

FAQs on NOAA Fisheries' 2020 Marine Recreational Catch Estimates

Where can I access the agency's recreational catch estimates?

The Marine Recreational Information Program maintains a searchable database of recreational catch and effort estimates known as the [MRIP Query Tool](#). Estimates can also be found on the program's [Recreational Fishing Data Downloads](#) webpage.

What information is available as part of the agency's 2020 catch estimates?

These estimates include catch (catch per trip), effort (trip), and total catch estimates for all fishing modes (shore, private boat, and for-hire, which includes charter and headboat) for the Atlantic Coast (Maine through Florida), Gulf Coast (Florida through Mississippi), and Hawaii. The estimates were produced using the agency's standard estimation methods and published at the standard levels of aggregation (annual, two-month sampling wave, geographic region, fishing mode, and area fished).

What is imputation?

In statistics, imputation is the process of filling data gaps with proxy, or replacement, values. These replacement values are known as imputed data.

Why did NOAA Fisheries select imputation as its method of addressing gaps in recreational catch data?

Imputation is a well-established, standard statistical practice for addressing missing survey data. The U.S. Census Bureau, for example, applies [imputation procedures](#) to data from its Survey of Income and Program Participation. Upon evaluation, both staff and statistical consultants agreed imputation would be a reasonable method of filling our catch data's gaps.

How was imputation applied?

Because NOAA Fisheries actively tracked sampling suspensions with our state data collection partners—monitoring when and where the angler intercept survey was interrupted—we were able to fill gaps in our catch data with corresponding catch records from prior years. This simple imputation approach involved using 2018 and 2019 catch data as proxy values to fill 2020's data gaps. These 2018 and 2019 data were not arbitrarily selected. Instead, imputed data are representative of the data gaps, matching the time, place, and fishing mode combinations that would have been sampled had the survey continued uninterrupted. To ensure imputed data weren't over-represented against observed data, the original sample weights for the 2018 and 2019 catch records were down-weighted. Imputation only affected catch data; because our effort surveys continued largely uninterrupted, imputation was not required for effort data.

How will data users know where imputation was applied?

The [MRIP Query Tool](#)'s Catch Time Series Query indicates the percent of each estimate that was produced using imputed catch records.

How did imputation affect catch estimates in my region?

When estimates that were produced with both imputed and observed data are compared with estimates that were produced using only observed data, we can see that the overall impacts of imputation on the agency's 2020 catch estimates were modest, with some regional variability. For example, impacts on landings estimates in New England and the Mid-Atlantic were larger than in the South Atlantic and Gulf of Mexico. These differences reflect differences in states' decisions to suspend

sampling: New England and the Mid-Atlantic saw longer sampling suspensions and larger data gaps than the South Atlantic and Gulf of Mexico.

Does NOAA Fisheries expect to revise 2020 estimates once 2021 data have been collected?

When data from 2021 are available in 2022, the agency will evaluate the effects of including 2021 data (for example, alongside 2019 data and instead of 2018 data) in the imputation. Because these effects are unknown, the agency cannot predict whether it will seek to revise its 2020 catch estimates.