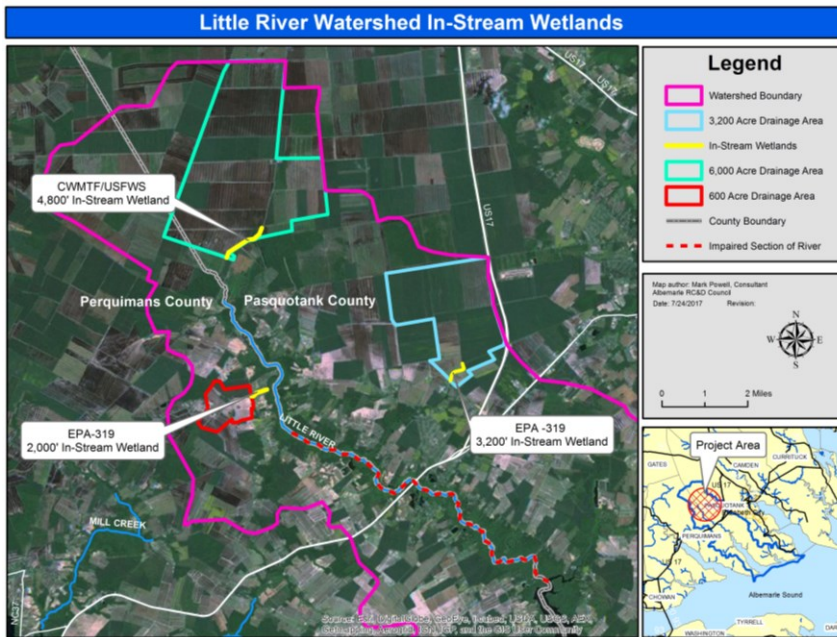


Restoring the Little River Watershed

*Wisely Conserving Natural Resources and Creating Opportunities for
Positive Economic and Community Development*



Agricultural operations and residential and commercial development have significantly impacted water quality and fisheries in the Little River watershed. Drainage canals opened years ago carry sediment and nutrients from agricultural operations directly to the river, and residential and commercial developments have increased pollution from stormwater runoff. Swamp forest buffers have been eliminated or severely degraded in many locations along the river. As a result, sections of the Little River have been included at different times on the 303(d) list of impaired waters. In 2012 and 2014, an eight-mile section of the river was listed as impaired.

A nine-element watershed restoration plan, completed in 2014 through a 205j grant to the Albemarle Commission, identified in-stream wetlands and conservation of swamp forest buffers as key activities for restoring water quality of the Little River. Most of the drainage canals that flow into the Little River are on private lands, and constructing in-stream wetlands along these canals is critical for effectively managing stormwater in the watershed. In 2016, the Albemarle Resource Conservation and Development Council (ARCD), Pasquotank County, and Pasquotank Soil and Water Conservation District (SWCD) used grants from the Clean Water Management Trust Fund (CWMTF) and US Fish and Wildlife Service to construct 4,800' of instream wetland on a private canal in the upper part of the watershed. At the same time, the ARCD, Perquimans County, and Perquimans SWCD used an EPA 319 grant to construct approximately 2,000' of in-stream wetland on a private canal just above the impaired section of the Little River. A new EPA 319 grant will fund the construction of a 3,200' in-stream wetland in Pasquotank County along a private canal that drains approximately 3,200 acres of agricultural land and solar farms. These projects are creating a critical mass of in-stream wetlands, which are needed to effectively manage stormwater above and along the impaired section of the Little River.

For more information on Albemarle RC&D Council programs and services:

www.albemarlrcd.org – albemarlrcandd@yahoo.com – [facebook.com/albemarlrcd](https://www.facebook.com/albemarlrcd) – (252)-482-4127 x3266

Restoring the Little River Watershed

4,800' of in-stream wetland and buffer in the upper Little River watershed.



1,700' of in-stream wetland and buffer in the Little River watershed.



3,200' of in-stream wetland to be constructed in 2018.



The impact of agriculture on water quality of the Little River watershed is typical to watersheds in eastern North Carolina, and constructing in-stream wetlands along privately-owned agricultural drainage canals could be replicated throughout the region to effectively manage stormwater and protect water quality.

Swamp forests in the Little River watershed are critical for storing and filtering stormwater, and providing key habitat for fish and wildlife. These forests are slow growing and there is a lack of information on how recent, wide-spread clearcutting is impacting water temperature and nutrient release into the Little River. Algal blooms in the river in 2016 and 2017 may be linked to recent harvests of swamp forests that left little or no forest buffers. The ARCD worked with Perquimans and Pasquotank counties to develop a program whereby landowners may enroll a 300' buffer of riparian forest in a voluntary conservation agreement. In exchange, landowners receive a grant incentive based on the tax value of the enrolled acreage.

Unique characteristics of the 86,000 acre Little River Watershed as defined by the NC Biodiversity Wildlife Habitat Assessment and other sources include:

- 5,300 acres of Strategic Habitat Area
- 19,500 acres of swamp forests and wetlands
- 7.5 square miles of Critical anadromous fish spawning areas
- 540 acres of Submerged Aquatic Vegetation along the Albemarle Sound
- Nine animal, plant and natural communities identified by the NC Natural Heritage Program
- Shortnose and Atlantic Sturgeon on the Endangered Species list, Grassleaf Arrowhead on the Federal Species of Concern list, and Bald Eagles under the Bald and Golden Eagle Protection

Grants:

2013, 205j Nine Element Watershed Restoration Plan - \$25,300
2015, CWMTF - \$141,878; Match - \$34,000
2015, USFWS - \$25,000; Match - 2015 CWMTF Grant
2015, EPA 319 - \$90,475; Match - 2015 CWMTF & USFWS Grants
2018, EPA 319 - \$116,736; Match - \$79,600

The Albemarle Resource Conservation and Development Council, Inc. is a 501c3 non-profit organization that assists local governments and community groups in northeast NC with projects that protect land and water resources while promoting economic development.

The ARCD proudly serves the people of Camden, Chowan, Currituck, Dare, Gates, Hyde, Pasquotank, Perquimans, Tyrrell, and Washington Counties.