
SECTION I. INTRODUCTION

This Fiscal Year 2004/2005 - 2005/2006 CAMA Core Land Use Plan is prepared in accordance with the requirements of the North Carolina Coastal Area Management Act (CAMA). Specifically, this document complies with Subchapter 7B, "CAMA Land Use Planning Requirements," of the North Carolina Administrative Code, as amended, August 1, 2002.

The 7B guidelines provide that each of the twenty coastal counties and the municipalities within those counties prepare and adopt a CAMA Core Land Use Plan that meets the planning requirements adopted by the Coastal Resources Commission (CRC). If a county chooses not to prepare a plan, the guidelines specify that the CRC will prepare and adopt a CAMA Land Use Plan for that county and the municipalities in the county which choose not to prepare their own plan. Municipalities not preparing their own plan will be included in the plan for the county in which the municipality is located.

In general, 7B requires that a plan include analysis of existing and emerging conditions. To fulfill those requirements, this plan includes information regarding the population, housing, economy, natural systems, existing land use and community facilities, a land suitability analysis, and a review of current plans, policies, and regulations as well as extensive mapping. This plan is also required to have a plan for the future. To meet that requirement, this plan includes community facility demand information, a future land use map, and specific land use/development goals/policies. Finally, the plan has tools for managing development. The management tools must specify the actions which the Town of Shallotte will take to ensure implementation of this plan. Refer to Section VI.C on how the land use plan is used for CAMA permitting and local decision making.

At the beginning of the preparation of this document, the Town of Shallotte adopted a Citizen Participation Plan which is intended to ensure that all interested citizens have an opportunity to participate in the development of this plan through both oral and written comments. A copy of the Citizen Participation Plan is included as Appendix I.

Following adoption of the plan by the Shallotte Board of Aldermen, it was submitted to the CRC for certification. Certification of the plan was achieved on September 28, 2007.

SECTION II. HISTORY

The majority of the information provided in this section was taken from the Shallotte Centennial Commemorative Book written and edited by Elwood Cheers in 1999. This book is the source of information unless otherwise noted.

The earliest reference to the Town of Shallotte is from 1734. The Town was located at the crossing of the river where the ferry was operated. The Town was called Charlotte, possibly for Queen Charlotte, wife of George III, the monarch of England. The spelling eventually conformed to the pronunciation and became known as Shallotte. (Lawrence Lee, *The History of Brunswick County, NC*).

In 1750, a group of families from Cape May, New Jersey settled between Lockwood Folly River and Charlotte River. Roads were scarce during this time, so water bodies attracted people because it connected them with the outside world. Freight was hauled using flatboats, rafts, or other small vessels.

By 1807, a bridge spanned the river and a post office was established for the area in 1837. At this time, the Town's name officially became Shallotte. The exact location of the Town shifted over the years depending on the location of the bridge that crossed the river. In 1840, an attempt was made to establish the Town at the mouth of the river but the attempt never came to fruition. In 1889, the Town was officially located at its present location. The main public bridge was located in this area and about 100 people lived within one square mile. The Town was the center of trade for people shipping goods to Wilmington. Items shipped were turpentine, rosin, tar, cotton, rice, peanuts, and seafood. The Town was later incorporated in 1899.

Firsts for Shallotte

Roads

The first roads in Shallotte were made of logs placed crosswise on existing trails. The road surface transitioned to plank roads so as to stabilize it. Better roads were much needed with the invention of the automobile. The first road for automobiles in Shallotte was built in the 1920s. The road was nine feet wide and 7.6 miles long. The cost of construction was \$78,000 and it extended from Shallotte to Supply. A better and wider road was built through Shallotte in 1928. The road was widened and hard-surfaced in 1937.

Electricity

Brunswick Electric Membership filed for incorporation in March 1939. A contract was approved for construction of 138 miles of line (113 miles were in Brunswick County). The first annual meeting was held in Shallotte and the first lines were energized in December 1939.

Schools

The Leonard School was the first school in Shallotte and opened in April 1891. A new school was funded in 1915 and it was named Sunnyside. Sunnyside had two classrooms, an auditorium, and two dressing rooms. There were 80-90 students and two teachers. Shallotte High School was built in 1927 to replace Sunnyside. The first graduating class was in 1931. Shallotte High School was closed in 1972 when three county high schools were built.

Telephones

Telephone lines were run in 1911 with the increasing importance of the Town as a place to do business. By 1915, Shallotte had a post office, five general stores, a drug store, a doctor, a hotel, two turpentine distilleries, and two churches. Atlantic Telephone Membership Cooperative (ATMC) received its corporate telecommunications charter in 1955 (Source: Atlantic Telephone Membership Cooperative).

SECTION III. REGIONAL SETTING

The Town of Shallotte is located in western Brunswick County, North Carolina. Shallotte is situated at approximately the midway point between Wilmington, North Carolina to the east and Myrtle Beach, SC to the west. Wilmington and Myrtle Beach are both approximately 30 to 40 minutes from Shallotte. US Highway 17 and NC Highways 130 and 179 are the major roads that traverse the Town. Map I depicts the Town's regional location.

MAP I - REGIONAL SETTING

SECTION IV. TOWN OF SHALLOTTE
COMMUNITY CONCERNS AND ASPIRATIONS

A. DOMINANT GROWTH-RELATED ISSUES/KEY ISSUES

In order to fulfill the CAMA Core Land Use Plan requirements and the requirements of the Citizen Participation Plan, the Town of Shallotte conducted a Town-wide meeting to accept comment from citizens regarding key issues and concerns in the community. The meeting was held on November 17, 2004, with approximately 25 - 30 people in attendance. The meeting was advertised in the Brunswick Beacon, notices were mailed to all residents and businesses, and flyers were posted around Town. Comments regarding key issues were written on poster boards and each citizen voted on which issues they felt were the most significant to Shallotte. The list below provides the key issues identified at the meeting. The rank and score for each issue is also provided. The input received at this meeting will help guide the Town with policy statement and implementing actions development.

Town of Shallotte
Issues Identification (Ranked in Priority Order)

RANK	ISSUE	SCORE
1	UPGRADE MUNICIPAL FACILITIES	18
2	REVITALIZE DOWNTOWN; SUPPORT DOWNTOWN BUSINESS	15
3*	PROTECTION OF EXISTING RESIDENTIAL AREAS	14
3*	CONTINUE TO EMPHASIZE GREEN AND BLUE TRAILS (GREENWAY)	14
4*	DEVELOPMENT OF WATERFRONT/SHORELINE AREAS	13
4*	PROTECT/PRESERVE ENVIRONMENT	13
4*	HOUSING FOR SENIORS	13
5	COMMUNITY CENTER (YOUTH AND SENIORS)	12
6*	REGULATION OF TRAFFIC IN THE COMMERCIAL AREAS	11
6*	PLANNING FOR THE CONSTRUCTION OF INTERSTATE 74	11
7	BETTER SENIOR FACILITIES (SENIOR CENTER FOR TOTAL SENIOR POPULATION)	10
8*	PROTECT AREAS OF ENVIRONMENTAL CONCERN	7
8*	ECONOMIC DEVELOPMENT	7
8*	TAXES OR FEES FOR SERVICES - EQUITY	7
8*	PROMOTE ECO-TOURISM	7
8*	REGULATE URBAN SPRAWL	7
9*	IMPROVED PARKING (INCREASE) – GET RID OF ON-STREET PARKING -- PARKING DECK	6
9*	ENSURE DEVELOPMENT OCCURS AS PROMISED	6

RANK	ISSUE	SCORE
10*	IMPROVE WATER MAINTENANCE AROUND MARINAS (INCLUDING FUTURE MARINAS)	5
10*	ENVIRONMENTAL EDUCATION	5
10*	BETTER COORDINATION BETWEEN TOWN/COUNTY/STATE FOR FUNDING AND DEVELOPMENT	5
10*	SIMPLIFY BUILDING RETROFITTING	5
11*	IMPROVEMENT AND EXPANSION OF RECREATION FACILITIES	4
11*	TAX INCENTIVES FOR ENVIRONMENTALLY-SENSITIVE DEVELOPMENT	4
11*	SIDEWALKS (EVERYWHERE)	4
12*	TOWN RESPONSE TO SERVICE DEMANDS CREATED BY SIGNIFICANT RETAIL AND SERVICE INDUSTRY GROWTH	3
12*	ENVIRONMENTALLY-SENSITIVE DEVELOPMENT/REDEVELOPMENT	3
12*	INCREASE BUILDING HEIGHT REQUIREMENTS (ZONING)	3
12*	PEDESTRIAN-FRIENDLY NEIGHBORHOODS	3
13	TRANSPORTATION FOR SENIORS AND NEEDY	2

*Indicates a tie score.

Additionally, surveys were mailed out to 183 absentee property owners. A total of 44 completed questionnaires were received. See Appendix V for a comparison of these results as well as the tabulation of additional questions from the absentee property owners survey.

B. TOWN OF SHALLOTTE COMMUNITY VISION

The Town of Shallotte wishes to preserve environmentally sensitive areas and provide regulations that support sensitive development along the Town’s waterfront and shorelines. The Town also wishes to enhance economic development in the area by sustaining existing business and encouraging new business through downtown revitalization and the promotion of eco-tourism and the proper planning of Interstate 74. Shallotte wants to continue its leadership position as the economic center of southeast Brunswick County. The Town desires to maintain a high quality of life for its residents by protecting existing residential areas, providing additional recreational opportunities in the form of facilities and greenways, and controlling traffic and urban sprawl.

SECTION V. ANALYSIS OF EXISTING AND EMERGING CONDITIONS

A. POPULATION, HOUSING, AND ECONOMY

I. Shallotte Permanent Population

a. *North Carolina's Fastest Growing Counties 2000-2003*

Shallotte is located in North Carolina's fourth fastest growing county, according to 2003 census estimates. Brunswick County experienced a 11.3% net migration between 2000 and 2003. Net migration can be defined as new population moving into an area from other places. This figure is a more accurate indicator of true population growth versus the population growth estimate, which takes into account natural increase (births minus deaths). The county's location on the coast makes it a popular tourist destination. The following table provides population information for the ten fastest growing counties in North Carolina. Map 2 depicts the population growth for North Carolina's counties.

Table 1. North Carolina's Ten Fastest Growing Counties
Population Change 2000-2003 By Percentage Growth and Net Migration

County	2000 Population	2003 Estimates	Growth	% Growth	Births	Deaths	Natural Growth	Net Migration	% Net Migration
Union	123,772	144,708	20,936	16.9%	7,494	2,837	4,657	16,279	13.2%
Camden	6,885	7,844	959	13.9%	257	208	49	910	13.2%
Currituck	18,190	20,598	2,408	13.2%	715	530	185	2,223	12.2%
Brunswick	73,141	81,810	8,669	11.9%	2,797	2,389	408	8,261	11.3%
Johnston	121,900	136,304	14,404	11.8%	6,836	3,134	3,702	10,702	8.8%
Wake	627,866	699,503	71,637	11.4%	34,954	10,926	24,028	47,609	7.6%
Dare	29,967	33,328	3,361	11.2%	1,185	848	337	3,024	10.1%
Hoke	33,646	36,990	3,344	9.9%	2,195	796	1,399	1,945	5.8%
Cabarrus	131,063	143,433	12,370	9.4%	7,108	3,706	3,402	8,968	6.8%
Franklin	47,260	51,652	4,392	9.3%	2,138	1,428	710	3,682	7.8%
North Carolina	8,046,807	8,418,090	371,283	4.6%	384,752	232,931	151,821	219,462	2.7%

Source: 2000 US Census and NC State Data Center Census Estimates.

MAP 2 - POPULATION GROWTH OF NORTH CAROLINA COUNTIES

b. *Population Change 1980-2003*

According to 2003 census estimates, the Town of Shallotte has 1,662 residents. This population comprises 5.2% of Brunswick County’s incorporated population. The Town has the seventh highest population behind Boiling Spring Lakes (3,427), Carolina Shores (2,120), Leland (4,703), Oak Island (7,120), Southport (2,558), and Sunset Beach (1,967). The incorporated areas of the county experienced a growth rate of 33% between 2000 and 2003 compared to a 20.3% increase in Shallotte during the same time frame. While the rate of increase was slightly lower in Shallotte, the Town had the sixth highest rate increase out of nineteen municipalities. Only Calabash, Carolina Shores, Leland, Navassa, and St. James had higher percentage increases. Table 2 presents the population distribution and percent change within Brunswick County by municipality from 1980 to 2003. Chart I depicts the population change for the Town for the same period.

Table 2. Town of Shallotte and Brunswick County, NC
Summary of Year Round Population Growth by Municipality, 1980-2003

Municipality	Total Population				% Change			Overall 1980-2003
	1980	1990	2000	2003 Estimate	1980- 1990	1990- 2000	2000- 2003	
Bald Head Island*	0	78	173	205	0.0%	121.8%	18.5%	162.8%
Belville	102	66	363	407	-35.3%	450.0%	12.1%	299.0%
Boiling Spring Lakes	998	1,650	2,972	3,427	65.3%	80.1%	15.3%	243.4%
Bolivia	252	228	148	151	-9.5%	-35.1%	2.0%	-40.1%
Calabash	128	179	711	1,334	39.8%	297.2%	87.6%	942.2%
Carolina Shores*	0	1,031	1,482	2,120	0.0%	43.7%	43.0%	105.6%
Caswell Beach	110	175	370	425	59.1%	111.4%	14.9%	286.4%
Holden Beach	232	626	787	836	169.8%	25.7%	6.2%	260.3%
Leland*	0	1,801	1,938	4,703	0.0%	7.6%	142.7%	161.1%
Long Beach**	1,844	3,816	0	0	106.9%	-100.0%	0.0%	-100.0%
Navassa	439	445	479	1,570	1.4%	7.6%	227.8%	257.6%
Northwest*	0	611	671	727	0.0%	9.8%	8.3%	19.0%
Oak Island**	0	0	6,571	7,120	0.0%	0.0%	8.4%	8.4%
Ocean Isle Beach	143	523	426	448	265.7%	-18.5%	5.2%	213.3%
Sandy Creek*	0	243	246	262	0.0%	1.2%	6.5%	7.8%
Shallotte	680	1,073	1,381	1,662	57.8%	28.7%	20.3%	144.4%
Southport	2,824	2,369	2,351	2,558	-16.1%	-0.8%	8.8%	-9.4%
St. James***	0	0	804	1,610	0.0%	0.0%	100.2%	100.2%
Sunset Beach	304	311	1,824	1,967	2.3%	486.5%	7.8%	547.0%

Table 2 (continued)

Municipality	Total Population				% Change			Overall 1980-2003
	1980	1990	2000	2003 Estimate	1980- 1990	1990- 2000	2000- 2003	
Varnamtown*	328	404	481	513	23.2%	19.1%	6.7%	56.4%
Yaupon Beach**	569	734	0	0	29.0%	-100.0%	0.0%	-100.0%
Total Municipalities	8,953	16,363	24,178	32,045	82.8%	47.3%	33.0%	258.0%
Total Unincorp. Areas	26,824	34,622	48,963	49,765	29.1%	41.6%	1.5%	85.5%
Total County	35,777	50,985	73,141	81,810	42.5%	43.5%	11.9%	128.7%

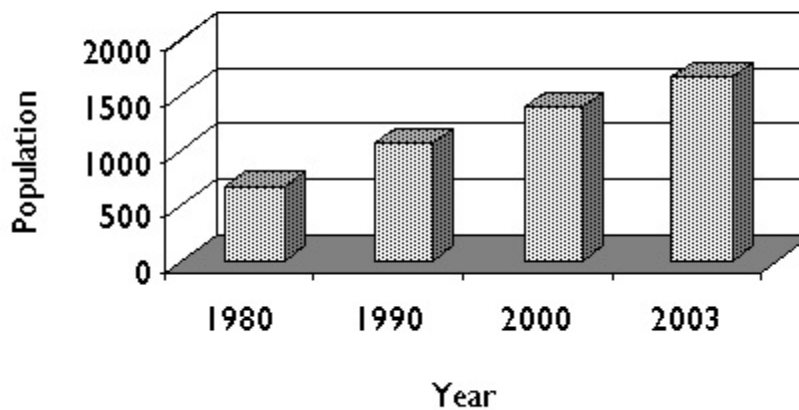
*This municipality was incorporated or reactivated between the 1980 and the 1990 censuses. The overall percentage reflects 1990-2003 except for Varnamtown.

**Long Beach and Yaupon Beach merged to form the Town of Oak Island in July, 1999. The percentage change for the Town of Oak Island represents 2000-2003.

***This municipality was incorporated between the 1990 and 2000 Censuses. The overall percent change reflects 2000-2003. NOTE: The Town of Saint James paid for a special census to be completed as a result of some annexations that occurred after the 2000 Census was taken. The special census, dated June 10, 2004, reflects a census count of 1,831 persons. Municipalities may challenge a census count within three years of when the census is taken in order to have the population changed. The special census for Saint James was completed after that time period and, therefore, the official decennial census count was not changed. However, the state demographer gave Saint James an updated census count of 1,814. This figure was based on the Town's boundaries, including the 2001 annexed areas (This information was obtained from the NC State Data Center).

Source: US Census Bureau.

Chart I. Town of Shallotte
Population Change



c. *Shallotte Seasonal Population*

Seasonal population was reported in the 1992 Land Use Plan to be negligible by the Town of Shallotte. The number of housing units that were used for seasonal, recreational or occasional use was 14, or 3.4% of dwelling units. That number was not increased according to the US Census 2000 information. In fact, the percentage of seasonal units declined slightly from 3.4% to 2.3%.

d. *Shallotte Population Profile*

The white population percentage increased by almost 7.5% between 1980 and 1990 and decreased by 2.6% between 1990 and 2000 for a net increase of 4.8% between 1980 and 2000. The non-white population made up 12.7% of the population in 1980 compared to 7.9% in 2000. The shift in the racial composition of the county has been somewhat similar. The white population percentage in Brunswick County increased by 5.8% between 1980 and 2000 while the non-white population decreased from 23.5% in 1980 to 17.7% in 2000. Persons with Hispanic origin was reported for the first time in the 2000 census. In Shallotte, 1.2% of residents were reported to be of Hispanic origin compared to 2.7% in the county. Table 3 provides a breakdown of the percentage change in population by race for Shallotte and Brunswick County since 1980.

Also indicated in Table 3 is information on the breakdown of the gender within the Town and the county. The percentage of females is slightly higher in Shallotte than in Brunswick County. Fifty-three percent (53.2%) of Shallotte residents are female compared to 50.8% of Brunswick County residents.

