and trails; bicycle access; public transportation; rural airports; and river access.

The topics of this chapter are the following:

- **Road and Street Inventory**
- **Transportation Planning – Mid-Carolina Rural Transportation Planning Organization (RTPO) and NC-Department of Transportation (DOT)**
- **Interstate - 95 Highway**
- **Bus Service - Public Transportation**
- **Sidewalks, Bike Paths, Walking Trails**
- **Rail Access**
- **Airports**
- **River Access**

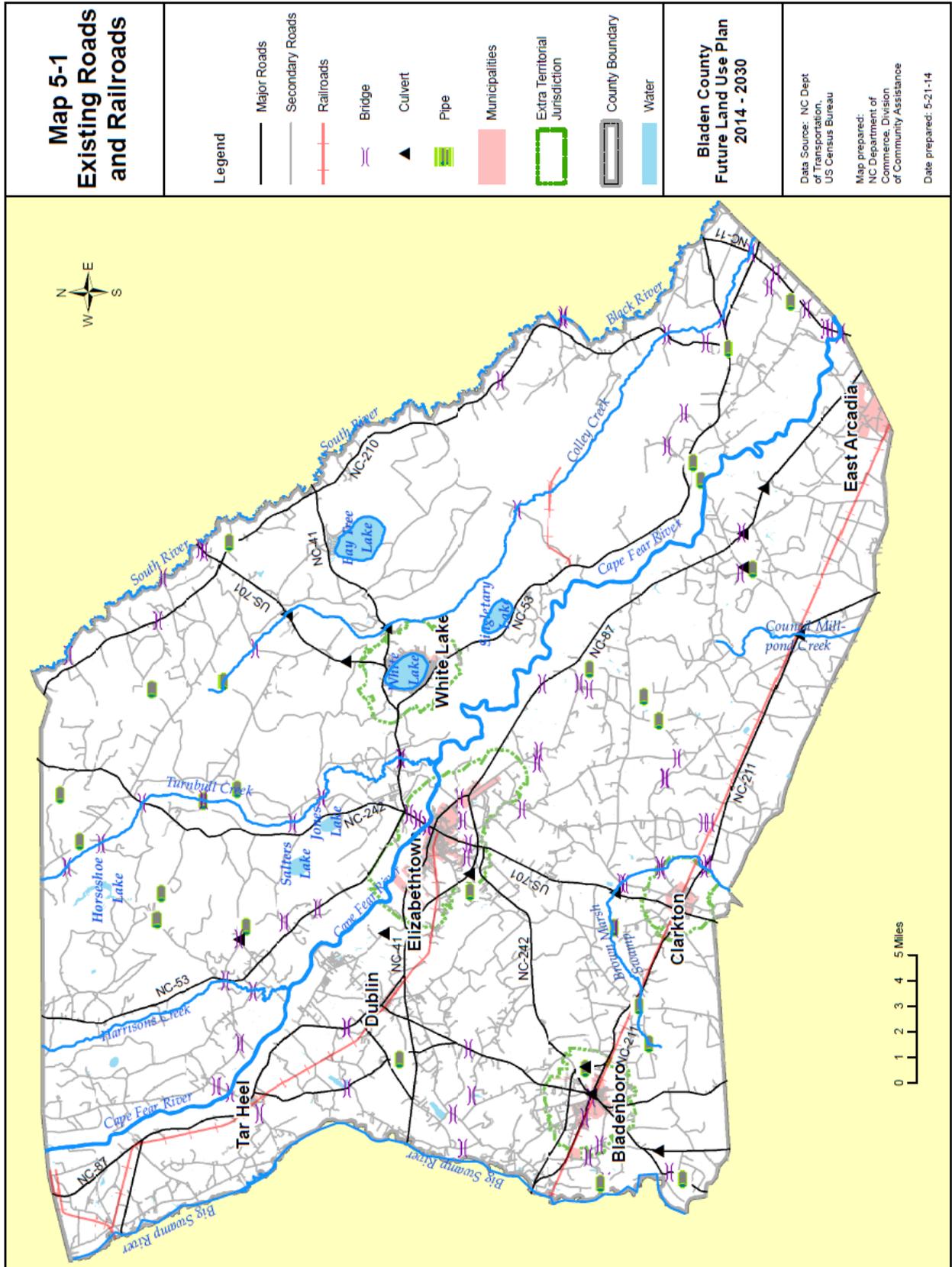
Road and Street Inventory

The purpose of the roadway system is to move people and commercial goods safely and efficiently. Roads also allow drivers to move safely and easily in and out of the County and Towns to employment. The County with the NC-Department of Transportation, and the Mid-Carolina - Rural Transportation Planning Organization (RTPO) manages the connected road system to surrounding communities, region, and interstate highway system.

For County planning purposes there are three kinds of roads and streets, each of which has a different function used by both residents and visitors. Local streets provide access to property and mainly serve local residents. Collector roads move traffic from local streets to major arterials. Arterial roads carry traffic into and out of towns. Map 5-1 shows the road and street network in the County. There are main County and state maintained roadways that traverse through Bladen County. There are also private property maintained and unmaintained dirt roads in the rural County. Many collector and local roads also provide access to towns and residential communities throughout the County.

Table 5-1 lists primary roads in the County. Most all the roads in the County are two lane right-of-ways except for the north portion of Route 87 which has four lanes between Elizabethtown and the north County line at Tobermory. The municipalities in the County also maintain some of the roads and receive state Powell Bill funds.

Bladen County – Future Land Use Plan 2014 - 2030



Bladen County – Future Land Use Plan 2014 - 2030



Pictures of rural two-lane Bladen County roads.

Table 5-1. Primary roads in Bladen County.

Roads	Vicinity	Roads	Vicinity
SR-11	Sandyfield	SR-131	Tar Heel
SR-20	Tobermory	SR-210	South River
SR-41	Dublin - White Lake	SR-211	Bladenboro - Council
SR-53	White Oak - Kelly	SR-242	Ammon - Bladenboro
SR-87	N. County - Tar Heel – East Arcadia	US-701	Clarkton - Garland

Source: NC-DOT

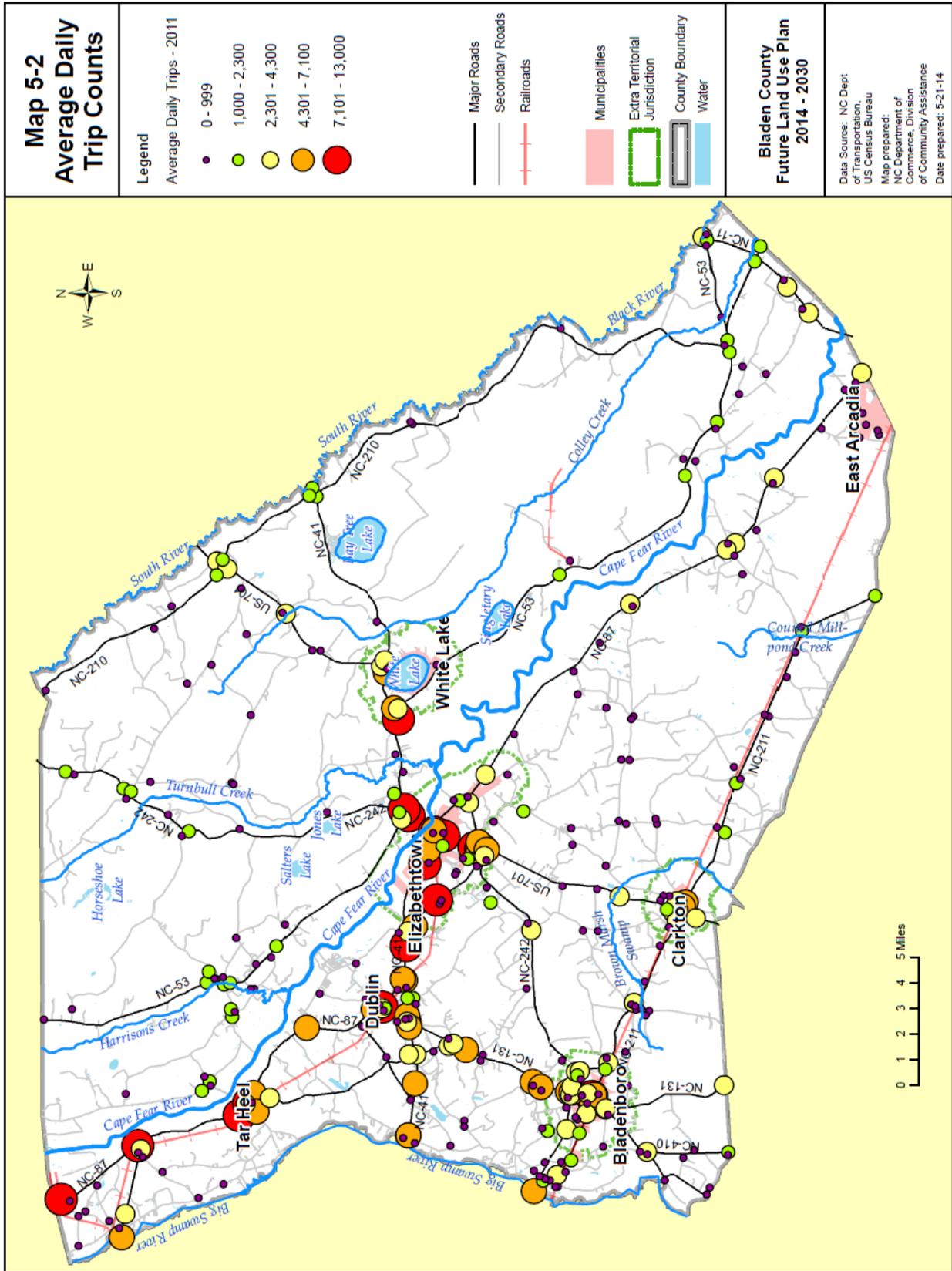
The Mid-Carolina - Rural Transportation Planning Organization (RTPO) and NC-Department of Transportation collect average day traffic (ADT) counts for various locations in the County and towns in the County. Map 5-2 shows the average annual daily trips in the County from the 2000 decade. Table 5-2 lists the location of the highest number of daily trips in the County. These locations are found along SR-87 north of Elizabethtown, including traffic from the DuPont industrial plant and the Smithfield packing plant; at various intersections in Elizabethtown; and in White Lake which has a large summer seasonal influx of tourists. Generally traffic congestion is not an issue in Bladen County because of the rural nature of the County and because the towns are small. In the summer of 2014 the Mid-Carolina Rural Transportation Planning Organization plans to start preparing a Bladen County Comprehensive Transportation Plan.

Table 5-2. Highest Traffic Locations in Bladen County; 7,000 to 13,000 Average Daily Trips.

Road Way Location	Community
DuPont Plant – NC-87	Tobermory
Intersection NC-20 / NC-87	Purdie Hall
Smithfield Packing Plant – NC-87	Tar Heel
Intersection NC-410 / NC-87	Dublin
Various intersections	Elizabethtown
Intersection US-701 / NC-41 / NC-53	White Lake

Source: NC-DOT

Bladen County – Future Land Use Plan 2014 - 2030



Recently the Mid-Carolina Rural Transportation Planning Organization completed a Collector Road Plan including Bladen County in order to identify future roadway needs. The plan addresses long-range transportation policies and designated roads to provide safe and efficient access to major roads and thoroughfares. The plan identified collector road expansions or improvements in order to improve traffic and circulation throughout the County. NC-87 road from Elizabethtown to Acme-Delco at Highway 74-76 is proposed to be widened from two lanes to four lanes (Map 5-3). The proposed widening of State Route 87 will bring more traffic through the County between Fayetteville and Wilmington. However the projected population increases (Table 2-8) for the County are moderate in the next 20 years, and therefore traffic increases will not likely be a major land planning issue.



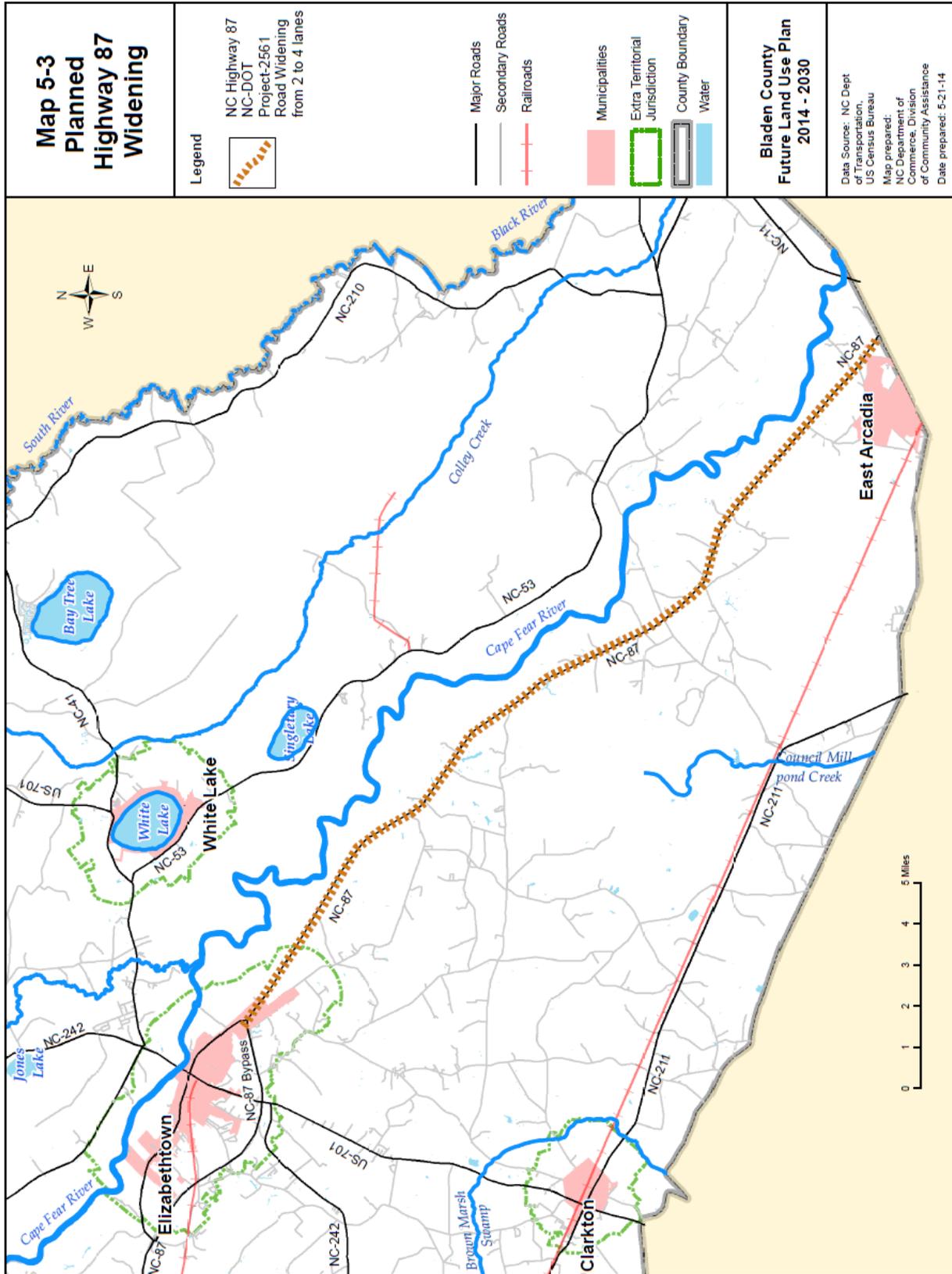
A section of State Road 87 with four lanes.

Transportation Planning – Mid-Carolina Rural Transportation Planning Organization and NC-Department of Transportation

The Council of Government and Mid-Carolina Rural Transportation Planning Organization (RTPO) are the main transportation planning organizations for Bladen, Cumberland, Harnett and Sampson counties. Mid-Carolina is one of twenty RTPOs in the state. The RTPO receives public input on transportation issues, sets both short and long term priorities, drafts plans, and identifies specific investment projects. The RTPO makes projections of future land use, travel demands, and the performance of the road network. The organization drafts a 20 year regional transportation plan and a 3 to 5 year transportation improvement plan with requirements needed to create a desired road network and improvements and funding mechanisms.



Bladen County, North Carolina – Future Land Use Plan 2014 – 2030



The federal 1991 Intermodal Surface Transportation Efficiency Act requires a RTPO to qualify for federal funding. The Mid-Carolina RTPO is the regional transportation planning agency for Bladen County and southeastern North Carolina. The RTPO facilitates a cooperative, comprehensive and continuing transportation planning process that serves as the basis for the expenditure of all federal transportation funds in the area for streets, highways, bridges, public transit, and bicycle and pedestrian facilities.

Bladen County and the towns in the County are members of the Mid-Carolina RTPO organization. As a member, the County sends one elected official, who serves as a representative to the RTPO's Transportation Advisory Committee (TAC). The TAC determines the level of priority of regional projects and makes recommendations of transportation projects to the North Carolina Department of Transportation for funding. Multi-jurisdiction staff serves on the RTPO's Technical Coordinating Committee (TCC) which makes policy and funding recommendations to the TAC.

The North Carolina Department of Transportation is the State's main transportation policy, planning, and funding organization. NC-DOT uses a "Policy to Projects" process in order to determine statewide, regional, and local transportation projects. Policy to Projects has long-range goals and investment decisions from the 30 year statewide long-range transportation plan. The plan details a work program that spells out specific projects needed to achieve these goals in the next 30 years. Bladen County works with the Mid-Carolina RTPO and NC-DOT to establish long term transportation needs and goals. The Mid-Carolina RTPO is working on a transportation master plan for south-east state area including Bladen County. The plan will address future roadway needs, transportation policy, and improvements.

Interstate - 95 Highway

US Interstate – 95 Highway lies 5 to 10 miles northwest and west of Bladen County. It is a main north-south artery along the east coast going past Fayetteville and Lumberton and is a heavily traveled and used commerce highway. It serves as a major connecting arterial road for nearby Bladen County.

Bus Service – Public Transportation

Public bus service in Bladen County is provided by the Bladen Area Rural Transportation System (BARTS). The bus system provides a variety of service needs for citizens with an emphasis for the elderly. BARTS service is fee based on a varying scale for individuals or small groups and publicly supported. Also there is one local commercial taxi service company in the county.

Main Public Transportation Functions of BARTS

- General transportation for senior adults
- Medical transportation for senior adults
- Employment transportation
- Public routes for shopping
- Disability transportation services

Sidewalks, Bicycle Paths, Walking Trails

Bladen County is rural and generally there are no sidewalks in the unincorporated County. Some portions of Towns in the County have a limited amount of sidewalks. The zoning ordinance for the County generally does not require sidewalks for new development, as development has been limited and sites have tended to be far apart. But because of recent health issues such as obesity the County is studying the need for sidewalks where appropriate such as in new residential subdivisions. Similarly there are no dedicated bicycle lanes or paths in the County and bicyclists must use and “share” the existing vehicle roads. Public walking trails exist in a limited amount at the State lakes and parks.



A sidewalk example in Bladenboro – an important pedestrian asset for safety and community.



Rural walking trail in the woods.



NC Bicycle Route 5 runs from Apex through the southeast coastal plain part of the state to Wilmington. A segment of the route goes through Bladen County including Jones Lake State Park (NC-DOT).

Rail Access



The CSX Rail Road runs between Lumberton and Wilmington and in south-west part of Bladen County connecting Butters, Bladenboro, Clarkton, Council and East Arcadia (Map 5-1). The rail line carries freight to and from the coast to Fayetteville, and other points. A spur rail road in the north part of the County connects the DuPont chemical plant on the Cape Fear River near Tobermory to St. Pauls.

