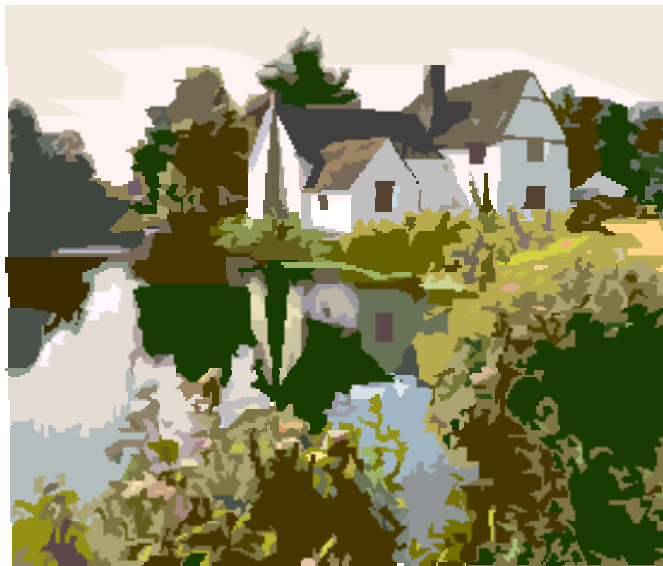

LOCATION AND NATURAL FEATURES



With 819 Square miles,
Duplin County is the 9th
largest county in North Carolina.

Duplin County Profile Map Here

Map link located in the Table of Contents

Location

Duplin County is located in the Southeastern Coastal Plain of North Carolina and is the 9th largest county in the state in land area with 819 square miles. Duplin is bounded by Wayne County to the north; Lenoir, Jones, and Onslow Counties to the east; Pender County to the south; and Sampson County to the west. Kenansville, the county seat, is located in the center of the county and is approximately 80 miles from Raleigh, 55 miles from Wilmington, 65 miles from Fayetteville and 55 miles from the Atlantic Ocean.

Source: The Legend
NC Property Mapping Association

Climate

Due to its proximity to the Atlantic Ocean and its location in the coastal plain, Duplin County experiences relatively mild temperatures. The annual average temperature is approximately 63 degrees with a prevailing southwesterly breeze. Summers are long and commonly have short periods of very hot and humid weather. Winters are generally short and mild with significant accumulations of ice and snow being unusual. The average annual rainfall is approximately 51 inches with most precipitation occurring during the summer months. The average frost-free season is from mid April to mid November, slightly more than 200 days.

Source: Soil Survey-Duplin County, NC U.S. Department of Agriculture 1959
U.S. Department of Commerce Climate Summary of the U.S. 1972

Topography

Duplin County lies within the Coastal Plain of Eastern North Carolina. Typical of this region, the terrain is nearly flat to gently rolling. Slopes rarely exceed 5 percent. The county's terrain slopes from the higher slightly rolling terrain of the northwest to the lower flatter portions of the southeast.

The highest elevation in the county is near Bowdens, approximately 167 feet above sea level. The lowest elevation is approximately 20 feet above sea level at the point where the Northeast Cape Fear River flows out of the county.

Soils

In general, most Duplin County soils located outside the flood plains are suitable for agriculture and are capable of supporting structures. The major limiting factor is poor drainage.

The soils of Duplin County, fall within two major land resource areas (MLRA'S), 133A – Southern Coastal Plain and 153A – Atlantic Coast Flatwoods. The soils are derived from marine sediments that traverse four marine terraces (i.e. Coharie, Sunderland, Wicomico, and Chowan) and are classified as mineral soils.

Information on soil conditions for specific sites is available through the Duplin county Natural Resources Conservation Service.

Source: Soil Survey
Duplin County, NC U.S. Department of Agriculture 1959

Ground Water

Abundant supplies of high quality ground water are available to Duplin County from two aquifers: the water table aquifer and the cretaceous aquifer.

The water table aquifer is generally within 20 feet of the ground surface. Water in this aquifer is stored unconfined in pore spaces of sands, which vary in thickness from several feet to several tens of feet. Wells tapping this aquifer generally yield 10 to 350 gallons per minute. The water quality varies from fair to good.

The Cretaceous aquifer is Duplin County's most important source of water. This aquifer varies from 400 to 800 feet and consists of water stored under artesian pressures in sands of the Cretaceous Age. Wells tapping this aquifer are very productive, yielding from 100 to over 500 gallons per minute. It is probably that a properly constructed gravel walled well drawing from several beds of sand could yield as much as 500 gallons per minute from most any location in the county. The quality of water from the Cretaceous aquifer varies from very good to excellent. Duplin's ground water resources are of sufficient yield and quality to meet anticipated demands.

Currently, there are two water use zones that dissect the county. The eastern half of the county is in the Declining Water Level Zone and the western half is in the Capacity Use Area (NC Division of Water Resources.)

Drainage

The greater portion of the County is drained by the Northeast Cape Fear River. Its main tributaries include Goshen Swamp and Rockfish, Cypress, Maxwell, Muddy, Limestone and Grove Creeks. A small area west of Warsaw is drained by Stewarts and Turkey Creeks, which are both tributaries of the Black River in Sampson County.

Source: Duplin County Land Use Plan

Surface Water

Duplin County's surface water streams are classified by the North Carolina Department of Environment, and Natural Resources as class "CSw Waters". This classification designates waters suitable for aquatic life propagation and survival, fishing, wildlife, secondary recreation and agriculture.

The section of the Northeast Cape Fear River between Muddy Creek and Rockfish Creek is classified as "High Quality Waters". This segment is rated as good based on biological and physical/chemical characteristics.

Source: Cape Fear River Basinwide water quality plan
Draft February, 2000