



NOAA FISHERIES

Marine Recreational
Information Program

The Marine Recreational Information Program is the state-regional-federal partnership responsible for developing, improving, and implementing surveys that measure how many trips recreational anglers take and how many fish they catch.

Transitioning to a New Survey of Fishing Effort

Implemented in 2018, the Fishing Effort Survey is a more accurate and efficient way of estimating recreational saltwater fishing activity.

The Fishing Effort Survey, which is delivered and returned by mail, replaced the Coastal Household Telephone Survey, which contacted randomly selected landline telephone numbers in coastal counties. In its final years, errors in survey coverage and participant screening negatively biased the estimates the Coastal Household Telephone Survey produced. The Fishing Effort Survey is designed to address these limitations, providing nearly complete coverage of state residents and a more representative sample than the survey it replaced.

The South Atlantic Fishery Management Council's Scientific and Statistical Committee endorsed the Fishing Effort Survey as the best scientific information available.

In 2019, the committee endorsed the use of estimates produced by the Fishing Effort Survey, as well as historical estimates calibrated to the "currency" of the mail survey's design, in conducting stock assessments. The committee also endorsed the use of Fishing Effort Survey estimates to monitor annual catch limits set with the survey's data.

The Coastal Household Telephone Survey underestimated fishing effort, so calibrating historical estimates to the new survey design raised these estimates across the time series.

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

While Fishing Effort Survey estimates are larger, they do not paint an unreasonable picture of fishing activity.

Between July and August of 2018—considered a high-activity wave—the Fishing Effort Survey indicates about five percent of the Mid-Atlantic population participated in recreational saltwater fishing. While the average angler took four trips during this time, the vast majority of anglers only took one or two.

NOAA Fisheries continues to evaluate potential improvements to the Fishing Effort Survey.

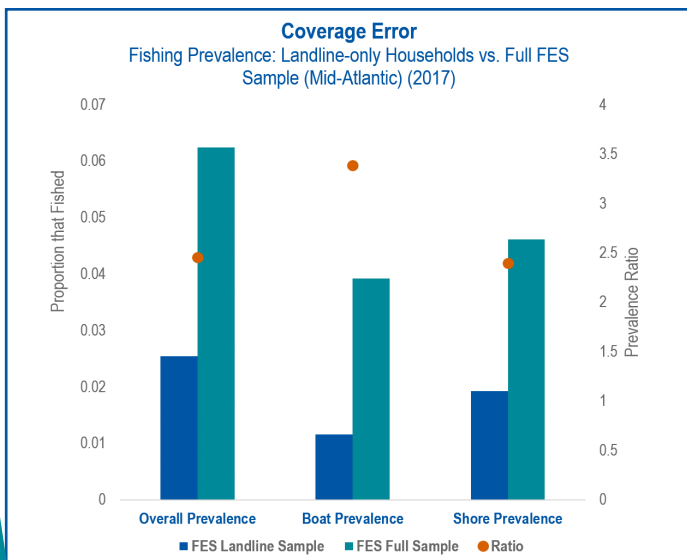
We are currently evaluating the:

- Potential for non-response bias in the existing effort survey design.
- Feasibility of an online survey response option.
- Impact of question order on reports of fishing activity.
- Role of boat registration data, demographic characteristics, and other information in improving sampling efficiency.

Taken together, coverage error and the Gatekeeper Effect explain a large portion of the differences between new and legacy estimates of recreational saltwater fishing activity in the Mid-Atlantic.

Coverage Error

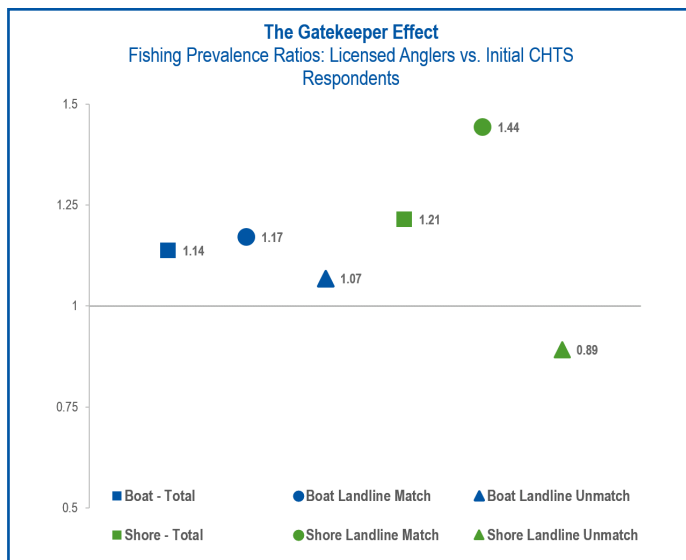
Over the past 15 years, the percentage of adults living in households with landline telephones has steadily declined. According to the National Center for Health Statistics, by 2018, 70 percent of U.S. households didn't have or were unlikely to answer a landline phone. Today, residents of households with landline phones tend to be older, in poorer health, and without children at home. These individuals are also less likely to report having fished. Because the Coastal Household Telephone Survey was limited to households with landlines, it produced inaccurate estimates of fishing activity.



The Fishing Effort Survey Landline Sample—or those respondents who reported having a landline phone at home—is composed of households that resemble Coastal Household Telephone Survey respondents. These landline-only households report far less fishing activity than the sample that includes mobile phone users.

Gatekeeper Effect

The Coastal Household Telephone Survey asked initial respondents a series of screener questions to determine whether anyone in the household fished during a particular period, and if they or another household member would be willing to participate in our survey. This process was based on the assumption that initial respondents would be aware of and able to recall fishing trips taken by all household members. But we found that the household members who were more likely to answer landline telephones were also less likely to report household fishing activity. The Gatekeeper Hypothesis—supported by experimental results—suggests a significant portion of initial survey respondents did not accurately report their households' fishing activity, resulting in an underestimate of fishing effort.



During a pilot study of the Gatekeeper Effect, reported fishing was higher when we asked to speak with the licensed angler by name, rather than administering screener questions to the initial survey respondent. This effect is particularly noticeable for reports of fishing from landline users and shore-based anglers—an important factor in the post-calibration increase in historical shore mode estimates—and indicates the Coastal Household Telephone Survey under-reported household fishing activity.