Airports

Facilities

Rural Bladen County is served by two small airports (Map 5-1). The Curtis L. Brown Jr. airport is in Elizabethtown, and Bladenboro is served by the Bladenboro airport. Although the closest large carrier commercial passenger flight service is at Wilmington ILM, Fayetteville FAY and Raleigh RDU airports, the Curtis L. Brown, Jr. airport serves the business needs of the area. Curtis Brown field has become better equipped to accommodate business aircraft although several smaller private aircraft are based at the airport as well. Over the past five years, the airport has seen a significant increase in tax base and use primarily due to larger private aircraft based at the field. Over the same period of time, Jet-A fuel sales have shown monthly growth as compared to avgas which has slowly declined since 2008. Recently, the Brown airport underwent a \$900,000 LED lighting replacement project to include runway approach lights to improve safety for aircraft that are using the airport. In the future, the Elizabethtown Airport Commission plans

to extend its taxiways to provide aircraft access to industrial properties within the Elizabethtown Industrial Park and other undeveloped properties adjacent to the airport.



The Curtis L. Brown Jr. Airport in Elizabethtown.

County Airport Zoning Act

The County uses the Bladen County Airport Zoning Act which is an ordinance to regulate the use of property in the vicinity of the airports in the County. It also regulates and restricts structures, buildings, towers, trees, and landscaping.

River Access

Almost all of the boat traffic on the Cape Fear River is for recreational purposes. Because of the predominate use of vehicles for transportation, commercial boat traffic in the river has declined to almost non-existent. There are four boat access ramps operated by the NC Wildlife Resources Commission on the Cape Fear River at: the historical Elwell's Cable Ferry; Carvers Creek; Tar Heel; and Tory Hole in Elizabethtown. There is also boat access on the Black River at Hunt's Bluff operated by the NC Wildlife Resources Commission. There are three locks and dams on the Cape Fear River as shown on Map 3-8. These facilities are operated by the US Army Corps



Historic Elwell's Cable Ferry at Carvers Creek.



Boat ramp on the Cape Fear River.



Cape Fear River lock and dam No. 1 at Kings Bluff.



A picture of a Cape Fear River lock and dam.

of Engineers. At each lock and dam the Corps operates public recreation facilities, including a boat ramp, picnic facilities and restrooms. At lock and dam 1 and 2 are newly constructed fishing piers. The US Navy and US Army special forces have also used the locks and surrounding infrastructure for training purposes.

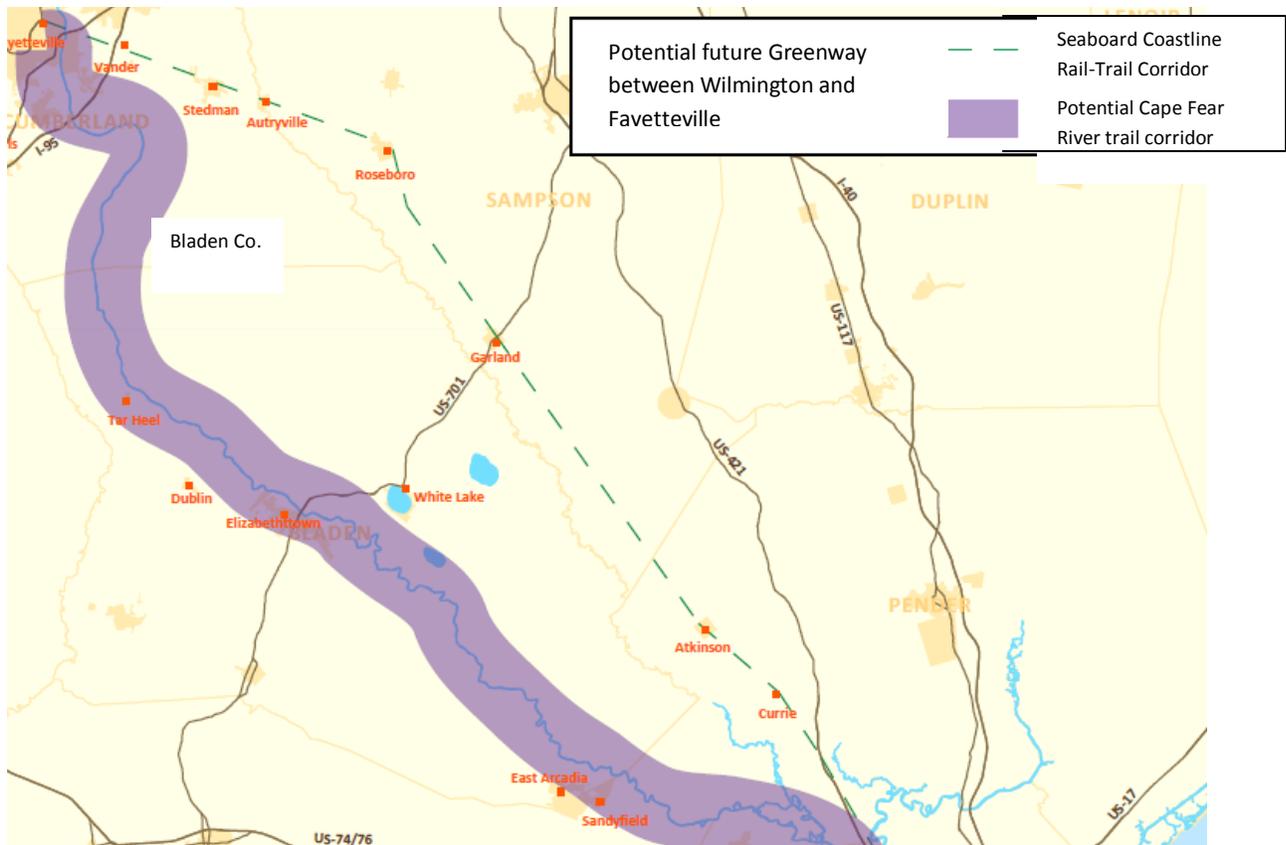
The US Army Corps of Engineers in the next few years depending on funding may undertake a planning and use study of the Cape Fear River. The Corps “Section 216” process would evaluate the locks and dams as well as fish ladders. Due to a lack of commercial boat traffic several alternative the Corps would evaluate would include: re-purposing the locks and dams and turning them over to entities other than the Federal government; and de-commissioning the locks with the same end goal and potential removal.

Project activity by the US Army Corps of Engineers along the Cape Fear River in Bladen County has included the following items from 2009 to 2013. The Corps is interested in working with the County on planning and opportunities regarding public access, water safety, fishing, and fishing enhancement.

US Army Corps of Engineers – Cape Fear River Projects (2009 to 2013)

Item	Case Number
Lock and Dam 2 - shad habitat enhancement	SAW-2013-02091
Lock and Dam 1 - fishing pier	SAW-2012-01869
Tory Hole boat ramp	SAW-2012-01850
Carvers Creek boat ramp	SAW-2012-01778
Kings Bluff Pump Station and water intake canal maintenance dredging	SAW-2011-02411 & 2006-41503
Lock and Dam 3 - rock arch ramp (planning only)	SAW-2009-01032
DuPont Fayetteville works - maintenance dredging	SAW-2009-00705 & 2002-01068

Bladen County, North Carolina – Future Land Use Plan 2014 – 2030



The Mid-Carolina Rural Transportation Planning Organization has put forth a planning concept for a future creation of a recreation oriented greenway along the Cape Fear River (trail corridor) from Fayetteville to Wilmington going through Bladen County. A multi-county and multi-municipality cooperative effort would be necessary to further realize the concept. Source: Mid-Carolina RTPO.

Chapter 6 - Current and Future Land Use

Purpose

This Chapter of the plan presents the existing land use pattern in Map 6-1, and the recommended County land use patterns for the future (Map 6-2). The Future Land Use - Map 6-2 serves as a guide for staff, the Planning Board and County Commissioners when reviewing development proposals and making decisions on the location of public facilities. It is also a guide for citizens. The future land use map lays the foundation for zoning and subdivision regulations and a capital improvements program, which enable the goals and policies of Chapter 8 into action. The County zoning map is based on existing land use patterns and this plan combines a desired pattern of development with the future land use map. The plan recommends building public facilities in those areas of future growth.

Planning and zoning legislation from the State encourages towns and counties to write and adopt a future land use plan tied to zoning and subdivision regulations. The zoning and subdivision regulations should be consistent with the adopted land use plan including the Future Land Use Map 6-2. This means that the map can provide information in legal situations regarding a particular zoning or subdivision regulations, procedure, or decision.

The topics of this chapter are the following:

- **Current County Land Use Patterns**
- **Land Use Compatibility**
- **Development Trends**
- **Land Suitability**
- **Future Land Use Map**
 - **Consistency**
 - **Change in Land Use**
 - **Legend Characteristics - Future Land Use Map – Bladen County**
- **Future Land Use and Facilities**
- **A Guide for the County**

Current County Land Use Patterns

Staff collected and interpreted land use data (Table 6-1) showing County land use patterns and prepared a current land use Map 6-1. The map shows the: county and town boundaries; extra territorial jurisdiction; residential, non-residential and undeveloped vacant land area uses; roads; streams and lakes. The County maintains geographic information system (GIS) map files with parcel land uses which were grouped and color coded for Map 6-1.

Bladen County, North Carolina – Future Land Use Plan 2014 – 2030

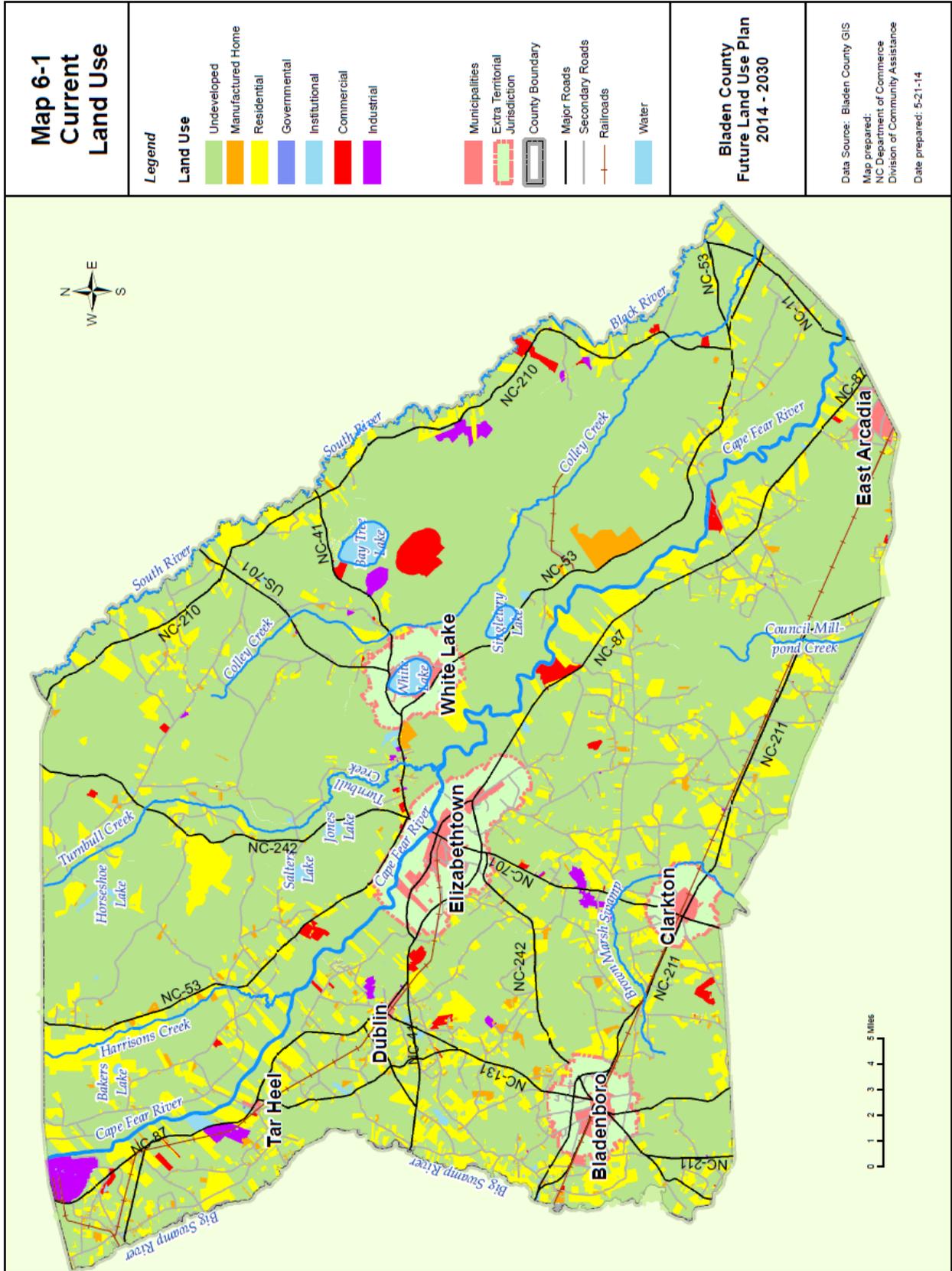


Table 6-1. County land use general categories analyzed

Land Use	Category
Residential	Primarily single family with infrequent duplex, multi-family
	Manufactured (mobile) home
Institutional	Churches
Governmental - public	Government buildings and land, schools, public facilities, airport, parks
Commercial	Retail, office
Industrial	Manufacturing, warehousing, food processing
Transportation	Roads and rail roads
Undeveloped Land	Vacant, agriculture, cleared pasture, wooded forest wooded, fields, wetlands, swamp
Water	Creeks, rivers, ponds, lakes

Bladen County as shown on Map 6-1 is composed of the unincorporated area, and seven towns (Table 6-2) and their extra territorial jurisdiction. The towns have a land use mixture of residential, institutional, commercial, industrial, and government that is aggregated together on the map (gray color). By state law towns have planning and zoning authority in their extra territorial jurisdiction.

Table 6-2. Towns (Municipalities) in Bladen County and extra territorial jurisdiction

- Tar Heel
- Dublin
- Elizabethtown
- White Lake
- Bladenboro
- Clarkton
- East Arcadia

Outside of the towns in the unincorporated County the land is mainly composed of undeveloped land with forests, fields, swamps, wetlands, and agricultural crop farm land. Developed residential land includes rural primarily single family uses and manufactured (mobile) homes. There is a very minor amount of duplexes and multi-family in the unincorporated County (Table 2-21). Non-residential land uses include agricultural farms, government, state forest, institutional, commercial, animal farms (swine, poultry, and livestock), and industrial. Two large industrial uses in the County are the DuPont chemical plant north of Tar Heel towards the north County line, and the Smithfield Foods pork processing plant near Tar Heel. Current (2013) acreage was calculated for land use categories and organized as shown in Table 6-3 A. the size of towns and extra territorial jurisdiction in the County is shown in Table 6-3 B. A percent comparison of Towns and extra territorial jurisdiction with Unincorporated County is shown in Table 6-3 C. A

summary of the land use amounts and percentages for the unincorporated County is shown in Chart 6-1.

Table 6-3 A. Land uses and amounts – Bladen County (2013)

<i>Unincorporated County</i>	Parcels	Acres	% Acres
Standard residential*	5,934	88,447	15.6%
Manufactured (mobile) home residential	1,422	11,684	2.1%
Institutional	210	1,528	0.3%
Governmental	16	31	0.01%
Commercial	146	6,289	1.1%
Industrial	48	3,711	0.7%
Undeveloped vacant land	15,249	456,297	80.3%
<i>Total</i>	23,025	567,986	100.0%

*Built with traditional residential construction standards i.e. wood framed, and or bricks and mortar.

Table 6-3 B. Size of Towns and Extra Territorial Jurisdiction in Bladen County

<i>Towns</i>	Town Acres	Extra Territorial Jurisdiction Acres
Tar Heel	109	0
Dublin	284	0
Elizabethtown	2,800	11,546
Bladenboro	1,392	5,452
White Lake	1,732	5,008
Clarkton	803	3,465
East Arcadia	1,358	0
<i>Total</i>	8,478	25,471

Table 6-3 C. Percent Comparison: Towns and Extra Territorial Jurisdiction with Unincorporated Bladen County

	Acres	Percent %
Six Towns and Extra Territorial Jurisdiction area in County	25,471	6%
Unincorporated County	534,037	94%
Towns ETJ and Unincorporated County	567,986	100%

Bladen County, North Carolina – Future Land Use Plan 2014 – 2030

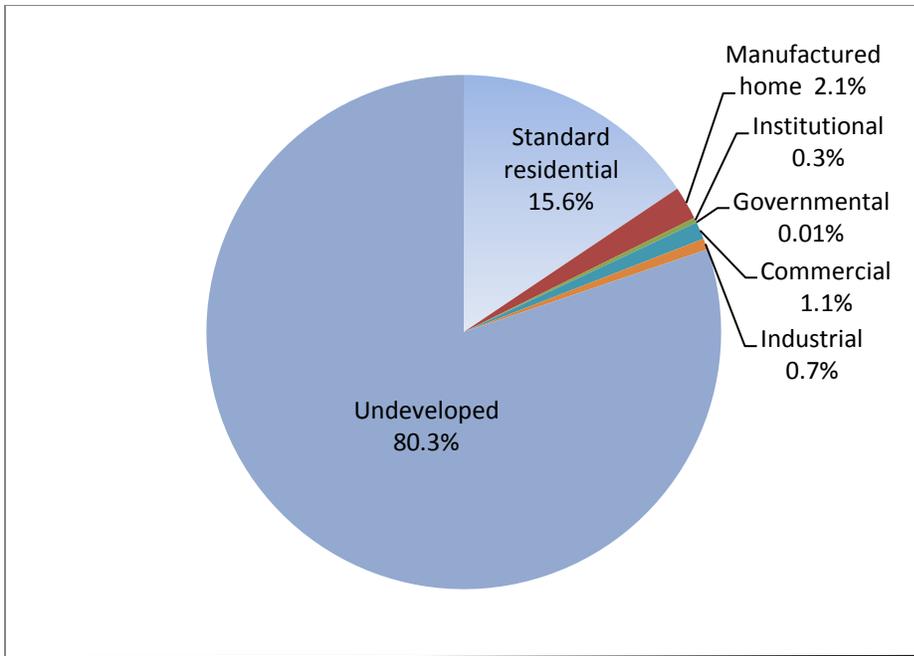


Chart 6-1. Current Land Use – Unincorporated Bladen County 2013

Land Use Compatibility

County regulations limit the development use and density through the zoning and subdivision ordinances. Code enforcement is also used to address property complaints such as building disrepair, abandoned structures, unmaintained lots, littering, junk material on lots, and noise. The County uses zoning and planning to protect property. This applies for existing residential uses and non-residential uses. Typically compatibility land use issues may arise when intense uses are located adjacent to or in close proximity to non-intense uses. An example of where there may be land use incompatibility is where non-residential intense uses such as intense commercial, industrial plants, and animal farms such as for swine and poultry are located next to existing residential uses. In these circumstances non-residential intense uses should be permitted with mitigation of potentially harmful environmental or noxious effects, such as by buffering, setbacks, or best management practices.

Development Trends

According to the 2010 Census, Bladen County population growth was a total of 9% for the decade from 2000-2010 (Table 2-1). This population increase was approximately slightly less than 1% per year for the decade. The current trend in development is that the majority of growth in the unincorporated County will continue to be scattered agriculture, rural residential, animal farms, and a limited amount of commercial and industrial development as the population increases. Additionally the state highway department NC-DOT is planning and widening Highway 87 from two to four lanes from Elizabethtown to Acme-Delco junction at Highway 74-76. Some of the existing property and development along the road may be affected by the road widening with increased traffic as segments of the road are completed. During the drafting of this Land Use Plan, the nation and North Carolina was still feeling the effects of the recession that started in 2008. In the last approximate six years economic growth in the southeast part of the state including Fayetteville and the Wilmington area has had a cooling slow period. However, 2014 economic trends suggest that recent moderate growth has begun to resume. As indicated in Table 2-8 in Chapter 2 Bladen County population projection for the near the future will likely see slow to moderate growth of approximately 1% per year.

