

# CAPE FEAR RIVER BASIN



## PROFILE:

River Basin Size:  
9,164 mi<sup>2</sup>

Total miles of stream  
and rivers:  
6,584

Total miles of impaired  
stream by selected  
parameters:

Chlorophyll-a: 50  
Turbidity: 31  
Fecal Coliform: 64

Total acres of lakes:  
34,796

Total acres of estuary:  
24,472

Total acres of impaired  
lake/estuary by select-  
ed parameters:

Chlorophyll-a: 9,553  
Turbidity: 2,252  
Fecal Coliform: 2,104

2022 IR

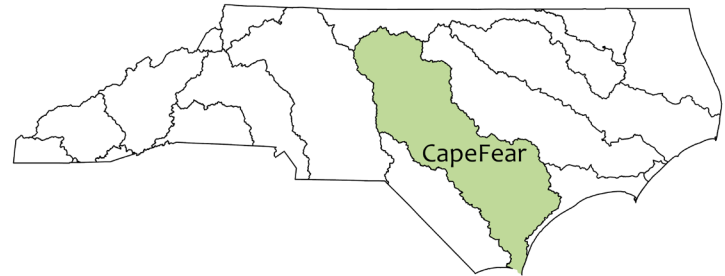
The Cape Fear River Basin is the largest river basin in North Carolina draining the central Piedmont, Sandhills, and Coastal plain regions. The river basin includes the Haw, Deep, Black, Cape Fear, and Northeast Cape Fear rivers. Collectively, these rivers create a network of connected waterways flowing to the Atlantic Ocean.

Currently, North Carolina's Division of Water Resources (DWR) is preparing the draft Cape Fear River Basin Water Resources Management Plan focusing on the quality and quantity of these waterways. This plan takes a watershed-based approach to restoring and protecting the quality of North Carolina's waterways.

Protecting these waterways requires coordinations between many agencies, local governments, and stakeholders in the watershed. We need you to get involved with the State's basin planning efforts to help identify areas of concern, bring awareness to problems your community faces, and collaboratively work to help mitigate stressors to water quality and quantity. Keep reading to learn more about water pollution sources and how you can get involved in the State's planning efforts.

## Point and Non-point Source Pollution

Water quality problems can be caused by point and non-point sources of pollution. Point source pollutants are primarily associated with wastewater and stormwater discharges from municipal and industrial wastewater treatment facilities. To ensure that point source pollution does not negatively impact water quality or human health, wastewater and stormwater point source pollutants are regulated. Non-point source pollution (NPS) originates from multiples sources, some examples include construction, agriculture, and land clearing activities. People can contribute to NPS everyday through the use of lawn chemicals, oil or fuel vehicle leaks, and even failure to clean up pet waste.



CAPE FEAR RIVER BASIN IN NC

## Nutrients/Chlorophyll-a

Nutrients (nitrogen and phosphorus) are essential for plant growth and survival. Nutrients in waterways can come from both point and non-point sources, such as agricultural and urban runoff, wastewater treatment plants, forestry activities and atmospheric deposition. Chlorophyll-a, a constituent of algae, is used as an indicator of algal growth/productivity. When high concentration of nutrients are available in a stream, river or estuary, excessive algal growth known as algal blooms can occur. Certain species can produce toxins and create harmful algal blooms, leading to negative water quality impacts such as low dissolved oxygen and fish kills. To prevent algal bloom, there is a need to reduce nutrients by implementing source-specific best management practices (BMPs) such as repairing failing septic systems, reducing fertilizer runoff, and protecting streamside buffers to help reduce nutrient runoff.

## Turbidity

Turbidity is a measure of water clarity. Any land-disturbing activities that mobilize or produce particulate matter will reduce light penetration, ecological health and productivity, recreational value, habitat quality, and can even reduce drinking water reservoir capacity. High turbidity can promote pathogen growth and lead to waterborne disease outbreaks. Preventing erosion, expanding riparian buffers, and installing source-specific BMPs can help maintain good water clarity.

## Pathogens

Some pathogens that make their way into waterways include fecal coliform, which lives in the digestive tract of warm-blooded animals (humans as well as other mammals) and are excreted in their waste. Exposure to water contaminated with feces poses health risks. Sources of fecal coliform in surface water are urban stormwater, pets, wildlife, improperly managed animal waste facilities, or improperly treated discharges of domestic wastewater. While rainfall can wash pathogens from the land surface into waterways, persistent releases of untreated human or animal waste into waterways should be avoided. This can be achieved by implementing source-specific BMPs, improving animal waste management systems, and repairing failing septic systems to prevent pathogens from impacting downstream waterways.