Table 3. Town of Shallotte and Brunswick County
Racial and Gender Composition, 1980-2000

	Shallotte		Brunswick County	
	Total	Percentage	Total	Percentage
1980 Population	679	100.0%	35,777	100.0%
White	593	87.3%	27,368	76.5%
Black	86	12.7%	8,261	23.1%
Other	0	0.0%	148	0.4%
1990 Population	965	100.0%	50,985	100.0%
White	914	94.7%	41,336	81.1%
Black	42	4.4%	9,211	18.1%
Asian or Pacific Islander	3	0.3%	81	0.2%
American Indian, Eskimo, Aleut	5	0.5%	242	0.5%
Other	1	0.1%	115	0.2%

Table 3 (continued)

	Shallotte		Brunswick County	
	Total	Percentage	Total	Percentage
2000 Population	1,373	100.0%	73,143	100.0%
White	1,264	92.1%	60,200	82.3%
Black	84	6.1%	10,516	14.4%
Asian	0	0.0%	198	0.3%
American Indian and Alaska Native	4	0.3%	494	0.7%
Native Hawaiian & Other Pacific Islander	0	0.0%	32	0.0%
Some Other Race	3	0.2%	965	1.3%
Two or More Races	18	1.3%	738	1.0%
Hispanic or Latino (of any race)*	16	1.2%	1,960	2.7%
Male	642	46.8%	35,965	49.2%
Female	731	53.2%	37,178	50.8%

*Note: In the 2000 Census, the Hispanic was not considered a race. It was considered an ethnic origin. However, this is the number of individuals who reported being of Hispanic origin.
Source: 2000 US Census.

e. *Age Composition*

Between 1990 and 2000, Shallotte experienced population increases in all of the age groups listed except the 25 to 34 group. The most significant rate of increase occurred in the 75 to 84 age group. That age group increased 124.6% between 1990 and 2000. Other significant increases occurred in the 10 to 14 age group with a 95.8% increase and the 65 to 74 age group with a 64.8% increase in population. The increases in age groups for the Town is similar to the increases for Brunswick County. The county experienced an increase in all age groups. The most significant increases were the 75 to 84 age group (93%), the 85 and over age group (85.9%), and the 45 to 54 age group (77.3%).

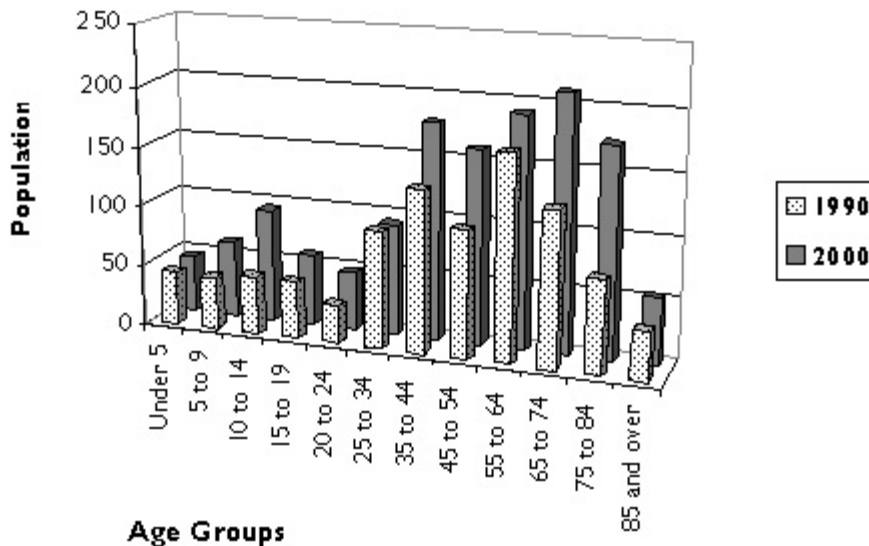
The change in the age composition of Shallotte and Brunswick County is provided in Table 4. The change in age composition for the Town is depicted in Chart 2. Thirty-two percent (32%) of Shallotte's population is 65 and over which is an increase from 25.4% in 1990. The percentage of persons 65 and over is much higher in Shallotte than in Brunswick County (17.1%). This is a strong indicator that Shallotte is a desirable community for retirees. The working age population, persons between 20 and 64, represents 48.8% of Shallotte's population.

Table 4. Town of Shallotte and Brunswick County
Age Composition, 1990 and 2000

Age Groups	Shallotte				Brunswick County			
	1990 Total	1990 % of Total	2000 Total	2000 % of Total	1990 Total	1990 % of Total	2000 Total	2000 % of Total
Under 5	44	4.6%	47	3.4%	3,326	6.5%	4,005	5.5%
5 to 9 years	43	4.5%	63	4.6%	3,208	6.3%	4,358	6.0%
10 to 14 years	48	5.0%	94	6.8%	3,340	6.6%	4,521	6.2%
15 to 19 years	48	5.0%	60	4.4%	3,452	6.8%	4,257	5.8%
20 to 24 years	32	3.3%	48	3.5%	3,068	6.0%	3,471	4.7%
25 to 34 years	96	9.9%	92	6.7%	7,523	14.8%	8,494	11.6%
35 to 44 years	134	13.9%	179	13.0%	7,189	14.1%	10,287	14.1%
45 to 54 years	106	11.0%	160	11.7%	5,997	11.8%	10,630	14.5%
55 to 64 years	169	17.5%	191	13.9%	6,388	12.5%	10,740	14.7%
65 to 74 years	128	13.3%	211	15.4%	5,265	10.3%	8,107	11.1%
75 to 84 years	77	8.0%	173	12.6%	1,812	3.6%	3,498	4.8%
85 and over	40	4.1%	55	4.0%	417	0.8%	775	1.2%
Total population	965	100.0%	1,373	100.0%	50,985	100.0%	73,143	100.0%
Median age	N/A*		51.6		N/A*		42	

*Median age was not calculated in the 1990 census.
Source: 2000 US Census.

Chart 2. Town of Shallotte
Age Group Comparison, 1990-2000



f. *Educational Attainment*

The educational attainment of Shallotte citizens is slightly higher than that of the county as a whole. Almost eighty-one percent (80.9%) of Shallotte citizens that are 25 and older have graduated from high school compared to 78.3% of Brunswick County residents. In addition, the percentage of persons with a Bachelor’s Degree or Graduate/Professional Degree is slightly higher in the Town than in the county. Twenty-four percent (24.2%) of Shallotte citizens have a Bachelor’s Degree or Graduate/ Professional Degree compared to 16.1% of Brunswick County residents.

Table 5. Town of Shallotte and Brunswick County
Educational Attainment, 2000
Based on Persons 25 Years and Older

	Shallotte		Brunswick County	
	Total	% of Total	Total	% of Total
Less than 9 th grade	70	6.6%	3,337	6.3%
Ninth to twelfth grade, no diploma	133	12.5%	8,098	15.4%
High school graduate	310	29.2%	17,482	33.2%
Some college, no degree	238	22.4%	11,821	22.5%
Associate degree	54	5.1%	3,417	6.5%
Bachelor’s degree	178	16.8%	5,774	11.0%
Graduate/Professional degree	78	7.4%	2,676	5.1%
Total population 25 years and over	1,061	100.0%	52,605	100.0%

Source: 2000 US Census.

g. *Population Summary*

- » Shallotte is located in the state’s fourth fastest growing county.
- » Approximately five and one-half percent (5.2%) of Brunswick County’s incorporated population lives in Shallotte.
- » Shallotte experienced a population increase of 144.4% between 1980 and 2003.
- » The racial composition has experienced a slight shift since 1980. The percentage of non-white population living in the Town decreased from 12.7% in 1980 to 7.9% in 2000.
- » Almost 32% of Shallotte’s population is in the 65 or over age group.

- » Almost eighty-one percent (80.9%) of Shallotte residents have high school diplomas. Twenty-four percent have a Bachelor’s Degree or Graduate/Professional Degree. These percentages are slightly higher than the percentages reported for the county as a whole.

2. Housing

a. *Housing Occupancy and Tenure*

According to US Census data, Shallotte had 600 dwelling units in 2000. This figure represents a 45% increase in dwelling units since from 1990. The percentage of vacant dwellings decreased slightly between 1990 and 2000 from 11.1% to 10.7%. The percentage of vacant dwellings is much higher for Brunswick County (40.8%). The number of owner-occupied dwelling units increased slightly during the last census period from 322 in 1990 to 426 in 2000. The percentage of owner-occupied dwellings in Shallotte is considerably higher than the percentage of owner-occupied dwellings in the county (48.6%). Information regarding the housing occupancy and tenure in Shallotte and Brunswick County is provided in the following table.

Table 6. Town of Shallotte and Brunswick County Housing Occupancy and Tenure, 1990 and 2000

	Town of Shallotte				Brunswick County
	1990 Total	1990 % of Total	2000 Total	2000 % of Total	2000 % of Total
Total Housing Units	413	100.0%	600	100.0%	100.0%
Vacant:	46	11.1%	64	10.7%	40.8%
For rent	5	1.2%	21	3.5%	4.1%
For sale only	13	3.1%	19	3.2%	1.9%
Rented or sold, not occupied	2	0.5%	8	1.3%	0.8%
For seasonal, recreational, or occasional use	14	3.4%	14	2.3%	30.2%
For migrant workers	0	0.0%	0	0.0%	0.0%
Other vacant	12	2.9%	2	0.3%	3.7%
Occupied:	367	88.9%	536	89.3%	59.2%
Owner-occupied	322	78.0%	426	71.0%	48.6%
Renter-occupied	45	10.9%	110	18.3%	10.5%

Source: US Census Bureau.

b. Structure Age

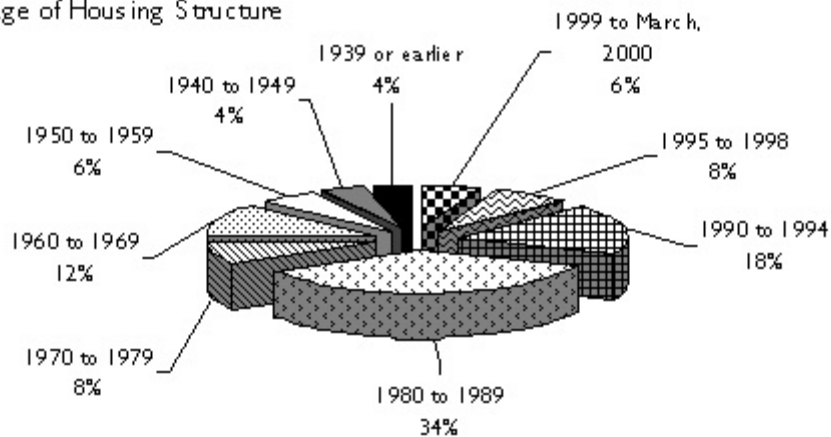
US Census 2000 data reports that 7.8% of housing structures in Shallotte were built before 1950. Thirty-five percent (35.3%) of the housing stock was built between 1980 and 1989. In addition, 66.3% of dwelling units have been built since 1980. Thirty-one percent (31%) of structures have been built since 1990. The median year built for housing structures is 1985. Table 7 provides information regarding the age of housing structures within the Town.

Table 7. Town of Shallotte
Housing Structure, 2000

Year	Number of Structures	% of Total
1999 to March, 2000	33	5.5%
1995 to 1998	45	7.5%
1990 to 1994	108	18.0%
1980 to 1989	212	35.3%
1970 to 1979	50	8.3%
1960 to 1969	72	12.0%
1950 to 1959	33	5.5%
1940 to 1949	26	4.3%
1939 or earlier	21	3.5%
Total Structures	600	100.0%
Median Year Structure Built	1985	

Source: US Census Bureau.

Chart 3. Town of Shallotte
Age of Housing Structure



c. *Housing Conditions*

The following table provides a comparison of several housing conditions within the Town, county, and the state. The median number of rooms in Shallotte (5.6) is slightly more than the number for the county (5.2) and the state (5.3). US Census data from 2000 indicates that there were no houses reported to lack complete kitchen facilities and less than one half percent (0.4%) of structures lacked complete plumbing facilities. In addition, less than one percent (0.6%) of homes were reported to have no telephone service. This percentage is lower than the county (3.8%) and the state (3.0%).

Table 8. Town of Shallotte
Housing Conditions

	Shallotte	Brunswick County	North Carolina
Median Number of Rooms	5.6	5.2	5.3
Percent lacking complete kitchen facilities	0.0%	0.3%	0.5%
Percent lacking complete plumbing	0.4%	0.6%	0.6%
Percent with no telephone service	0.6%	3.8%	3.0%

Source: US Census Bureau.

d. *Single and Multi-Family Units*

The Town of Shallotte's housing stock consists of 79.2% single-family, 14.6% multi-family, and 6.2% mobile homes. The percentage of single family units is much higher in Shallotte than in Brunswick County (57%). The breakdown of single-family and multi-family housing units is provided in Table 9 for Shallotte and Brunswick County.

Table 9. Town of Shallotte and Brunswick County
Units in Structure and Mobile Home Count, 2000

Units in Structure	Town of Shallotte		Brunswick County
	Total	% of Total	% of Total
1-unit, detached	468	78.0%	55.7%
1-unit, attached	7	1.2%	1.3%
2 units	12	2.0%	1.2%
3 or 4 units	33	5.5%	2.1%
5 to 9 units	32	5.3%	1.9%
10 to 19 units	11	1.8%	1.1%
20 units or more	0	0.0%	0.6%
Mobile home	37	6.2%	35.9%
Boat, RV, van, etc.	0	0.0%	0.2%
Total	600	100.0%	100.0%

Source: US Census Bureau.

e. *Housing Value*

The value of owner-occupied housing has increase significantly since 1990. The percentage of houses with values less than \$100,000 decreased from 52.5% in 1990 to 26.0% in 2000. The decrease was also significant in Brunswick County where the percentage of homes valued at less than \$100,000 was 74% in 1990 and 35% in 2000. The percentage of homes valued at \$150,000 or more increased by 22% between 1990 and 2000 from 20.7% to 42.8%. The median value of homes increase significantly in both the Town and the county. The median value of homes in Shallotte increased by 44.2% and the value within the county increased 80.9%. These increases could be attributed to the desirability of the area and the inflow of retirees to the area with the ability to afford more expensive housing structures. Table 10 indicates the housing value percentages for Shallotte and Brunswick County between 1990 and 2000.

Table 10. Town of Shallotte and Brunswick County
Value of Owner Occupied Housing

	Town of Shallotte		Brunswick County	
	1990 Percentage	2000 Percentage	1990 Percentage	2000 Percentage
Less than \$15,000	0.4%	1.2%	4.0%	1.0%
\$15,000 - \$34,999	2.8%	1.6%	10.0%	1.0%
\$35,000 - \$59,999	10.7%	1.4%	25.0%	6.0%
\$60,000 - \$99,999	38.6%	21.8%	35.0%	27.0%
\$100,000 - \$149,999	26.8%	31.2%	16.0%	27.0%
\$150,000 - \$199,999	16.0%	27.7%	6.0%	16.0%
\$200,000 - \$249,999	2.7%	10.6%	1.0%	7.0%
\$250,000 or more	2.0%	4.5%	3.0%	15.0%
Total	100.0%	100.0%	100.0%	100.0%
Median Value	\$97,200	\$140,200	\$70,400	\$127,400

Source: US Census Bureau.

f. *Housing Summary*

- » Shallotte has approximately 600 housing units. The Town experienced a 45% increase in the number of dwelling units since 1990. Vacant dwellings represent 10.7% of the housing stock. Seventy-one percent (71%) of occupied housing units are owner-occupied.
- » The median year structures were built in Shallotte is 1985.
- » No homes were reported to lack complete kitchen facilities, less than one percent of homes were reported to lack complete plumbing facilities, and less than one percent of homes were reported to have no telephone service.

- » Single-family homes represent 79.2% of the housing stock. Fourteen percent (14%) of homes are multi-family and 6.2% are mobile homes.
- » The median value of housing structures in Shallotte increased by 44.2% between 1990 and 2000.

3. Employment and Economy

a. *Introduction*

Shallotte’s per capita income is 6.6% higher than the per capita income in the county. Since 1990, the per capita incomes of both local governments have risen dramatically. Shallotte’s per capita income increased by 41% and Brunswick County’s increased by almost 70%. The unemployment rate and the poverty rate for the Town are lower than those of the county. The percentage of the population in the labor force is lower in the Town than in the county. Table II provides a compares various economic indicators for Shallotte and Brunswick County.

Table II. Town of Shallotte and Brunswick County
Summary of Economic Indicators

	Year	Shallotte	Brunswick County
Per Capita Income	1999	\$21,168	\$19,857
Per Capita Income	1990	\$14,989	\$11,688
Unemployment Rate	2000	1.6%	2.6%
% of Population in Labor Force	2000	46.5%	57.7%
Poverty Rate*	2000	8.0%	12.6%

*For Individuals. According to the US Department of Commerce, US Census Bureau, poverty is tracked by the US Census Bureau following guidelines established through the US Office of Management and Budget. These guidelines establish a matrix of money income thresholds that vary based on family size. These thresholds are adjusted annually using the Consumer Price Index to compensate for inflation, but the thresholds do not change based on geography. Regarding decennial census data, the poverty threshold is the same across the nation. If a family’s total income is below the established poverty threshold, they are considered to live below the poverty level or in poverty. Poverty is based on income, household size, and relationship. Income considered for determining poverty is money income before taxes. Capital gains and noncash benefits, such as food stamps or Medicaid, are not counted as income. The population considered for determining poverty is not the total population of an area. Persons living in group quarters, such as military barracks, college dorms, or long-term health care facilities, are not considered when determining poverty. Unrelated persons under the age of 15 in a household, such as foster children, are also not considered when determining poverty. The decennial census poverty data is based on the poverty thresholds used at the time the information was collected and compiled. Annually adjusted poverty thresholds are used to produce poverty data through the Current Population Survey. See Appendix IIA&B for information regarding poverty thresholds (2000) and Division of Community Assistance Income Limits for Brunswick County by number of persons in family (2005).

Source: US Census Bureau and NC Department of Commerce.

b. Household Income

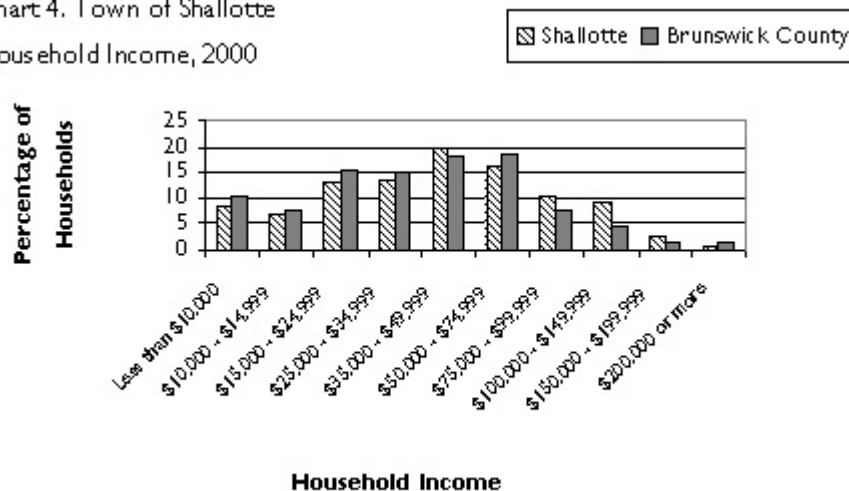
The percentage of households with incomes that are less than \$25,000 is lower in Shallotte than in Brunswick County. Twenty-eight and one-half percent (28.5%) percent of Shallotte citizens have household incomes that are less than \$25,000 compared to 33.5% in the county. The percentage of households making \$75,000 or more is fifty-two percent (52%) higher in the Town than in the county. The median income in Shallotte is eleven percent (11%) higher than the median income in Brunswick County. Table 12 provides information regarding household income for Shallotte and Brunswick County.