Land Suitability

Suitability of land and different types of uses is an important factor to consider in development and future land use in Bladen County (Table 6-4). Natural environment information including soil type, topography, drainage, and wetlands from maps are identified in Chapter 3. Wetland and swamp areas generally have severe limitations for development. These areas can be planned and designated for lower intensity use such as parks and recreation, wildlife areas, and open space areas. Also important are the flood plain areas shown in Map 3-7 Chapter 3 with flood zone information related to 100-year and 500-year flood plains from the Federal

Emergency Management Agency (FEMA). Soil types yield information regarding capability of septic fields in the unincorporated County (Map 3-2). Water line facilities in the unincorporated County are an important future land development factor (Map 4-1). And water and sewer line facilities are important factors for the small seven towns and extra territorial jurisdiction development in the County (Map 4-1 and Map 4-2).

Table 6-4. Natural and Development Features important to Bladen County Current and the Future Land Use.

Natural Features

- Topography
- Floodplain
- Forests, fields, swamps, wetlands
- Soils
- Creeks, rivers
- Ponds, lakes
- Vacant developable land

Development Features

- Agricultural farm land
- Parks and recreation areas
- Potable water system
- Septic and sewer system
- Storm water management
- Roads, railroads
- Residential
- Governmental use and schools
- Commercial
- Animal farms
- Industrial

The features in Table 6-4 should be used to help determine suitable land and location for development. These features are intended to provide the County with information for areas best suited and least suited for development. The County geographic information system (GIS) mapping generally delineates these features and informed land development decisions can be made by the public, County staff and officials.

Future Land Use Map – Bladen County

This section of the plan contains the Future Land Use - Map 6-2. It represents the unincorporated County existing main land use features and desired guide for future land-use.

Consistency

The Bladen County zoning map and County ordinances (Chapter 7) must be consistent with the Future Land Use - Map 6-2 and land use goals and policies (Chapter 8). The different zoning districts shown on the County zoning map should be consistent with the land-use categories shown on the Future Land Use Map.

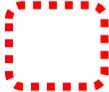
Changes of Land Use

The land use information in this plan and Future Land Use - Map 6-2 give direction to the County staff, Planning Board, Board of Commissioners and citizens for reviewing development proposals and growth. The land use plan is implemented by the zoning subdivision land development standards, and other documents listed in Chapter 7. County rezoning map changes must also be consistent with the Future Land Use Map. And the GIS (geographic information system) maps should be updated when rezoning occur. This future land use plan should also be used to guide public improvements through the capital improvements plan described in Chapter 7. Thus, the land use goals and policies (Chapter 8) and the Future Land Use Map lay the foundation for land use regulations and rational, orderly growth. This is important for good community planning in the County.

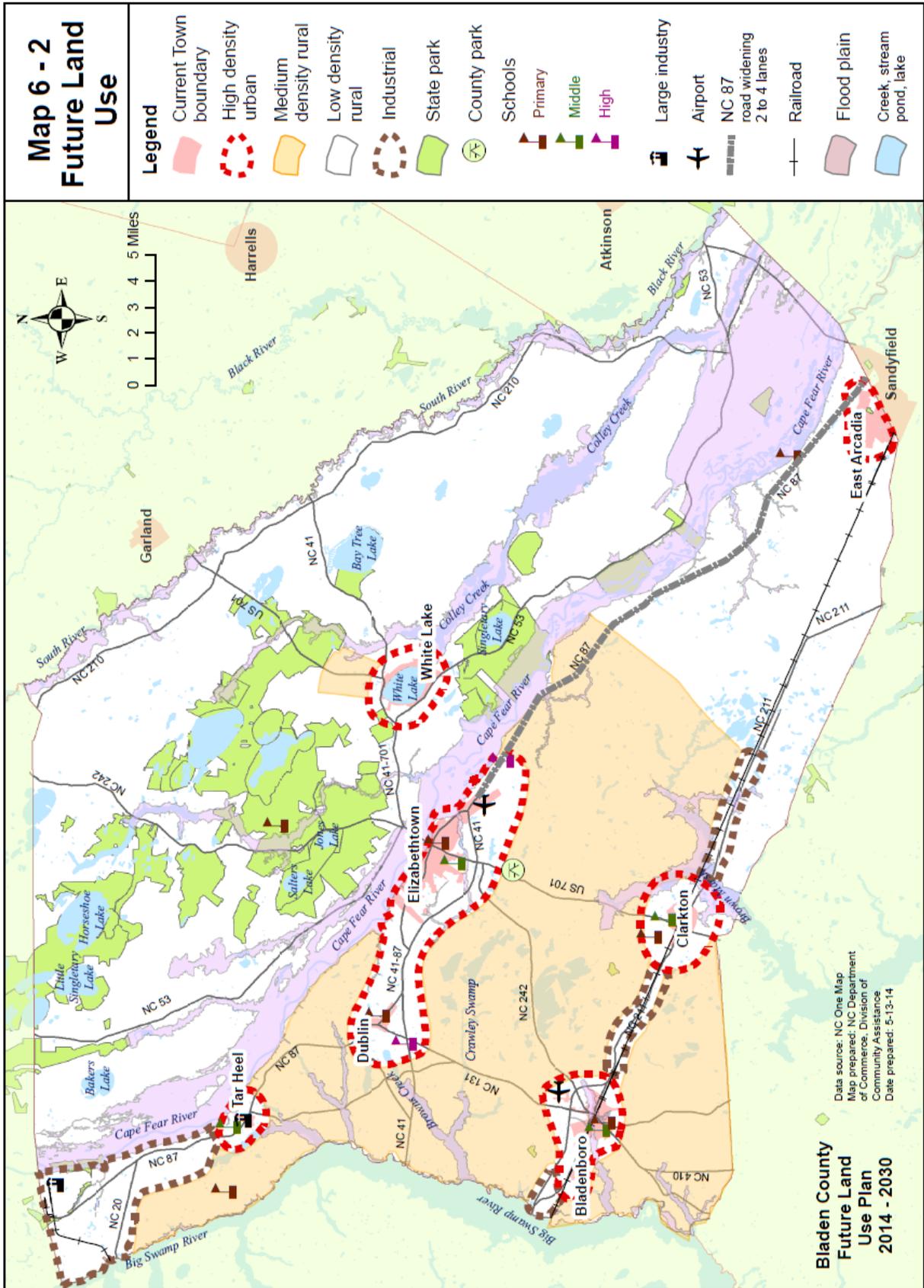
Legend Characteristics - Future Land Use Map - Bladen County

The Future Land Use - Map 6-2 legend with existing and preferred future characteristics are shown on the map and listed in the below Table 6-5 with a general description.

Table 6-5. Future Land Use – Map 6-2; General Characteristics – Bladen County

	Flood plain Low areas adjacent to creeks, streams, ponds and lakes.
	State park - forest, and County park State and County recreation areas.
	Low density rural development – Unincorporated County Lots 2 acres and greater. Well water and septic use. Agricultural farms; scattered residential and commercial; animal farms.
	Medium density rural development - Unincorporated County Lots ½ acre and greater. Some water lines available, and greater potential for sewer connection. Agricultural farms; scattered residential and commercial; animal farms.
	Schools Existing school sites: primary, middle, and high.
	High density urban development Infill of residential, government, schools, commercial, and industrial. Generally water lines available, and greater potential for sewer connection.
	Current town boundary Contained within: residential, government, schools, commercial, and industrial. Generally have water lines, and sewer connection.
	Industrial corridor development - Unincorporated County Industrial, manufacturing activity, serviced with road and rail facilities.
I	Large industrial sites DuPont Chemical, Smithfield Foods.
A	Airports Elizabethtown, Bladenboro
=	Highway 87 road widening project 2 to 4 lanes Elizabethtown to Acme-Delco Highway 74-76.

Bladen County – Future Land Use Plan – 2014-2030



Future Land Use and Facilities

Table 6-6 below shows the approximate percentage of land dedicated to the land use categories on the Future Land Use - Map 6-2.

Table 6-6. Future Land Use Map % Areas of Bladen County

Land Use Category	Approximate % of County
Floodplain	35%
State forest and recreation parks	9%
Low density rural	29%
Medium density rural	19%
High density urban	6%
Industrial corridor growth	2%
Total	100%

Bladen County – Future Land Use Plan – 2014-2030

Table 6-7 below shows generalized existing and preferred future land use area characteristics which are tied to the Future Land Use - Map 6-2.

Table 6-7. Summarized Existing and Preferred Future Land Use Map Area Characteristics for Bladen County (Map 6-2).

Item	Low density rural area	Medium density urban area	High density urban area	Industrial corridor area
State park and forest	Yes	Not located in	Not located in	Not located in
Agricultural farms	Yes	Yes	Discourage	Discourage
Residential	Minimum 2 ac lots	Minimum ½ ac lots	All lot sizes	Discourage
Commercial	Encourage in nodes (centers)	Encourage in nodes (centers)	Encourage	Discourage
Industrial	Discourage	Discourage	Encourage with buffers away from residential areas	Encourage
Town boundary	n/a	n/a	Yes located in area	n/a
Town extra territorial jurisdiction (ETJ)	n/a	n/a	Yes located in area	Yes abuts some sections of corridor
Well drinking water	Yes	Yes	Some wells; encourage connection to municipal water	Discourage
Water lines - drinking	Almost none	Some	Yes	Some lines existing; encourage in future
Septic	Yes	Yes	Yes some; encourage sewer connection	Encourage sewer connection
Sewer	No	No	Yes	Currently none, encourage in future
Animal farms	Yes	Yes	No	No
Development density	Lowest	Moderate	Highest	Industrial
Airports	No	No	Yes	No
Schools	Existing: 2 primary schools	Existing: 1 primary school	Existing schools: 4 primary; 4 middle; 2 high	No, discourage
Flood plain	Avoid development	Avoid development	Avoid development	Avoid development
Exceptional wetlands	Avoid development	Avoid development	Avoid development	Avoid development

Bladen County – Future Land Use Plan – 2014-2030

Future land use development for the County was estimated from existing land use, building permits and projected moderate population growth of approximately 1% per year from 2014 to 2030 (Table 2-8). Future County projected trend development needs were estimated for the following categories (Table 6-8) and information sources on the next page.

Table 6-8. Future Bladen County projected trend activity in planning period 2014 to 2030.

Entity	Future projected trend activity
Agricultural farms ¹	Overall decrease in number of farms 10% to 15%. 15% increase of large farms 1,000 acres or greater.
Residential ² Single family Manufactured home Duplex and multi-family	Estimated new dwelling units (du) during 2014-2030: 55 du / yr. for 882 du total. 176 du / yr. for 2,818 du total. 10 du / yr. for 155 du total.
Institutional Government ³ Medical ⁴	Specified in County capital improvements planning. Upgraded county hospital facility.
County parks and recreation ⁵	Long term goal recommendations of County Recreation and Parks master plan improvements of Phase II 2014-2018 of Bladen County Park facilities.
Schools ⁶	Projected approximately 500 new students by 2030. Possibly one new school building would be needed for elementary, middle and high school students.
Commercial ⁷	10 new permits / year. 153 new businesses 2014-2030.
Industrial ⁸	5 new permits / year. 78 new business industries 2014-2030.
Animal farms ⁹	In 2013 there were 156 swine and 52 poultry farms in the County. Based on the past trend could possibly add new poultry farms. There has been a state moratorium on constructing new large swine farms since 1997. However some existing swine farms have been expanding in size as allowed by state rules.
Airport ¹⁰	Projected moderate increase in service and growth.
Highway 87 ¹¹	Upgraded facility from two to four lanes; Elizabethtown to Acme-Delco Highway 74-76.

Information sources for (the above) Table 6-8

- ¹ Agricultural farms. “Bladen County working lands protection plan.” Feb. 2010, by G. Lawrence. Bladen County farms by size table, p. 20.
 - ² Residential. Projected from Table 2-25 Bladen County building permits from 2005 to 2013.
 - ³ Government. Bladen County capital improvement plan.
 - ⁴ Medical. Cape Fear Valley – Bladen County Hospital.
 - ⁵ County parks and recreation. “2009 comprehensive system wide recreation and park plan for Bladen County, NC.” R. Wendling, B Boaz, and E. Orr. Dec. 2008. p. 142-143.
 - ⁶ Schools. Projection from existing number of students Table 4-13 and population increase with slow growth Table 2-8.
- 2014 population of county = 35,999; 2030 projected county population = 39,427
 2014 total student population = 5,020 (From Table 4-13)
- | | | | | | | |
|-------|---|--------|---|---|-------|----------------------------------|
| x | = | 39,427 | x | = | 5,498 | Total estimated students by 2030 |
| 5,020 | | 35,999 | | | | |
- Estimate 5,498 – 5,020 = 478 new students projected by 2030, ~ 500 new students
- ⁷ Commercial. Projected from Table 2-26 Bladen County building permits from 2005 to 2013.
 - ⁸ Industrial. Projected from Table 2-26 Bladen County building permits from 2005 to 2013.
 - ⁹ Animal farms. Poultry information Table 3-12 and Map 3-10. Since 1997 there has been a moratorium in the state on the construction of new hog farms.
 - ¹⁰ Airport. From Elizabethtown airport.
 - ¹¹ Highway NC 87. From Mid-Carolina Rural Transportation Planning Organization and NC Department of Transportation.

A Guide for the County

Due to the ever changing nature of the economy and events only general guidelines of future growth and development have been given in this Chapter 6 and Tables 6-7 and 6-8. However, the information in this Future Land Use plan will better enable the County, citizens, developers, County staff, planning board, and elected officials to make informed decisions. When making decisions regarding future development, the County should consider factors including: existing adjacent land uses, available public services, and existing environmentally sensitive areas. The Future Land Use – Map 6-2 will assist in the decision making process. The map is to be used as a guide for future development and can be amended as needed following the requirements set forth in Chapter 7 of this Land Use Plan. The information from the Future Land Use - Map 6-2 is to be used with goals and policies developed with citizen public input in Chapter 8. These policies address the natural environment, County resources and public facilities, transportation and circulation, and land use.

Chapter 7 - Putting the Plan into Action

Introduction

This chapter presents the parties responsible for implementation and action steps of the plan with ordinances, programs, and code. In order for this plan to be effective, it is important that all development regulations and related implementation methods in Bladen County are consistent with this chapter, and the plan goals and policies of the following Chapter 8. This chapter presents information on the role of the land use plan, the intended use of the plan, amending the plan, and the parties responsible for its implementation.

❖ Sections in this Chapter

- ❖ **Role of the Plan**
- ❖ **Intended Use of the Plan**
- ❖ **Amendment of the Future Land Use Plan**
- ❖ **Responsible Parties**

A review of the following implementation methods for the Future Land Use Plan are presented in this chapter:

- ❖ **Primary Future Land Use Plan Implementation**
 - *Zoning Ordinance*
 - *Subdivision Ordinance*
 - *Capital Improvement Program*

Supporting implementation methods for the Future Land Use Plan are also listed in this chapter with responsible party. They consisting of programs, codes, plans, ordinances and an act as shown in chapter summary tables (p. 131).

❖ **Supporting Future Land Use Plan Implementation**

Additional Future Land Use Plan implementation the County may want to consider is in regard to health and wellness, housing, and nuisance (p. 133).

- ❖ **Additional Plan Implementation to Consider**
 - *Health and Wellness*
 - *Housing*
 - *Nuisance*

❖ **Role of the Plan**

The County Future Land Use Plan is a guide for the desired direction of land use and development. Although goals and policies (Chapter 8) in the Plan do not have the authority of an ordinance or regulation, many state and federal decisions on permitting local actions and projects rest on a determination of consistency with the County's Plan. Such state permitting decisions for example include the NC Department of Environment and Natural Resources (NC-DENR), and NC Department of Transportation (NC-DOT). Securing state or federal grant or loan funding by Bladen County may also be contingent upon review of consistency with the Plan, and to whether the County's policies are adequate to meet state and federal standards regarding funded projects (e.g. land development, and roads).

In addition, any future County zoning and subdivision ordinance and/or zoning map amendments to accommodate development projects must also be evaluated for their consistency with this Plan. Any County decisions to amend zoning and subdivision regulations must be evaluated, even if they do not relate to a land use, dimensional standard, or area that is not under the purview of state or federal permitting. North Carolina General Statute 153A-341, requires that the planning board review of zoning and subdivision amendments include a written statement on the consistency of the proposed amendment with this comprehensive Plan, as well as any other relevant plans and ordinances (such as transportation, capital improvements, building code, potable water, septic, parks and recreation, school facilities etc.) that have been adopted by the County's governing board. The state statute includes provisions that allow the County's governing board to proceed and adopt proposed zoning and subdivision amendments which the planning board may determine to be inconsistent with adopted plans. However, this is only if the County governing board can provide a statement as to why the action taken is reasonable, necessary and in the public interest. The County's governing board is required to adopt such a statement on Plan consistency or inconsistency before adopting or rejecting any zoning amendment.

❖ **Intended Use of the Plan**

When adopted by the County Commissioners the Future Land Use Plan shall also be used for the following:

- The approval of routine and major developments (including redevelopments) shall be consistent with the policy direction and goals of the Plan.
- Amendments to development related ordinances (e.g. rezoning petitions), conditional use permit (or special use permit) review, as well as creation and approval of new ordinances shall be consistent with the policy direction and goals of the Plan.
- The approval of capital improvements (e.g. water, sewer, school facilities, park and

recreation facilities, etc.), and related projects, shall be consistent with and prioritized based on the policy direction and goals of the Plan.

- County Administration and Planning Staff shall consult the Plan and use it as a basis for making recommendations to the planning board and the County governing board in such actions as development approval and ordinance amendments. If the proposed development or amendment is in conflict with the policy direction or goals of the Plan, staff shall notify the planning board and the County governing board of the possible inconsistency.

❖ **Amendment of the Future Land Use Plan**

In addition to evaluating existing and future proposed ordinances, the County's Future Land Use Plan may be amended if a situation arises where the Plan becomes in conflict with new local, state, or federal policy needs. Minor updates or minor changes in policy would require a minor amendment procedure. Whereas a substantial amendment to County policy would require procedures such as a public hearing, and review by the appropriate state and/or federal agencies.

❖ **Responsible Parties**

Responsible parties for land development in the County with this Plan are: County Commissioners, Planning Board, Planning Department, Administration, and any advisory board or committee.

County Commissioners

The County Commissioners is the elected body of the County. The Commissioners consists of nine members with a Chairman. Land use cases, based on Planning Board recommendations and staff advice and recommendations, are decided by the elected body. The Commissioners also adopts plans and ordinances for the County and is in charge of appropriating funds.

Planning Board

The Planning Board is responsible for development review, making recommendations to the County Commissioners on development proposals and planning policies, and for zoning enforcement. The board consists of 9 members, including the Chairman.

Planning Department

The Planning Department is responsible for development review and recommendations to the Planning Board and County Commissioners for activity that occurs in the County. The Department reviews plans for development, enforces County ordinances and codes and creates and reviews all planning and development documents. As with all plans adopted by the County, the Planning Department is responsible for ensure the activities carried out are consistent with the Future Land Use Plan, and state and federal law. The Planning Department is staffed by the Planning Director with administrative staff. A Zoning Board of Adjustment hears planning case appeals.

County Advisory Boards

Volunteers and county involvement on a wide range of issues are important to the well being of the County. In order to tap the expertise of local residents, over time many committees have been formed to advise, and in some cases make rulings, on various issues that arise in the County. In 2013 there were approximately 55 different advisory boards and committees in the County serving numerous needs.

❖ Primary Future Land Use Plan Implementation

The following are primary Future Land Use Plan implementation items and the responsible party. For more detailed information see Chapter 6 of this plan.

