



# NOAA FISHERIES

## Community Benefits of Conserving the Cape Fear River Basin



Recreation on the Cape Fear River includes fishing, paddling, sailing, and other ways to relax on and near the water. (NOAA)



Image: Cape Fear River Watch

The Cape Fear River provides drinking water, irrigation and recreational opportunities to millions of people in eastern North Carolina. Because of the river's importance, over 30 organizations came together to form the Cape Fear River Partnership in 2011 to help improve the conditions of the river for both the people and species that use it. NOAA was a founding member of this partnership and has provided extensive assistance in improving the river to increase fish populations. The work of this coalition provides important socio-economic benefits to the North Carolinians living in the watershed, which stretches from the growing urban areas of Greensboro, Durham and Fayetteville through important farmland to eventually meet the Atlantic shoreline outside of Wilmington.

### Key Benefits

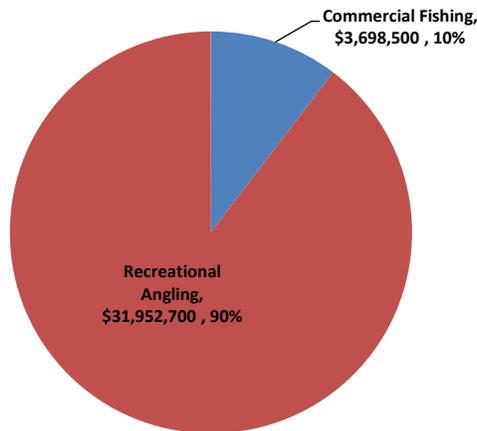
Healthy and productive fisheries and ecosystems in the Cape Fear River watershed provide a long-term source of:

- Jobs
- Income
- Enhanced economic activity, by promoting tourism, recreational fishing, and commercial fishing
- Clean drinking water

Partnering has catalyzed:

- Real work to restore the migratory fish passages needed to support fisheries of striped bass and shad
- Development of financial mechanisms for investing in watershed conservation
- Education of the public and policymakers about Cape Fear River regions that generate large amounts of nutrients

The Cape Fear River in North Carolina supports \$35.7 million in sales of recreationally and commercially important fisheries.



### Why is NOAA Fisheries involved?

The river's importance for people, such as commercial and recreational fishing, tourism, recreation, water quality, and water supply, has a connection to migratory fish. These fish touch every part of the river. By paying attention to the needs of fish, we also support the entire river system's health.

Restoring and improving access to habitat for migratory fish not only enhances the freshwater ecosystem and its biodiversity, but it also provides human benefits that can be described and counted. The Cape Fear River basin, including its many river

tributaries, provides economic goods and services and contributes to the livelihoods and food security of its residents. Keeping track of these benefits helps managers to sustain the flow of goods and services in the interest of current and future generations. Additionally, restoring habitats and fish populations helps the community put its conservation concerns into action.

## Economic Value of Fishing

When looking at the fisheries that the Cape Fear River supports, it is important to examine multiple sections of the river. The commercial fisheries for American shad occur in the Lower Cape Fear, mostly by fishermen using large mesh gill nets, while recreational anglers usually target the American shad in the Middle Cape Fear using hook and line.

In 2013, the fisheries of the Cape Fear River supported nearly 500 jobs, \$14.2 million in income, and \$35.7 million in business sales.

## Aspects of Recreational Fishing

Recreational fishing is popular throughout the Cape Fear River basin. On average, anglers traveled approximately 57 miles round-trip and expected to take three or more trips per year. They generally indicated a high level of overall satisfaction with their fishing trips.

Anglers target species such as the American shad (*Alosa sapidissima*), hickory shad (*Alosa mediocris*), and striped bass (*Morone saxatilis*). American shad were by far the most commonly caught and targeted species of anglers fishing on the Middle Cape Fear.

Local residents surveyed have been fishing recreationally for more than 32 years (on average).

On average, anglers were willing to spend an extra \$8.84 per trip in order to continue fishing. As such, this extra

spending would equal \$106,796 in 2013. For all fishing trips occurring on the Middle Cape Fear, the extra spending would be \$188,584 in 2013.

## Economic Benefits of Drinking Water

Improving water quality, by reducing nutrients and other pollutants into the basin, promises long-term benefits for the natural environment of the Cape Fear River and the drinking water it supplies. From 2009-2012, there were multiple harmful algal outbreaks just upstream of drinking water outtakes. These algal outbreaks affect human health and also lead to fish kills. By decreasing nutrients into the water and improving general water quality, we are decreasing algae, decreasing the treatment costs for drinking water utilities and improving the conditions for fish.

It costs one drinking water utility in the Cape Fear an estimated \$800 to \$1,300 per day to treat algal blooms.<sup>1</sup> Habitat conservation measures like protecting riverside land, increasing vegetation



Fishing is a pastime shared from generation to generation on the Cape Fear River. (NOAA)

buffers near nutrient hotspot inputs and improving habitat within stretches of the river itself can help save money for water utilities as well as increase areas for fish habitat. As a means of comparison, within the Neuse River Basin in North Carolina, a 30% improvement in raw water quality would lead to a savings of between \$2.6 and \$16.7 million over 30 years across the region.<sup>2</sup>

<sup>1</sup> Estimating the exact savings depends on the facility and their technology.

<sup>2</sup> Elsin, Y.K., Kramer, R.A., & Jenkins, W.A. (2010). Valuing Drinking Water Provision as an Ecosystem Service in the Neuse River Basin. *Journal of Water Resources Planning and Management*, 136(4), 474-482.

## What is the Cape Fear River Partnership?

NOAA helped to create the coalition that unites a wide range of concerned parties. The Cape Fear River Partnership consists of 31 partner organizations that represent federal, state, and local government, non-profits, industry, and academia. They work in coordination to conserve the river effectively.

Learn more and find Useful Links to plans and reports at: <http://www.habitat.noaa.gov/protection/capefear>



## References

Benner, R., D. Ryan, and M. Fields. 2014. [The Cape Fear Water Fund: A Partnership for Watershed Conservation](#). The Nature Conservancy. Final Report under Grant Award NA13NMF4630239. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Silver Spring, MD, 18 p.

Hadley, J. 2015. [An Economic Analysis of Recreational and Commercial Fisheries Occurring in the Middle and Lower Cape Fear River, North Carolina](#). Division of Marine Fisheries, North Carolina Department of Environment and Natural Resources. Final Report under Grant Award NA13NMF4630239. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Silver Spring, MD, 26 p.



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