Table 12. Town of Shallotte and Brunswick County Household Income, 2000

	Shallotte		Brunswick County	
	Total	% of Total	Total	% of Total
Less than \$10,000	45	8.5%	3,141	10.3%
\$10,000 to \$14,999	37	7.0%	2,336	7.7%
\$15,000 to \$24,999	69	13.0%	4,724	15.5%
\$25,000 to \$34,999	71	13.4%	4,644	15.2%
\$35,000 to \$49,999	104	19.6%	5,476	18.0%
\$50,000 to \$74,999	86	16.2%	5,667	18.6%
\$75,000 to \$99,999	55	10.4%	2,250	7.4%
\$100,000 to \$149,999	48	9.1%	1,406	4.6%
\$150,000 to \$199,999	12	2.3%	356	1.2%
\$200,000 or more	3	0.6%	455	1.5%
Total	530	100.0%	30,455	100.0%
Median Household Income	\$40,000		\$35,888	

Source: 2000 US Census.

Chart 4. Town of Shallotte Household Income, 2000



c. *Employment By Industry*

According to the 2000 US Census, the leading employment industries are Arts, Entertainment, Recreation, Accommodation, and Food Services (18.0%; Education, Health, and Social Services (16.1%); and Retail Trade (14.2%). Table 13 provides a summary of employment by industry in Shallotte for those persons 16 years and older.

Table 13. Town of Shallotte
Employment by Industry, 2000

Industry	# Employed	% Employed
Agriculture, Forestry, Fishing, and Mining	6	1.1%
Construction	45	8.6%
Manufacturing	29	5.6%
Wholesale Trade	16	3.1%
Retail Trade	74	14.2%
Transportation, Warehousing, and Utilities	21	4.0%
Information	10	1.9%
Finance, Insurance, Real Estate, and Rental and Leasing	22	4.2%
Professional, Scientific, Management, Administrative, and Waste Management Services	30	5.7%
Education, Health, and Social Services	84	16.1%
Arts, Entertainment, Recreation, Accommodation, and Food Services	94	18.0%
Other Services (except Public Administration)	54	10.3%
Public Administration	37	7.1%
Total Persons Employed 16 Years and Over	522	100.0%

Source: US Census Bureau.

d. *Employee Wages By Industry*

The table below provides information regarding the average weekly earnings by industry for Brunswick County and North Carolina. This type of information is not available at a municipal level. According to the NC Department of Commerce, the highest paying industry in Brunswick County is Transportation, Communications, and Public Utilities with an average weekly earning of \$932.90. The average weekly earning for this sector is higher than the average weekly earning for the state in the same sector. The second highest paying industry within Brunswick County is Manufacturing with a \$711.52

average weekly earning. The majority of industry sectors within Brunswick County have average weekly wages that are lower than the state averages.

Table 14. Brunswick County and North Carolina Wages by Industry, 1999

Industry	Average Weekly Earnings	
	Brunswick County	North Carolina
Agriculture	\$318.27	\$416.35
Construction	\$439.94	\$598.43
Finance, Insurance, Real Estate	\$426.58	\$907.31
Government	\$521.77	\$622.30
Manufacturing	\$711.52	\$716.21
Retail Trade	\$257.27	\$336.64
Wholesale Trade	\$470.12	\$783.87
Service	\$388.35	\$580.23
Transportation, Communications, Public Utilities	\$932.90	\$775.01

Source: NC Department of Commerce.

e. *Industries*

Table 15 provides a summary of the manufacturing facilities located within Shallotte’s planning jurisdiction. Wal-Mart is the largest employer in the area.

Table 15. Town of Shallotte Industries

Company	Product	Employees
Wal-Mart Supercenter	General Merchandise	400
Brunswick Community Hospital	Healthcare	350
Home Depot, Inc.	Lumber & Other Building Materials	200
Atlantic Telephone Membership Cooperative	Telephone Communications, Except Radio	154
Autumn Care of Shallotte	Skilled Nursing Facility	103
Lowe’s Home Improvement Whse	Lumber & Other Building Materials	100
West Brunswick High School	Education	100
Food Lion, LLC	Grocery Store	75
Lowe’s Food	Grocery Store	75

Table 15 (continued)

Company	Product	Employees
Shallotte Middle School	Education	75
Brunswick Electric Membership Corp.	Electric Services	70
Burger King	Eating Place	70
Lee Electrical Construction	Utility Line Construction	70
Naber Chrysler Dodge Jeep, Inc.	Motor Vehicle Dealer	52
Hills Farmers Market	Grocery Store	50
Joe's Barbeque, Inc.	Eating Place	50
McDonald's	Eating Place	50
Mirror Lite of NC	Glass Products made of Purchased Glass	50
Hardee's	Eating Place	25
Wendy's	Eating Place	20

Source: North Carolina Department of Commerce.

f. Employment and Economy Summary

- » The per capita income in Shallotte increased by 41% to \$21,168. The Town's per capita income is 6.6% higher than the county's.
- » The poverty rate is lower in Shallotte (8.0%) than in the county (12.6%).
- » Fewer households in Shallotte (28.5%) have incomes that are less than \$25,000 than in the county (33.5%).
- » The leading employment industries are Arts, Entertainment, Recreation, Accommodation, and Food Services (18.0%); Education, Health, and Social Services (16.1%); and Retail Trade (14.2%).
- » The highest paying industry in Brunswick County is Transportation, Communications, and Public Utilities with an average weekly earning of \$932.90. The average weekly earning for this sector is higher than the average weekly earning for the state in the same sector.

4. Population Projections

a. *Permanent Population*

Population projections through 2020 for Shallotte and Brunswick County are provided in the following table. Municipal projections do not take into consideration annexations that may occur. County projections were taken from the North Carolina Office of State Planning. The other projections were extrapolated based on a combination of Shallotte's historical growth rate and the Town's growth rate as a percentage of the county's population.

Table 16. Town of Shallotte and Brunswick County
Population Projections, 2000-2020

Location	2000	2003 Estimate	2010	2020
Shallotte	1,381	1,662	2,127	3,220
Total Municipalities	24,178	32,045	41,263	51,935
Total Unincorporated	48,963	49,765	54,698	63,477
Brunswick County	73,141	81,810	95,961	115,412

Source: North Carolina Office of State Planning and Holland Consulting Planners, Inc.

b. *Seasonal Population*

The Town of Shallotte does not currently have a significant seasonal population, and that is not expected to change significantly. Due to the surrounding area being known as a tourist and vacation destination, there is a significant amount of day visitor traffic to Shallotte. However, it is impossible to get an exact count. In order to get a day visitor traffic estimate, the number of trips made by the occupied residential dwellings (536 units) within the Town and the annual average daily traffic (AADT) count provided by NCDOT can be compared. If an assumption is made that each dwelling unit makes six trips per day, there are a total of 3,216 resident trips per day. According to information from NCDOT, there is an AADT count of 9,700 at a location on Main Street and an AADT count of 7,700 at a point on Bricklanding Road SW. If the residential traffic is subtracted from these numbers, it can be estimated that Shallotte has approximately 4,484 to 6,484 day visitors.

B. NATURAL SYSTEMS ANALYSIS

I. Mapping and Analysis of Natural Features

The purpose of this section of the CAMA Land Use Plan Update is to describe, analyze, and map the natural features and environmental conditions currently found in the Town of Shallotte and to assess their capabilities and limitations for development.

a. Topography/Geology

Shallotte is located in the southwestern portion of Brunswick County. The Town is part of the Lumber River Basin, subbasins 03-07-57 and 03-07-59. All of the waters in these subbasins drain to the Atlantic Ocean. Most of the Town is nearly level. However, topographic relief does exist with elevation ranges of two feet along the Shallotte River and its tributaries to 68 feet in the northeast portion of the Town around the Highlands subdivision. The Shallotte River traverses the Town and is affected by tides. Shallotte is located in the lower coastal plains of North Carolina. The area is considered to be in the Cenozoic Era and the Tertiary Period. The geology is classified as Tpyw, the Waccamaw Formation, which consists of fossiliferous sand with silt and clay, bluish-gray to tan, and loosely consolidated.

b. Climate

The Soil Survey of Brunswick County, North Carolina reports that the county is hot and humid in the summer but the coast is frequently cooled by sea breezes. Winters are cool with occasional brief cold spells. The average temperature in the winter is 47°F and the average daily minimum temperature is 37°F. In summer, the average temperature is 78°F and the average daily maximum temperature is 86°F.

Rain falls throughout the year and is heavy. Annual precipitation is adequate for all crops. The average annual precipitation is 54.81 inches. Sixty percent (60%) of the total annual precipitation usually falls between April and September. In two years out of ten, the rainfall between April and September is less than 25 inches. Thunderstorms occur on about 45 days each year, and most occur in summer. The average seasonal snowfall is less than one inch.

The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 85 percent. The sun shines 65 percent of the time possible in summer and 60 percent in winter.

c. *Flood Zones*

North Carolina was designated as the first Federal Emergency Management Agency (FEMA) Cooperating Technical State. As such, the state assumed primary ownership and responsibility of the state's National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRMs). Shallotte is in the Lumber River Basin. Mapping for the Lumber River Basin is part of the North Carolina Floodplain Mapping Initiative's first phase. At the time of this writing, the Lumber River Basin FIRMs were in the Post Preliminary Phase. This means the maps have been completed but have not been adopted. The maps will be adopted when all maps within the county are finished. The eastern portion of the county is in the Cape Fear River Basin. Those maps are in the engineering review process.

The NFIP uses flood hazard zone designations to indicate the magnitude of flood hazards in specific areas. These flood zone designations are delineated on FIRMS, which are considered the most reliable and consistent source for delineating flood hazard areas. FIRMS are also used to determine whether or not flood insurance is mandatory for developed properties with mortgages. There are three flood zone designations in Shallotte: AE, AEFW, and Shaded X. Following are definitions for each of Shallotte's flood zone designations.

Zone AE - Zone AE is the flood insurance rate zone that corresponds to the 1% annual chance floodplains that are determined in the Flood Insurance Study by detailed methods of analysis. In most instances, Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone. Mandatory flood insurance purchase requirements apply.

Zone AEFW - Zone AEFW is a floodway area in Zone AE. The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

Zone Shaded X - Zone X is the flood insurance rate zone that corresponds to areas outside the 1% annual chance sheet flow flooding where average depths are less than one foot, areas of 1% annual chance stream flooding where the contributing drainage area is less than one square mile, or areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in these zones.

According to the current FIRMS, Shallotte is located in the Lumber River Basin and 19.5%, or 1,509.6 acres, of the Town’s planning jurisdiction is located within a flood hazard area. Eleven percent (11%) of the Town falls within the AE zone, 5% falls within the AEFW zone, and 3% falls within the Shaded X zone. The following table provides information regarding the flood hazard area acreage in Shallotte. Map 3 represents the location of all flood hazard areas within the Town.

Table 17. Town of Shallotte
Flood Hazard Areas

Flood Zones	Corporate Limits and ETJ		Corporate Limits		ETJ	
	Acres	% of Total	Acres	% of Total	Acres	% of Total
AE	856.6	11.1%	319.3	8.7%	537.3	13.1%
AEFW	396.0	5.1%	127.8	3.5%	268.1	6.5%
Shaded X	257.0	3.3%	107.1	2.9%	149.6	3.6%
Acreage in Flood Zone	1,509.6	19.5%	554.2	15.2%	955.0	23.2%
Total Town Acreage	7,740.4	--	3,641.4	--	4,099.0	--

Note: All acreage is in Subbasin 03-07-59.

Sources: Holland Consulting Planners, Inc., and Federal Emergency Management Agency.

Shallotte is also at risk of flooding from storm surge inundation. Map 4 shows the general areas of Shallotte that may be affected by hurricane-generated storm surge based on the SLOSH (Sea, Lake, Overland Surges from Hurricanes) model. The SLOSH model was developed by the US Army Corps of Engineers and the model is run by the National Hurricane Center. The model plots hurricane-related flooding for fast and slow moving storms that may result from a number of characteristics including wind speed, wind direction, time, and tide. Fast moving hurricanes are hurricanes that have a forward velocity of greater than or equal to 15 miles per hour while slow moving hurricanes have forward velocities of less than 15 miles per hour.

The following table provides the inundation acreage in Shallotte for varying hurricane categories. The model estimates that 9.3% of Shallotte’s planning jurisdiction will be inundated by a Category 1 or 2 slow moving hurricane, 18.1% will be inundated by a Category 3 slow moving storm, and 26% will be inundated by a Category 4 or 5 slow moving storm. Thirteen and one half percent (13.5%) could be inundated by a Category 1 or 2 fast moving storm, 18.4% could be inundated by a Category 3 fast moving storm, and 46.5% could be inundated by a Category 4 or 5 fast moving storm.

MAP 3 - FLOOD HAZARD AREAS

MAP 4 - STORM SURGE INUNDATION

Table 18. Town of Shallotte
Hurricane Storm Surge Inundation

	Slow Moving		Fast Moving	
	Acres	% of Total Town Acreage	Acres	% of Total Town Acreage
Categories 1 and 2	724.4	9.3%	1,042.1	13.5%
Category 3	1,401.2	18.1%	1,422.8	18.4%
Categories 4 and 5	2,008.1	26.0%	3,598.0	46.5%

Note: All acreage is in Subbasin 03-07-59.
Source: Federal Emergency Management Agency.

Hurricanes are ranked based on intensity using the Saffir-Simpson Hurricane Scale. Examples of each category are listed below.

Category One Hurricane: Winds 74-95 mph. Storm surge generally 4-5 feet above normal. No significant damage to permanent structures. Damage limited to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed buildings. Limited coastal road flooding and minor pier damage may occur. Hurricanes Allison and Noel of 1995 were Category One hurricanes at peak intensity.

Category Two Hurricane: Winds 96-110 mph. Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage to buildings. Considerable damage to shrubbery and trees. Some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before the arrival of the hurricane center. Small craft in unprotected anchorages break moorings. Hurricane Bertha of 1996 was a Category Two hurricane when it hit the North Carolina coast.

Category Three Hurricane: Winds 111-130 mph. Storm surge generally 9-12 feet above normal. Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Foliage blown off trees. Large trees blown down. Mobile homes and poorly constructed signs are destroyed. Flooding near the coast destroys smaller structures, with larger structures damaged by floating debris. Terrain lower than five feet above mean sea level may be flooded eight miles inland. Evacuation of low-lying residences within several blocks of the shoreline may be required. Hurricane Fran of 1996 was a Category Three hurricane.

Category Four Hurricane: Winds 131-155 mph. Storm surge generally 13-18 feet above normal. More extensive curtainwall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be covered by rising water 3-5 hours before the arrival of the hurricane center. Major damage to the lower floors of structures near the shore. Terrain lower than ten feet above sea level may be flooded, requiring the massive evacuation of residential areas as far inland as six miles. Hurricanes Opal and Hugo were Category Four hurricanes at peak intensity when they struck the Florida and South Carolina coasts, respectively. Both storms eventually passed over the western part of North Carolina. At this time, wind speeds had dropped to tropical storm force winds.

Category Five Hurricane: Winds greater than 155 mph. Storm surge generally greater than 18 feet. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown down. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before the arrival of the hurricane center. Major damage to lower floors of all structures located less than 15 feet above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles of the shoreline may be required. Hurricane Gilbert of 1988 was a Category Five hurricane at peak intensity and is the strongest Atlantic tropical cyclone of record. Gilbert passed over Jamaica, the Yucatan Peninsula, and Northern Mexico.

The Town adopted a Hazard Mitigation Plan that was approved by FEMA. The plan is designed to enable the Town to be more prepared for natural disasters by establishing goals and strategies for mitigation, which are included in this plan as Appendix VI. If either the Land Use Plan or Hazard Mitigation Plan are revised, a review of each plan is necessary to ensure consistency.

d. Manmade Hazards

There are no significant manmade hazards within Shallotte's planning jurisdiction. The Environmental Protection Agency (EPA) developed a set of documents that have chemical profiles that are used for the Superfund Amendments and Reauthorization Act (SARA). The documents contain information for chemicals on the EPA's list of extremely hazardous substances. The chemical profiles were originally developed for the 402 chemicals that were called "acutely toxic chemicals." That list eventually went into law as the list of extremely hazardous substances. The EPA requires that facilities report whether or not any of these chemical substances are located on site. Specifically, under this regulatory requirement, facilities with chemicals on the EPA's list of Extremely Hazardous Substances present in a quantity equal to or in

excess of their established threshold planning quantity or a 500-pound threshold (whichever number is less), as well as any hazardous chemical present on site in a quantity equal to or greater than 10,000 pounds, must be included on an annual report called the Tier II. The following table provides a list of facilities in the Shallotte area that submitted Tier II reports in 2004.

Table 19. Town of Shallotte
Tier II Reporters, 2004

Facility Name	Address
Diversified Energy	2468 Ocean Highway Shallotte, NC
Gogas #9 - Shallotte	5058 Main Street Shallotte, NC
The Home Depot	150-1 Shallotte Crossing Parkway Shallotte, NC
Minuteman #12	116 Holden Beach Road Shallotte, NC
NC Dept. of Transportation	Shallotte, NC
NC National Guard Armory	5050 Main Street Shallotte, NC
RD White & Sons	4737 Main Street Shallotte, NC
Wal-Mart	4540 Main Street Shallotte, NC

Source: Brunswick County Emergency Management.

e. *Soils*

The last detailed soil survey for Brunswick County was issued in November 1986 by the Soil Conservation Service. That report, Soil Survey of Brunswick County, North Carolina, identifies 24 soil series located within Shallotte’s planning jurisdiction. These soils are delineated on Map 5 and their characteristics, by subbasin, are summarized in Tables 20 and 21.

Of the 24 soil series, 10 are Hydric Soils and are noted in the table. Hydric soils are defined as soils formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions within the upper part. In order to be considered hydric, a soil does not need to be saturated at the time of examination. Similarly, soils that formed under these conditions that have been drained are still considered hydric soils. The presence of hydric soils is significant because these soils are typically poorly suited for development. These soils may meet the definition of 404 wetland areas if found in combination with certain 404 vegetation and require permitting by the U.S. Army Corps of Engineers’ Wilmington office prior to any disturbance.