Chapter 6 - Future Land Use Plan primary implementation

Item	Responsible Party	Information (page)	Policy (page)
Current and Future Land Use	Bladen Co. Board of County Commissioners, Planning Board, Planning Department	118 to 125	146 to 149
Zoning Ordinance	Bladen Co. Planning Department, Planning Board	132	Many policies in Chap. 8 including 146 to 149
Subdivision Ordinance	Bladen Co. Planning Department, Planning Board	132	146 to 149
Capital Improvement Program	Bladen Co. Manager’s Office	133	Project specific

Zoning Ordinance

Bladen County’s Zoning Ordinance is the primary tool for regulating the uses of land and development. The Ordinance was adopted in 2002 and includes a Zoning Map that divides the county into different zoning districts. Each district permits a set of activities and establishes a maximum density of development. The Zoning Ordinance and Map should be updated as needed to be consistent with this Future Land Use Plan, to modernize standards, to improve public health, to promote the public welfare, and to address local concerns. The zoning ordinance also addresses signs.



The Zoning Ordinance is the primary tool for implementing the land development goals and policies of this Plan shown in Chapter 8. The Ordinance helps shape the land use patterns, sets density, and regulates natural environmental areas in the County. The County will work to ensure that the Ordinance is in conformance with the Plan goals and policies. Doing so will ensure that the identified County future land use needs, issues, and vision will be met.

The County can ensure the Zoning Ordinance and Land Use Plan are coordinated by:

- Reviewing the Plan and Ordinance to identify conflicts and possible improvements.
- Identifying key areas of the Ordinance that should be amended or updated to reflect the policies of the Plan or carry out the community goals and vision.
- Holding public hearings to ensure the community has a participating voice in the revision of any Ordinance policies.
- Officially amending the language of the Ordinance.

Subdivision Ordinance

The Subdivision Ordinance was adopted in 2000, and is another tool for regulating the use of land in the County. The Ordinance regulates the creation of new lots, the construction of new streets by developers, and the provision of public services. The Subdivision Ordinance should be updated as needed to: be consistent with this Future Land Use Plan, and Zoning Ordinance; improve public health; promote public welfare; and address local concerns.



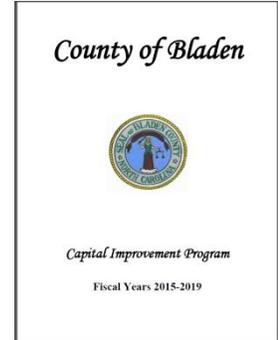
The County can ensure Subdivision Ordinance and Future Land Use Plan coordination by:

- Reviewing the Plan and Ordinance to identify conflicts and possible improvements.
- Identifying key areas of the Ordinance that should be amended or updated to reflect the policies of the Plan or carry out the community goals and vision.
- Holding public hearings to ensure the community has a participating voice in the revision

- of any Ordinance policies.
- Officially amending the language of the Ordinance.

Capital Improvement Program

It is important for the County to continually plan and budget major capital expenditures through the adopted Capital Improvements Program (CIP). Capital improvements are projects involving a substantial expense for the construction or improvement of major public facilities. Examples of capital projects include construction of parks facilities, potable water infrastructure, and County buildings.



The CIP involves all County departments in its development. The program, which projects five years into the future, is updated each year. The CIP is designed to be a flexible planning tool for the County. Each year, the list of projects is reviewed for need, cost and priority. Projects may be added, deleted, delayed, moved up or altogether new projects may be inserted. The County staff provides recommendations regarding the alteration of the desired timetables of projects with the ultimate responsibility for approval and implementation resting with the County Commissioners. The County should examine the goals and policies of Chapter 8 of this Future Land Use Plan and coordinate with the CIP on updates. The CIP should also be coordinated with the Zoning Ordinance, Subdivision Ordinance, and other supporting implementation information in this Chapter.

❖ **Supporting Future Land Use Plan Implementation**

The following are supporting Future Land Use Plan implementation listed items and responsible party. For more detailed information see the referring Chapter of this plan for the item.

Chapter 2 - Community Profile - Supporting Future Land Use Plan Implementation

Item	Responsible Party	Information (page)	Policy (page)
Building Code	Bladen Co. Inspections Department	35	146 to 149
Manufactured Home Park Ordinance	Bladen Co. Planning Department	35	146 to 149

Chapter 3 - Natural Environment - Supporting Future Land Use Plan Implementation

Item	Responsible Party	Information (page)	Policy (page)
Farming and Agricultural Plan	Multiple including NC Cooperative Extension	43	139 to 140
County Voluntary Agricultural District Ordinance	Bladen Co. Planning Department	43	139
Groundwater resources	NC Department of Environment and Natural Resources	49	139 to 140
Water Supply Watershed Ordinance	Bladen Co. Watershed Administrator and Review Board	54	139 to 142
Wetlands	US Army Corps of Engineers, NC Department of Environment and Natural Resources	54	140
Flood Damage Prevention Ordinance	Bladen Co. Planning Department, Federal Emergency Management Agency (FEMA)	58	140
Water quality	NC Department of Environment and Natural Resources	58	140
Hazard mitigation planning	Bladen Co. Emergency Services Department, Bladen Co. Planning Department	62	140
Fish and Game	NC Wildlife Resources Commission	63	140
Industrial site monitoring, hazardous waste, storage tanks	NC Department of Environment and Natural Resources	65	140 to 141
Natural gas pipeline	Piedmont Natural Gas Company	68	140 to 141
Animal farms	NC Department of Environment and Natural Resources	69	141

Chapter 4 - Community Resources and Public Facilities - Supporting Future Land Use Plan Implementation

Item	Responsible Party	Information (page)	Policy (page)
Solid Waste Disposal & Recycling	Bladen Co. Solid Waste Management Department	72	141
Water Supply and System Management	Bladen Co. Water District, Bladen Co. Public Works Department	75	141 to 142
Potable Water Supply Plans	Bladen Co. Water District and NC Department of Environment and Natural Resources	81	141 to 142
Septic Ordinance	Bladen Co. Planning Department	83	141 to 142
Sheriff Protection	Bladen Co. Sheriff Department	83	142
Fire Protection and Emergency Management	Bladen Co. Emergency Services Department	84	142
Animal control	Bladen Co. Health Department	85	142
Recreation and Park Plans	Bladen Co. Parks and Recreation Department	85	142 to 143
Cultural Resources	Multiple - including State Historic Preservation Office, and Bladen Co.	90	143 to 144
School Facilities Planning	Bladen County Schools	94	144
Health Services and Health Assessment	Multiple - including Bladen Co. Health Department	98	144
Wireless Communication Facility Ordinance	Bladen Co. Planning Department	99	146 to 149
Noise Ordinance	Bladen Co. Planning Department	99	146 to 149
Economic Development	Bladen Co. Economic Development Commission	100	150

Chapter 5 - Transportation and Circulation- Supporting Future Land Use Plan Implementation

Item	Responsible Party	Information (page)	Policy (page)
Transportation Planning	Mid-Carolina Rural Transportation Planning Organization; NC Department of Transportation; Bladen Co. Planning Department	105	145 to 146
BARTS	Bladen Co. Bladen Area Rural Transportation System	107	146
Railroad access	CSX Railroads	109	146
Airports and Airport Zoning Act	Town of Elizabethtown, Town of Bladenboro, Bladen Co. Planning Department	109	146
River access – lock and dams, boat ramps	US-Army Corps of Engineers, NC Wildlife Resources Commission	110	146

❖ **Additional Plan Implementation to Consider**

The County may want to consider in the future: an increased health and wellness effort; and increased enforcement and upgraded code language regarding housing and nuisance.

Health and Wellness

Bladen County, municipalities in the county and other supporting organizations may want to consider undertaking a more extensive health and wellness initiative. The purpose would be to prepare a report or plan with: community health profile; health and wellness concerns; and implementation strategies to improve the existing health conditions. The report or plan would also include wellness and prevention components that for example address walking trails, parks, and fresh produce. This effort would be designed to enhance the overall health of Bladen County citizens long-term. The report or plan would be designed to potentially increase economic growth and prevent chronic illnesses that impact the quality of life and the County’s share of Medicaid dollars. This effort would build on the 2013 Bladen County *Community Health Assessment* report prepared by the Bladen County Health Department (See Chapter 4). Supporting plan information could include additional community opinion health survey and health maps. Forming a steering committee would need to be considered in order to prepare the plan properly.

For a health initiative example document see the “A Health and Wellness Initiative for Columbus County, NC” 2013.

Bladen County in March 2014 was ranked the 9th least healthy out of 100 counties in North Carolina, in a nationwide County Health Rankings & Roadmaps program, by the Robert Wood Johnson foundation and the University of Wisconsin Population Health Institute. However, the county improved its ranking from 3rd position in 2013. Using data specific to each county, this program ranks the health of nearly every county in the nation. The Health Rankings illustrate factual data; what is known about what's making people sick or healthy. The Health Roadmaps help counties institute policies and programs to create healthier places to live, learn, work, and play.

Information for the above assessment and ranking is from the *County Health Rankings & Roadmaps Program* website - <http://www.countyhealthrankings.org/>

Housing

The County does not have a housing code which would establish how a house dwelling is used and or maintained once it has been built. In the future the County may want to adopt minimum ordinance standards. Housing codes typically regulate substandard housing such as units which lack adequate plumbing, have deteriorating facades, or have overcrowding conditions. A housing code would reinforce the existing building code with regard to building maintenance and require all structures to be in compliant with the State building code. A housing code would also establish the minimum standards required in order for a dwelling to be habitable. For example, if upon investigation, a dwelling was found to be unfit for human habitation according to the standards of a housing code, the County could order that the dwelling be repaired or closed and that an abandoned dwelling be demolished.

Nuisance

The County may also want to consider preparing and adopting a nuisance ordinance. Nuisance ordinances have been established in some towns and counties in the state to protect public health and safety in regard to the maintenance of property. These ordinances may declare property to be a nuisance if it unreasonably threatens the health or safety of the public or neighboring land users; or unreasonably interfere with the ability of neighboring property users to enjoy the reasonable use and occupancy of their property. The adoption of a nuisance ordinance would provide a stronger tool for the County to pursue complaints against nuisance properties in order to protect the health, safety, and welfare.

Examples of nuisances that an ordinance could address are:

- Housing dwellings with i.e. chronic problems regarding maintenance, appearance, and/or disturbing the peace of neighbors.
- Property problems such as stagnant water, unkempt lawns, weeds, and uncontrolled vegetation growth.
- Storage of junk or dumping of trash and debris on private or public property.

Chapter 8 – Goals and Policies Implementation

Introduction

General goals and specific policy statements were formed for the Future Land Use Plan based on input from the steering committee, planning board, citizens, elected officials, and staff to respond to identified needs. The following goal and policy statements provide overall guidance for official County decisions and actions. The more detailed policies are designed to address specific issues. These goals and policies are tied to the implementation action items found in the previous Chapter 7.

The Plan **Goal and Policy topics** in this Chapter are the following.

1. **Natural Environment**
2. **Solid Waste Disposal and Recycling**
3. **Potable Water, Septic, and Sewer Facilities**
4. **Public Safety – Sheriff, Fire Protection, Emergency Services, and Animal Control**
5. **Parks and Recreation**
6. **Cultural Resources**
7. **School Facilities**
8. **Health Services**
9. **Transportation and Circulation**
10. **Current and Future Land Use**
11. **Economic Development**



Plan Goals and Policies

This following in this chapter is a list of the Future Land Use Plan has implementation actions with goals and policies. Some actions will be implemented in an ongoing manner, some are likely to be implemented in a few years, and some will likely take many years to occur. While the policies of the plan often will likely remain relatively unchanged over time, implementation actions should be revisited every few years and updated as needed. An overall goal of this plan is for the County to implement and address the policies over the 2014-2030 planning period.



Staff drafted goals and policies with the Steering Committee. Citizens at public meetings reviewed, refined and added this information for the Future Land Use Plan.

1. Natural Environment

County Goals

1. Preserve the rural character of the County.
2. Separate agricultural uses from developed areas.
3. Protect life and property from floods, wind, and fire.
4. Protect environmentally sensitive areas of the County.
5. Protect the natural environment from degradation, pollution and unregulated poorly planned development.
6. Maintain, protect, and enhance water quality in aquifers, lakes, and streams and all state and federal regulated wetlands.
7. Protect and enhance the County's air quality.
8. Educate County residents about the natural environment.

County Policies

Topography

1. Avoid development locating in steep sloped areas and flood plains.

Soils and Septic Quality

1. Consider best management practices or restrictions for development activity in areas where the soil suitability is incompatible.
2. Insure that state and County rules are followed regarding septic use.
3. The County encourages development to avoid locations with soil foundation limitations.

Soils and Prime Farm Land

1. Support the Bladen County voluntary agricultural Districts ordinance from the Bladen County Working Lands Protection Plan – 2010.
2. Support the farm friendly policies and recommendations of the Bladen County Working Lands Protection Plan – 2010.

Land Cover – Forests

1. Consider forest harvesting best management practices.
2. Consider creek, stream, and river setback best management practices for timber harvesting.

Biodiversity and Wildlife Habitat

1. Consider working with the NC Wildlife Resource Commission to prepare and adopt a County wildlife habitat protection for biodiverse and environmentally sensitive areas in the County.

Ground Water

1. Ensure that all land use and development decisions comply with state, County, and

Town federal regulations to protect groundwater aquifers and well water use.

Wetlands

1. Development activity shall be regulated in wetlands according to state and federal i.e. US Army Corp of Engineers regulatory requirements.
2. Development should be avoided in wetland areas.

Floodplains

1. Comply with the Federal Emergency Management Agency (FEMA) floodplain requirements to decrease the cost of property insurance rates with the National Flood Insurance Program.
2. Consider development restrictions in the floodplain to decrease avoidable property loss from floods.
3. In floodplain areas encourage the County and property owners to work with non-profit land trusts to conserve floodplain areas.

Water Quality

1. Regulate development activities along streams and lakes within area watersheds to help prevent the degradation of water quality in the County and to prevent the loss of public trust uses.
2. Consider requiring retention and management of natural vegetation in buffer areas along streams and lakes in the County.
3. Support the Lumber River basin and Cape Fear River basin water resource plans.
4. Adhere to state storm water development regulations pertaining to pervious and impervious surfaces to protect water quality of wetlands, streams, and lakes in the County.
5. Seek future participation opportunities with the state Clean Water Management Trust Fund programs such as protection of land bordering streams and lakes.

Natural Hazards and Hurricanes

1. Keep the County’s Hazard Mitigation Plan - 2009 current and up to date.
2. Have a community hurricane shelter plan for the County residents.

Fish and Game

1. Support of the efforts of the NC Division of Inland Fisheries and the NC Wildlife Resources Commission, and the US Army Corps of Engineers to improve and protect fisheries resources including the 2001 Cape Fear River Fisheries Management Plan.
2. Support the game regulatory efforts of the NC Wildlife Resources Commission.

Industrial Sites and Environmental Concerns

1. Support the state and federal monitoring, inspection and clean-up of industrial sites regarding hazardous waste, chemical spills, and storage tanks.
2. Encourage clean up and redevelop existing brown fields within the County.

3. Use the County conditional or special use permit process and state rules to regulate intense commercial and industrial development, using hazardous chemical substances, creating pollution and noxious effects, and other adverse environmental effects.

Large Scale Farming: Poultry, Swine and Cattle

1. Support the poultry, swine and cattle inspection efforts and best management practices by the state.
2. Consider buffers and best management practices for odor control of large farms to adjacent users.
3. Maintain in the County GIS the location of poultry, swine, and cattle farms.

Air Quality

1. Support state air quality regulations and compliance inspections.

2. Solid Waste Disposal and Recycling

County Goals

1. Provide sanitary disposal of solid waste.
2. Provide recycling education program outreach and services.

County Policies

1. Assess solid waste needs, service provision, and coordinate with the providers of waste removal with the County Solid Waste Management Plan.
2. Prohibit illegal trash dumping with stronger enforcement and fines.
3. Maintain convenience recycling centers and improve customer service for all citizens with the County Solid Waste Management Plan.
4. Increase coordination with the Keep America Beautiful program with education and outreach regarding waste and recycling.

3. Potable Water, Septic, and Sewer Facilities

County Goals

1. All persons shall have access to safe drinking water.
2. Insure that septic use meets code and best management practices.
3. Avoid unplanned and uncoordinated water system growth.

County Policies

1. Map areas that have County potable (drinking) water.
2. Prioritize areas that will receive County potable water.

3. Insure that potable water wells and septic systems are properly inspected, permitted and operating.
4. Expand the public works department as needed to keep up with planned growth and development.
5. Remain informed with municipalities regarding sewer system expansion.
6. Identify failing septic systems and regulate improvements that meet codes and state laws.

4. Public Safety – Sheriff, Fire Protection, Emergency Services, and Animal Control

County Goals

1. Provide high quality law enforcement and first responders: sheriff, fire protection and emergency services.
2. Reduce homeowner’s insurance premiums for residents.
3. Maintain good relations between the sherriff’s department and public.
4. Provide high quality animal control protection services.

County Policies

1. Assess the sheriff, fire, and emergency services programs with other comparable counties, state and national standards and address improvements.
2. Support highly trained and skilled personnel to fill sheriff, fire and emergency services department positions.
3. Assess fire hydrant locations and insure that distances between hydrants meet high quality standards of protection.
4. Assess the animal control program with state and national standards and address improvements.

5. Parks and Recreation

County Goals

1. Ensure park facilities are safe, attractive, and well maintained.
2. Increase recreational opportunities for the public.
3. Use parks and recreational programs to enhance the quality of life of users.
4. Optimize public opportunities for recreation with parks including picnic areas, ball fields, and walking trails.
5. Provide public recreation access.
6. Follow the recommendations of the County 2009 parks and recreation plan and 2009 master plan for Bladen County Park.

County Policies

1. Increase parks and recreation department operating and capital improvement budget.
2. Develop and/or maintain cooperative working relationships or partnerships with other public quasi-public, non-profit, and private/commercial organizations.
3. Have a marketing program.
4. Apply for state and federal park and recreation grants.
5. Evaluate the user fee system regarding programs and services.
6. Evaluate additional parks and recreation funding and land facility acquisition methods.
7. Locate park facilities in population centers of the county.
8. Short-term Goals (2009-2013)
 - a. Renovate Bladen County Park.
 - b. Increase programs for youth, adults, seniors, and disabled.
 - c. Address participation barriers for parks and recreation.
 - d. Address health issues such as obesity and associated diseases.
 - e. Promote County tourism.
9. Long term Goals (2014-2018)
 - a. Build a community recreation center.
 - b. Build a swimming pool.
 - c. Monitor and maintain park facilities.
 - d. Monitor public input with parks and recreation.
10. Use the County development regulations to continue to require that new development provide public open space.
11. Encourage river and lake public access opportunities, including boat ramps, canoe and kayak launches, paddle trails, and fishing areas. Coordinate river activity with the US Army Corps of Engineers, NC Wildlife Resources Commission, and the NC Division of Inland Fisheries.
12. Support the efforts of the Mid-Carolina Rural Transportation Planning Organization for a future creation of a recreation oriented greenway along the Cape Fear River (trail corridor) from Fayetteville to Wilmington going through Bladen County.

6. Cultural Resources

County Goals

1. Ensure that the unique cultural history is nurtured, protected and supported.

County Policies

1. Archaeological, cultural, historical sites and places, should be protected and preserved using state Historic Preservation Office resources, guidelines and best management practices.
2. Planning new development adjacent to historical sites and places should include

- state Historic Preservation Office guidelines and best management practices.
3. Use County and private partnerships to preserve historical buildings and property.
 4. Support improvements to historic sites.
 5. Support where possible public festival events, and allow a county fair.