Cape Fear River

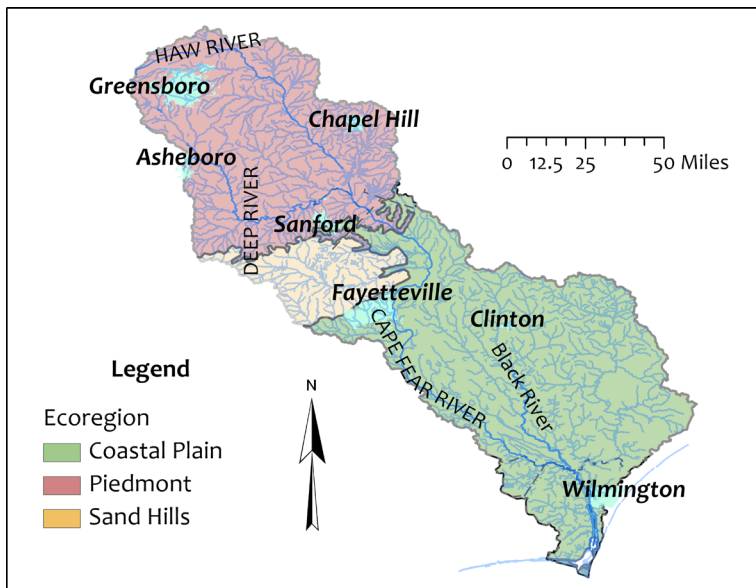
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## Get Involved

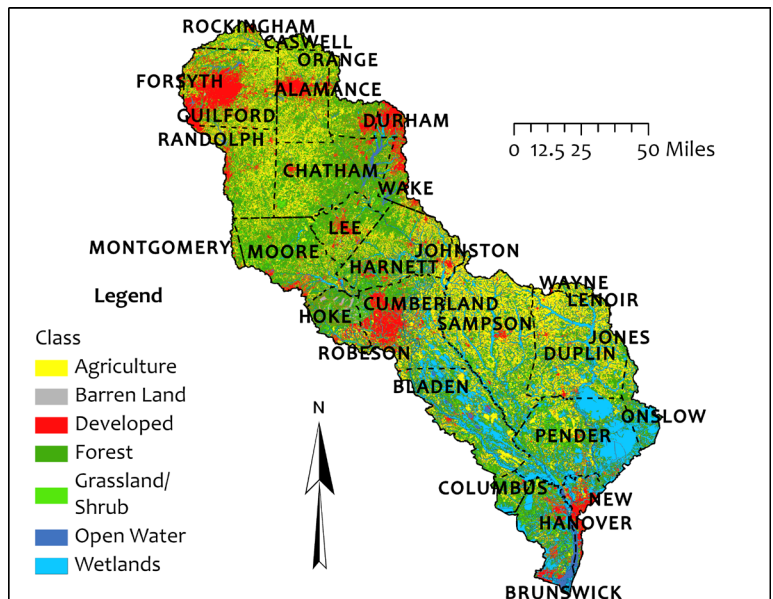
The Cape Fear River Basin offers many opportunities to enjoy and explore nature through walking, hiking, biking, and paddling. Many sites include views of streams, rivers, creeks, lakes and wetlands. There are numerous recreational opportunities that encourage appreciation and support of our natural resources.

As population and industry in the watershed continue to increase, conservation groups, municipalities and other stakeholders are collaborating to manage growth, monitor water quality, restore wetlands and protect the other valuable resources of the Cape Fear River basin. There are many opportunities for people to get involved with grassroots efforts to protect community creeks, streams, and rivers. Individuals can help by reducing the use of fertilizers, pesticides and other chemicals, and controlling erosion on their properties.

## REGIONS AND WATERS



## LAND USE (2019)



## Resources

Financial resources for North Carolina water improvement projects are available through federal, state, and private sources through grants, cost shares, and loans. DWR maintains a Funding Source Website with many of these available sources that can be navigated to using: <https://deq.nc.gov/about/divisions/water-resources>.

DWR creates many programs, events, and other resources to connect and engage communities with their local water resources. Some of which include Stream Watch, Our Water, and Project WET. If you're interested in learning how you can utilize these water education resources into your own programs, please email [lauren.daniel@ncdenr.gov](mailto:lauren.daniel@ncdenr.gov).

## We Need Your Help

In partnership with the Cape Fear River Assembly (CFRA), DWR's Basin Planning Branch (BPB) developed a survey to connect with stakeholders and address their concerns. The answers we collect will help guide DWR's and CFRA's efforts in understanding the issues facing the Cape Fear River Basin. We encourage you to speak out about water quality issues in your area, please participate in our survey by following this link, <https://forms.office.com/g/3L8mK44Pjk>. The following link will take you to the framework for the survey, detailing the survey's purpose and DEQ's mission: [https://qrcgcustomers.s3-eu-west-1.amazonaws.com/account19862747/29091426\\_1.pdf?0.0103551561192754](https://qrcgcustomers.s3-eu-west-1.amazonaws.com/account19862747/29091426_1.pdf?0.0103551561192754).

Visit, <https://deq.nc.gov/about/divisions/water-resources/water-planning/basin-planning-branch>, for more information about river basin planning. With this link, you can also navigate to additional grant programs, interactive maps, and educational resources. To receive basin planning updates and news about the Cape Fear River Basin, you can join the mailing list also linked on this page. If you have any questions or comments please contact our main point of contact for the Cape Fear River basin, Nora Deamer ([nora.deamer@ncdenr.gov](mailto:nora.deamer@ncdenr.gov)).