MAP 5 - SOIL CLASSIFICATIONS

Table 20. Town of Shallotte
Soil Characteristics - Subbasin 03-07-57

Map Symbol	Description	Acres	% of Total	Depth to Seasonal High Water Table (ft)	Flooding Frequency (Surface)	Dwellings without Basements	Local Roads and Streets
KrB	Kureb fine sand, 1 to 8% slopes	25.0	18.8%	> 6.0 feet	None	Slight	Slight
Lo*	Leon fine sand	37.6	28.2%	0 to 1.0 feet	None	Severe: wetness	Severe: wetness
Ma	Mandarin fine sand	36.0	27.0%	1.5 to 3.5 feet	None	Moderate: wetness	Moderate: wetness
Mu*	Murville mucky fine sand	34.6	26.0%	0 to 1.0 feet	None	Severe: ponding	Severe: ponding

*Hydric soils.

Source: Soil Survey of Brunswick County, North Carolina.

Table 21. Town of Shallotte
Soil Characteristics - Subbasin 03-07-59

Map Symbol	Description	Acres	% of Total	Depth to Seasonal High Water Table (ft)	Flooding Frequency (Surface)	Dwellings without Basements	Local Roads and Streets
BaB	Baymeade fine sand, 1 to 6% slopes	2,015.5	26.5%	4.0 to 5.0 feet	None	Slight	Slight
BnB	Blanton fine sand, 0 to 5% slopes	425.2	5.6%	5.0 to 6.0 feet	None	Slight	Slight
BDC	Baymeade and Marvyn, 6 to 12% slopes	117.8	1.6%	4.0 to 5.0 feet	None	Moderate: wetness, slope	Moderate: slope
BO*	Bohicket silty clay loam	125.5	1.7%	+ 3 to 0 feet	Frequent	Severe: flooding, ponding, shrink-swell	Severe: low strength, ponding, flooding
DO*	Dorovan muck	134.0	1.8%	+ 1 to 0.5 feet	Frequent	Severe: flooding, ponding, low strength	Severe: ponding, flooding, low strength
Fo	Foreston loamy fine sand	563.4	7.4%	2.5 to 3.5 feet	None	Slight	Slight
GoA	Goldsboro fine sandy loam, 0 to 2% slopes	463.4	6.1%	2.0 to 3.0 feet	None	Moderate: wetness	Moderate: wetness
Gt*	Grifton fine sandy loam	17.0	0.2%	0.5 to 1.0 feet	None	Severe: wetness	Severe: wetness

Table 21 (continued)

Map Symbol	Description	Acres	% of Total	Depth to Seasonal High Water Table (ft)	Flooding Frequency (Surface)	Dwellings without Basements	Local Roads and Streets
Jo	Johns fine sandy loam	82.2	1.1%	1.5 to 3.0 feet	None	Moderate: wetness	Moderate: wetness
KrB	Kureb fine sand, 1 to 8% slopes	287.4	3.8%	> 6.0 feet	None	Slight	Slight
LA*	Lafitte muck	228.5	3.0%	0 to 0.5 feet	Frequent	Severe: flooding, low strength	Severe: flooding, low strength
Lo*	Leon fine sand	471.5	6.2%	0 to 1.0 feet	None	Severe: wetness	Severe: wetness
Ly	Lynchburg fine sandy loam	235.2	3.1%	0.5 to 1.5 feet	None	Severe: wetness	Severe: wetness
Ma	Mandarin fine sand	235.2	3.1%	1.5 to 3.5 feet	None	Moderate: wetness	Moderate: wetness
Mk*	Muckalee loam	314.2	4.1%	0.5 to 1.5 feet	Frequent	Severe: flooding, wetness	Severe: wetness, flooding
Mu*	Murville mucky fine sand	505.0	6.6%	0 to 1.0 feet	None	Severe: ponding	Severe: ponding
NoB	Norfolk loamy fine sand, 2 to 6% slopes	386.7	5.1%	4.0 to 6.0 feet	None	Slight	Slight
On	Onslow fine sandy loam	162.2	2.1%	1.5 to 3.0 feet	None	Moderate: wetness	Moderate: wetness
Pn*	Pantego mucky loam	6.7	0.1%	0 to 1.5 feet	None	Severe: wetness	Severe: wetness
Pt	Pits	26.0	0.3%	N/A	N/A	N/A	N/A
Ra*	Rains fine sandy loam	92.2	1.2%	0 to 1.0 feet	None	Severe: wetness	Severe: wetness
Tm	Tomahawk loamy fine sand	37.8	0.5%	1.5 to 3.0 feet	None	Moderate: wetness	Moderate: wetness
To*	Torhunta mucky fine sandy loam	543.4	7.2%	0.5 to 1.5 feet	None	Severe: wetness	Severe: wetness
Ur	Urban land	33.6	0.4%	N/A	N/A	N/A	N/A
w	Water	83.9	1.1%	N/A	N/A	N/A	N/A

*Hydric soils.

Source: Soil Survey of Brunswick County, North Carolina.

f. *Water Supply*

According to the Soil Survey of Brunswick County, North Carolina, ground water from the surficial deposits is of good quality but may have a high iron content. The surficial deposits are a valuable aquifer and furnish water for many rural residences. Generally, the aquifer is 10 to 30 feet thick and 40 feet thick in some places. Below the surficial deposits is a limestone aquifer. It consists of phosphatic limestone with layers of sand, silt, and sandy marl. The limestone aquifer is an important source of water. It is underlain by sedimentary deposits that contain brackish water.

g. *Fragile Areas*

Areas of Environmental Concern are the foundation of the Coastal Resources Commission's permitting program for coastal development. An AEC is an area of natural importance. It may be easily destroyed by erosion or flooding or it may have environmental, social, economic, or aesthetic values that make it valuable.

The Coastal Resource Commission designates areas as AECs to protect them from uncontrolled development that may cause irreversible damage to property, public health or the environment, thereby diminishing their value to the entire state. Statewide, AECs cover almost all coastal waters and less than 3% of the land in the 20 coastal counties.

Fragile areas are those areas that are not explicitly defined as AECs but that could cause significant environmental damage or other diminution of quality of life if not managed. These include wetlands, natural heritage areas, areas containing endangered species, prime wildlife habitats, or maritime forests. These areas must be evaluated pursuant to State regulations at 15A NCAC 7H for the CAMA Land Use Planning process.

This section of the plan evaluates the following AECs and fragile areas in Shallotte: estuarine waters and shorelines, public trust areas, wetlands, and significant natural heritage areas.

(1) Estuarine Waters and Estuarine Shorelines (AEC)

An estuary can be defined as a semi-enclosed coastal body of water that has a free connection to the open sea and within which sea water is measurably diluted with fresh water derived from land drainage. Estuaries serve as transition zones between fresh and salt water and are protected from the full force of ocean wind and waves by barrier islands, mudflats, and/or sand.

Estuaries provide significant environmental and economic benefits. The sheltered waters support an abundance and diversity of plant and animal life, including marine mammals, shore birds,

fish, crabs, clams and other shellfish, and reptiles. A number of marine organisms, including many of the commercially valuable fish species, depend on the estuaries for spawning, nursing, or feeding.

Estuaries also serve as a water filtration system by removing sediments, nutrients, and pollutants before they reach the ocean. Cleaner water is the result, which benefits marine life and the people that inhabit the surrounding area. Estuaries also assist with flood control, with porous salt marsh soils and grasses absorbing flood waters and dissipating storm surges. They provide natural barriers between the land and the ocean.

Estuarine shorelines are shorelines immediately adjacent to or bordering estuarine waters. The areas are leeward of mean high tide and support the ecological function of estuaries and are highly vulnerable to erosion caused by wind or water and to damage caused by development. Development along estuarine shorelines can exacerbate water quality problems within estuarine waters and expedite the threats of shorefront erosion and flooding. In Shallotte, estuarine waters and estuarine shorelines are found along the Shallotte River.

(2) Public Trust Areas

The North Carolina Division of Coastal Management (DCM) defines public trust areas as the coastal waters and submerged lands that every North Carolinian has the right to use for activities such as boating, swimming, or fishing. These areas often overlap with estuarine waters, but they also include many inland fishing waters. The following lands and waters are considered public trust areas:

- » All waters of the Atlantic Ocean and the lands underneath, from the normal high water mark on shore to the state's official boundary three miles offshore;
- » All navigable natural water bodies and the lands underneath, to the normal high watermark on shore (a body of water is considered navigable if you can float a canoe in it). This does not include privately-owned lakes where the public doesn't have access rights;
- » All water in artificially-created water bodies that have significant public fishing resources and are accessible to the public from other waters; and
- » All waters in artificially-created water bodies where the public has acquired rights by prescription, custom, usage, dedication or any other means.

Public trust areas must be delineated by on-site analysis. Under CAMA regulations, all lands 30 feet leeward of public trust areas are subject to the restrictions specified for estuarine shorelines.

(3) Wetlands

Wetlands are lands that are saturated or covered with a shallow layer of water for part of the year and are not necessarily permanently wet. Many wetlands occur in areas where surface water collects or where underground water discharges to the surface, making the area wet for extended periods of time. Coastal wetlands are any marsh in a coastal area that regularly or occasionally floods by lunar or wind tide, and that include certain plant species. Wetlands include a variety of natural systems such as marshes, swamps, and pocosins. While they may not all look the same, they share certain characteristics such as wetland vegetation, hydric soils, and hydrologic features.

Wetlands provide natural functions that benefit the area around them. Wetlands are critical for water quality protection. Stormwater runoff that may have toxins washes into water bodies contaminating them. Wetlands provide a buffer between the two that traps sediment, removes nutrients, and detoxifies chemicals. Wetlands are also useful for flood protection by storing water and slowly releasing it. Wetlands assist with the stabilization of shorelines to protect from erosion, and they also provide a safe wildlife habitat.

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities in waters of the United States that are regulated under this program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. The basic premise of the program is that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. On-site evaluation is needed to determine the exact locations of 404 wetlands.

According to the North Carolina Coastal Regional Evaluation of Wetland Significance (NC-CREWS), approximately 26% of Shallotte is considered to be a wetland. The types of wetlands found in Shallotte are listed in the following tables by subbasin. The locations of these wetlands are shown on Map 6.

MAP 6 - WETLANDS

Table 22. Town of Shallotte
Wetlands - Subbasin 03-07-57

Wetland Name	Acres	% of Town's Acreage in the Subbasin*
Cleared Pine Flat	0.3	0.2%
Cleared Pocosin	0.3	0.2%
Cutover Pocosin	0.5	0.4%
Managed Pineland	36.1	26.3%
Pine Flat	2.7	2.0%
Pocosin	26.0	19.0%
Total	65.9	48.1%

*Shallotte has 137.2 acres in Subbasin 03-07-57.

Source: North Carolina Division of Coastal Management, Wetland Inventory.

Table 23. Town of Shallotte
Wetlands - Subbasin 03-07-59

Wetland Name	Acres	% of Town's Acreage in the Subbasin*
Bottomland Hardwood	65.7	0.9%
Cleared Bottomland Hardwood	3.3	0.0%
Cleared Depressional Swamp Forest	1.3	0.0%
Cleared Hardwood Flat	0.4	0.0%
Cleared Pine Flat	0.7	0.0%
Cleared Pocosin	3.6	0.0%
Cutover Bottomland Hardwood	5.3	0.1%
Cutover Depressional Swamp Forest	1.3	0.0%
Cutover Pine Flat	5.1	0.1%
Cutover Pocosin	6.5	0.1%
Depressional Swamp Forest	17.7	0.2%
Estuarine Forest	11.1	0.1%
Freshwater Marsh	24.0	0.3%
Hardwood Flat	3.5	0.0%
Human Impacted	9.3	0.1%
Managed Pineland	940.2	12.4%
Pine Flat	55.2	0.7%

Table 23 (continued)

Wetland Name	Acres	% of Town's Acreage in the Subbasin*
Pocosin	178.2	2.3%
Riverine Swamp Forest	276.1	3.6%
Salt/Brackish Marsh	310.3	4.1%
Total	1,918.6	25.3%

*Shallotte has 7,603.2 acres in Subbasin 03-07-59

Source: North Carolina Division of Coastal Management, Wetland Inventory.

(4) Significant Natural Heritage Areas

The North Carolina Natural Heritage Program maintains the state's list of Significant Natural Heritage Areas as required by the Nature Preserves Act (NCGS Chapter 113A-164 or Article 9A). The list is based on the program's inventory of the natural diversity in the state. Natural areas (sites) are evaluated on the basis of the occurrences of rare plant and animal species, rare or high quality natural communities, and geologic features. The global and statewide rarity of these elements and the quality of their occurrence at a site relative to other occurrences determine a site's significance rating.

The North Carolina Natural Heritage Program has identified one significant natural heritage area within Shallotte. Eighty-seven acres of the Sandy Branch Sand Ridge and Bay Complex is located within Shallotte's ETJ. The Division of Parks and Recreation states that this is an area containing ecologically significant natural communities or rare species reported by the county. Map 7 depicts the location of this area.

(5) Slopes in Excess of 12%

Areas of excessive slope are considered to be areas with slopes in excess of 12%. The topography within Shallotte is relatively flat; however, some areas along the Shallotte River may be exceptions. According to the Soil Survey of Brunswick County, North Carolina, there are no soils with slopes in excess of 12% in Shallotte's planning jurisdiction. Excess slope has had little impact on land use and/or development within Shallotte.

MAP 7 - SIGNIFICANT NATURAL HERITAGE AREAS

(6) Excessive Erosion Areas

Excessive erosion of shoreline areas has not been a problem within Shallotte's planning jurisdiction.

h. Areas of Resource Potential

(1) Regionally Significant Parks

There are a number of recreational facilities located within Shallotte. They are identified in the Analysis of Existing Community Facilities/Services. There are no public parks located within the Town's planning jurisdiction which have regional significance.

(2) Marinas and Mooring Fields

Marinas are defined as any publicly- or privately-owned dock, basin, or wet boat storage facility constructed to accommodate more than ten boats and providing any of the following services: permanent or transient docking spaces, dry storage, fueling facilities, haulout facilities, and repair service. Excluded from this definition are boat ramp facilities allowing access only, temporary docking, and none of the preceding services.

Based on information from the Town of Shallotte Unified Development Ordinance (UDO), Shallotte allows the construction of marinas as conditional uses in certain zoning districts. There are marinas located within Shallotte's planning jurisdiction.

A "freestanding mooring" is any means to attach a ship, boat, vessel, floating structure, or other water craft to a stationary underwater device, mooring buoy, buoyed anchor, or piling (not associated with an existing pier, dock, or boathouse). When more than one freestanding mooring is used in the same general vicinity it is commonly referred to as a mooring field. The Town of Shallotte has not regulated the establishment of mooring fields within its planning jurisdiction and they have not been a problem. However, the Town recognizes that the establishment of mooring fields could lead to the degradation of water quality.

(3) Floating Homes

A floating home or structure is any structure, not a boat, supported by a means of flotation, designed to be used without a permanent foundation, which is used or intended for human habitation or commerce. A structure will be considered a floating structure when it is inhabited or used for commercial purposes for more than thirty days in any one location. A boat may be deemed a floating structure when its means of propulsion has been removed or rendered inoperative and it contains at least 200 square feet of living space area. Currently, there are no floating homes located within Shallotte's planning jurisdiction.

(4) Aquaculture

As defined under N.C. General Statute 106-758, aquaculture is the propagation and rearing of aquatic species in controlled or selected environments, including, but not limited to ocean ranching. Aquaculture has not been an issue in the Shallotte planning jurisdiction.

(5) Channel Maintenance

The Shallotte River provides a route for fisherman and recreational boat traffic. Proper maintenance of channels is very important to Shallotte. If silt or other deposits fill in the channels, safe and efficient movement of vessels could be impeded. At the present time, there is no channel maintenance program in Shallotte.

(6) Marine Resources (Water Quality)

The North Carolina Division of Water Quality assigns water quality classifications to all named waters of the State of North Carolina. The classifications are based upon the existing or contemplated best usage of the various streams and segments of streams within a basin, as determined through studies, evaluations, and comments received at public hearings. The state water classification system is summarized in Table 24.

Table 24. NC Division of Water Quality
Water Body Classifications

PRIMARY FRESHWATER AND SALTWATER CLASSIFICATIONS*	
<u>CLASS</u>	<u>BEST USES</u>
C and SC	Aquatic life propagation/protection and secondary recreation
B and SB	Primary recreation and Class C uses
SA	Waters classified for commercial shellfish harvesting
WS	<i>Water Supply watershed.</i> There are five WS classes ranging from WS-I through WS-V. WS classifications are assigned to watersheds based on land use characteristics of the area. Each water supply classification has a set of management strategies to protect the surface water supply. WS-I provides the highest level of protection and WS-V provides the least protection. A Critical Area (CA) designation is also listed for watershed areas within a half-mile and draining to the water supply intake or reservoir where an intake is located.
SUPPLEMENTAL CLASSIFICATIONS	
<u>CLASS</u>	<u>BEST USES</u>
Sw	<i>Swamp Waters:</i> Recognizes waters that will naturally be more acidic (have lower pH values) and have lower levels of dissolved oxygen.
Tr	<i>Trout Waters:</i> Provides protection to freshwaters for natural trout propagation and survival of stocked trout.
HQW	<i>High Quality Waters:</i> Waters possessing special qualities including excellent water quality, Native or Special Native Trout Waters, Critical habitat areas, or WS-I and WS-II water supplies.
ORW	<i>Outstanding Resource Waters:</i> Unique and special surface waters that are unimpacted by pollution and have some outstanding resource values.
NSW	<i>Nutrient Sensitive Waters:</i> Areas with water quality problems associated with excessive plant growth resulting from nutrient enrichment.

* Primary classifications beginning with an "S" are assigned to saltwaters.
Source: NC Department of Environment and Natural Resources.

Water quality classifications vary slightly within Shallotte's planning jurisdiction. Table 25 provides a listing of all water bodies within the Shallotte area that are classified by the NC Division of Water Quality along with their assigned classification. Seven of the water bodies are currently listed as High Quality Waters (HQW). Map 8 provides the locations of these water bodies.

MAP 8 - LOCATIONS OF WATER BODIES

Table 25. Town of Shallotte
Water Bodies and Classifications

Name of Stream	Description	Current Classification	Stream Index #
Mulberry Branch	From source to Shallotte River	C; Sw	15-25-2-7
Woodard Branch (Charles Branch)	From source to Shallotte River	C; Sw, HQW	15-25-2-8
Sherrow Creek (Grissett Swamp)	From source to Williams Branch	C; Sw, HQW	15-25-2-9-(1)
Sherrow Creek (Grissett Swamp)	From Williams Branch to Shallotte River	SC; HQW	15-25-2-9-(2)
Williams Branch	From source to Sharron Creek (Grissett Swamp)	C; Sw, HQW	15-25-2-9-3
Shallotte River	From mouth of The Mill Pond to Intracoastal Waterway	SA; HQW	15-25-2-(10)
The Mill Pond	From source to a point 1.0 mile below Brunswick County SR 1145	C; Sw, HQW	15-25-2-11-(1)
The Mill Pond	From a point 1.0 mile below Brunswick County SR 1145 to Shallotte River	SA; HQW	15-25-2-11-(2)

Note: All water bodies listed are in Subbasin 03-07-59.
Source: NC Division of Water Quality.