7. School Facilities

County Goals

1. All County K-12 students will have access to high quality public education buildings and facilities.

County Policies

1. The County shall be part of the development review process for County School buildings and facilities.
2. Use County development regulations to encourage new residential developments to consider the impact of their development on the County school system.
3. Support the efforts of the County School Board efforts to prepare a new master facilities plan - 2014.

8. Health Services

County Goals

1. Increase access to medical personnel and support services.

County Policies

1. Support the County Health Department's available health programs.
2. Improve or add Emergency Medical Services (EMS) and health facilities in order to improve service delivery and reduce insurance premiums.
3. Support hospital improvements and expansion and maintain dialogue with the municipalities in the County.
4. Maintain and improve County Emergency Medical Service addressing of residences and businesses with the geographical information system (GIS).
5. Increase the walkability of communities with sidewalks, foot paths, and trails to help address the recent obesity challenges.
6. Bladen County, municipalities in the county and other supporting health organizations should consider undertaking a health and wellness initiative with steering committee and report/plan.

9. Transportation and Circulation

County Goals

1. Provide safe, reliable and efficient transportation patterns and facilities.
2. Improve transportation links within and beyond the County.
3. Improve pedestrian and bicycle opportunities and safety.

County Policies

Generally

1. Work with the Mid-Carolina Rural Transportation Planning Organization (RTPO) and municipalities on transportation issues.
2. Coordinate with the Mid-Carolina Rural Transportation Planning Organization (RTPO) when reviewing development proposals.

Roads

1. Roads will connect as much as possible and avoid development patterns with dead ends and cul-de-sacs.
2. Support the principles of NC Department of Transportation Access Management and encourage the use of recommended road and driveway design standards.
3. Coordinate with NC Department of Transportation regarding the proposed NC-87 road widening from two to four lanes between Elizabethtown and Acme-Delco at Highway 74-76.
4. Support and encourage use of NC Department of Transportation - Traditional Neighborhood Development narrow streets guidelines for new development.
5. With the County Subdivision Ordinance adhere to the NC Department of Transportation subdivision roads and minimum construction standards.
6. The County will use the Rural Transportation Planning Organization (RTPO) Strategic Planning Office of Transportation (SPOT) List and the Bladen County Comprehensive Transportation Plan for guidance with new roads and keep the plan updated.
7. Insure that new subdivisions connect with the surrounding property or have stub-outs for future connections and avoid dead end roads.

Sidewalks, Paths and Trails

1. Consider upgrading the County Subdivision Ordinance to require sidewalks where appropriate with new development as sidewalks link the community together, increase the quality of life, address health issues, and improve pedestrian access and mobility.

Bicycle Lanes and Paths

1. The County will work to improve and extend to other areas bicycle lanes on roads and paths coordinating with the Mid-Carolina Rural Transportation Planning

Organization (RTPO) and State parks.

Rail Road

1. Coordinate with the CSX rail road carrier regarding rail road crossings and safety.

Bus Service

1. Coordinate and encourage expansion of the local bus service carrier Bladen Area Rural Transportation System (BARTS) with facilities and service.

Airports

1. Coordinate with the three local airports in the County at Elizabethtown, Bladenboro and Mitchell Field in Kelly, and the Federal Aviation Administration regarding airport use.
2. Insure proper County review and coordination if new development occurs adjacent to the airports or in flight paths.

Water

1. Provide public water access i.e. to rivers and lakes, coordinated with the County Parks and Recreation Master Plan and State Parks.
2. Coordinate as needed with the US Army Corps of Engineers regarding Cape Fear River boating use and the three locks and dams in the County.
3. Coordinate boat use and water safety programs and operation with the County sheriff, fire department, and state.
4. Support the maintenance and operation of the historic Elwell Cable Ferry on the Cape Fear River at Carvers Creek.
5. Support the NC Wildlife Commission maintenance and operation of the four boat ramps on the Cape Fear River and one on the Black River.

10. Current and Future Land Use

County Goals

1. Maintain a land use plan to service existing and new development.
2. Provide sound, healthy and affordable housing for all residents in all income levels.
3. Encourage compact community and business development patterns in nodes (centers) as this will lead to efficient transportation, infrastructure, and public services.
4. Reduce land use conflicts.
5. Maintain updated land development ordinances for best growth and management practices.
6. Ensure the goals and policies of the Future Land Use Plan are consistent with each other.

County Policies

Generally

1. Ensure that elected officials, planning board members, and staff are kept abreast of County land use concerns for residents and businesses.
2. Use the future land use Map 6-2 and future land use plan for County development and conservation decisions.

Re-Zonings

1. Use the future land use Map 6-2 and the future land use plan to assess suitability of re-zonings.

Consistency

1. Land use goals and policies shall be consistent with the future land use plan including: population, local economy, housing, natural environment, community resources, public facilities, and transportation.

Residential Housing

1. Residential development is recommended to occur as designed in the future land use plan and zoning and sub-division ordinances.
2. Residential development should be consistent with County's ability to provide services.
3. Ensure housing is safe and complies with State and County's standards.
4. Allow manufactured housing and multi-family housing.
5. Consider a County minimum housing code.
6. Enforce non-conforming residential use ordinance language.
7. Ensure housing is in compliance with septic field (or sanitary sewer) requirements.
8. Residential development should be discouraged with multiple single driveways on major roads and encouraged to access minor roads.
9. Work with state and federal programs for rehabilitation of substandard housing i.e. Housing and Urban Development (HUD), and Community Development Block Grant (CDBG).
10. Support non-profit affordable housing organization efforts, i.e. Habitat for Humanity.
11. Allow a home occupation where appropriate in residential dwelling, i.e. day care, or office use.

Commercial

1. Discourage commercial strip development patterns along roads. Encourage commercial development in clustered nodal areas.
2. Highway commercial uses should be mutually compatible and reinforcing in use and design where possible.
3. Highway commercial should be designed with minimized road access points to control strip development and increase vehicle and pedestrian road safety.

4. Insure that commercial use is properly permitted to handle water and septic or sewer needs.

Schools and Government Buildings

1. Work and coordinate with the County School board with existing and planned future school location and facilities.
2. Discourage schools from being located in close proximity to animal farm operations, and industry.
3. Encourage government buildings to be located in Towns where there is existing infrastructure and to avoid unplanned sprawled development.

Animal Farms

1. Monitor and regulate with State and County rules regarding animal farms uses such as swine houses and waste lagoons, poultry, and livestock.
2. Promote best management practices regarding animal production, waste management, and odor control.

Industrial

1. Zone for only as much industrial land as the County can service with roads, water lines and sewer or septic needs.
2. Insure that industrial use is properly permitted to handle water and septic or sewer needs.
3. Plan for a reasonable demand of industrial land need.
4. Industry should be located on physically suited land i.e. not in the flood plain.
5. Encourage industry to locate in the two industrial parks to take advantage of available services and infrastructure.

Annexation

1. Maintain a dialogue with the Towns in the County regarding annexation and land uses adjacent to Towns.
2. Discourage Towns from annexing satellite areas in the unincorporated County that are not contiguous to a Town. Annexing lands and developments a distance away (satellite- i.e. a mile or more from the County's boundaries) invites spread-out development that is inefficient to service.

Water

1. Encourage development to occur where existing water lines are.

Sewage Treatment

1. Encourage higher density development to be located in or near Towns so that development can be connected to a municipal sewer system.

Buffers and Setbacks

1. Use the zoning and subdivision ordinances to separate and buffer incompatible adjacent land uses, with vegetation, fences, walls, and odor control. Examples of possible conflicting uses could include animal farms, intense commercial, intense industrial located in close proximity to residential areas and schools.
2. Use good site planning and a land development application to employ buffers and setbacks to reduce adjacent conflicts.

Landscaping

1. Encourage the County zoning ordinance to provide landscaping requirements, particularly with parking lots and street yards, for commercial and industrial development.

Parking

1. Review and revise if needed the parking standards in the ordinance to ensure that there is not excessive parking required for commercial and nonresidential development.
2. In the zoning ordinance encourage the use of best management practices regarding permeable pavers in parking areas to encourage onsite infiltration and maintain good water quality.

Signs

1. Ensure sign ordinance regulations result in attractive signs. Use information from Towns that have good and attractive signs including i.e. Knightdale, Cornelius, Davidson, Jamestown. Generally prohibit unnecessarily large signs.
2. Consider not allowing new billboards (off premise signs) in the zoning ordinance to prevent unsightly land use degrading signs.
3. Discourage changeable copy electronic signs that change more frequently than once a minute, as they are a driving safety concern for drivers and pedestrians. Discourage flashing and movement sign display.

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General Development

1. Enhance and strengthen the zoning ordinance by encouraging the NC Department of Commerce – Division of Community Assistance to prepare a design hand book showing preferred and discouraged development patterns, and particularly for non-residential commercial development. Hand book examples could include poor and high quality development, and what to avoid and encourage.
2. Ensure that private property owners are fairly compensated for lands which are to be acquired for public purposes.

11. Economic Development

County Goals

1. Create a business friendly environment that will foster quality jobs and investment.
2. Support relocating and expanding business.
3. Provide site selection services.
4. Provide contact network assistance between economic development professionals and companies choosing to relocate or expand.

County Policies

1. Support the Bladen County Economic Development Commission program.
2. Encourage a working relationship with North Carolina's Southeast a regional economic development partnership.
3. Work with the NC Rural Economic Development Center including the NC Step and Bladen's Bloomin' non-profit programs.
4. Encourage towns in the County to apply to participate with the NC Small Town Main Street program with the NC Department of Commerce.

Appendix A – Public Input

Three night meetings were held for *public citizen comments* for the Future Land Use Plan. Sixty-five people attended.

Future Land Use Plan Public Meetings (7:00 – 8:30 pm)

Elizabethtown Town Hall, 11-21-13

East Arcadia Town Hall, 12-12-13

Bladenboro Historical Society Building, 1-9-14



Topics discussed and comments on were the following.

- Natural environment
- Potable water, septic, and sewer facilities
- Public safety – sheriff, fire protection emergency services, and animal control
- Solid waste disposal and recycling
- Parks and recreation
- Cultural resources
- School facilities
- Health services
- Transportation and circulation
- Current and future land use
- General government and economic development

Public Citizen Input and Comments

At the end of each following *comments* the meeting location is noted as:

E – Elizabethtown; EA – East Arcadia; and B – Bladenboro.

Natural Environment

Wetlands

- *Desire County map delineation of wetlands available to public. EA*

Floodplains

- *Flood Emergency Management Agency (FEMA) - flood plain insurance has expanded its role and affects too much of the property i.e. along the Cape Fear River and in the flood plain. Can anything be done about this. This has caused higher dollar insurance costs and survey costs and is a concern. FEMA should have to shoulder the burden of cost assessments and not the property owners. E*

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- *Desire response from some county or state agency to help with beavers i.e. NC Wildlife Commission. EA*
- *Desire financial help to remove beaver dams and obstructions. EA*
- *Would like information about most recent i.e. 2007 FEMA flood map updates available to public. EA*
- *Ditches not being cleaned, problems with standing water along roads. EA*
- *Creek in East Arcadia needs to be cleaned out. EA*
- *Land doesn't drain well. EA*
- *Beavers have dammed a creek in East Arcadia creating flooding problems, affecting property, farm land and septic systems. EA*
- *Support any government work that can help with the drainage in East Arcadia area. EA*
- *FEMA floodplain maps are incorrect. Wanted to develop a solar farm and was not able to do so because of FEMA designation near Forest Drive southwest of Bladenboro. Lost potential development earnings because of this. FEMA maps need to be corrected. B*
- *Would like more information about county FEMA maps and when they are updated. B*

Water Quality

- *Desire public information about delineation of watershed and how it is determined and affects on property. EA*
- *Want to protect watershed from pollution. EA*
- *Don't want landfill or other waste sites to be located in East Arcadia watershed. Concerned about polluted sludge. EA*
- *Freshwater mussel growth has been stunted by pollution in Reeder Branch Creek because of inadequate waste and land runoff treatment. B*
- *NC Department of Water Quality needs to inspect and communicate with persons of affected properties such as with the Bryant Swamp Drainage Association along Reedy Branch Creek. Fish kills have occurred in the creek i.e. in 2005. B*
- *Industry growth is limited by water permitting restrictions. EA*

Animal Farming

- *Concerned about hog farm lagoons and odor problems – negatively affecting quality of life. Can even smell hog odors inside buildings i.e. East Bladen High School. E*
- *Is waste from animal farms being properly disposed of and where does it go? E*
- *Concerned about swine moratorium being lifted and more hog farm development occurring. EA*
- *A concern about hog houses being too close to residences, churches, and schools. EA*
- *Bryant Swamp Run has a water quality problem because of hog lagoons and the spray areas. This has caused fish kills that have occurred all the way up to Bladenboro. B*
- *There is a problem with hog lagoons and where to put the sludge. It has high zinc levels after it is applied or sprayed on the land, such that one can't grow crops i.e. peanuts on it for 10 years or more after it is applied. B*

Fish and Game

- *Poor people and families depend on fishing. Don't like the fish catch restrictions with type, size, and amount i.e. on the Cape Fear River. EA*

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Agriculture

- *Agriculture is big business and revenue for the County, including silviculture. E*
- *Agricultural tourism – Would like to see more of it, i.e. wineries. E*

Natural Hazards and Hurricanes

- *Would like hurricane planning and disaster assistance. EA*
- *Water intake from the Cape Fear River is restricted. Would like to know public benefits we getting use of the river water. EA*
- *Need disseminated public information i.e. public information officer, of where people can go to in the case of emergency i.e. train wreck, or other natural events. Need better outreach. B*

Air Quality

- *Would like information on how Bladen County ranks in air quality as related to rest of state. EA*
- *Need better control and enforcement of open burning fires. EA*
- *There are problems with unrestricted unregulated open fire burning that is occurring. EA*
- *Feed pellets for hog farms by Murphrey Brown release gas that is noxious and irritating to my wife. B*
- *Spray fields waste from hog houses causes intense air pollution. B*
- *Odor pollution is caused from hog houses and when the waste lagoons are pumped. B*



Citizen input at one of the public meetings.

Potable Water, Septic, and Sewer Facilities

Septic

- *Need enhanced County enforcement of septic systems and tanks, to make sure they are properly installed and operating. EA*

Potable Drinking Water

- *Piped water system quality concerns. Drinking water tastes bad. Concerned about “stagnant water in pipes and system”. E*
- *Problems with piped system in Elizabethtown. E*

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- *Phase 3 expansion still has a problem with a lack of property owner participants. The low number of customers has contributed to higher overall costs for the County. Residents have been reluctant to join except when their private water wells fail. E*
- *Want information about Tar Heel surface water treatment plant and safety of it. EA*
- *What are the plans for getting water facilities to various parts of the County. For example Berry Lewis Road. Want to know how this will impact my taxes. B*
- *After hurricane Floyd in 1999 it took a long while for the water treatment plant to be operational. Need better management plans in the event of a natural disaster. B*

Sewer

- *County residents use septic systems. A problem is that the County doesn't have money to invest in a sewer system. This makes it harder to attract business – "chicken or the egg" situation. Need to pay attention to this into the future for the County. E*
- *Would like public sewer system. EA*

Public Safety – Sheriff, Fire Protection Emergency Services, and Animal Control

Sheriff

- *Would like enhanced sheriff's department visibility. EA*
- *Crime rate has gone up because youth lack gym and recreation programs. Desire for this to be addressed. EA*
- *Desire to improve sheriff response time. EA*
- *Would like a satellite sheriff branch in East Arcadia area. There is need for this service. EA*
- *In Bladenboro a community watch crime prevention effort has been operating which has been beneficial but need better participation. B*
- *Would like our county law enforcement to make more drug arrests. B*
- *Bladenboro has a high drug abuse problem. B*
- *Need better gang control in Bladenboro. B*

Fire Protection

- *Concerns about level of fire department services. EA*

Emergency Services

- *Would like to change volunteer scheduling and accounting of time, i.e. when you report for service and time off related to your job. E*
- *Need improvement of emergency response services. EA*
- *Would like to have a centralized government facility location for sheriff, emergency management services and BARTS to reduce response time. EA*
- *Existing EMS service is outstanding in the county. B*
- *Need better coordination of medical records and services when patients are transported by ambulance outside of the county. B*

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- *The Pine Ridge area of Bladenboro can be cut off by a stopped rail-road train. This could be a problem if there is a fire or EMS needs. Need additional escape access road to Pine Ridge subdivision i.e. to the south, west or east. B*

Animal Control

- *There are problems with loose running animals i.e. dogs, in the County. E*
- *Need information on who to call for bear control. EA*
- *Dog and cat animal dumping (turning loose) need to be addressed i.e. with fines and or enforcement as this is a problem. B*

Solid Waste Disposal and Recycling

Solid Waste

- *Need to strategically locate dumpsters and make them more accessible. EA*

Recycling

- *Centers not conveniently located in County. This is a problem of getting your recycling material to a center. Also closed on Wednesday, Sunday and holidays. E*
- *Problem of what the recycling center will accept and lack of customer attention. E*
- *Would like improved County public education and outreach regarding recycling and proper way to drop off recycling materials. EA*
- *Recycling drop off sites not open on Wednesdays. Would like to know the cost of having the sites open on this day if possible. B*
- *Would like to have dumpsters for cardboard that would be available for drop off at any time. Could have a narrow slot allowing the cardboard to be inserted into dumpster or container. B*
- *Would like to have better separation of recyclable materials. B*

Trash and Illegal Dumping

- *Historical problem in the County of people dumping trash, i.e. it not being picked up, lack of enforcement, and prevention. E*
- *Illegal burning practices occur with i.e. garbage, insulation, tires, etc... EA*
- *Desire stronger enforcement regarding improperly disposed and burned garbage. EA*
- *Problem with illegal dumping of trash on properties. B*

Parks and Recreation

- *Have to drive long distances to parks. A lack of parks. The parks are too concentrated in Elizabethtown. E*
- *Lack of personal to staff parks i.e. in Dublin. Need to put parks where people are i.e. in White Oak. E*
- *Need clarification of job duties of park personnel. E*
- *If the County builds a swimming pool where would it be located? E*

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- *Would like a multi-purpose facility building; i.e. offering classes in arts, pottery, performing arts and other cultural events. E*
- *Would like an auditorium. E*
- *Would like to have a public park in East Arcadia. EA*
- *Need money for maintenance and upkeep of gym in East Arcadia. Would like more recreation opportunities. EA*
- *Would like part of master park plan the deals with East Arcadia area. EA*
- *Desire copy of park master plan. EA*
- *Would like increase in park programs particularly for youth and adults. EA*
- *Need more parks and better park service programs. EA*
- *Would like to build a public swimming pool. EA*
- *Desire new senior center in East Arcadia, the existing building is over 100 years old. EA*
- *Would like park facilities to be more spread throughout the County instead of being concentrated mainly in Elizabethtown. B*
- *Would like better public access to White Lake. Also have to pay to use the boat ramp at the lake. B*



Recording citizen comments at one of the public input meetings.

