



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

Kevin Anson
Council Chair
Gulf of Mexico Fishery Management Council
4107 W. Spruce Street, Suite 200
Tampa, Florida 33607

Dear Mr. Anson and Council Staff,

Thank you for your letter dated Feb. 15, 2024, regarding MRIP recreational effort extrapolation, as well as the use of state recreational fishing data in management. We hope the below information and resources help answer your questions and provide clarification. Please feel free to reach out to me or my colleagues if additional follow up is needed.

We recognize the concerns raised by the Council regarding the differences in estimates between Florida's State Reef Fish Survey and the MRIP surveys. We believe that survey bias is the primary driver for these differences. We have provided more context below regarding our [estimation process](#) (which covers the letter's reference to extrapolation), as well as current initiatives to improve the bias and resulting precision of estimates in the Gulf region.

Regarding differences in the use of effort data in SRFS and MRIP APAIS-FES catch estimation

MRIP and SRFS employ a similar approach to estimate total catch; however, there are some key differences. Both surveys use MRIP access point angler intercept (APAIS) data to inform catch estimates; supplemental data collected at offshore access point sites are included in SRFS catch estimates. **The biggest difference in methodology is between the mail effort component for both SRFS and MRIP.**

- MRIP's Fishing Effort Survey (FES) is sent every two months to a proportion of all coastal households using USPS addresses matched against the national saltwater angler registry. The use of the USPS address list provides for the most complete coverage of angling households that include licensed and unlicensed anglers. We send more surveys to licensed households. As a generalized survey, MRIP FES estimates total fishing effort for all saltwater species anywhere in the state, partitioned by area and region using information collected through APAIS interviews.
- The specialized mail survey for SRFS is sent monthly only to anglers with a SRFS reef fish angler designation and directly estimates total fishing effort for reef species by region (Gulf vs. Atlantic) and area fished (state waters vs. federal waters). The questionnaire design is also different in terms of types of questions asked.
- In addition to differences in scope, both surveys use different approaches to adjust for off-frame effort (trips taken by anglers that may not be licensed or do not have a SRFS angler designation). NOAA Fisheries and FWC are working together to identify factors that may influence these adjustments.

FES Study and Post-Study Expectations

The current FES follow-up study is working to address one potential source of bias that will minimize any estimation process effect. If results of the study are similar to the previous question order pilot study, scaling of the FES estimates may be closer to the scaling of SRFS estimates than they are currently. Also, increasing sampling from every two months to monthly will make the FES recall period similar to that of SRFS.

If we shift to a revised FES design based on the findings from our current follow-up study as well as a favorable peer review, the historical effort estimates would be rescaled to reflect the new design. This would not impact our current estimation or weighting methods, which have been peer reviewed and certified, as outlined in our [Survey Design and Statistical Methods for Estimation of Recreational Fisheries Catch and Effort](#).

Catch advice generally reflects the scale of catch information that informs assessments: for instance, if the FES is overestimating effort as our initial pilot study suggests, total catch estimates would be biased high. It's important to note that this generally results in higher estimates of stock biomass, and commensurately higher catch limits. Conversely, if the FES effort estimates decrease following completion of the follow-up study and implementation of a revised FES design, it's likely that total catch estimates will be lower, which could lead to lower stock biomass estimates and lower catch limits. Because the potential differences in effort caused by the FES question order issue are systematic, they would not likely cause issues with individual catch estimates or spikes in data.

Collaborative work to improve MRIP and all Gulf State Programs

Both NOAA Fisheries and Florida's Fish and Wildlife Conservation Commission are committed to evaluating and improving the precision and accuracy of their estimates to best inform stock assessments and fisheries management decisions. FWC and NOAA Fisheries are working together to make SRFS estimates of recreational fishing effort, landings, and discards accessible for potential use in assessments and monitoring. This is part of our broader interagency Gulf Transition Plan, which aims to inform survey improvements, increase accuracy of state and federal recreational fisheries statistics, and minimize differences between estimates.

We support state and regional partners in meeting their unique regional recreational fishing data needs. This includes developing and implementing state data collection programs like SRFS, designed to produce estimates for species of high interest that are more precise than those available through the NOAA general surveys. Alongside SRFS, several other Gulf State surveys have already been [certified](#) by NOAA Fisheries, meaning an independent peer review has found the survey designs to be a statistically valid approach to meet survey objectives and provide key estimates. One criterion considered as part of the peer review certification process is that estimation methods appropriately weight sample data to account for the sampling design, and both point and variance estimates are produced.

An updated Gulf research plan that incorporates the FES study, as well as the LA Creel pilot study in Mississippi and Alabama, is anticipated to be finalized this spring. This plan will better inform the timeline for meeting the aforementioned overarching transition plan's goals.

NOAA Fisheries continues to evaluate and incorporate improvements to our recreational catch and effort data estimation processes as well as our estimate review process. Gulf States Marine Fisheries Commission and we, alongside state partners, are jointly hosting a workshop May 14 - 16 to discuss how we can strengthen the estimate review process and better incorporate regional feedback. GSMFC previously notified the Gulf Council of this meeting, and we look forward to your representative's contribution to the process. We are also continuing collaborative work on alternative approaches for data gaps caused by imprecise and outlier catch and effort estimates.

We continue to actively work with our Gulf State partners to identify and address drivers that impact estimate differences, which is critical to improve consistency and comparability among the different survey methods.

Sincerely,

A handwritten signature in blue ink, appearing to read "Evan A. Howell", with a long horizontal flourish extending to the right.

Evan Howell
NOAA Fisheries
Director, Office of Science and Technology