2. Environmental Composite Map

The environmental composite map (Map 9) is a requirement under the new CAMA Land Use Planning guidelines [15A NCAC 7B.0702 (c)(2)]. Environmental data layers were assigned to a class based on CAMA regulations. Three classes are identified and all land masses, developed and undeveloped, are considered. The ultimate intent of the map is to rank the suitability of all land based on the environmental criteria. The layers used, and their assigned classes, are outlined in the following table. The categories utilized are as follows:

Class I – Land that contains only minimal hazards and limitations that can be addressed by commonly accepted land planning and development practices. Class I land will generally support the more intensive types of land uses and development.

MAP 9 - ENVIRONMENTAL COMPOSITE

Class II – Land that has hazards and limitations for development that can be addressed by restrictions on land uses, special site planning, or the provision of public services such as water and sewer. Land in this class will generally support only the less intensive uses, such as low density residential, without significant investment in services.

Class III – Land that has serious hazards and limitations. Land in this class will generally support very low intensity uses, such as conservation and open space.

Table 26. Town of Shallotte
Environmental Composite Map Layers

Layer	Class I	Class II	Class III
Coastal Wetlands			X
Exceptional or Substantial Non-Coastal Wetlands			X
Beneficial Non-Coastal Wetlands		X	
Estuarine Waters			X
Flood Zones		X	
Storm Surge Areas		X	
HQW/ORW Watersheds		X	
Water Supply Watersheds		X	
Significant Natural Heritage Areas		X	
Protected Lands			X

Data layers are site specific. As such, the value of the site will be determined by the highest class theme that is represented on that site. For example, if the site is in a coastal wetland (Class III) and in a storm surge area (Class II), the value for the site will be Class III. In other words, if an area does not meet the criteria for Class III, but qualifies as Class II, it has Class II for a value. If an area does not qualify for either Class III or Class II, then it is Class I by default.

Table 27 provides a summary of the land use acreages by class for the Town.

Table 27. Town of Shallotte
Land Use Acreage by Class

Town of Shallotte	
Class I	4,536.11
Class II	1,371.56
Class III	1,832.73
TOTAL	7,740.40

Source: Holland Consulting Planners, Inc.

3. Environmental Conditions (Water Quality, Natural Hazards, and Natural Resources)

The Lumber River Basinwide Water Quality Plan was adopted by the Division of Water Quality on December 11, 2003. The following are the goals of DWQ's basinwide program and should be kept in mind when considering future land uses:

- » Identify water quality problems and restore full use to impaired waters;
- » Identify and protect high value resource waters;
- » Protect unimpaired waters while allowing for reasonable economic growth.

These goals are accomplished through the following objectives:

- » Collaborate with other agencies to develop appropriate management strategies.
- » Assure equitable distribution of waste assimilative capacity.
- » Better evaluate cumulative effects of pollution.
- » Improve public awareness and involvement.

Shallotte is located within the Lumber River Basin's subbasins 03-07-57 and 03-07-59. Ninety-eight percent (98%), or 7,603 acres, is located within subbasin 03-07-59. The boundaries for the Lumber River Basin and subbasins 03-07-57 and 03-07-59 are delineated on Map 10. There are seven water bodies classified as High Quality Waters in and around Shallotte. The following provides a summary of existing conditions in the Lumber River Basin and subbasins 03-07-57 and 03-07-59. Also included are DWQ recommendations from the 2003 Basinwide Plan.

MAP 10 - RIVER BASINS/SUBBASINS

a. *Lumber River Basin*

The 2003 Lumber River Basinwide Water Quality Plan reports that the basin extends for 150 miles along the North Carolina/South Carolina border in the southeastern corner of North Carolina. All streams and rivers in this basin flow into South Carolina and are tributaries of the Pee Dee River except for the Lockwood Folly and Shallotte Rivers. The basin flows southeast from the Sandhills region in southern Moore County and Montgomery County to the Atlantic Ocean in Brunswick County. The Lumber River mainstem is the only North Carolina blackwater river to earn Federal designation as a National Wild and Scenic River. It is one of only four rivers in North Carolina with state designation as a Natural and Scenic River.

Lumber River Basin Statistics	
Total Area:	3,336 sq. miles
Freshwater Stream Miles:	2,232.5
Freshwater Lakes Acres:	8,965.9
Estuarine Acres:	4,305.6
Coastline Miles:	25.6
No. of Counties:	9
No. of Municipalities:	51
No. of Subbasins:	10
Population (2000):	304,579*
Pop. Density (2000):	92 persons/sq. mi.*
*Estimated based on % of county land area that is partially or entirely within the basin.	

The Lumber River Basin encompasses all or portions of 9 counties and 51 municipalities. Table 28 provides a listing of these municipalities along with an identification of the regional planning jurisdiction (Council of Governments) for each county.

Table 28. Local Governments and Planning Units within the Lumber River Basin

County	Council of Government Region	Municipalities
Bladen	N	Bladenboro, Clarkton, Dublin*, Tar Heel*
Brunswick	O	Boiling Spring Lakes*, Bolivia, Calabash, Carolina Shores, Holden Beach, Oak Island*, Ocean Isle Beach, Shallotte, Sunset Beach, Varnamtown
Columbus	O	Boardman, Bolton*, Brunswick, Cerro Gordo, Chadbourn, Fair Bluff, Lake Waccamaw, Tabor City, Whiteville
Hoke	N	Raeford*
Montgomery	G	Candor*
Moore	J	Aberdeen, Foxfire Village, Pinebluff, Pinehurst*, Southern Pines*
Richmond	N	Hoffman*, Norman*

Table 28 (continued)

County	Council of Government Region	Municipalities
Robeson	N	Fairmont, Lumber Bridge, Lumberton, Marietta, Maxton**, McDonald, Orrum, Parkton, Pembroke, Proctorville, Raynham, Red Springs, Rennert, Rowland, Saint Pauls
Scotland	N	East Laurinburg, Gibson, Laurinburg, Maxton**, Wagram

*Located in more than one major river basin.

**Located in more than one county.

NOTE: Counties are not included as part of a river basin if only a trace amount of the county (<2%) is located in that basin unless there is a municipality.

Source: Lumber River Basinwide Water Quality Plan.

b. Subbasin 03-07-57

Subbasin 03-07-57 is located partially in Columbus and Brunswick Counties. The population growth is concentrated around Tabor City and Calabash. Land use is largely forest and agriculture. Most of the streams are intermittent with little or no flow during the summer months. There are four permitted dischargers in subbasin 03-07-57. The total permitted flow is 1.6 MGD. The largest discharger is the Tabor City wastewater treatment plant (WWTP) which discharges 1.1 MGD to Grissett Swamp. Only 1.8% of Shallotte’s planning jurisdiction is located in this subbasin.

Waters are classified according to their best intended uses. Determining how well a water body supports its designated uses is an important method of interpreting water quality data and assessing water quality. In subbasin 03-07-57, use support ratings were assigned for aquatic life, recreation, and fish consumption categories. Almost 21% of waters were evaluated for aquatic life. Fifty-five percent (55%) of the monitored waters were supporting for aquatic life. Nine percent (9%) of waters were evaluated for recreation. One hundred percent (100%) were supporting for recreation. All waters in the subbasin are considered impaired for fish consumption. In April 2002, the NC Department of Health and

Table 29 Subbasin 03-07-57 Description	
Land and Water	
Total area:	555 mi ²
Land area:	552 mi ²
Water area:	3mi ²
Population Statistics	
2000 Est. pop.:	37,467 people
Land Cover	
Forest/Wetland:	74.0%
Surface Water:	1.0%
Urban	< 1.0%
Agriculture	25.0%
Counties	
Brunswick and Columbus	
Municipalities	
Carolina Shores, Calabash, Tabor City, and Shallotte	

Human Services developed new guidelines to advise people as to what fish are safe to eat. DWQ considers uses of waters with a consumption advice or advisory for one or more species of fish to be impaired. Elevated methylmercury levels have been found in shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish) and chain pickerel (or jack), and these fish species fall under the guidelines. Map I I provides the locations for DWQ samplings.

2003 Recommendations: The surface waters in this subbasin are not impaired.

c. *Subbasin 03-07-59*

Subbasin 03-07-59 is located entirely within Brunswick County and all waters drain into the Atlantic Ocean. The population growth is concentrated around coastal communities and around Shallotte and Calabash. Ninety-eight percent (98%) of Shallotte’s planning jurisdiction is located in this subbasin. Brunswick County has the highest estimated population change for the 2000-2020 year projection. There are three permitted dischargers in subbasin 03-07-59. The total permitted flow is 0.02 MGD. There is also one individual NPDES stormwater permit in the subbasin.

Waters are classified according to their best intended uses. Determining how well a water body supports its designated uses is an important method of interpreting water quality data and assessing water quality. In subbasin 03-07-59, use support ratings were assigned for aquatic life, fish consumption, recreation, and shellfish harvesting categories. Nineteen percent (19%) of waters (miles) were evaluated for aquatic life. Seventy-nine percent (79%) of the monitored waters were supporting for aquatic life. Fifteen percent (15%) of waters were evaluated for recreation. One hundred percent (100%) were supporting for recreation. One hundred percent (100%) of waters were monitored for shellfish harvesting. Almost 16% were classified as supporting and 85% were classified as impaired. All waters in the subbasin are considered impaired for fish consumption. In April 2002, the NC Department of Health and Human Services developed new guidelines to advise people as to what fish are safe to eat. DWQ considers uses of waters with a consumption advice or advisory for one or more species of fish to be Impaired. Elevated methylmercury levels have been found in shark, swordfish, king mackerel, tilefish, largemouth bass, bowfin (or blackfish) and chain pickerel (or jack), and these fish species fall under the guidelines. Map I I provides DWQ sampling locations.

Table 30	
Subbasin 03-07-59 Description	
Land and Water	
Total area:	267mi ²
Land area:	260 mi ²
Water area:	7 mi ²
Population Statistics	
2000 Est. pop.:	21,177 people
Land Cover	
Forest/Wetland:	75.0%
Surface Water:	3.0%
Urban	4.0%
Agriculture	18.0%
County	
Brunswick	
Municipalities	
Boiling Spring Lakes, Bolivia, Carolina Shores, Holden Beach, Oak Island, Ocean Isle Beach, Shallotte, Sunset Beach, and Varnamtown	

MAP 11 - DWQ SAMPLING LOCATIONS

The Division of Water Quality has concluded that its current coastal stormwater rules have not been adequately effective towards addressing water quality impacts to public trust waters. Additionally, DWQ's review of scientific studies has resulted in a determination that local governments' simply deferring to state and federal rules to address water quality issues still results in impaired local water quality based on the following conclusions:

- » Areas with impervious surfaces of 10% or greater can be linked to local stream degradation.
- » Biological diversity has been shown to drop when areas of impervious surface increase beyond 10-15%.
- » Stream stability is affected when impervious surface approaches 10% in an area.
- » Estuaries generally degrade when areas have 10% impervious surface.
- » Sensitive fish species loss increases with 12% impervious surface.

2003 Recommendations: Portions of the Lockwood Folly and Shallotte Rivers, Intracoastal Waterway, and all of Calabash Creek were partially supporting in the 1999 basin plan because they were classified as prohibited and conditionally approved closed to shellfish harvesting by Division of Environmental Health Shellfish Sanitation (DEH SS). It was recommended that management strategies be developed for shellfish harvesting waters. These strategies included, but were not limited to, reducing NPS runoff, resolving septic system impacts, and working more closely with other state and local agencies to address all pollution impacts to SA waters.

At a site on the Shallotte River near US 17, the bioclassification decreased from Good-Fair in 1996 to Fair during the 2001 assessment. The decrease was probably due to drought conditions and subsequent effects of brackish intrusion during the low flow period. The site assessment in 2003 reported a Good-Fair bioclassification. However, the assessment found the highest number of taxa out of its historical sampling regime.

d. Registered Animal Operations within Lumber River Basin

The following table provides a summary of registered animal operations within Lumber River subbasins 03-07-57 and 03-07-59. The numbers only reflect those operations required by law to be registered. There are no registered cattle operations in the subbasins. None of these facilities are located in the Shallotte vicinity (see Map 10, page 52).

Table 31. Lumber River Basin
Registered Animal Operations (as of 1/2/2003)

Subbasin	Swine*		
	No. of Facilities	No. of Animals	Total Steady State Live Weight**
03-07-57	15	60,244	7,948,420
03-07-59	1	3,750	506,250

*There are no other registered animal operations located within these subbasins.

**Steady State Live Weight (SSLW) is the result, in pounds, after a conversion factor has been applied to the number (head count) of swine, cattle, or poultry on a farm. The conversion factors, which come from the Natural Resource Conservation Service (NRCS) guidelines, vary depending on the type of animals on the farm and the type of operation (for example, there are five types of hog farms). Since the amount of waste produced varies by the size of the animal, SSLW is the best way to compare the sizes of the farms.

Source: NC Division of Water Quality 2003 Lumber River Basinwide Water Quality Plan.

e. *Prohibited Shellfish Harvesting*

The following areas in Growing Area A-2 in the Shallotte River area are closed to shellfishing:

- » *Shallotte River* - All those waters upstream of a line in Shallotte River beginning at a point 33° 55.8196' N – 78° 22.1005' W on the west shore; running easterly to a point 33° 55.9182' N – 78° 21.6542' W on the east shore.
- » All those waters upstream of a line beginning at a point 33° 54.8914' N – 78° 18.4305' W on the west shore; running easterly to a point 33° 54.8948' N – 78° 18.4099' W on the east shore.
- » *Hughes Marina* - All those waters within 150 feet of the last dockage space at Hughes Marina beginning at a point 33° 54.9159' N – 78° 22.3835' W on the north shore; running easterly to a point 33° 54.9156' N – 78° 22.3284' W; running southerly to a point 33° 54.8069' N – 78° 22.3292' W; running westerly to a point 33° 54.8074' N – 78° 22.4230' W; running northerly to a point 33° 54.8410' N – 78° 22.4229' W on the shore.
- » *Holden Beach Marina* - All those waters within 100 feet of the last dockage space at Holden Beach Marina beginning at a point 33° 55.0730' N – 78° 15.9361' W on the north shore; running southerly to a point 33° 55.0461' N – 78° 15.9265' W; running southwesterly to a point 33° 55.0081' N – 78° 16.0696' W; running northerly to a point 33° 55.0361' N – 78° 16.0778' W on the shore.

- » *Saucepan Creek* - All those waters in Saucepan Creek upstream of a line beginning at a point 33° 54.6806' N – 78° 22.8183' W on the north shore; running southwesterly to a point 33° 54.5606' N – 78° 22.9863' W on the south shore.
- » All those waters upstream of a line beginning at a point 33° 54.9143' N – 78° 17.7089' W on the west shore; running easterly to a point 33° 54.9159' N – 78° 17.6615' W on the east shore.
- » *Sea Air Boat Basin* - All those waters within Sea Air Boat Basin beginning at a point 33° 55.0279' N – 78° 17.5174' W on the west shore; running easterly to a point 33° 55.0173' N – 78° 17.4811' W on the east shore.
- » All those waters upstream of a line beginning at a point 33° 54.7634' N – 78° 20.1167' W on the west shore; running easterly to a point 33° 54.7653' N – 78° 20.0915' W on the east shore.
- » *Sea Scape Marina* - All those waters within 325 feet of the last dockage space at Sea Scape Marina beginning at a point 33° 55.2182' N – 78° 14.7266' W on the west shore; running easterly to a point 33° 55.2236' N – 78° 14.7120' W on the east shore.

f. *Growth Trends*

Between 1990 and 2000, the population within the Lumber River Basin increased 20.0%. The Lumber River Basinwide Water Quality Plan projects percent growth between 2000 and 2020 for counties within the basin. Since river basin boundaries do not coincide with county boundaries, these numbers are not directly applicable to the Lumber River Basin. They are estimates of county-wide population changes.

Population growth trends for the basin between 2000 and 2020 indicate three counties with growth rates in excess of 30% and two counties with growth rates of 20% to 30%, with a total population increase in the basin of 31.2%. According to the Water Quality Plan, Brunswick County is expected to experience a 54% population increase between 2000 and 2020.

C. ANALYSIS OF LAND USE AND DEVELOPMENT

I. Introduction

In order to address future development within Shallotte's planning jurisdiction, it is necessary to establish a snapshot of how the Town's planning jurisdiction is currently developed. This is achieved by conducting an existing land use survey. The survey assists in identifying land use patterns, conflicts, and trends that exist

within the planning jurisdiction. The process and data associated with it will provide a solid foundation for decisions about future land use and policy development.

An existing land use survey was conducted for the entire planning jurisdiction. Aerial photography, obtained from the Brunswick County Geographic Information Systems Department, and on-site windshield surveys were used to complete the survey. Land use within Shallotte was divided into the following land use categories:

- » *Single-Family Residential* - a detached building designed for or occupied exclusively by one family.
- » *Multi-Family Residential* - a residential building designed for or occupied by two or more families, with the number of families in residence not exceeding the number of dwelling units provided.
- » *Commercial* - land is used for retailing, commercial, and service uses but does not include industrial uses.
- » *Office & Institutional* - land for business, office, and institutional needs.
- » *Industrial (Light and Heavy)* - land used for office parks, commercial warehousing, assembly and manufacturing, and research facilities.
- » *Agriculture* - land used for agricultural purposes.
- » *Mobile Home Park* - land use for manufactured housing.
- » *Mixed Use* - land that has more than one use on the property.
- » *Recreation* - land used for active and/or passive recreation pursuits.
- » *Utility* - land used for infrastructure to serve the community.
- » *Vacant* - undeveloped land.

Map 12 depicts the locations of land uses within Shallotte. Table 32 summarizes the land use acreage resulting from the existing land use survey. According to this information, residential land use comprises approximately 34.7% of Shallotte's planning jurisdiction. Almost 11% is industrial, 5.4% is commercial, and 5.2% is office & institutional land use. Almost 40% of Shallotte's planning jurisdiction is vacant.