Cultural Resources

County Fair

- *Would like to look into state law or rules affecting preventing having a County fair. E*
- *Would like to reinstate County fair, but wouldn't want County to fund it, or it to interfere with other festivals. B*

School Facilities

- *Infrastructure and buildings are old i.e. 60 years old in some cases. Buildings are dilapidated and patchwork maintenance a constant challenge. E*
- *Don't think that lottery money is being fairly distributed and sent back to the schools. E*

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- *Concerned about new school leadership. E*
- *Need to look at re-purpose use of old school facilities. E*
- *Schools are a vital part of community and should be located in the towns not in rural uninhabited areas. E*
- *Need more charter schools. E*
- *Need fewer charter schools – they take away money from public schools. E*
- *Bladen County school locations require long busing distances for students. Don't like this. EA*
- *Need to build and locate schools in local communities i.e. locate a school in East Arcadia-Carvers Creek- Kelly area. EA*
- *Need plans for new schools east of State Highway 701. Would like at least one school east of 701. EA*
- *Avoid building new schools, instead need to reuse or retrofit old schools. Don't tear down old schools as they can be reused i.e. Bladenboro Historical Society building is an example of an old reused school. B*

Health Services

- *Health and Wellness - Look at Columbus County Health and Wellness Initiative plan for information. They did an in- depth analysis of health needs in their county. E*
- *Mental Health – Bladen County has great need for upgraded mental health services. E*
- *There is a higher cancer rate in East Arcadia than the surrounding areas. Need to monitor and address this. EA*
- *County needs to coordinate with National Institute of Environmental and Health Services regarding cancer in East Arcadia area. EA*
- *Need better public county health services and preventative care. EA*
- *Would like increase County health service i.e. with checking blood pressure, and diabetes control. EA*

Transportation and Circulation

General

- *Doesn't seem fair that a disproportionate share of the state transportation Powell Bill money revenue goes to the urban areas of the state and not the rural counties i.e. Bladen County. E*
- *Mid-Carolina Rural Transportation Planning Organization (RTPO) – is working on a transportation master plan for area including Bladen County. E*

Roads

- *Concerned about State Road 87 widening affecting safety of school bused youth. EA*
- *Would like to realign and move segment of State Road 87 that goes through East Arcadia.*
- *Need to widen roads in East Arcadia area because of truck traffic. EA*
- *There needs to be a road sign at the end of East Arcadia Road and State Road 87 that is lighted. Intersection is not safe and has had vehicle wrecks. Would like NC-DOT to address this. EA*
- *Need caution light at the East Arcadia school or a safe turning lane – not currently safe. EA*

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- *Roads in Bladen County are not built for the heavy tractor trailer traffic such as by hog and poultry users i.e. Main Street in Bladenboro. B*
- *The citizens of Pine Ridge felt that the proposed access road design to the subdivision by NC-DOT was overbuilt and too large. They would have liked a smaller access road. B*
- *Would like to see NC-DOT install cross-walks in Bladenboro. There is a need for them by pedestrians, children, and wheel chairs. B*
- *NC-242 road has had some vehicle and pedestrian accidents. If NC-DOT can't install sidewalks because of lack of money would like to see striping and or wide road with shoulder for people to walk. B*

Railroad

- *Desire for East Arcadia to connect into the railroad system. EA*
- *Would like passenger railroad connection in the County. EA*

Bus

- *Need to improve BARTS services for local residents i.e. for doctor's visits. EA*
- *Through town CSX train speed is about 45 mph which is too high. B*

Bicycle

- *Would like to see bicycle lanes in the County. E*
- *Don't need to spend too much money on bike paths and trails. B*

Trails

- *Would like to see public access rural trails for hiking – not just along the Cape Fear River. E*

Current and Future Land Use

Construction

- *Desire County building permit activity for residential, commercial, and industrial. E*

Zoning

- *East Arcadia and County area needs to have current up-to date zoning ordinances. EA*
- *Zoning – Need education outreach information of county zoning districts. B*

Code Enforcement

- *There is a problem and lack of code enforcement with abandoned and stripped down mobile (manufactured) homes. They look terrible in the community and need to do something about them. B*

Commercial

- *Commercial development – Look as pros and cons of strip development. E*

Bladen County – Future Land Use Plan – 2014-2030

- Business – Would like to lower the County tax rate to attract more business. E
- Business industry – Need to attract smaller industry and diversify and not have just a few huge industries. If there is an economic downturn the diversification will be better for the County. E
- Commercial retail – The super Wal-Mart's are too large for a rural Bladen County and they negatively impact small businesses. E

Housing

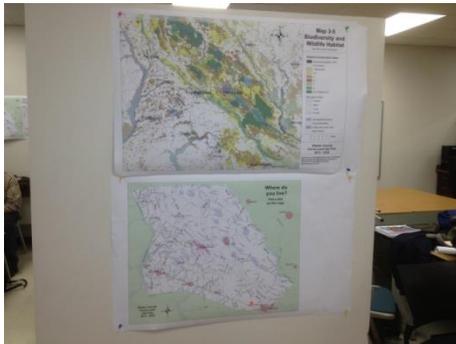
- *Need description of affordable housing in the plan and what would apply. E*
- *Desire assistance and grant programs for East Arcadia area that is available from the federal Housing and Urban Development agency, and the Community Development Block program. EA*
- *There is a lack of available rental units. EA*
- *Need to improve the lack of affordable housing. EA*

Signs

- *Don't totally outlaw off premise small signs i.e. need to advertize farm produce. But alright to regulate and restrict large billboards. EA*

Infrastructure

- *Would like to see increased natural gas lines in the County as an improved service and infrastructure. E*
- *Bladenboro has good investment in infrastructure and relatively good industry compared to Elizabethtown. E*



Map displays in one of the citizen input meeting.

General Government and Economic Development

- *East Arcadia would like support for town efforts by the County. EA*
- *East Arcadia is being left behind. EA*
- *Desire County effort to attract businesses with economic development program including East Arcadia area. EA*
- *Citizen's need to attend Town meetings to be kept abreast of activities. EA*

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- *Need outreach and education of what public services are offered, and responsibilities by the Town versus the County. EA*
- *There is a need for a public community building and assistance available towards this. EA*
- *Need to find a way to bring more industry to Bladen County. B*
- *There is not enough effort with attracting new industries to the state. Maybe there is too much industrial regulation. B*
- *Would like to see more small business attraction efforts by the County and state. B*
- *Need right amount of zoning regulation. B*
- *Don't think there is a need for a development design handbook. B*
- *Need to encourage cooperation with developers. B*

Appendix B - Bladen Co. Community Planning Survey Results

Introduction



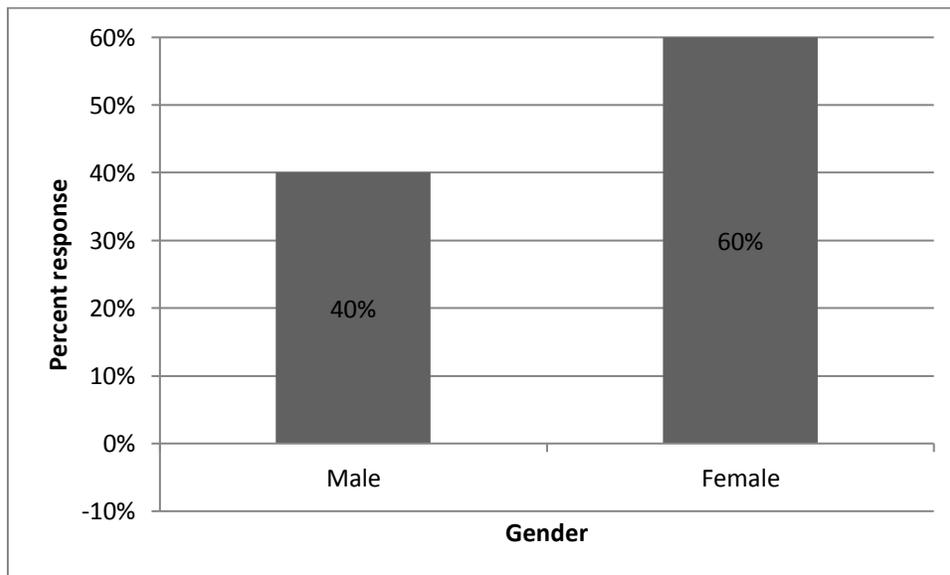
The following are the survey questions and results of the Bladen County Community Planning Survey that was conducted during the preparation of the Future Land Use Plan. Seventy people responded to the survey.

Topics in the survey were the following.

- **Demographic information**
- **Community facilities and services**
- **Community housing**
- **Local economy and use of County resources**
- **Community growth, development, and quality of life**

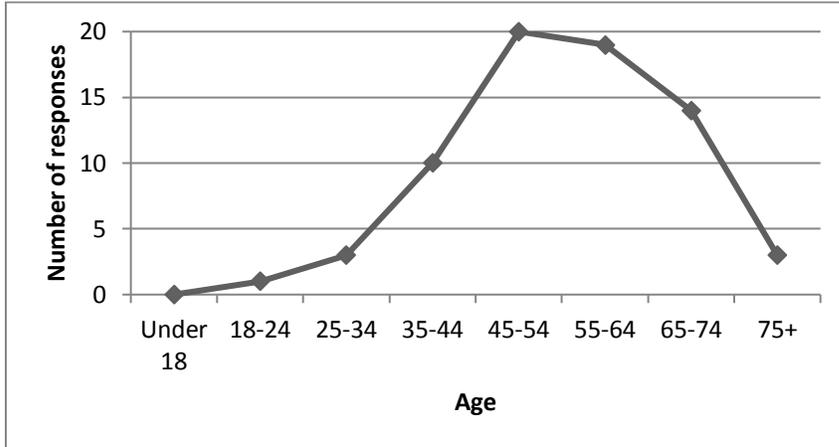
A. Demographic Information

1. Please indicate your gender.

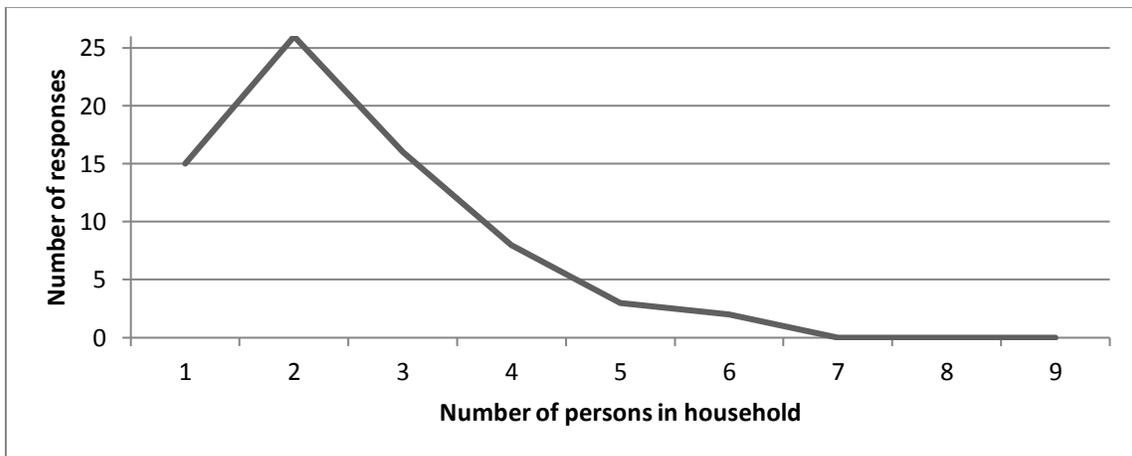


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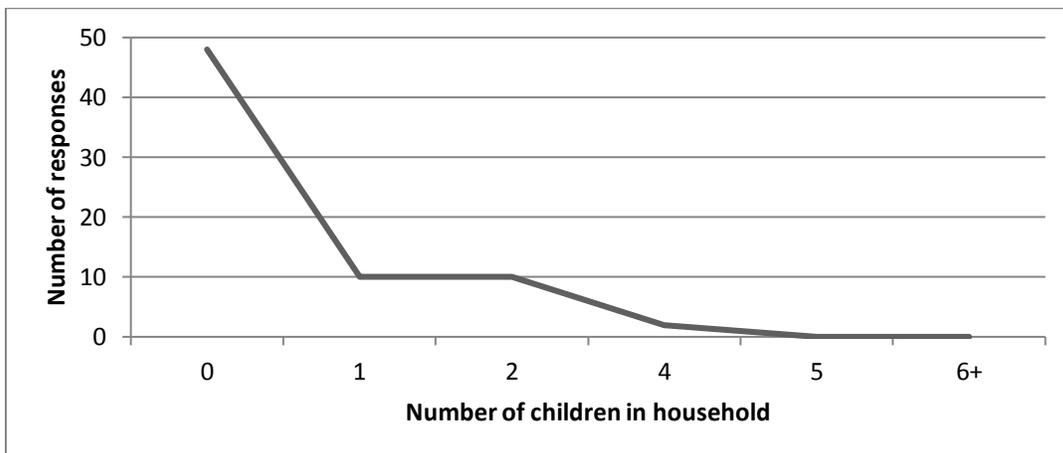
2. What is your age?



3. Please indicate the number of people currently living in your household, including yourself.

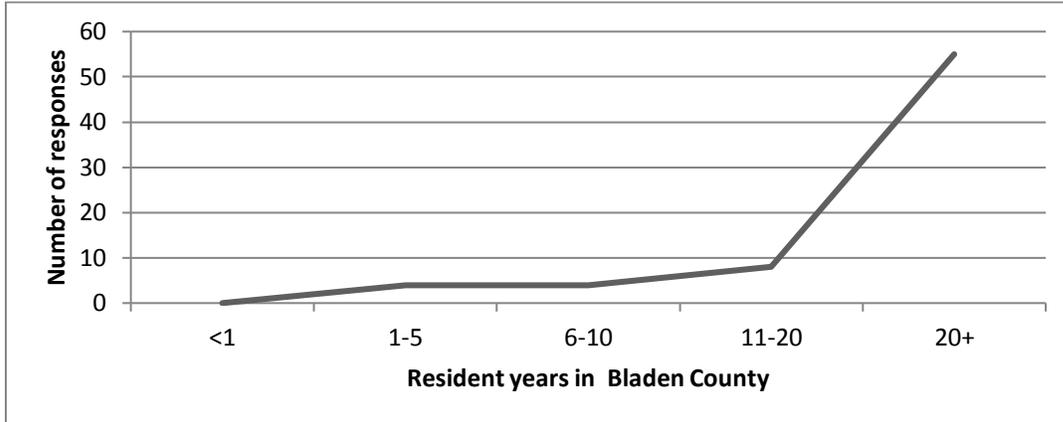


4. Please indicate how many children under the age of 18 live in your home.



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5. Please indicate how long you have been resident in the County.

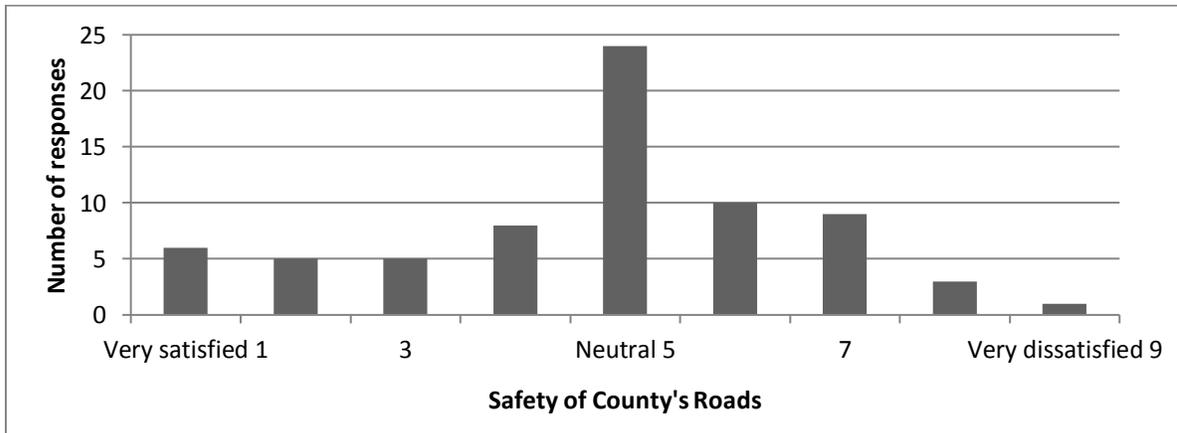


6. Please indicate your current employment status.



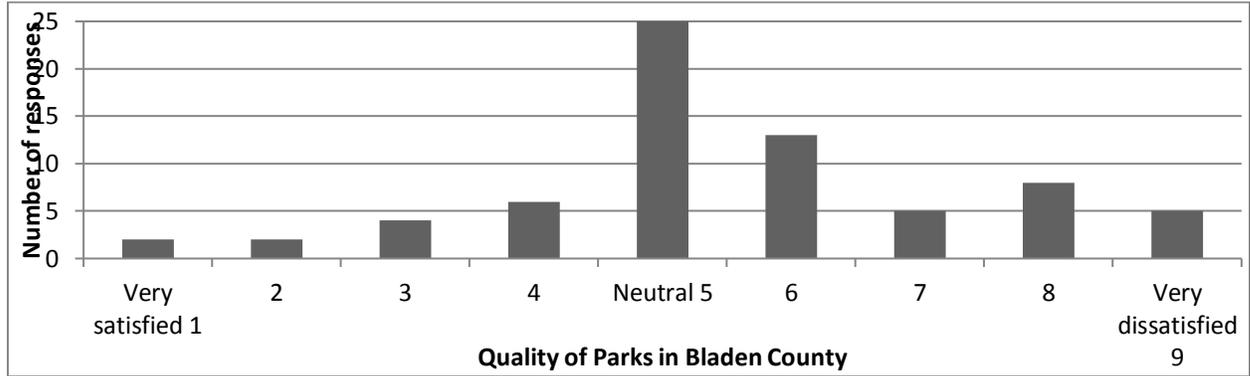
B. Community Facilities and Services

7. Safety of the County’s roads.

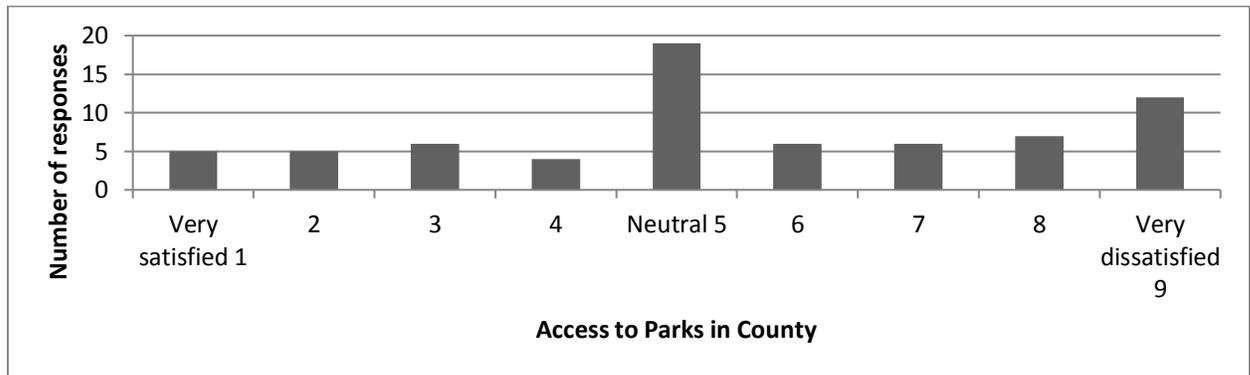


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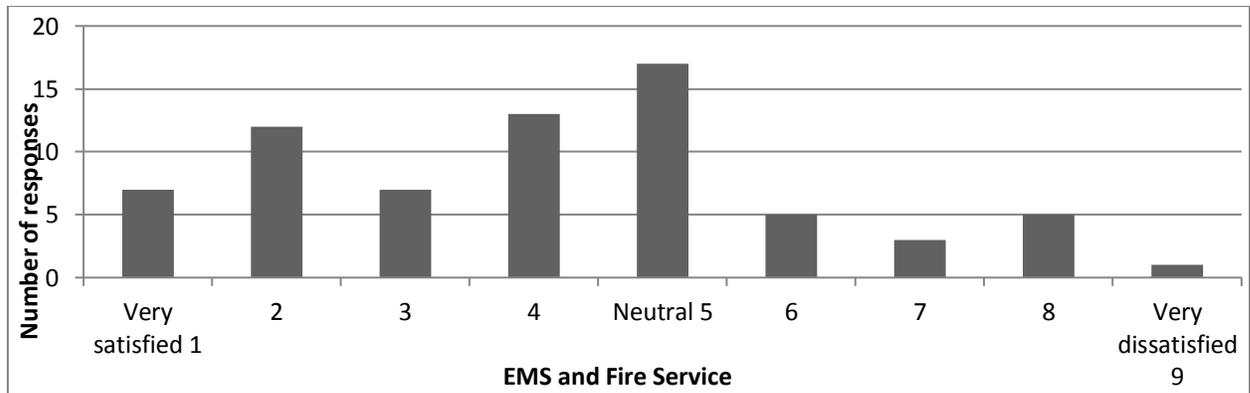
8. Quality of parks within the County.



