

# THE ECONOMIC IMPACT OF MOUNTAIN TROUT FISHING IN NORTH CAROLINA

Executive Summary

MOUNTAIN FISHERIES INVESTIGATIONS

Federal Aid in Fish Restoration  
Project F-86

Period Covered: November 2008–June 2009

Prepared for:  
North Carolina Wildlife Resources Commission

Prepared by:  
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## **EXECUTIVE SUMMARY**

In total, 92,769 mountain trout anglers (76,761 residents and 16,008 nonresidents) fished for 1.42 million days in North Carolina in 2008. They spent \$146 million and had a total economic output of \$174 million when indirect economic effects are factored in.

Mountain trout fishing in Hatchery Supported Waters contributed an estimated \$72.7 million to North Carolina's economy. Mountain trout fishing in Delayed Harvest Waters contributed an estimated \$46.5 million to North Carolina's economy. Finally, mountain trout fishing in Wild Trout Waters contributed an estimated \$55.2 million to the economy of North Carolina.

The typical resident mountain trout angler spends approximately \$65 per day on trip expenditures when mountain trout fishing in North Carolina; nonresidents average \$158 on trip expenditures. Annually, the typical resident mountain trout angler spends a little over \$500 on mountain trout fishing equipment in North Carolina.

The typical resident mountain trout angler fishes for mountain trout about 10 days in North Carolina in a year; the typical nonresident fishes for about 5 days for mountain trout in North Carolina. Anglers fished an estimated 625,147 days in Hatchery Supported Waters, 374,611 days in Delayed Harvest Waters, and 422,671 days in Wild Trout Waters. Most trips taken by mountain trout anglers last only 1 day.

More than three-fourths of mountain trout anglers are North Carolina residents. The typical mountain trout angler is approximately 50 years old (the mean ages are 51.2 years among resident anglers and 48.9 years among nonresident anglers). Finally, mountain trout anglers are overwhelmingly male (92% of resident anglers; 96% of nonresident anglers).

This study was conducted for the North Carolina Wildlife Resources Commission (the Commission) to determine mountain trout anglers' contribution to North Carolina's economy. The study entailed a telephone survey of North Carolina licensed anglers and an economic analysis of their spending on mountain trout fishing activities.

For the survey, telephones were selected as the preferred sampling medium because almost all of the anglers in the sample owned a telephone. The telephone survey questionnaire was developed cooperatively by Responsive Management, Southwick Associates, and the Commission. The survey was conducted in late March through early April 2009. Responsive Management obtained a total of 1,232 completed interviews. The software used for data collection was Questionnaire Programming Language.

The full survey was limited to only those anglers who satisfied all of the following conditions:

- They were at least 18 years old.
- They had a valid North Carolina fishing license for the 2008 fishing season that included privileges for fishing in public mountain trout waters.
- They fished for brook trout, brown trout, or rainbow trout in North Carolina in 2008, collectively known as mountain trout.
- They fished for mountain trout in Hatchery Supported Waters, Delayed Harvest Waters, or Wild Trout Waters. (Wild Trout Waters encompass Wild Trout Waters, Wild Trout With Natural Bait Waters, Catch and Release Artificial Lures Only Waters, and Catch and Release Artificial Flies Only Waters.)

The analysis of data, excepting the economic analysis, was performed using Statistical Package for the Social Sciences software as well as proprietary software developed by Responsive Management.

The estimation of economic contributions to the North Carolina economy by anglers who fish for mountain trout consisted of two components:

- Calculation of expenditures made by mountain trout anglers in North Carolina by residency, region, and trout fishery management regime (i.e., Hatchery Supported Waters, Delayed Harvest Waters, or Wild Trout Waters).
- Estimation of the multiplier effects that result from spending by mountain trout anglers.

The estimation of spending by mountain trout anglers is based on the data from the telephone survey of resident and nonresident anglers who fished for mountain trout in 2008. The results of the survey were coupled with counts of licensed anglers and estimates of fishing activity (angler-days) to estimate the total amount of fishing-related spending by anglers, the specific goods and services purchased, and the regional locations of the spending. An input-output model of the North Carolina economy was then used to estimate the economic multiplier effects of the anglers' spending.

Regarding *mountain trout* fishing in *North Carolina*, a majority of residents (59%) and a large majority of nonresidents (78%) fished for mountain trout from 1 to 10 days in 2008 in North Carolina; the medians were 10 and 5 days, respectively. Most commonly, fishing trips taken by anglers last only a day: 67% of residents and 40% of nonresidents said that their most recent fishing trip lasted 1 day.

The leading counties of mountain trout fishing participation are Transylvania, Watauga, Haywood, Cherokee, Henderson, Jackson, and Ashe. Hatchery Supported Waters are the most popular.

In total, 92,769 mountain trout anglers (76,761 residents and 16,008 nonresidents) fished a total of 1.42 million days in North Carolina in 2008 (this number represents 16.2% of resident fishing license holders and 60.5% of nonresident fishing license holders in 2008). They spent \$146 million and had a total economic output of \$174 million when indirect economic effects are factored in.

Resident mountain trout anglers' total trip expenditures were \$83.5 million; nonresident mountain trout anglers' total trip expenditures were \$23.3 million. Resident mountain trout anglers' total equipment expenditures were \$36.9 million.

The survey also gathered demographic data on mountain trout anglers. Ages of respondents follow a bell-curve, slightly skewed to the older age groups; the mean ages are 51.2 years among resident anglers and 48.9 years among nonresident anglers. Finally, the sample of anglers is overwhelmingly male (92% of resident anglers; 96% of nonresident anglers).