Tab F, No. 7

Fishing Effort Survey Study Update

November 4-7, 2024

Richard Cody
Fisheries Statistics Division
NOAA Fisheries Office of Science & Technology

Outline

- Fishing Effort Survey (FES) follow-up study progress update and timeline
- Calibration & 1-month waves transition
- FES non-response mitigation approach
- Current priorities

NOAA FISHERIES

FES Follow-up Study

- **Revised design - switches 2 and 12-month fishing activity questions and is distributed monthly (as opposed to every 2 months)**
- **Revised design being tested is producing improved data quality in alignment with prior pilot studies**
  - We continue to see a large reduction in reporting errors and illogical responses
  - Respondents have been less likely to indicate more trips for the 2-month fishing reference period than for the 12-month reference period
- **Large amount of data to collect and analyze before fully informed comparisons can be made, including direction and magnitude of differences in effort estimates**

NOAA FISHERIES

Use of Current FES data

- NOAA Fisheries Guidance - FES data should continue to be used where they are currently to inform stock assessments and management until the Follow-up Study has been completed and the results calibrated and incorporated into relevant stock assessments.
    - **Regional considerations.** NOAA Fisheries is working collaboratively with Gulf states to incorporate data from state programs into stock assessments. NOAA Fisheries is already using state data to monitor several species in the Gulf.

NOAA FISHERIES

Timeline Remains on Track

Actions	Timeline
Conclude study data collection	End of 2024
Work with regional partners on preliminary planning for potentially transitioning to a revised FES design; Begin calibration model development, leveraging previously reviewed modeling framework from 2018 FES calibration (telephone survey to mail FES); Develop APAIS/FHS monthly component estimation.	2024/2025
Produce final 2024 estimates	Spring 2025
Produce public study report outlining key findings and estimates and initiate peer review; Finalize calibration methodology and initiate peer review.	Summer 2025
Earliest new design could be implemented (pending favorable study results and peer review)	2026
Produce calibrated historical catch and effort estimates for use in subsequent assessments and management	Spring 2026 (normal release of final 2025 estimates)

NOAA FISHERIES

Calibration Approach & Planning for 1-month Waves

- **Original FES Calibration**
  - Small area estimation model to calibrate between Coastal Household Telephone Survey (CHTS) and current FES
  - Separate models by fishing mode (Private boat, Shore) with time-series framework (trend, season, random effects) plus spatial (state) and wireless phone effects

- **Updated FES Calibration**
  - Bayesian modeling framework
  - Account for design changes from CHTS to current FES and current FES to updated FES
    - Question order and 1-month waves
  - In development

- **Anticipating flexibility to produce 1-month wave estimates**
  - Access Point Angler Intercept Survey (APAIS) components for estimating catch- estimate monthly components for entire time series
    - Catch rates, select effort components
  - For-Hire modes
    - Produce monthly effort estimates

NOAA FISHERIES

FES Non-response Mitigation Approach

- FES Annual Reports **(Section 6. Weighting)**

- **Sample weighting class adjustment** (step 1)
  - Classes - combinations of sub-state region, fishing license status, and state boat registry status
  - Within classes, respondents upweighted to represent nonrespondents

- **Raking adjustment (step 2)**
  - Raking controls include households with seniors, households with children, household tenure (own/rent), households with three or more household members, and wireless-only households

- **Post-stratification adjustment (step 3)**
  - Household weights adjusted so summed weights return household totals within sub-state regions (coastal, non-coastal)

NOAA FISHERIES

Current Priorities

- Focus on finishing 2024 FES sampling, completing estimation process and calibration model.
  - Preparing for Wave 5 FES sample distribution
  - Working with Consultant team (NORC) to prepare for final two waves of data
  - Working on potential efficiencies to offset increased workloads
    - Includes adjustments to wave level estimate review process
- Working with Gulf, Atlantic and HI Partners on transition planning
  - APAIS associated information needs and draw process
- Planning review process for design changes and calibration
  - Expect to have more details on this by late 2024, early 2025.

NOAA FISHERIES

NOAA FISHERIES

GULF STATES–NOAA FISHERIES
Recreational Fishing Surveys

Timeline of key milestones to improve and streamline catch and effort estimates used in Gulf of Mexico stock assessments and fisheries management

2024

- Study improvements to survey methods used to estimate fishing effort
  - Evaluate results from testing the LA Creel survey effort methods in Mississippi and Alabama
  - Evaluate results from testing the revised NOAA Fisheries' Fishing Effort Survey
  - Conduct studies in Florida to better understand and measure the distribution and magnitude of fishing effort along the state's Gulf and Atlantic coasts

2025

- Review and analyze catch data from dockside interviews to evaluate and improve how interview sites are selected
- Review Texas' survey design and procedures through a collaborative, independent process to inform a suitable method for calibrating its state estimates; this will improve Gulf-wide estimates necessary for stock assessments

2026

- Make necessary improvements to one or more surveys in the region
- Implement a model to better align/compare estimates from the different surveys or produce a composite estimate that integrates data from all the state surveys
- Deploy a centralized data system for access to estimates from all of the Gulf state survey programs

2027

countmyfish.noaa.gov

Photos (from left):
T. Kirchler/NOAA Fisheries
NOAA Fisheries

NOAA FISHERIES

For more information

Contact:

Sarah Lazo (sarah.lazo@noaa.gov)
Richard Cody (richard.cody@noaa.gov)