Map 12 - Existing Land Use

Table 32. Town of Shallotte
Existing Land Use Acreages (Not Zoning)

Land Use	Town Limits*		ETJ*		Total*	
	Acres	% of Total	Acres	% of Total	Acres	% of Total
Agriculture	38.6	1.2%	0.0	0.0%	38.6	0.5%
Commercial	311.5	9.4%	71.5	1.9%	383.0	5.4%
Industrial	627.7	18.9%	151.8	4.0%	779.5	10.9%
Mobile Home Park	2.6	0.1%	0.02	0.0%	2.6	0.0%
Mixed Use	7.5	0.2%	139.7	3.7%	147.2	2.1%
Multi-family	43.3	1.3%	24.1	0.6%	67.4	0.9%
Office & Institutional	324.0	9.7%	44.6	1.2%	368.6	5.2%
Recreation	0.0	0.0%	68.8	1.8%	68.8	1.0%
Single-Family Residential	1,179.8	35.5%	1,236.9	32.3%	2,416.7	33.8%
Utility	25.0	0.8%	0.0	0.0%	25.0	0.3%
Vacant	767.1	23.1%	2,086.8	54.6%	2,853.9	39.9%
Total	3,327.1	100.0%	3,824.2	100.0%	7,151.3	100.0%

*These figures represent existing land use as of April 2005.

Note: These figures do not include right-of-ways or water.

Source: Holland Consulting Planners, Inc.

2. Land Use Conflicts

Land use conflicts often exist within a Town's planning jurisdiction resulting from a variety of circumstances. Issues leading to land use conflicts can result from a lack of proper land use controls, demand for increased development, and development of land not suited for a particular land use. Land use conflicts that exist within Shallotte are discussed below.

The vulnerability of Shallotte to flooding and hurricanes was discussed in the Natural Systems Analysis portion of this document. The Town recognizes that development within flood hazard or storm surge inundation areas is going to occur due to the Town's proximity to the coast and its location along the Shallotte River. The Town's strategy to address this issue will be to continue enforcement of land use controls that increase the safety of residential and non-residential structures that are built within defined flood zones. Additionally, the Town has recently adopted a Hazard Mitigation Plan that describes the hazards to which Shallotte is susceptible, the vulnerability of the Town to those hazards, and the capability of the Town to respond during and after hazards. The plan also provides specific goals, objectives, and implementing actions that will be carried out to increase the safety of residents and property in the event of a natural disaster.

3. Development Trends

The Town of Shallotte has developed rapidly over the last 20 years. Over 66% of the Town’s housing stock has been constructed since 1980. This rapid development can be attributed to the Town’s appeal as a tourist destination, the Town’s geographic location near the Brunswick County beaches and the midway point between Wilmington, NC, and Myrtle Beach, SC, and the Town’s establishment as an economic center in Brunswick County.

According to the existing land use survey, 297 parcels, or 9.2%, of the Town’s total parcel count is vacant. Many of the vacant parcels are already platted for single-family residential development. Other vacant property is scattered throughout the Town’s jurisdiction.

In order to provide a forecast of how vacant land could be developed, an overlay analysis was performed that compared the existing land use survey and the Town’s zoning map. The analysis identified the zoning district of each undeveloped parcel. This exercise enabled the Town to determine how the land could be used if developed as currently permitted by the Town’s zoning regulations. The following table provides a summary of the zoning classifications of undeveloped properties.

Table 33. Town of Shallotte
Zoning Classification of Undeveloped Properties

Zoning District	Parcels	% of Total Vacant Parcels	Acreage	% of Total Vacant Acreage
Residential				
R-10	32	10.8%	208.8	7.3%
R-15	5	1.7%	48.2	1.7%
RA-15	101	34.0%	848.9	29.7%
RAM-15	42	14.1%	444.0	15.6%
RM-10	4	1.4%	21.5	0.8%
Subtotal	184	62.0%	1,571.4	55.1%
Commercial				
B-2	65	21.9%	469.6	16.5%
HB	34	11.4%	395.5	13.9%
Subtotal	99	33.3%	865.1	30.4%
Industrial (HI)	3	1.0%	1.3	0.0%
Conservation	4	1.3%	192.6	6.7%
Split Zoned*	7	2.4%	223.5	7.8%
Total	297	100.0%	2,853.9	100.0%

*The split zoned parcels include one RAM-15/RA-15 parcel, two CB/CW parcels, one HB/R-10 parcel, two RA-15/conservation parcels, and one B-2/RAM-15 parcel.

Source: Holland Consulting Planners, Inc.

Map 13 delineates the zoning district for each vacant parcel. Zoning will be discussed in more detail with a complete zoning map in Section V.F, Current Plans, Policies, and Regulations. The following summarizes which zoning districts have vacant parcels and the intended use of each zoning district as defined in the Town's Unified Development Ordinance.

- » *R-10 Residential District* - This district is established to serve essentially the same purposes as the R-15 Residential District while allowing slightly higher density.

- » *R-15 Residential District* - This district is established in which the principal use of land is for medium density residential purposes. In promoting the general purpose of the Ordinance, the specific intent is: (1) to encourage the continued use of land for residential purposes; (2) to encourage the development of residential neighborhoods that compliment one another in creating an overall balance in the community by providing for a variety of dwellings suitable to all lifestyles and family sizes; (3) to prohibit commercial and industrial use of the land and to prohibit any other uses which would interfere with development or continuation of dwellings in the district; (4) to encourage the discontinuance of existing uses that would not be permitted as new uses under the ordinance; (5) to discourage uses which would generate traffic on minor streets other than normal traffic to serve residents of those streets; and (6) to discourage uses which because of its character or size would create requirements and costs for public services such as police, fire protection, water supply and sewerage substantially in excess of such requirements and costs if the district were developed solely for residential purposes.

- » *RA-15 Residential Agriculture District* - This district is established in which the principal use of the land is for medium density residential and agricultural purposes.

- » *RAM-15 Residential Agricultural Manufactured Home District* - This district is established in which the principal use of land is for medium density residential, agricultural, and manufactured home purposes.

- » *RM-10 Residential District* - This district is established to serve essentially the same purpose as the R-10 Residential District with the addition of multi-family dwellings and manufactured homes.

- » *B-2 Business District* - This district is established in which the principal use of land is for the retailing of durable goods, provision of commercial services to residential and industrial areas, and the provision of services to transients.

Map 13 - Zoning of Vacant Parcels

-
- » *HB Highway Business District* - This district is established in which the principal use of land is for the retailing of durable goods, provision of commercial services to industrial areas, and the provision of services to transients.
 - » *CB Central Business District* - This district is established as a zone in which the use of the land is for commercial and service uses for an urban and rural market area.
 - » *CW Commercial Waterfront District* - This district is established to preserve and reserve adequate areas for water-related uses in the Town, while allowing low intensity commercial uses.
 - » *HI Industrial District* - This district is established in which the principal use of land is for wholesale activities, industrial research, warehouses, and manufacturing operations.
 - » *C Conservation* - The Conservation District is established in which only partial development of land may occur. The regulations of this district are intended to protect the floodplain and estuarine areas and permitted uses shall be in conformity with the uses listed in this ordinance, subject to the appropriate State and Federal laws. This district shall apply to those areas above mean high water which may be covered by marsh and are protected by the Coastal Area Management Act and appropriate Federal laws.

According to Table 33, 184 parcels, or 62.0%, of the Town's undeveloped land is zoned for residential development. It is difficult to judge how rapidly these areas will develop. According to the Brunswick County Building Inspections Department, in the last two years 396 building permits have been issued in Shallotte for an average of 198 per year. The permits were for single-family residences (162 permits issued over two years), commercial developments (217 permits issued over two years), and mobile homes (17 permits issued over two years).

The environmental composite map (Map 9) was discussed in the Natural Systems Analysis section of the plan. The map is intended to delineate the Town's jurisdiction in accordance with environmentally sensitive areas. All land masses were assigned an environmental composite class based on CAMA regulations (see Table 26, page 50). The following table provides a summary of how the undeveloped parcels in Shallotte relate to the classes established on the environmental composite map. If a parcel was located in more than one class as defined in the analysis, the most environmentally sensitive class was assigned to the parcel.

Table 34. Town of Shallotte
Undeveloped Land in Relation to the Environmental Composite Analysis (Classes I - III)

Environmental Composite	Acreage	% of Total
Class I	1,550.0	54.3%
Class II	511.9	17.9%
Class III	792.0	27.8%
Total	2,853.9	100.0%

Source: Holland Consulting Planners, Inc., and NC Center for Geographic Analysis.

4. Projections of Future Land Needs

Population projections for Shallotte were provided in Section V.A.4. Based on that information, the population in the Town could reach 3,220 by 2020. That population is an increase of 1,558 from the 2003 estimate reported by the State Data Center. The average household size, taken from the 2000 US Census, is 2.3 persons per household. If the average household size is applied to the population increase, the number of households needed in Shallotte will be 677 dwelling units by 2020. That number of dwelling units averages out to approximately 40 units needed per year during the time period. According to the Land Suitability Analysis, there are 571 acres of undeveloped land that is considered Highly Suitable for development. Of that acreage, 343 acres, or 14,940,000 square feet, are zoned residential. According to the Unified Development Ordinance, the lot size requirements for each single-family district is 10,000 square feet/dwelling (if served by public water/sewer). Assuming that all lots are served by public water and sewer, there is enough acreage for 1,195 single-family dwelling units. This figure incorporates a 20% deduction for right-of-ways from the 14,940,000 square footage of the vacant residential zoning area that is highly suitable for development. Therefore, the number demonstrates that the Town has enough land to accommodate housing development to support the population projection.

5. Historic, Cultural, and Scenic Areas

There are no sites listed on the National Register of Historic Places nor are there any sites on the study list for future nomination. There are several sites that are of local significance in Shallotte. Sunnyside School, one of the first schools in Shallotte, is near its original site. It is located at the front of the Shallotte Middle School campus. The White House, circa 1892, is in its original location. Coastal Drug Store is also of local significance. The store was first opened by Dr. William R. Goley who practiced medicine and operated a drug store between 1906 and 1936. The site was reopened as a drug store by Mr. Fredrick Mintz in 1952 and is still in business today as a drug store. There is one state-defined Significant Natural Heritage Area that is delineated on Map 7 in the Natural Systems Analysis section of the plan.

D. ANALYSIS OF EXISTING COMMUNITY FACILITIES/SERVICES

Map 14 provides the location of community facilities within Shallotte's planning jurisdiction.

I. Transportation

US Highway 17 and NC Highway 130 are the major routes running through Shallotte. NC Highway 179 is also an important transportation route. Shallotte is served by several other collector and local access streets that are important to the area.

According to the North Carolina Department of Transportation (NCDOT), there are approximately 77.4 miles of roadway located within Shallotte's planning jurisdiction. NCDOT (2003) data reports that the annual average daily traffic counts (AADT) have increased as much as 37.5% in certain areas since 2001. The AADT increased 18% on Main Street at a point just west of the intersection with US Highway 17 Bypass; 28.5% on Holden Beach Road at a point just south of the intersection with Main Street; 30% on the west end of Main Street at a point just east of the intersection with US Highway 17 Bypass; and 37.5% on NC Highway 179 (Bricklanding Road) at a point south of the intersection at Village Road. Map 15 depicts the 2003 AADT recorded in the Shallotte vicinity by NCDOT.

There are two projects in Shallotte on the NCDOT 2004-2010 Transportation Improvement Program (TIP). One project is to realign the intersection to eliminate the offset at NC Highway 130 and SR 1357 (Smith Avenue). At the time of this writing, the project was in the design phase with right-of-way scheduled for FY2005 and construction scheduled for FY2008. The TIP also lists a bridge replacement over Mulberry Swamp. The approximate locations of these projects are located on Map 15.

The 2002 Technical Report for the Town of Shallotte Transportation Plan identifies roads that are nearing capacity and roads that are over capacity. There are four sections on US Highway 17, two sections on NC Highway 130, and one section on NC Highway 179 that are nearing capacity. US Highway 17 Business between Holden Beach Road (NC Highway 130) and Whiteville Road (NC Highway 130) is over capacity. A portion of Holden Beach Road (NC Highway 130) and a portion of Village Road (NC Highway 179), both at their intersections with US Highway 17 Business and extending south, are over capacity.

The 2002 Technical Report also identifies several proposed major and minor thoroughfares on the Thoroughfare Plan. The proposed major thoroughfares include: a connector between US Highway 17 and Holden Beach Road, Shallotte Parkway between US Highway 17 Bypass and Whiteville Road, Shallotte Parkway between SR 1320 and the intersection of US Highway 17 and Ocean Isle Beach Road, Old Georgetown Road Extension between Ocean Isle Beach Road and Village Road, NC 179 Extension between US Highway 17 Business and Village Road, and an extension of Gray Bridge Road to the mainland of Holden Beach. Proposed minor thoroughfares include: New Britton Road Extension to Royal Oaks Road, New

Britton Road to Whiteville Road, Northern CBD Loop from US Highway 17 Business on the east side of Town to Whiteville Road, Southern CBD Arterial between Wall Street and Red Bug Road, Bailey Extension from Whiteville Road to US Highway 17 Business at the intersection of the proposed NC 179 extension, a connector between Village Road and Copas Drive, and a connector between Pender Drive and Copas Drive. Map 15 delineates the proposed thoroughfares and the roads nearing or at capacity from the 2002 Technical Report.

2. Health Care

Brunswick Community Hospital, located in the heart of the county, has been providing medical care to residents since 1977 and is accredited by the Joint Commission on Accreditation of Healthcare Organizations. The hospital is staffed with over 96 physicians and specialists. The hospital offers a variety of medical and surgical services from general surgery to cardiology. Following are some of the services provided at the facility. This is not a comprehensive list of services at the hospital.

» Birthing	» Nuclear Medicine
» Cardiac Rehab	» Obstetrics/Gynecology
» Diagnostic Imaging	» Ophthalmology
» Emergency Services	» Orthopedics
» Endoscopy/Special Procedures	» Outpatient Diagnostic Services
» Immunology	» Outpatient Surgery
» Inpatient Surgery	» Pediatrics
» Intensive Care	» Physical Therapy
» Laboratory Services	» Plastic/Reconstructive
» Mammography	» Radiology
» MRI	» Respiratory Therapy Services
» Neurosurgery	» Speech Therapy

3. Law Enforcement

The Shallotte Police Department is located at 115 Wall Street. The department's full-time staff is made up of a chief, one lieutenant, one lieutenant detective, one detective, two sergeants, four patrol officers, and a secretary/records clerk. The city also has two part-time officers. The department responds to approximately 1,500 calls per month and maintains its own Records Management System. Response calls are received through the Brunswick County 911 Call Center. Following is a list of equipment available for use by the department. It should be noted that each police officer has his own vehicle.

» 2 - 2005 Ford Crown Victoria	» 1 - 2000 Jeep Grand Cherokee
» 2 - 2004 Ford Crown Victoria	» 2 - 1999 Ford Crown Victoria
» 1 - 2002 Ford Crown Victoria	» 2 - 1997 Ford Crown Victoria
» 1 - 2001 Ford Crown Victoria	» 1 radar trailer

Map 14 - Community Facilities

Map 15 - AADT/TIP/Roads at or near Capacity

4. Fire Services

The Shallotte Fire Department is located at 113 Wall Street. Shallotte provides fire services through a combination paid and volunteer department. There are six full-time paid staff members and 23 volunteers. The department has an ISO rating of 4 if you are within 1,000' of a hydrant and 9 if you are not located within 1,000' of a hydrant. The service area is 28.8 square miles. The fire department responds to approximately 350 calls per year. The following equipment is utilized by the department:

- » Engine 1571 - 1995 FORD E-ONE, 1,250 GPM Hale Pump, 1,000 Gallon Tank
- » Engine 1572 - 1995 FORD E-ONE, 1,250 GPM Hale Pump, 1,000 Gallon Tank
- » Engine 1574 - 2004 E-ONE, 1,250 GPM Hale Pump, 1,000 Gallon Tank
- » Ladder 1573 - 1987 FMC Telesquirt 50', 1,250 GPM Hale Pump, 400 Gallon Tank
- » Mini-Pumper 1575 - 2000 F450 4x4 Anchor-Richey EVS, Hale 250 GPM Pump, 250 Gallon Tank, 7 Gallon Foam Tank
- » Service Truck 1576 - 1998 GMC Step Van, Cascade System/Rehab
- » Chiefs Vehicle 1580 - 2001 Jeep Cherokee, Specialty Equipment
- » Special Operations Unit 1584 - Trailer, Specialty Equipment

5. Administration

The Shallotte Town Hall is located at 110 Cheers Street. The Town operates under a Mayor-Aldermen form of government. The Town has 38 full-time employees. The following provides a summary of governmental departments and the number of employees in each.

<u>Department</u>	<u>Full-Time Employees</u>
Administrative	5
Police	11
Fire	6
Streets	2
Water	3
Sewer	11

6. Water System

The Town of Shallotte receives water from Brunswick County and distributes to 900 water customers. The Town's current flow is 317,808 gpd. A 300,000 gallon storage tank, belonging to Brunswick County, is located within Shallotte. Main sizes range from 6 inches to 12 inches. Map 16 illustrates the location of water lines in Shallotte. A discussion of future demand is located in Section VI.A.10, page 102.

7. Sewer System

The Town of Shallotte sold its sewer treatment plant to Brunswick County in July 2005. The capacity is 1,000,000 gallons per day with a current flow of 350,000 gpd. The sewer system has 900-950 customers.

Map 16 illustrates the location of sewer lines within Shallotte. At the present time, there are no private package treatment plants in use within the Town. In addition, since there is no discharge system, the Town is not required to have a National Pollutant Discharge Elimination System (NPDES) permit. A discussion of future demand is located in Section VI.A.11, page 102.

8. Schools

Shallotte is served by the Brunswick County School System. Supply Elementary School and Union Elementary School serve grades K-5. Supply Elementary is located at 51 Benton Road SE in Supply and Union Elementary is located at 180 Union School Road NW in Shallotte. Students in grades 6-8 attend Shallotte Middle School at 225 Village Road in Shallotte, and students in grades 9-12 attend West Brunswick High School at 550 Whiteville Road NW in Shallotte. The following table provides a summary of the schools that serve Shallotte’s school age children.

Table 35. Schools Serving Shallotte School Children

School	Enrollment	Capacity	Staff	Recreational Facilities
Supply Elementary Grades K-5	638	632	47	Multi-purpose room (Gymnasium), a field, and 4 playgrounds
Union Elementary Grades K-5	653	726	44	Gym and playground
Shallotte Middle Grades 6-8	926	924	90	Gymnasium, soccer field, football field, softball field, baseball field, and 2 bocci courts
West Brunswick High Grades 9-12	1,283	1,270	80	Gymnasium, football field, practice field, baseball field, softball field, and track

Source: Enrollment, staff, and recreational facilities were provided by each school. The Brunswick County Director of Public Facilities and Capital Improvements supplied information regarding capacity.

Shallotte is also served by private schools: the Evelyn Smith Wray Village School serves grades K through 8 and has an enrollment of 60 students; West Christian Academy serves grades K-12 and has 77 students.