9. Access to parks within the County.



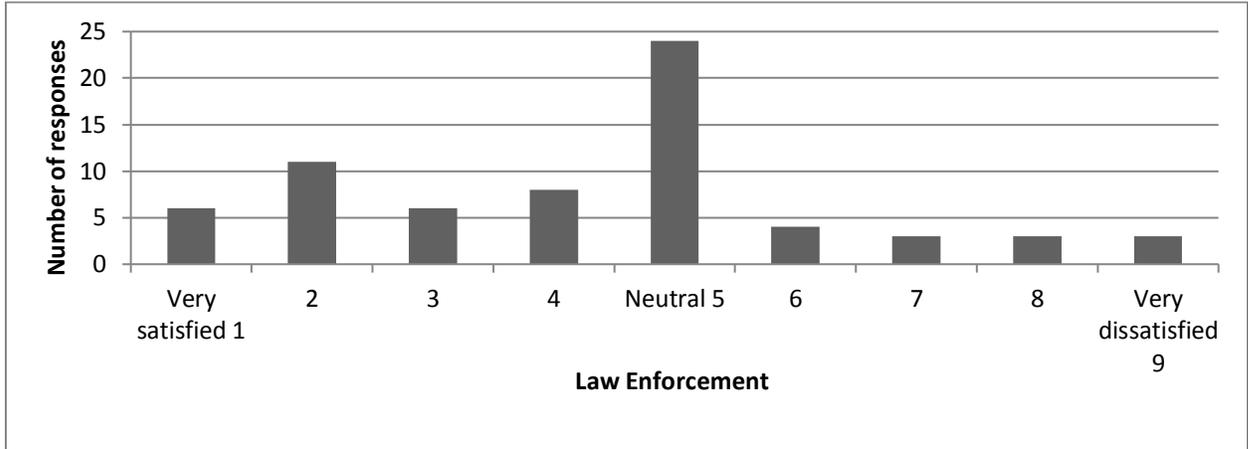
10. Emergency Management and Fire service within the County.



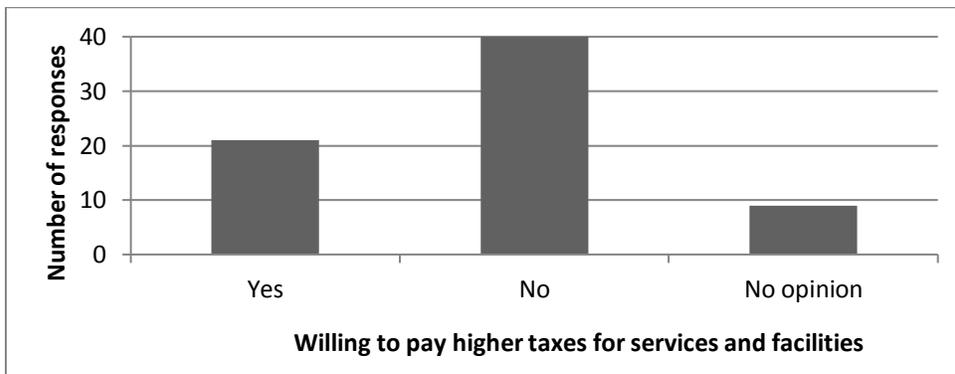
Additional comment (for Question 10): *Have not had to use them*

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11. Law Enforcement service within the County.



12. Would you be willing to pay higher taxes to improve any of the Community Facilities and Services listed in the above survey questions #7 to #11?



If yes please specify:

- Parks for kids and young adults
- Law enforcement
- It depends on how high the tax increase is
- Do you really think Bladen Co. needs to pay higher taxes for this during this time with the economy in the shape it's in
- Roads and parks
- All of the above (#7 to #11)
- Law enforcement and parks
- Law enforcement
- All ditches need cleaning
- EMS great in the town
- There is nothing to do in Bladen County
- Limited activities (would like more) restaurants, movie theatre, bike trails, walking trails
- More and better parks and recreation for the younger people
- Money may not be the problem
- (Use) sales and property taxes
- Parks and recreation, emergency service funding via sales tax increase

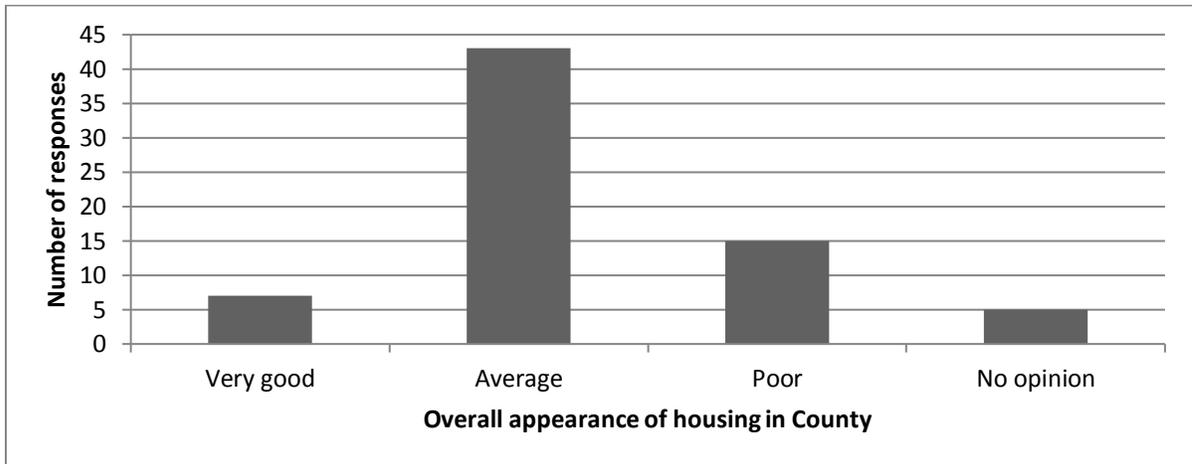
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13. Any additional comments on Community Facilities or Services.

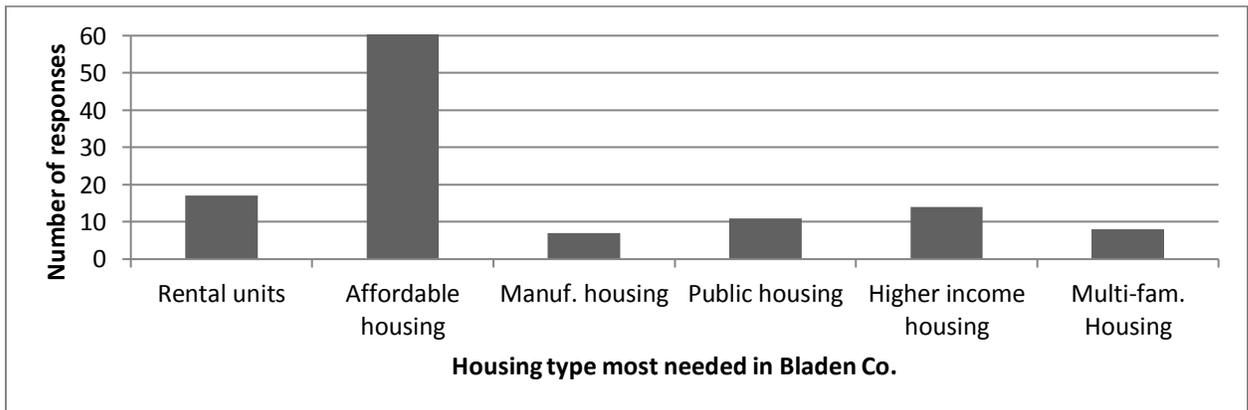
- *Clean (the) ditches*
- *(Desire) clean water*
- *No more taxes – property taxes already almost doubled*
- *Upgrade of facilities needed*
- *Some County entities have outgrown their facilities*
- *Need to spray for mosquitoes*
- *Parks need to be in communities through the County not just in Elizabethtown*
- *I enjoy Elizabethtown small town feel (including) market, bakery, trees and lights*
- *Elizabethtown is a pretty place*
- *Clean (the) ditches that drain water from the land*
- *Trash pick-up*
- *Need better health services, (improved) transportation, (attention to) environmental issues*
- *Ditches need cleaning*
- *Expand the local economy with more jobs and business which will create larger tax base*

C. Community Housing

14. Please indicate how you feel about the overall appearance of housing in the County.

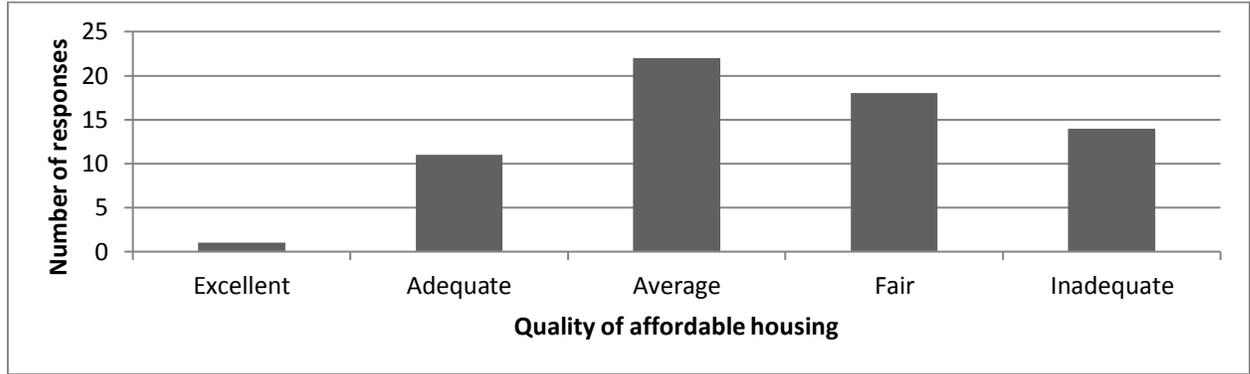


15. Please indicate what type of housing is most needed in Bladen County.

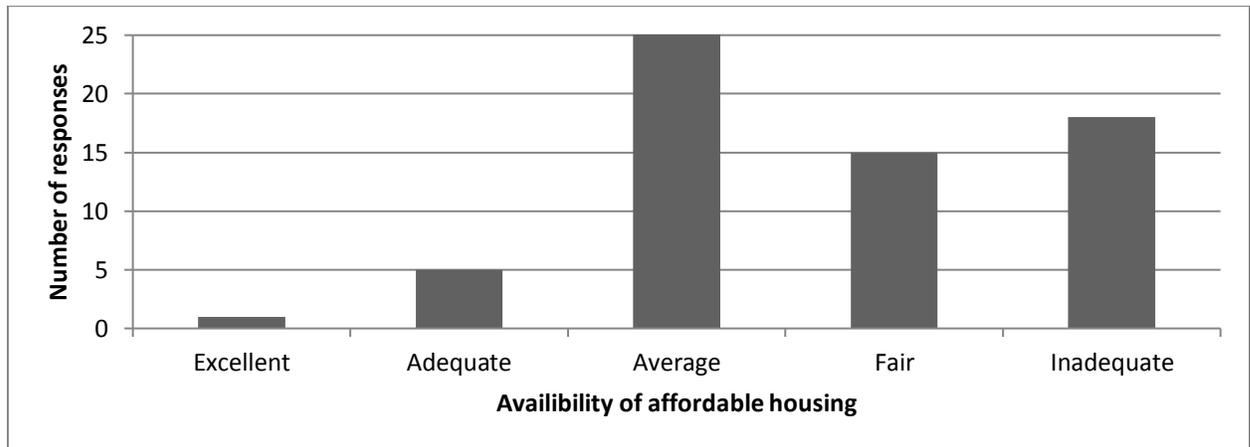


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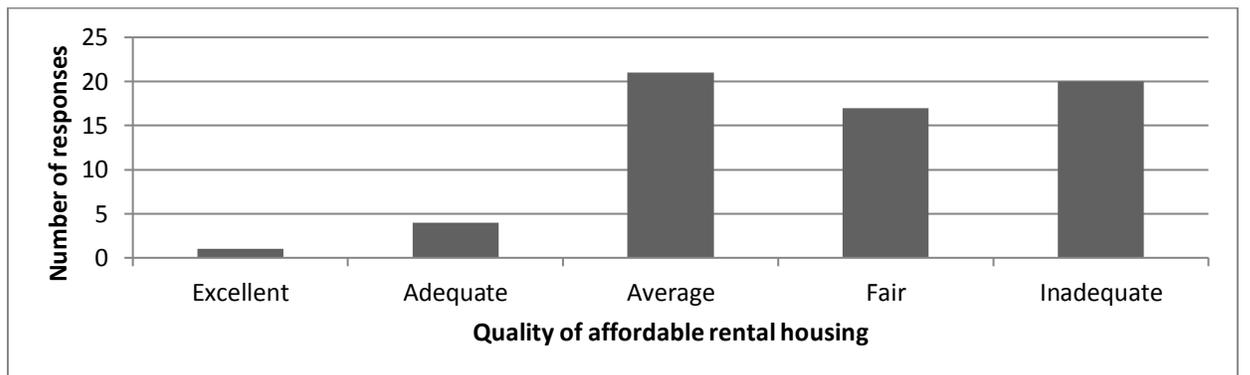
16. Quality of affordable housing.



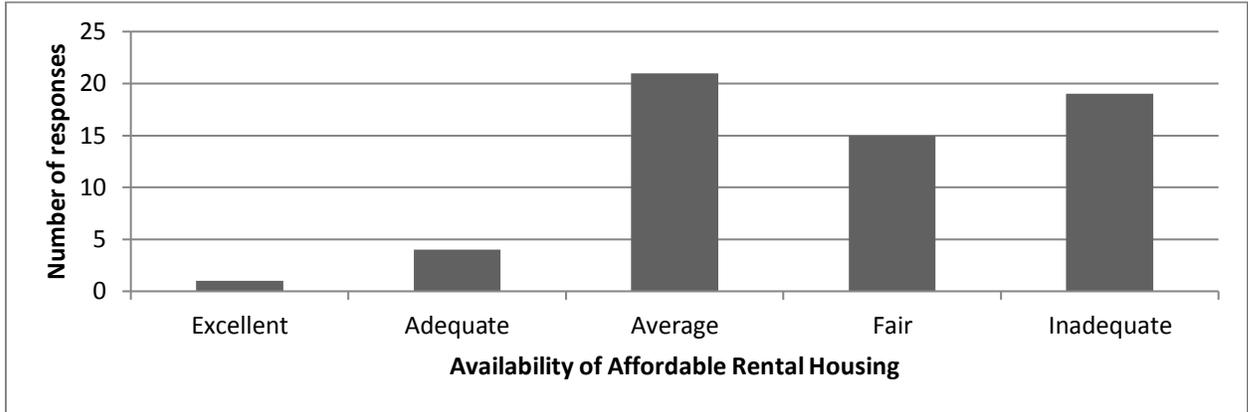
17. Availability of affordable housing.



18. Quality of affordable rental housing.



19. Availability of affordable rental housing.

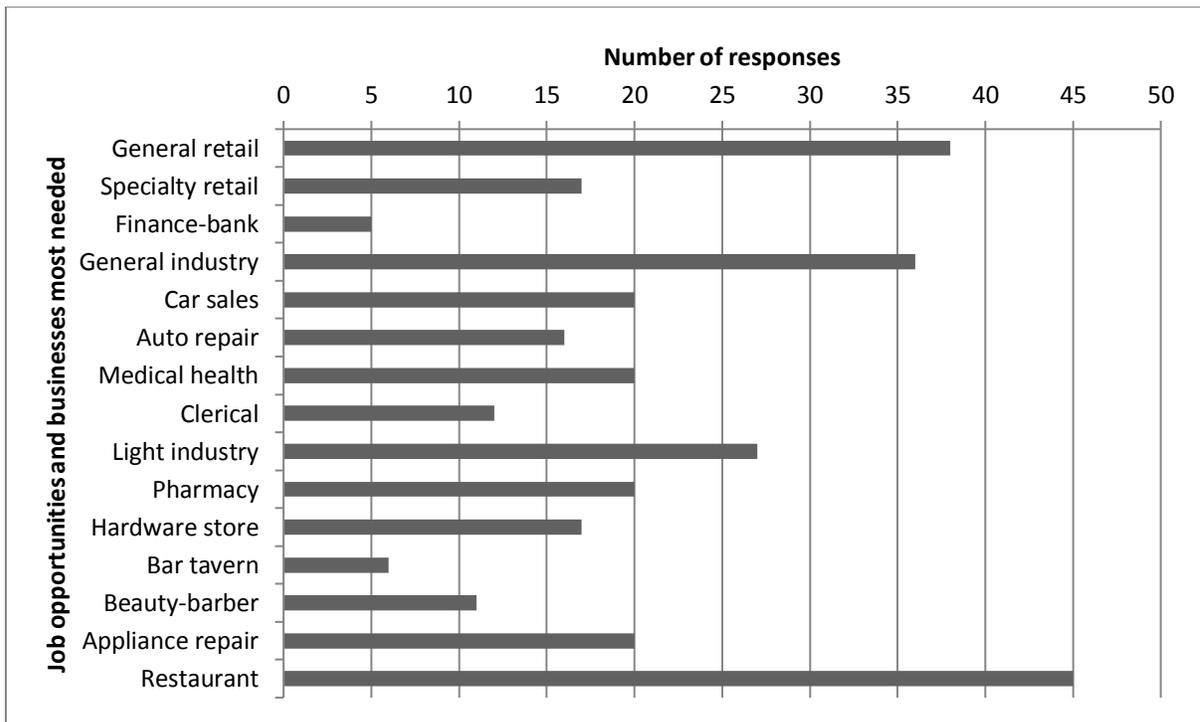


20. Any additional comments on Community Housing.

- Affordable housing is virtually non-existent
- More housing should be offered like Tall Oaks and multi-family
- No real (affordable) housing available beside what is already here
- Better water and sewer

D. Local Economy and Use of County Resources

21. Please indicate the type of job opportunities and businesses most needed.

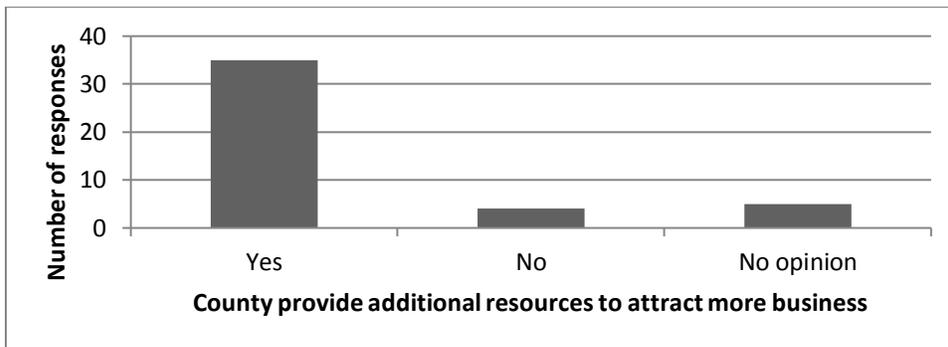


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Other responses (Question 21):

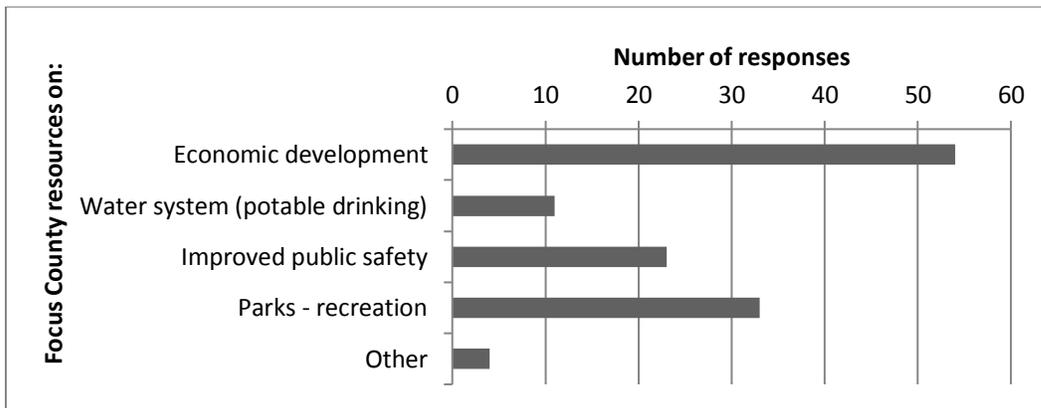
- Nice high quality home cooked meal restaurant
 - Telco
 - Belks, Lowes, small mall, theater
 - Movie theater, bowling, skating rink, put-put (golf), walking trails
 - Auto parts store in Bladenboro
- Home builders
 - Supermarkets
 - Lowe’s store, super Wal-Mart, Wendy’s, Ross, Marshalls
 - Agriculture

22. Indicate if the County should provide additional resources (e.g. time, effort, and or money) to attract more businesses.



