



NOAA
FISHERIES

Office of Science and Technology

Marine Recreational Information Program

Recreational Fishing Survey and Data Standards Documentation Guidance

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Table of Contents

Introduction	2
Meeting the Standards Documentation Requirements	2
Overview of Requirements	2
Annual Reporting Requirements of Standard 5.2	4
Survey Performance Indicators	5
The Effect of Funding Increases on Sample Sizes	5
The Effect of Funding Increases on Statistical Precision	6

Introduction

NOAA Fisheries formally established a set of recreational fishing survey and data standards in December 2020. The agency developed these standards with input from partners, including state agencies and regional Fisheries Information Networks (FINs). They were established to promote data quality, consistency, and comparability across the recreational fishing surveys administered and funded through the Marine Recreational Information Program (MRIP), thereby facilitating the shared use of the statistics these surveys produce. The standards set criteria for what NOAA Fisheries considers sound recreational fishing survey management practices, and their establishment removes ambiguities about whether a practice should be considered a recommendation or a requirement. By providing all partners, data customers, and stakeholders with access to a single set of guidelines, they also improve the transparency of MRIP.

The agency is using a phased approach to implement the standards, with full implementation scheduled to occur in April 2023. There are seven standards in total, located on the [MRIP webpage](#). **Recreational fishing surveys that receive funding from MRIP are required to meet all of the standards. Recreational fishing surveys that don't receive funding from MRIP are highly encouraged to meet the standards.**

Many of the standards have documentation requirements intended to help monitor survey performance, track design changes, evaluate methodological improvements, and improve transparency. **While most documents only need to be produced once and then updated as needed when survey methods change, annual reports are required at the conclusion of each survey year.** Below, we provide an overview of which standards require documentation, and guidance for meeting those requirements.

Meeting the Standards Documentation Requirements

Overview of Requirements

The standards with documentation requirements are as follows:

- Standard 1.1 — Survey Concepts and Justification: Planning
- Standard 2.1 — Survey Design: Sampling, Data Collection, Estimation, Evaluation
- Standard 3.1-3.2 — Data Quality: Processing, Editing, and Quality Control; Quality Assurance
- Standard 4 — Transition Planning

- **Note:** A transition planning document is only required for new or improved sampling or estimation designs that are likely to result in large deviations from historical estimates.
- Standard 5.2 — Annual Reporting
- Standard 6.1-6.2 — Process Improvement: Process Improvement Plan, Unplanned Modifications

There is some flexibility in how survey programs can meet these requirements, but we propose two documentation models for consideration. The first is following the model of the MRIP Fishing Effort Survey (FES). This survey meets all of the standards using three documents:

- (1) A comprehensive survey design document (e.g., [MRIP Survey Design and Estimation Methods Manual](#)).
- (2) If applicable, a transition plan (e.g., [FES transition plan](#)).
- (3) An annual report that covers all the other standards requirements (e.g., [the FES 2020 Annual Report](#)).

This first model is best to follow if a single entity is responsible for administering the survey, but sometimes multiple entities are responsible for different aspects of a survey. A good example of this scenario is the MRIP Access Point Angler Intercept Survey (APAIS), where NOAA Fisheries is the lead survey administrator (designed the survey, selects the sample, and produces estimates), but regional partners coordinate all aspects of data collection and are responsible for data processing. Following this alternative model, the lead survey administrator would develop:

- (1) A survey plan (e.g. [APAIS Survey Plan](#)).
- (2) A comprehensive survey design document (e.g. [MRIP Survey Design and Estimation Methods Manual](#)).
- (3) If applicable, a transition plan (not applicable to the APAIS).

A partner entity would then develop:

- (4) An annual report that meets all the other documentation requirements (the specifics of annual reporting are discussed in 5.2.1).

All standards documentation must be uploaded into the [NOAA Fisheries Research Publication Tracking System \(RPTS\)](#). MRIP partners with NOAA email accounts (i.e. @noaa.gov) may self register to access RPTS. Non-NOAA users and anyone needing support should contact the NOAA Fisheries [RPTS Administrator](#) or lauren.dolinger.few@noaa.gov. Once submitted, MRIP staff will review the documents to verify that they meet the standards. Once verified, all documentation will be publicly available in the [MRIP Reports Database](#).

Annual Reporting Requirements of Standard 5.2

Annual reports should be completed following the receipt of final estimates for a calendar year, and generally be distributed by June 30 of the following year.

Table 1 lists the entities responsible for preparing annual reports for the survey programs funded by MRIP, as well as those responsible for submitting the documentation into RPTS.

Table 1: Entities responsible for annual reports for MRIP-funded surveys as of 2022.

Program	Entity responsible for preparing annual reports	Entity responsible for submitting to RPTS
Fishing Effort Survey	NOAA Fisheries Office of Science and Technology (OST) ¹	NOAA Fisheries OST
Access Point Angler Intercept Survey and For-Hire Survey	Atlantic Coast: Atlantic Coastal Cooperative Statistics Program (ACCSP) ² Gulf Coast: Gulf Fisheries Information Network (GulfFIN) ²	Atlantic Coast: ACCSP Gulf Coast: GulfFIN
Large Pelagics Survey	Large Pelagics Telephone Survey, FHS Add-On: ACCSP ² Large Pelagics Telephone Survey, Private: LPTS-Private Contractor Large Pelagics Intercept Survey, ME: Maine Department of Marine Resources Large Pelagics Intercept Survey, NH-VA: LPIS Contractor	NOAA Fisheries OST ³
LA Creel	Louisiana Department of Wildlife and Fisheries (LDWF)	LDWF
Pacific State Surveys	California Recreational Fisheries Survey: California Department of Fish and Wildlife (CDFW) Oregon Ocean Recreational Boat Survey, Oregon Shore and Estuary Boat Survey: Oregon Department of Fish and Wildlife (ODFW) Washington Ocean Sampling Program:	Pacific Recreational Fisheries Information Network (RecFIN) ⁴

¹ With support, as needed, from the FES data collection contractor.

