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The Marine Recreational Information Program, or MRIP, is the way NOAA Fisheries is counting and reporting marine recreational catch and effort. It is a customer-driven initiative that not only produces better estimates, but does so through a process grounded in the principles of transparency, accountability and engagement.

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Effort Surveys: Exploring Alternatives to Random-Digit Dialing

This is the third in a series of articles looking at improvements we're making to our surveys of recreational fishing effort (the number of trips anglers take during a reporting period) for the Atlantic and Gulf coasts.

Overview

Along with improvements we have implemented to our catch surveys, MRIP has been conducting a series of studies to evaluate and make improvements to our complementary effort surveys. As we discussed in our first issue, we are seeking to reduce the potential for bias, while improving the efficiency and the timeliness of effort surveys. Potential sources of bias in surveys include:

- **Undercoverage**, which occurs when some members of a population - in this case recreational fisherman - are not included on a survey sample frame. Undercoverage is an increasing concern for Random Digit Dialing telephone surveys, which generally include only landline telephone numbers.
- **Nonresponse**, which occurs when people who are included in a survey sample do not respond. This is an increasing concern for telephone surveys, regardless of the topic or target audience.
- **Measurement error**, which occurs when individuals who respond to a survey provide inaccurate answers to survey questions.

In this issue, we look at what might seem like a counterintuitive solution in the digital age to the challenge of declining telephone survey response rates.

Telephone vs. Mail Surveys: What We Learned

As we covered in our second effort survey newscast, address databases maintained by the U.S. Postal Service proved to be much more complete and reliable sample frames than RDD telephone frames. In addition, the [Dual-Frame Mail Survey](#) demonstrated that response rates for mail surveys were much higher than for telephone surveys. To verify this finding, and to refine the survey design, we designed two follow-up studies.

- **Dual-Frame, Mixed-Mode Survey.** This study was designed to directly compare how people responded to mail vs. telephone surveys. The project evaluated both of these data collection methods in terms of response rates, non-response error, data quality, and timeliness. The broad trends in the previous study held up: response rates for

mail remained higher and sampling from the address frame provided nearly complete coverage of the entire U.S. population. In addition, anglers surveyed by mail responded within the timeframe necessary to produce estimates.

- **Conclusion:** *The study confirmed that in a side-by-side comparison, mail surveys achieve a higher response rate than telephone surveys. The study also demonstrated that the higher response rate can be achieved without compromising data timeliness.*
- **Single-Phase Address Based Survey (ABS).** Most recently, in November 2012, MRIP implemented a single-phase ABS pilot study in Florida, Massachusetts, New York, and North Carolina. Within each of the study states, samples of addresses were selected and augmented by matching the addresses to each state's database of licensed saltwater anglers. By using the license databases in this manner, we were able to direct more sampling toward households with known licensed anglers, which increases the efficiency (and minimizes the cost) of the survey. Maintaining addresses that don't match to the license databases ensures that all anglers are covered by the survey, regardless of whether they have a fishing license or not. Anglers who fish in the study states but reside in a different state are sampled directly from state license databases. The study is also testing multiple versions of the questionnaire and different levels of cash incentives to identify design options that maximize response and increase the efficiency of the survey.

What's Next?

Pending the final analysis of the most recent study, along with an independent peer review of the survey design and study findings, MRIP anticipates launching a new, mail-based effort survey in 2015. Over the next year, we will continue working with our state partners to promote licensing and registration. Although the Registry is not the only source of data we'll use to contact anglers, having thorough and accurate licensing databases will greatly increase the performance of the new design.

As with any changes to angler surveys, there is no way to predict what differences we will ultimately see in effort estimates based on this improved methodology. However, we know that we'll be doing a better job of contacting more anglers, including anglers that are not covered in the existing Coastal Household Telephone Survey, and we expect this will have an impact.

To prepare for the release of our new estimates, we will collaborate with all our data partners and users to consider potential outcomes and develop strategies to ensure the continued sustainable use and management of our ocean resources.

In the Next Newscast:

MRIP will continue to keep you updated on all of our improvements. If you have a topic or a question you would like us to address in an upcoming newsletter, please let us know.

Ask MRIP

Do you have questions about MRIP or our surveys? Ask us and we'll answer your question in an upcoming newsletter. If you've got a question about MRIP that you'd like answered, please e-mail Leah Sharpe at Leah.Sharpe@noaa.gov.

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