Higher education is offered at Brunswick Community College (BCC) at 50 College Road in Supply. The community college offers a variety of programs that lead to Associate Degrees in Applied Science including: Aquaculture Technology, Business Administration, Computer Programming, Cosmetology, Early Childhood Associate, Early Childhood Associate/Special Education, Early Childhood Associate/Teacher Associate, Electronics Engineering Technology, Health Information Technology, Horticulture Technology, Industrial Systems Technology, Information Systems, Office Systems Technology, and Turfgrass Management Technology. There are also technical programs with some that lead to technical certificates. The University of North Carolina at Wilmington (UNCW) is also within commuting distance to Shallotte residents. UNCW is a major four-year university, and is part of the University of North Carolina system.

Map 16 - Water/Sewer Lines

9. Recreation

The Town of Shallotte does not own or maintain any parks. However, the Town is served by Shallotte District Park which is owned by Brunswick County. The park is located at 5550 Main Street and consists of 64 acres. The park has four baseball/softball fields (2 at 200' and 2 at 300'), soccer fields, one concession stand with restrooms, one office storage building, one basketball court, two tennis courts, three picnic shelters, one playground, and a pavilion. Rourk Gardens is privately-owned land that is available for use by the public. The Gardens are maintained by the Shallotte Appearance Committee. Lions Park is owned by Brunswick Electric Membership Corporation and leased by the Town of Shallotte. The park has a pier to be used for canoeing and kayaking purposes.

10. Electric Service

Brunswick Electric Membership Corporation provides power to the Town of Shallotte.

11. Cable/Telephone (Landline) Service

Atlantic Telephone Membership Corporation (ATMC) provides cable service to Shallotte. Telephone service is provided by ATMC and Sprint.

12. Cell Phone Service

Cell phone service is provided by multiple companies within the area.

13. Stormwater Management

a. Introduction

Stormwater is generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events. These surfaces often contain pollutants in quantities that can adversely affect water quality and create flooding problems. When roads, parking lots, sidewalks, homes, and offices replace the natural and permeable landscape, rainfall that would once soak into vegetated ground is now stormwater runoff. One of the effects of increased runoff is that this stormwater reaches streams and other water bodies because there is less opportunity for it to infiltrate the ground. Velocities in streams increase causing more erosion potential and base flow is lower during dry weather because of a lack of infiltration.

b. *Existing Drainage Problems*

The Town of Shallotte experiences occasional flooding due to runoff from heavy rains. Flooding also occurs as a result of hurricanes and nor'easters. Typically, problems with drainage in Shallotte occur along the river and its tributaries. Management of stormwater runoff is an important issue in Shallotte. This is evidenced by the inclusion of the Stormwater Quality Management and Discharge Control Section of the Unified Development Ordinance (UDO). The UDO also includes, as an appendix, a Stormwater Management Manual. As urban development continues in the Town's planning jurisdiction, so will the construction of impervious and semi-permeable surfaces and the potential for surficial water contamination.

c. *Water Quality*

As mentioned in the Natural Systems Analysis section of the plan, seven of eight water bodies within Shallotte's planning jurisdiction are classified as High Quality Waters (HQW). This information is reported in the Lumber River Basinwide Water Quality Plan.

d. *EPA Regulations*

The Environmental Protection Agency (EPA) has begun implementation of Phase II of the Stormwater Management Plan. These policies apply to municipalities with populations greater than 10,000 and with densities of 1,000 per square mile. For municipalities that meet these parameters, submittal of a stormwater management plan is required. Phase II regulations also apply to entities designated under the 1990 census as a Small MS4 (Small Municipal Separate Storm Sewer System). MS4's are defined as a publicly-owned conveyance or system of conveyances designed or used for collecting and conveying storm water. MS4's are not combined with sewer and are not part of a publicly-owned treatment facility. At this time, the Town of Shallotte is not required to meet the new EPA Phase II Stormwater Management Program regulations. However, the Town will monitor the status of the program throughout the planning period.

e. *Construction Activities*

Stormwater runoff from construction activities can have a significant impact on water quality, contributing sediment and other pollutants exposed at construction sites. The NPDES Stormwater Program requires operators of both large and small construction sites to obtain authorization to discharge stormwater under a NPDES construction stormwater permit. In 1990, the Phase I Stormwater Management Program regulations addressed large construction operations that disturbed five (5) or more acres of land. The NPDES program also addresses small construction activities – those that disturb less than five (5) acres of land – which were included in the Phase II final rule. Construction activities that disturb over one (1) acre of land are required to develop and implement a stormwater pollution prevention plan specifically designed for the construction site. The development implementations of the plan follow the basic phases listed below:

-
- (1) Site Planning and Design Development Phase
 - (2) Assessment Phase
 - (3) Control Selection/Design Phase
 - (4) Certification/Verification/Approval Phase
 - (5) Implementation/Construction Phase
 - (6) Final Stabilization/Termination Phase

f. North Carolina Shoreline Buffering

In August of 2000, the State of North Carolina developed a 30-foot buffering rule for all new development in the 20 coastal counties governed by the Coastal Area Management Act (CAMA). This rule applies to all navigable waters, excluding the ocean, which has previously established setback requirements. The development of this buffer does not restrict the construction of water dependent structures, such as docks and boat ramps. The benefits of the buffering include the following:

- (1) Flood Control – by reducing the velocity and providing a collection area for stormwater runoff and precipitation. Buffers encourage water infiltration into the ground, rather than flooding low-lying areas.
- (2) Groundwater Recharge – buffers are also beneficial to recharging the groundwater supply and promoting groundwater flow.
- (3) Soil Erosion Prevention – vegetated buffers stabilize the soil and reduce sedimentation.
- (4) Conservation of Coastal Riparian Wildlife Habitats – these natural areas provide breeding, nesting, and habitat, and protect wildlife from predation. Vegetated buffers help increase the diversity of wildlife while providing site for foraging and corridors for dispersal.

E. LAND SUITABILITY ANALYSIS (LSA)

A Land Suitability Analysis is a mandatory component of all local CAMA land use plans. The analysis is a Geographic Information Systems (GIS) based process that determines the areas of land that are most and least suitable for development of structures and infrastructure. The procedure is very similar to the practice developed by Ian McHarg, in which geospatial data layers are referenced to each other in an effort to determine what portions of a land mass appear to be the most favorable sites for a specific land use. Several factors are considered during the analysis, including the natural system constraints, compatibility with existing land uses and development patterns, existing land use policies, and the availability of community facilities. The primary output of the analysis is the Land Suitability Map. The map identifies vacant or under-utilized land that is suited for development and can be used as a foundation for the discussion and formation of Town-wide land use policy. There are eight steps to completing the analysis:

-
1. Define criteria for the analysis – The criteria utilized for the LSA were based on CAMA guidelines and modified according to available GIS data sets. The criteria for land suitability are listed in Table 36 and were given a rating of high, medium, low, and least suitable for each one-acre portion of land analyzed.
 2. Define data needed – The GIS data used for the LSA was compiled from several sources. The majority of the data was provided by the North Carolina Center for Geographic Information & Analysis. Some of the data used was obtained from the Town of Shallotte. All of the data used in this process are listed on page 77-80.
 3. Determine what GIS analysis operations should be performed – This step involved determining what GIS operations would be required to effectively execute the overlay analysis.
 4. Prepare the data – All of the datasets defined in step 2 were prepared to be run through the model.
 5. Create a model – This step involved the actual construction of the LSA computer model.
 6. Run the model – The GIS data is run through the developed LSA model.
 7. Analyze results – The LSA map, as depicted in Map 17, is the output of the model. The results of the model are analyzed to determine if the model needs to be revised.
 8. Refine model as needed – If needed, modifications are made to the model and the process starts again from step 6 until satisfactory results are reached.

All of these steps have been completed and the end product is displayed on Map 17, Town of Shallotte Land Suitability Analysis. The criteria utilized in the LSA are listed below, along with the GIS data set associated with each criterion (the bold type indicates which GIS layer is a function of each criterion):

- » Land within **Beneficial Non-Coastal Wetlands** has low suitability.
- » Land within **Storm Surge Areas** has low suitability.
- » Land with **Severe Septic Limitations** (based on soils data) has low suitability; moderate limitations have medium suitability; slight limitations have high development suitability.
- » Land within 100-year **Flood Zones** has low development suitability.
- » Land within **HQW/ORW Watersheds** has low suitability.
- » Land within **Water Supply Watersheds** has low suitability.
- » Land within 500 feet of a **Significant Natural Heritage Area** has low suitability.

- » Land within 500 feet of a **Hazardous Substance Disposal Site** has low suitability.
- » Land within 500 feet of an **NPDES Site** has low suitability.
- » Land within 500 feet of a **Wastewater Treatment Plant** has low suitability.
- » Land within 500 feet of a **Municipal Sewage Discharge Point** has low suitability.
- » Land within 500 feet of a **Land Application Site** has low suitability.
- » Land within a half-mile of **Primary Roads** has high suitability; within a half-mile to a mile have medium suitability; areas greater than one mile outside of primary roads have low suitability.
- » Land within a half-mile of **Developed Land** has high suitability; areas within a half-mile to a mile have medium suitability; areas further than one mile away from developed land have low suitability.
- » Land within a quarter-mile of **Water Pipes** has high suitability; areas within a quarter-mile to a half-mile of water pipes have medium suitability; areas further than a half-mile away from water pipes have low suitability.
- » Land within a quarter-mile of **Sewer Pipes** has high suitability; areas within a quarter-mile to a half-mile of sewer pipes have medium suitability; areas further that a half-mile away from water pipes have low suitability.
- » Land within **Coastal Wetlands** is LEAST suitable.
- » Land within **Exceptional and Substantial Non-Coastal Wetlands** is LEAST suitable.
- » Land within **Protected Lands** is LEAST suitable.
- » Land within **Estuarine Waters** is LEAST suitable.

The following table displays a tabular account of what determines whether a specific portion of property has a high or low suitability rating based on the criterion listed above.

Table 36. Town of Shallotte
Land Suitability Analysis Criteria Table

Layer Name	Criteria and Rating			
	Least Suitable	Low Suitability	Medium Suitability	High Suitability
	0	-2	1	+2
Coastal Wetlands	Inside	--	Outside	--
Exceptional & Substantial Non-Coastal Wetlands	Inside	--	Outside	--
Estuarine Waters	Inside	--	Outside	--
Protected Lands	Inside	--	Outside	--
Storm Surge Areas	--	Inside	--	Outside
Soils (Septic Limitations)	--	Severe	Moderate	Slight
Flood Zones	--	Inside	--	Outside

Table 36 (continued)

Layer Name	Criteria and Rating			
	Least Suitable	Low Suitability	Medium Suitability	High Suitability
	0	-2	1	+2
HQW/ORW Watersheds	--	Inside	--	Outside
Natural Heritage Areas	--	< 500'	--	> 500'
Hazardous Substance Disposal Sites	--	< 500'	--	> 500'
NPDES Sites	--	< 500'	--	> 500'
Wastewater Treatment Plants	--	< 500'	--	> 500'
Discharge Points	--	< 500'	--	> 500'
Land Application Sites	--	< 500'	--	> 500'
Developed Land (extracted from the Town of Shallotte Existing Land Use survey)	--	> 1 mi	.5 - 1 mi	< .5 mi
Roads	--	> 1 mi	.5 - 1 mi	< .5 mi
Water Pipes	--	> .5 mi	.25 - .5 mi	< .25 mi
Sewer Pipes	--	> .5 mi	.25 - .5 mi	< .25 mi

*Data layers that are slated as exclusion have a suitability of 0 or 1, meaning that if a specific one-acre piece of property falls within one of these areas, it is automatically considered least suitable for development.

Source: NCCGIA and CAMA.

In order to complete the analysis, the Town was divided into one-acre squares of land. Each of these one-acre squares of land was given a score based on how that respective piece of property related to each of the criteria listed above. The scores for each layer were added together to determine a suitability rating for that one-acre square of property.

The process utilized Arcview GIS software with the Spatial Analyst extension along with a variety of data layers as listed above including: several layers provided by the North Carolina Center for Geographic Information and Analysis (NCCGIA) and existing land use data discussed earlier in this plan.

According to the LSA, land in Shallotte is fairly suitable for development. The following tables describe the land suitability acreage based on the results of the overlay analysis. Almost sixty-eight percent (67.7%) of the corporate limits were determined to be highly or moderately suitable for development and 54.7% of the ETJ was determined to be highly or moderately suitable for development. It should be noted that a lower suitability score does not mean that an area cannot be developed. Development can occur in these areas with proper infrastructure and improvements. The LSA is to be used as a guideline to identify areas where development should be watched closely and developed with more caution.

Map 17 - LSA

Table 37. Town of Shallotte
Corporate Limits LSA Acreage

Suitability	Acreage	% of Total
Least Suitable	873	23.8%
Low Suitability	312	8.5%
Moderate Suitability	1,288	35.2%
High Suitability	1,188	32.5%
Total	3,661	100.0%

Source: Holland Consulting Planners (February, 2005); North Carolina Center for Geographic Information and Analysis.

Table 38. Town of Shallotte
ETJ LSA Acreage

Suitability	Acreage	% of Total
Least Suitable	1,054	25.8%
Low Suitability	794	19.4%
Moderate Suitability	1,237	30.3%
High Suitability	998	24.4%
Total	4,083	100.0%

Source: Holland Consulting Planners (February, 2005); North Carolina Center for Geographic Information and Analysis.

Table 39. Town of Shallotte
Total LSA Acreage

Suitability	Acreage	% of Total
Least Suitable	1,927	24.9%
Low Suitability	1,106	14.3%
Moderate Suitability	2,525	32.6%
High Suitability	2,186	28.2%
Total	7,744	100.0%

Source: Holland Consulting Planners (February, 2005); North Carolina Center for Geographic Information and Analysis.

F. CURRENT PLANS, POLICIES, AND REGULATIONS

The Town of Shallotte operates under the authority of a Mayor-Aldermen form of government. There are five members on the Shallotte Board of Aldermen. The Town employs a full-time Zoning Code Enforcement Officer who oversees all development-related issues within the planning jurisdiction. The Brunswick County Inspections Department oversees construction inspections. The Town has an active nine member Planning Board (seven regular and two alternates) that reviews and comments on all proposed developments. There is also a nine member Board of Adjustment (seven regular and two alternates) that reviews variance requests.

The following provides a summary of the Town's land use-related codes and regulations:

I. Unified Development Ordinance

The Town of Shallotte Unified Development Ordinance (UDO) is used to regulate land development within the Town. The UDO was adopted by the Board of Aldermen on July 6, 2004. The ordinance is a comprehensive approach to land development and is divided into three chapters: General Provisions, Zoning Ordinance, and Subdivision Ordinance. The following provides a summary of these chapters.

a. *General Provisions*

The General Provisions of the Town of Shallotte Unified Development Ordinance provides the purpose and authority of the document and gives direction by supplying basic definitions and guidance for interpretation.

b. *Zoning Ordinance*

The Zoning Ordinance provides information on the procedures for amendments, appeals, variances, interpretations, zoning and conditional use permits, enforcement, and nonconforming situations. Requirements are also furnished for Residential Cluster Developments, Planned Building Groups, Planned Residential Developments, Flood Damage Prevention, and Stormwater Quality Management.

This section of the UDO also establishes the official zoning map and zoning districts for the corporate limits and the extraterritorial jurisdiction. Specific requirements are set forth regarding permitted uses in each district as well as the minimum lot sizes, yard setbacks, and building heights.

Map 18 and Table 40 provide the location and acreage figures of all zoning districts within Shallotte’s planning jurisdiction. The two largest zoning districts are RA-15 and HB. These two districts account for 44.6% of the Town’s total jurisdiction. Fifty-six percent (56%) of Shallotte is zoned residential, 27.4% is zoned commercial, 12.2% is zoned industrial, and 4.4% is zoned Conservation.

Table 40. Town of Shallotte
Zoning

Districts	Acres	% of Total
Residential		
R-7	0.0	0.0%
R-10	788.6	10.5%
RM-10	85.8	1.1%
R-15	411.8	5.5%
RA-15	2,128.0	28.4%
RAM-15	786.2	10.5%
Commercial		
CB	62.0	0.8%
HB	1,214.4	16.2%
CW	99.0	1.3%
B-2	682.0	9.1%
O/I	0.4	0.0%
Industrial		
LI	15.7	0.2%
HI	890.6	12.0%
Conservation		
	327.6	4.4%
PUD		
	0.0	0.0%
Total	7,492.1	100.0%

Source: Holland Consulting Planners, Inc./Town of Shallotte.

c. *Subdivision Ordinance*

The Subdivision Ordinance specifies design standards for stormwater drainage and easements and guidance for sedimentation pollution control and stormwater runoff disposal. In addition, procedure is laid out for the development of minor and major subdivisions and design standards established for recreation areas, streets, and utilities.

Map 18 - Zoning

2. NC State Building Code

The North Carolina State Building Code is used to oversee the erection of all structures. Brunswick County provides inspection services for the Town. The minimum use standards, provisions, and requirements for safe and stable design, methods of construction, and usage of materials in buildings and structures erected, enlarged, altered, repaired, moved, converted to other uses, or demolished, and the equipment, maintenance, use, and occupancy of all buildings and structures in the Town and its extraterritorial jurisdiction, are regulated in accordance with the terms of the North Carolina State Building Code.

3. Hazard Mitigation Plan

The Town of Shallotte adopted a Hazard Mitigation Plan (HMP) that was approved by the Federal Emergency Management Agency (FEMA) in response to Federal and State legislation. The Disaster Mitigation Act of 2000 (DMA2K), the Federal legislation, and Senate Bill 300, the State legislation, require that all local governments have a FEMA approved Hazard Mitigation Plan in place in order to receive Hazard Mitigation Grant Program (HMGP) funding or Public Assistance (PA) funding following a natural disaster. The plan identifies those hazards to which Shallotte is most susceptible, analyzes the vulnerability of Shallotte to those hazards (i.e., building development and value, and number of people at risk), and analyzes the Town's ability to respond to those hazards. The primary output of the plan is the Mitigation Strategies that assist with the prevention of loss due to hazards.

4. Review of the 1992 Town of Shallotte Land Use Plan Update

The 1992 Town of Shallotte Land Use Plan Update was adopted by the Board of Aldermen on March 15, 1994, and certified by the Coastal Resources Commission on March 25, 1994. The plan included 50 policy statements and 46 implementing actions. Of the 46 implementing actions, 45 have either been accomplished, are in progress, or are ongoing. There is one implementing action from the 1992 plan which was not carried out. All implementing actions from the 1992 plan are listed below according to their status of completion. **This list is a verbatim reproduction of the text from the 1992 Town of Shallotte Land Use Plan Update; there may be duplications in the text. Some of these statements may be inconsistent with current circumstances and requirements. However, they were not changed in order to accurately reflect the contents of the 1992 plan.** The action that was not completed will be revised and addressed in the policy action section of this plan.

ACCOMPLISHED/IN PROGRESS/ONGOING

RESOURCE PROTECTION

Constraints to Development Including Flood Prone Areas, Soil Suitability and Septic Tank Use

1. The Town recognizes the natural constraints placed on development by the floodplain of the Shallotte River and its tributaries and will, therefore, discourage development from occurring in the floodplain.

