Measuring Recreational Catch: The Fishing Effort Survey

How does NOAA Fisheries collect information about recreational fishing activity?

The mail Fishing Effort Survey collects information about the number of shore and private boat trips taken by recreational anglers in Hawaii and on the Atlantic and Gulf coasts. Because our sample needs to represent the fishing activity of all residents of participating states—and not just the residents who fish—all household members are asked to respond, even if they didn’t fish during the period of time the survey asks about.

What happened to the Coastal Household Telephone Survey?

The Coastal Household Telephone Survey suffered from gaps in survey coverage and errors in participant screening. As households abandoned landlines for mobile phones, these shortcomings grew worse, and the survey began to underestimate fishing effort. The Fishing Effort Survey replaced the Coastal Household Telephone Survey in 2018, and provides a more accurate and efficient way of estimating recreational fishing activity. It reduces the potential for reporting and recall errors, provides nearly complete coverage of coastal state residents, and achieves a more representative sample than the telephone survey.

How many mail surveys do you send out? How many people respond?

About 300,000 residential households across 17 states receive the Fishing Effort Survey each year, and response rates are consistently above 30 percent. (In its final year, response rates to the Coastal Household Telephone Survey were less than 10 percent.) Because research shows response rates increase when participants are compensated for their time and asked about topics other than fishing, the Fishing Effort Survey includes a $2 prepaid cash incentive and questions about weather and outdoor activity. A response from someone who didn’t fish at all is just as valuable to our survey as a response from someone who fished every day.

How are the data collected by the Fishing Effort Survey used?

The Fishing Effort Survey is part of a group of surveys NOAA Fisheries uses to estimate total recreational catch. These estimates are combined with commercial catch data, biological research, and information collected from direct observations of fisheries to help scientists and managers assess and maintain sustainable fish stocks. High-quality recreational catch estimates are fundamental to protecting the health of our ocean resources, the future of recreational fishing, and the millions of lives and livelihoods connected to the sport.

Why haven’t I been surveyed?

Because we take steps to ensure the sample of households we survey is representative of the population of coastal states, we don’t have to survey each of the millions of saltwater anglers in the U.S. to accurately estimate fishing effort.

Are your new effort estimates reliable?

Our data collection and estimation methods are statistically rigorous, scientifically sound, and subject to peer review. When we compare estimates produced by the Fishing Effort Survey with external data—such as rod and reel imports, outboard engine sales, registered boats, and other organizations’ estimates of fishing participation—we see similar trends.
How do you use the Fishing Effort Survey to estimate total catch?

The Fishing Effort Survey collects information about the number of trips private anglers take in Hawaii and on the Atlantic and Gulf coasts. From Maine to Mississippi, the For-Hire Survey measures fishing activity from for-hire vessels, and the Access Point Angler Intercept Survey collects information about the number of fish private and for-hire anglers catch. The Greater Atlantic Vessel Trip Reporting program accounts for catch and effort by federally permitted vessels from Maine to North Carolina. Three additional surveys, known collectively as the Large Pelagics Survey, collect catch and effort data for tuna, sharks, billfishes, swordfish, and other offshore species from Maine to Virginia. Catch and effort data are combined to estimate total catch, which informs scientific stock assessments and the public process of setting rules and regulations to support healthy and productive recreational fisheries.

Has the transition to the Fishing Effort Survey impacted our understanding of fishing effort?

While Fishing Effort Survey estimates are much higher than Coastal Household Telephone Survey estimates, this does not mean there are more people fishing. Instead, our research shows our new survey better measures the amount of fishing already taking place.

Transitioning to the Fishing Effort Survey required us to convert historical catch estimates to match the new survey’s design. Because the Coastal Household Telephone Survey underestimated fishing effort, calibrating historical effort estimates raised them across the time series.

For fish stocks assessed to date, this increase has generally resulted in higher estimates of past abundance. Regional fishery management councils and interstate marine fisheries commissions are working to determine whether and how these increases will change resource allocations between sectors or among states.

How does responding to the Fishing Effort Survey benefit me?

When you share information about your fishing activity, you’re making a vital contribution to fisheries science and management. Your participation in our surveys helps us produce more accurate estimates of recreational catch. These estimates help scientists and managers monitor the health of fish stocks and support sustainable fishing opportunities now and for generations to come.

What can I do to help?

If you’re asked to participate in a fishing survey, we encourage you to provide complete and accurate information, even if you didn’t fish, or didn’t catch anything. This will help us produce more accurate estimates of recreational catch. You can also encourage other anglers to participate in recreational fishing surveys; voice your support for state, regional, and national data collection programs; or get involved in fisheries management through your state marine fisheries agency, interstate marine fisheries commission, or regional fishery management council.

According to the Fishing Effort Survey, 4.7 percent of residents from Maine to Mississippi and in Hawaii fished in July and August of 2019, with an average of about five trips per angler.

Photos: Florida Fish and Wildlife Conservation Commission

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