Other responses: *Bigger Wal-Mart, more restaurants*

23. What should the County focus its resources on?

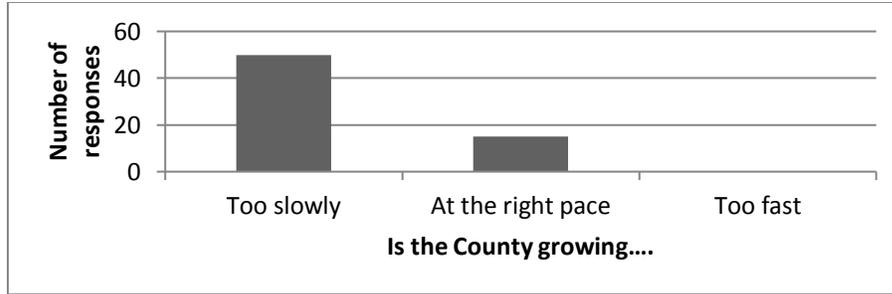


Other responses:

- Community development, trash pick-up, school construction
 - DSS building needs a much needed facelift
 - Affordable housing
- Community development
 - Trash pick-up
 - School construction

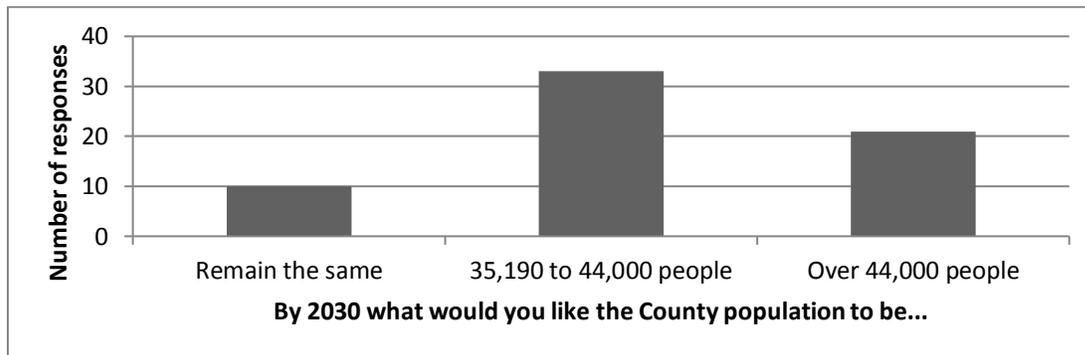
E. Community Growth, Development, and Quality of Life

24. Is the County growing...

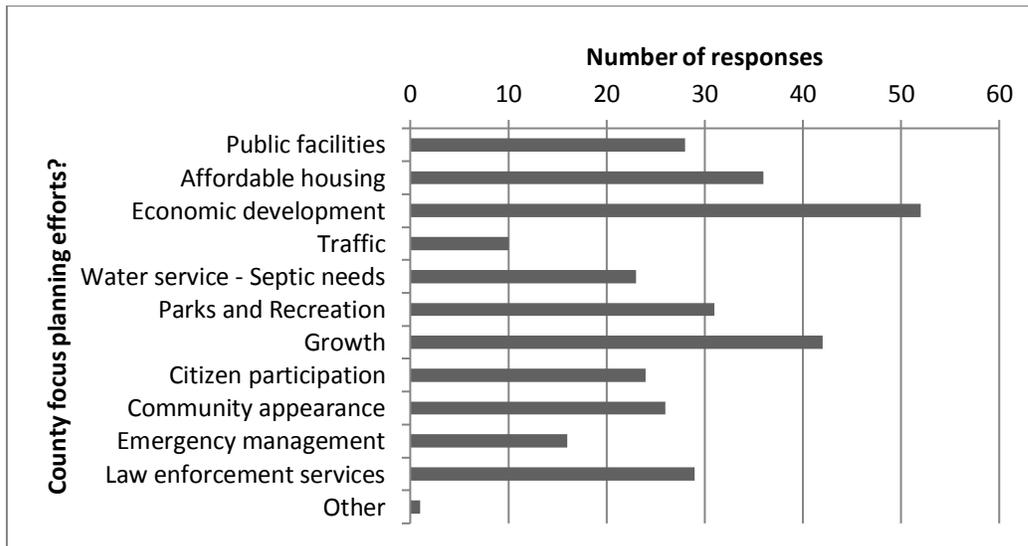


25. What would you like the county's population size to be in the next 16 years in 2030?

Note the county's population was 35,190 people according to the 2010 US Census. The moderate growth projection is for 44,000 by 2030.



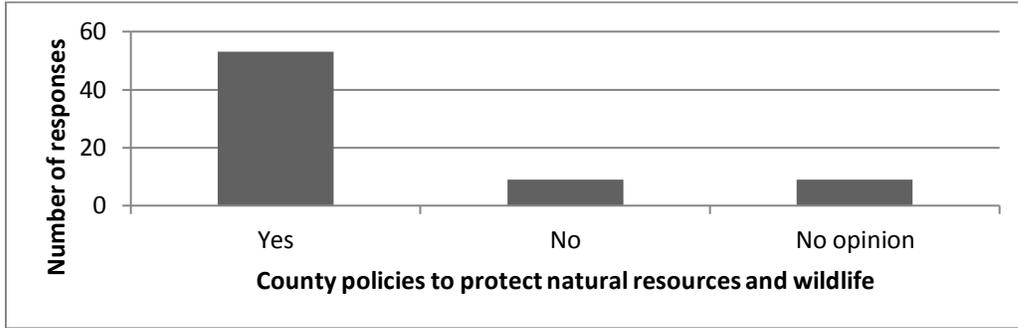
26. What should the County focus planning efforts on?



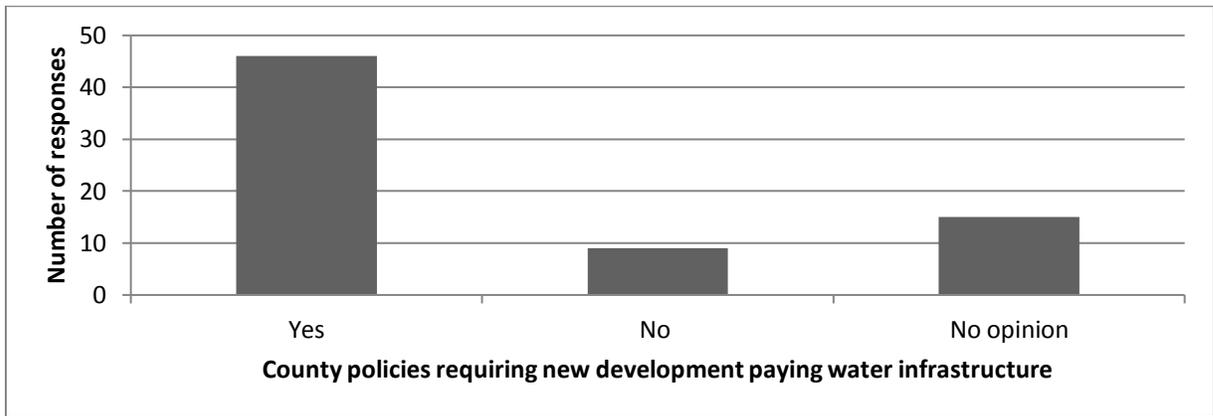
Other: Youth activities

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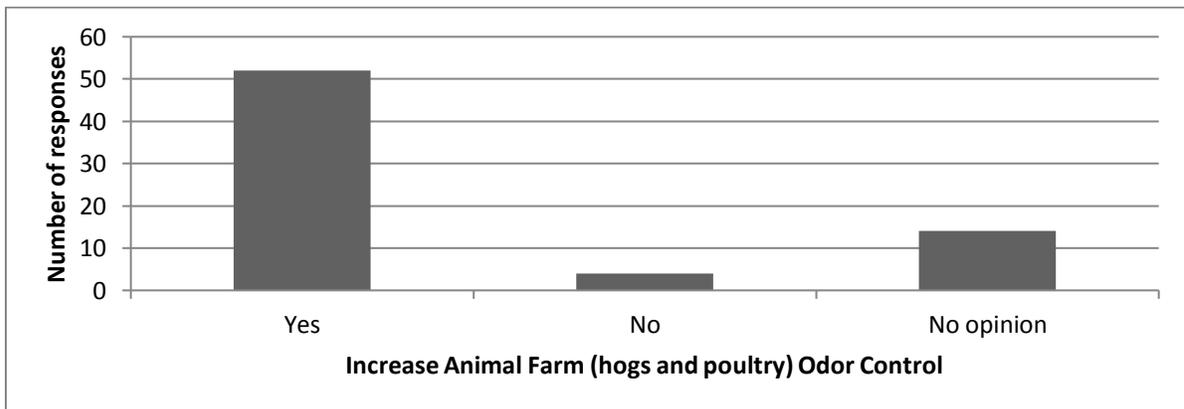
27. Should the County have policies to protect natural resources and wildlife protection?



28. Should the County have policies that require new development to pay for the installation of water infrastructure?



29. Should animal farms (hogs and poultry) be required to increase odor control?

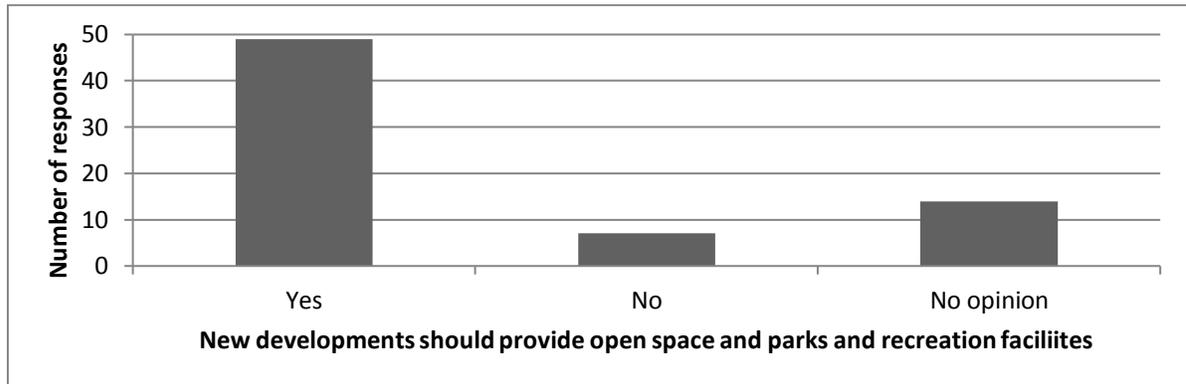


Any comments (for Question 29)?

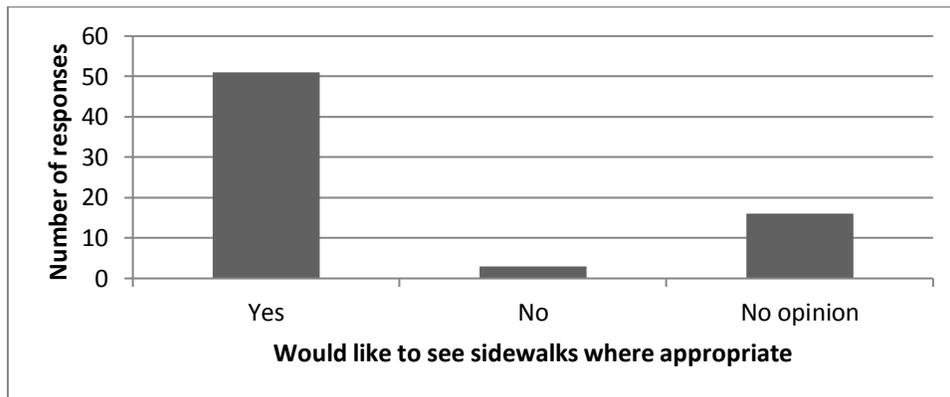
- Should be strictly enforced*
- Charge more for environmental protection*
- They shouldn't be allowed near any homes within 10 miles*
- Yes a moratorium should be re-installed*
- If economically feasible*

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30. Should the County have policies that require new developments to provide open space and parks and recreation facilities?



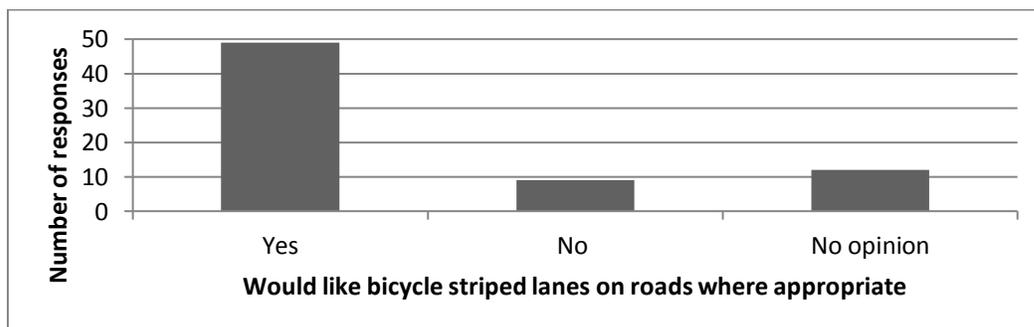
31. Would you like to see sidewalks where appropriate?



Any additional comments (for Question 31)?

- Not at the penalty of additional taxes*
- (Should be) grant funded*
- Great idea but (not) interested in tax hike to pay for it*
- Only (have sidewalks) in town*
- (Needed) for safety*
- (Should be) private funding*

32. Would you like to see bicycle striped lanes on roads where appropriate or possible?



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Any additional comments (Question 32)?

- *Especially at lake for marathons because as a taxpayer I have non-taxpayers blocking traffic*
- *Great idea but (not) interested in tax hike to pay for it*
- *Unsafe*

33. Please list one or more reasons why you like living in your County.

- *I like the small town atmosphere*
- *Prefer small less densely populated area*
- *Relatively safe from major violence*
- *Family is located here*
- *Born and raised here*
- *Location and job*
- *Small slow paced*
- *Small town feel*
- *Quiet, like living out in the country*
- *Where I work*
- *More family and community oriented*
- *Home*
- *I would rather be in the mountains*
- *It is home and where I can fulfill and enjoy the rest of my days*
- *Born and reared here. Not over crowded. Strategically located.*
- *Quiet. The housing.*
- *Family. Quiet.*
- *Rural country living*
- *Born and raised in Bladen County area*
- *My family and extended family live here*
- *This is my County and my children can benefit from having additional resources*
- *Privacy.*
- *People in the community.*
- *Small town feel and caring people.*
- *Work here and love small town of Bladenboro.*
- *Is my home.*
- *I like living in a small community*
- *(Rural) country*
- *It is my home county*
- *I like the people*
- *Born here – like country living*
- *Great community*
- *Family is here*
- *My job and church*
- *Safe and friendly community*
- *Born here, life-long resident*
- *Friendly citizens*
- *Home*
- *Friendly communities, natural scenery*
- *Short commute to work*

34. Please list anything you would like to change about your County.

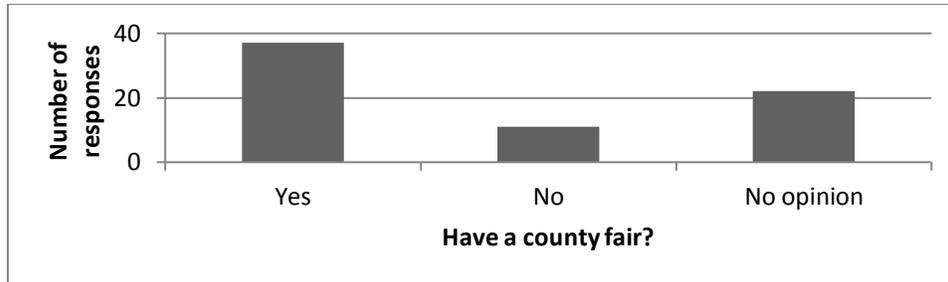
- *I feel that when County employees retire you should give opportunity for the younger generation to move up instead of giving upper management pay raises to cover two jobs but the one's due the promotion are still doing all the work.*
- *Increase in labor manufacturing industrial types of businesses*
- *Allow growth*
- *More jobs*
- *Newer infrastructure*
- *New businesses – super Wal-Mart*
- *Lower crime rate*
- *More diversity in positions of power*
- *Less crime and drugs, less mobile homes*
- *Make County more attractive to outside industry to move in*
- *More community events. Continue to repair Elizabethtown throughout not just main street*
- *It's home*
- *Allow more involvement*
- *Better up keep of property. Appropriate recreation facilities, road improvement, job opportunities, (reduce) natural hazards.*
- *No trucks on Baltimore Road*
- *Improved job opportunities*
- *Lack of resources.*
- *Attract small business*
- *(The County should better) serve the lower end of Bladen, East Arcadia*
- *More business and jobs*

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Question 34 – Continued - Responses

- Schools
- More industry – county wide B&W
- Better schools – not buildings, but teaching quality and curriculum.
- Better services within and for our community
- Need more jobs in the county
- More efficient government, raise tax base with growth
- Better access to quality of life programs, movies, bowling, etc...
- More growth

35. Please indicate whether you would like to have a county fair.



36. Any other planning comments.

- *The County is in great need of a car dealership with sales and service*
- *The looks of a town-county is what draws attention (i.e.) Pigeon Forge TN, Williamsburg VA. Grab ideas from those towns and run with it.*
- *More parks and recreation in the south end of the County- Carvers Creek (are needed)*
- *Please reduce County taxes*
- *Too many able body people on welfare-disability*
- *Too much goes to Elizabethtown. There are other towns with need but Elizabethtown controls too much such as stopping super Wal-Mart*
- *Bladenboro needs a ball park*
- *We do not need County wide zoning until we have more businesses coming in. Let them go where they want to for a while. If it gets to be a problem praise the Lord that finally some businesses wanted to come to Bladen County*
- *Ditches are badly in need of repairing, too much wet land*
- *I think more development in order to offer jobs would cut down on the robberies, and gang traffic .You need stores that attract people to spread money in Bladen County. There is a lot of money going out of the County.*
- *Do not restrict growth by unreasonable regulations. A better educated workforce would greatly enhance our ability to attract industries. Make wise decisions not political decision*

End of Plan