² With input from state partners and estimation support as needed from NOAA Fisheries OST.

³ NOAA Fisheries OST compiles the individual reports written by partners and contractors, and then submits them into RPTS as a single package.

⁴ Pacific RecFIN compiles the individual reports written by their state partners, and then submits them into RPTS as a single package.

	Washington Department of Fish and Wildlife (WDFW)	
Hawaii Marine Recreational Fishing Survey	Hawaii Division of Aquatic Resources (HDAR)	HDAR

The required general content for annual reports is outlined in the main text of [Standard 5.2](#). In summary, annual reports must provide an overview of data collection procedures (including questionnaires and data collection schedules); sample sizes; the number of completed surveys; response or compliance rates, including how they were calculated; quality control efforts and processes; a discussion of planned or unplanned modifications to the survey; quality assurance measures; and process improvement.

Survey Performance Indicators

For surveys that have received any increased investment after 2020 from MRIP, survey performance indicators must be tracked in the process improvement section of the annual reports. Starting in 2020, MRIP has been able to provide Modern Fish Act (MFA) Investment Funds to three FINs (ACCSP, GulfFIN, RecFIN). Although additional funding, due to MFA or other appropriations, are not guaranteed to the FINs or other MRIP partners, it is in the interest of MRIP and all its partners to be able to demonstrate the value of increased investment in the program. At minimum, partners should track two survey performance indicators: the effect of funding increases on sample sizes, and the effect of funding increases on statistical precision.

The Effect of Funding Increases on Sample Sizes

The exact metrics tracked may be unique to each region, but partners should generally track annual planned sampling levels (e.g. total numbers of planned assignments) and annual realized sampling levels (e.g., completed assignments) before and after funding increases, by survey component. Restoration of previously unfunded/suspended strata or survey components can also be highlighted.

Because we need to isolate the effects of funding increases on sample sizes, historical “base” levels of sampling effort (i.e., sampling effort before survey design changes were made) should not be considered in developing this indicator. As such, **comparisons should be limited to the five years leading up to the funding increases**, since that will better reflect funding effects on sample sizes for the current designs, rather than historical changes to those designs.

Partners may report annual sample sizes using the following general format, tailoring the column headers to their specific survey(s):

State	Planned Sample Sizes				Realized Sample Sizes ⁵			
	Before investment ⁶	After investment ⁷	Current year	% change ⁸	Before Investment ⁶	After investment ⁷	Current year	% change ⁸

If an annual report covers multiple surveys, partners should include a table for each survey.

The Effect of Funding Increases on Statistical Precision

Partners should track precision for at least four indicator species before and after funding increases. While many factors may contribute to precision for any given year, the primary purpose of increasing sample sizes is to improve the precision of estimates over time, so this is a particularly important indicator to track. For individual years, comparisons of precision at sample sizes corresponding to different levels of funding should be possible as well with support from NMFS OST staff (e.g., realized 2022 precision levels compared to what they would have been had additional funding not been provided).

Survey managers should use the past five years of data to target sampling increases, and include a description in the report of how they have distributed the sampling increases to address targeted precision improvements. NMFS OST staff will provide support as needed in predicting the impact of larger sample sizes on precision based upon the five prior years' data.

Partners should consider the following criteria in selecting their set of indicator species. First, indicator species must be targeted by recreational anglers and be managed at the

⁵ These columns may be subdivided if a survey has several sets of sample sizes to track (e.g., completed assignments and completed interviews before and after funding increases).

⁶ Use the average of the five years leading up to the increased investment to fill in these columns. This will help isolate the effects of funding on sample sizes from other confounding factors.

⁷ These columns are only needed if partners have received their increased investment for multiple years, in which case this column should be the average of the years leading up to the current year. For example, if this is the annual report for 2022, and partners have received increased investment since 2020, this column would display the average annual sample sizes for 2020-2021. If this is the first year of increased funding, these columns can be deleted.

⁸ These columns should be the ratio of the average percent change in sample sizes before and after investment (including the current year for multi-year investments).

state or federal level. Indicator species should also be representative of the different fisheries in the region and include at least one common species, one pulse/rare-event species, one inshore state managed species and one federally managed species. Precision targets are important to managed species with historically moderate PSE (40%-70%), so selected species should have precision levels in that range with the exception of pulse/rare-event species (which will usually have precision levels above that range).

Time series for each indicator species should be presented in graphics in the annual reports that display point estimates at the annual, regional level (or annual, state level for state surveys) with corresponding confidence intervals, starting five years prior to the funding increases. Each annual report should therefore have, at minimum, four time series graphics (one for each species), but partners may choose to include more granular time series if there are clear benefits at lower levels of aggregation as well. Partners may also choose to include a set of graphics for the current year displaying point estimates with precision levels compared to what they would have been had additional funding not been provided.

Partners that are only beginning to produce precision estimates, and are therefore not able to make comparisons with past estimates, should still select indicator species to begin to track over time. In their first report, they can then include the following, or a similar, statement: "For <insert selected indicator species>, we have reduced infinite uncertainty to <insert newly calculated precision estimates at the annual/regional or the annual/state level>."