Implementation Strategy:

The Town will cooperate with the regulatory efforts of State and Federal agencies in discouraging future development from occurring within the floodplain of the Shallotte River and its tributaries.

Other Hazard of Fragile Land Areas

2. Maritime Forests - There are no known stands of Maritime Forests in Shallotte's planning jurisdiction; however, Town officials support State efforts to regulate and control development in Maritime Forests.
3. Freshwater Swamps - Shallotte policy shall be to continue to support the U.S. Army Corps of Engineers 404 Wetlands program which has jurisdiction in regulating development in freshwater swamp and freshwater marsh areas and pocosins.
4. Other Fragile Areas - Town policy on ORW's is to support State efforts to protect these waters although there are no ORW's in Shallotte.

Town policy protection of shellfish waters, water supply areas and historic resources shall follow applicable local, State and Federal regulations.

Hurricane and Flood Evacuation Needs

5. The Town will continue to discourage development from occurring within the floodprone areas of the Town, and shall actively participate in all storm event evacuation procedures as coordinated by the Emergency Management Coordinator.

Implementation Strategies:

- a. The Town will continue to enforce the regulations under the Federal Flood Insurance Program to ensure that structures are protected against flood damage.
- b. All land areas falling within the 100 Year Flood Plain will be designated "Conservation" on the Town's land classification map.

Protection of Potable Water Supply

6. The Town will not permit development of land uses which will degrade the quality of the groundwater or significantly lower the water quantity in the aquifer.

Implementation Strategies:

- a. The Town will review all development proposals carefully to determine their effect on groundwater.
- b. The Town will continue to enforce the section of its Zoning Ordinance which prohibits the development of any landfills, hazardous waste disposal sites, or other uses which could pose a threat to the groundwater resource.

Use of Package Treatment Plants

7. The Town of Shallotte policy is to not permit the development of package sewage treatment plants serving developments within the corporate limits, except in instances where pretreatment facilities may be necessary to serve particular industrial or other unique processes which serve to protect and supplement the Town's sewage treatment system. Before allowing treatment plants in the ETJ area, every effort should be made to connect to the Town's system.

Implementation Strategy:

Local ordinance will continue to be used to not allow package treatment plants in Shallotte Town Limits.

Stormwater Runoff

8. Shallotte policy shall be to establish an ordinance that will require that runoff and drainage from development and agricultural activities shall be of a quality and quantity as near to natural conditions as possible.

Implementation Strategies:

- a. The Town will begin the process of establishing sufficient stormwater management controls such as stormwater retention or detention facilities on future residential and non-residential developments to help ensure the maintenance or improve the surface water quality in Shallotte by controlling stormwater runoff.
- b. Shallotte will study the possible establishment of a Stormwater Management Ordinance and procedure to be followed on all future development to ensure that stormwater runoff from future development will have a minimal impact on the Town's surface waters.
- c. Future Town plans, public works actions, and review procedures relating to drainage will include provisions to discourage increases in the flow of surface water into receiving waters.
- d. The Town, in its review of development proposals, will be satisfied that proposed systems of drainage conform as closely as possible with natural drainage patterns and conditions.

-
- e. The Town will continue to support the CAMA permitting procedure which specifies compliance with use standards under T15A:07H Section .0208.

Marina and Floating Home Development and Dry Stack Facilities

- 9. Shallotte policy shall be to support efforts to develop a marina in Shallotte or support efforts to upgrade existing marina facilities that can serve the Shallotte area and that meet all Federal, State and local requirements.

Shallotte policy shall be to allow dry stack facilities as permitted in the Shallotte Zoning Ordinance.

Industrial Impact on Fragile Areas

- 10. The Town of Shallotte supports the regulatory efforts of the Coastal Area Management Act and the U.S. Army Corps of Engineers to prohibit the siting of inappropriate industrial development within the sensitive estuarine AEC of the Shallotte River.

Implementation Strategy:

The Town supports the CAMA permitting procedure which specifies compliance with use standards under 15 NCAC 7H, Section .0208.

Development of Sound and Estuarine System Islands

- 11. Town policy shall be to discourage development of estuarine system islands.

Restriction of Development in Areas up to Five Feet Above Mean High Water

- 12. Shallotte policy will restrict development in areas up to five feet above mean high water using existing CAMA, local, State and Federal regulations as applicable.

Upland Excavation for Marina Basins

- 13. Shallotte policy shall be to allow upland excavation for marina basins adjacent to the Shallotte River if all zoning, CAMA and other applicable County, State or Federal regulations are complied with and all applicable permits are secured prior to beginning excavation work.

Damaging of Existing Marshes by Bulkhead Installation

- 14. Shallotte policy shall be to allow bulkhead installation in freshwater swamps if all necessary local, State and Federal permits can be obtained and all applicable regulations to protect freshwater swamps are followed.

RESOURCE PRODUCTION AND MANAGEMENT

Productive Agriculture Lands

15. The continued agricultural use of the Town's remaining farmlands shall be encouraged, but with all normal and permitted rights to use the land for other purposes reserved to the land owner and as allowed in the Shallotte Zoning Ordinance.

Commercial Forest Lands

16. Shallotte policy shall be to continue to support the efficient planting and harvesting of commercial forest lands in upland areas or areas away from the Town's river, creeks, and tributaries. Harvesting of hardwoods in Conservation areas adjacent to the river, creeks, and tributaries will be discouraged in an effort to protect water quality.

Agricultural operations must obtain a "wetland determination" prior to any hardwood clearing or drainage work in wetlands. This determination can be made with assistance from the County Soil Conservation Service. Inappropriate clearing or drainage in wetlands may jeopardize USDA benefits and coastal water quality. Wetland determination is done with assistance from the Corps of Engineers based on an on-site visit by the Corps of Engineers staff or a qualified consultant with follow-up and confirmation of the wetland location by the Corps of Engineers.

Potential Mineral Production Areas

17. The Town of Shallotte policy is to not allow the development of mines and quarries within the Town limits or ETJ.

Implementation Strategy:

The Town will continue to enforce the current provision in the Zoning Ordinance that prohibits the development of mines within the Town limits and ETJ.

Commercial and Recreational Fisheries

18. Shallotte policy shall be to continue to work to maintain or improve the water quality in the coastal waters as well as all the other water bodies of the community by developing better stormwater management practices for the Town and reducing future density by reviewing permitted densities in the Zoning Ordinance for areas adjacent to environmentally sensitive waters.

Implementation Strategy:

Shallotte will investigate establishment of a stormwater management ordinance and a lower density zone in areas adjacent to the river, creeks, tributaries and estuarine waters. Shallotte will request State or Federal grants to prepare a Stormwater Management Plan.

Residential, Commercial and Industrial Development

19. Shallotte policy shall be to encourage residential, commercial and industrial development that is compatible with existing land use, the Land Use Plan and zoning requirements.

Implementation Strategies:

- a. The Town will investigate the possibility of establishing improved buffering standards and landscaping requirements to reduce the amount of runoff potentially reaching the Shallotte River.
- b. The Town will continue to cooperate with Federal and State regulatory agencies as they seek to minimize the potential adverse impacts of future development on the Town's natural systems.

Peat and Phosphate Mining

20. There are no known phosphate deposits in Shallotte. Shallotte policy shall be to not allow peat or phosphate mining within the Town's Limits and ETJ.

ECONOMIC AND COMMUNITY DEVELOPMENT

Community Attitude Toward Growth

21. Shallotte policy shall continue to be to encourage both economic and community growth and development. Local officials will work to insure Shallotte citizens' prosperity while maintaining the quality of life in Shallotte.

Types and Location of Industries Desired

22. Shallotte policy shall be to use the Zoning Ordinance and updated Land Use Plan to direct the type and location of future industrial development. Industrial development shall not be allowed in the Conservation Classification area as shown on the Land Classification Map.

Implementation Strategies:

- a. The Town will seek to establish more specific buffering standards in the Zoning Ordinance for industrial development.
- b. The Town will use the Zoning Ordinance to direct future industrial development to appropriate locations within the Town, in accordance with the above-stated policy.
- c. Town officials will work to establish a list of specific types of industries to be recruited for the area.

Local Commitment to Providing Services

23. It is the policy of the Town of Shallotte to provide basic municipal services to all incorporated areas of the community. The Town is also willing to provide municipal services to new areas in the vicinity of the community. Provision of services shall be considered on a case-by-case basis.

Urban Growth Patterns Desired

24. Town policy shall be to encourage future growth to take place adjacent to existing water and sewer distribution lines.

Implementation Strategies:

- a. The Town will continue to enforce its policies regarding the extension of public water and sewer services.
- b. The Town will continue to use the Land Use Plan and Zoning Ordinance to direct future urban growth.

Redevelopment of Developed Areas Including Relocation of Structures Due to Erosion

25. In general, the Town has developed a policy which requires that any reconstruction of substantially damaged structures must occur in conformance with current regulations and building codes.

The Town encourages the redevelopment of existing structures and sites in a manner which is compatible with the overall character of development in the community, and in conformance with current building standards.

Redevelopment of structures affected by erosion of flood waters in Shallotte shall be allowed to be rebuilt as permitted by the Flood Insurance Program and if new construction meets all Zoning requirements and all applicable local, State and Federal regulations.

Commitment to State and Federal Programs Including Erosion Control, Public Access, Highway Improvements, Port Facilities, Dredging and Military Facilities

26. Shallotte policy shall continue to be to support State policy on erosion control, public access programs, highway improvements and dredging operations necessary to maintain the Shallotte River. Shallotte policy shall continue to be to request financial assistance from State or Federal agencies in providing Town services such as water, sewer, roads and bridges.

Channel Maintenance and Beach Nourishment Projects Including Financial Aid, Providing Spoil Areas or Providing Easements

27. The Town of Shallotte policy shall be to support maintenance of the Shallotte River channel as a navigable stream for boating and fishing.

Implementation Strategy:

The Town will continue to cooperate with the U.S. Army Corps of Engineers in its effort to maintain the navigability of the Shallotte River.

Energy Facility Siting

28. Shallotte policy is to not oppose the location of energy facilities and related activities in the area, provided that all reasonable safeguards are used to protect the people and the environment and such facilities meet all Zoning, State and Federal regulations.

Inshore and Offshore Exploration or Development Including Refineries, Storage

29. Shallotte policy is to not allow offshore exploration and inshore development of refineries or large gas or petroleum storage facilities in Shallotte. Town policy shall be to permit the exploration of gas or oil on inland properties as long as all zoning, State and Federal regulations are followed. Offshore exploration policy shall be implemented through the State and Federal permit review process.

Tourism

30. The Town will continue to foster the trade center concept of the Town, both for permanent and seasonal residents. Shallotte policy shall be to continue to encourage and support efforts to increase tourism. Shallotte will continue to support the local Chamber of Commerce and North Carolina Division of Travel and Tourism as they work to promote more job opportunities and increased tourism for the area.

Implementation Strategy:

The Town will continue to allow visitors weekend opportunities to trade in-Town by not adopting restrictive trade ordinance (blue laws).

Coastal and Estuarine Water Access

31. Shallotte will work to establish a waterfront access program. Shallotte policy will be to continue to work to obtain funds through State and Federal programs such as the CAMA Access Program and Land and Water Conservation Funds to purchase and develop coastal and estuarine water access areas and access areas along the Shallotte River.

Implementation Strategies:

- a. Shallotte will seek grant funds to prepare a Waterfront Access and Development Plan.
- b. Shallotte will prepare a waterfront access plan including cost estimates for acquisition and development of improvements.
- c. The Shallotte Planning Board will consider incorporating into the Town Subdivision Regulations the requirement that all future subdivisions dedicate or pay a fee in lieu of dedication for waterfront access.

Type, Densities, Location, Units Per Acre of Anticipated Residential Development

32. Shallotte policy shall be to continue to control the type, densities, location and units per acre of all future development in Shallotte. To carry out this policy the Shallotte Zoning Ordinance will be utilized.

Recreation

33. Shallotte policy shall be to support recreational opportunities in Shallotte as financially feasible. Shallotte will pursue all opportunities to expand recreational opportunities and improved public access to the Town's river, creeks, streams and tributaries through utilization of CAMA access funds, Land and Water conservation funds and any other State or Federal funds that might be used for recreational facility acquisition and development. The Town will also work in cooperation with the Brunswick County Recreation Department.

Implementation Strategy:

The Town will apply for State or Federal financial assistance on an annual basis to acquire and/or develop more recreational facilities and park sites.

Issues of Local Concern

Sewer System Expansion

34. To ensure that Shallotte has the necessary sewage treatment capacity to accommodate desired economic growth in the community, Shallotte policy shall be to work toward expansion of the community's sewage treatment capacity during the next 12 to 24 month period.

Implementation Strategies:

- a. Town Aldermen shall review on an annual basis the number of new sewer system connections and anticipated or actual additional use of the system in an effort to monitor use and capacity on an ongoing basis in order to provide adequate time to plan for and implement needed expansion.
- b. Town officials will review on an annual basis funds being generated from the Capital Reserve Fee and Acreage Fee that can be made available for sewage treatment capacity expansion.
- c. During the ten-year planning period, Town officials will utilize the services of an engineering firm to look at alternative sewage treatment expansion options and innovative collection systems based on future growth patterns. Local officials will also look at additional funding sources such as grants, loans and bonds to provide the necessary funding for further expansion.

New Business and Industry

35. Town officials will continue to support the recently formed Committee of 100 in their efforts to attract new industry and expansion of existing business and industry.

Implementation Strategies:

- a. Shallotte officials will support efforts to prepare a brochure on the Shallotte area that can be used to promote the community for new industry and business.

-
- b. Shallotte officials will support efforts by the Committee of 100 in developing an industrial building in the industrial park.
 - c. Shallotte officials will support efforts by the Committee of 100 to prepare informational brochures on any existing vacant buildings in the community that are available and appropriate for small industrial or commercial use.
 - d. Local officials will support efforts of the Committee of 100 to utilize the services of the Commerce Finance Center (919-733-5297) Industrial Building Renovation Fund or CDBG Economic Development Grant funds. Efforts to secure other loans or grants to bring about job opportunities in the community will be supported as financially feasible.

Landscaping Downtown and River Area

36. Shallotte policy shall be to upgrade the aesthetic quality of downtown Shallotte by preparing and implementing a plan to landscape the downtown and river area of the community.

Implementation Strategies:

- a. Town officials will contact the Department of Transportation and request assistance in planting trees along DOT right-of-way.
- b. Town officials will contact the Division of Forest Resources (919-733-2162) to receive information on and make application for an Urban and Community Forestry Grant when local matching funds required for the program are available.
- c. Town officials will consider revising the Shallotte Zoning Ordinance to require the planting of trees and shrubs or other ground cover in all future commercial or industrial developments to enhance the appearance of Shallotte.

Placement of Utilities Underground

37. Shallotte policy shall be to investigate the feasibility of placing existing utilities underground.

Implementation Strategies:

- a. Local officials will contact the users of overhead utilities to determine the feasibility and cost for placing utilities underground.
- b. Local officials will prepare a plan and budget for placing utilities underground if found to be financially feasible.
- c. Consider revising Subdivision Ordinance to require underground utilities in all residential developments. Revise zoning ordinance to required commercial and industrial development to place all utilities underground.

Future Road System Planning

38. Shallotte policy shall be to plan for future thoroughfares, minor thoroughfares and minor streets during the next five-to-ten-year period.

Implementation Strategies:

- a. Request assistance from DOT in preparing a Shallotte Thoroughfare Plan. Contact Dr. M.R. Pool, Statewide Planning Branch, Division of Highways, P.O. Box 25201, Raleigh, North Carolina, 27611, 919-733-4705.
- b. Revise Subdivision Ordinance as appropriate to provide for the location of new thoroughfares as shown on the official Thoroughfare Plan once adopted.

Overpass of U.S. 17 By-Pass at N.C. 130

39. Shallotte policy shall be to continue to support the construction of an overpass at U.S. 17 By-Pass and N.C. 130 as soon as possible to eliminate this dangerous intersection.

Recycling

40. Shallotte policy is to develop and implement a recycling program in cooperation with Brunswick County to reduce solid waste being placed in the county Landfill by 25%.

Local Flea Market

41. Shallotte policy will be to investigate the possible adoption of a local ordinance that would prohibit road-side flea markets to street vendors without a Town issued permit. Town policy will also be to support the establishment of a local flea market in a suitable commercial building, possibly an adaptive use of a currently vacant building.

STORM HAZARD MITIGATION, POST-DISASTER RECOVERY AND EVACUATION PLAN

Storm Hazard Mitigation

42. The Town of Shallotte shall discourage development from being constructed within the 100-year floodplain.

Implementation Strategy:

The Town will continue to participate in the National Flood Insurance Program, and to enforce its provisions.

43. The Town of Shallotte shall require all new construction to conform to current applicable construction standards, particularly those provisions which require construction to meet wind resistive factors, i.e., design, wind velocity.

Implementation Strategy:

The Town shall continue to enforce the North Carolina Building Code, particularly with regard to trailer tie-downs and anchorage.

Post-Disaster Reconstruction

44. The Town of Shallotte supports the Chairman of the Board of County Commissioners of Brunswick County as ultimately responsible for supervising the implementation of policies and procedures contained in the disaster relief and assistance plan, as well as any immediate post-disaster recovery policies.
45. The Mayor and the Board of Aldermen of the Town of Shallotte shall be responsible for carrying out the implementation of any long-term policies and actions related to post-disaster recovery in the Town of Shallotte.
46. Any structure suffering damage amounting to in excess of 50% of the structure's value prior to damage, shall be required to abide by the most current and restrictive development and building standards then in effect.
47. The Town of Shallotte shall not use local funds for the purchase of land parcels located in hazard areas or rendered unbuildable by storms or other events, for the purpose of shoreline access.
48. In the event of damage to public utilities, priorities shall be given to those repairs that will restore service to as many persons as possible, as soon as possible. Efforts should be made to relocate public utilities away from hazard areas as a precaution against repetitive, future public expense and replacement.
49. The Board of Aldermen may declare a moratorium of up to 180 days on the permitting of any new construction, including new utility hook-ups or redevelopment construction that would increase the intensity of the land uses existing before the damaging storm event.

Evacuation Plan

50. The Town of Shallotte supports the efforts of the Brunswick County Emergency Management Coordinator to facilitate and encourage the safe evacuation of vulnerable areas of the County during storm events.

Implementation Strategy:

Town officials will continue to actively participate in various scheduled activities of coordination between Towns in the County for storm preparedness, evacuation, and post-disaster recovery.

NOT ACCOMPLISHED

STORM HAZARD MITIGATION, POST-DISASTER RECOVERY AND EVACUATION PLAN

Post-Disaster Reconstruction

Implementation Strategy:

- I. Regarding Policy number 3 (46 listed in this plan), the Town will consider changing its excess of 50% criterion to a standard which conforms more directly to the percentages employed in the County Damage Assessment Plan.