



**NOAA
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Office of Science
and Technology

Marine
Recreational
Information
Program

NOAA Fisheries' Recreational Fishing Survey and Data Standards

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Standards Overview

- Guide **design, improvement, quality** of **data** produced by our recreational fishing surveys.
- **Shared use of single set of survey requirements, guidelines** helps promote data collection and distribution **consistency** across surveys **nationwide**.
- **Reduce ambiguity and potential misinterpretation** of data to best inform **sustainable fisheries management**.



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Why Were the Standards Developed?

- Full implementation will **align NOAA with OMB requirements, best practices of other federal agencies** that depend on statistics to make informed decisions.
- To **promote transparent, quality data and sound science.**
- To meet recommendations from National Academies of Sciences, Engineering, and Medicine to **establish performance standards.**



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Seven Standards/Focus Areas

- Survey concepts and justification
- Survey design
- Data quality
- Transition planning
- Review procedures
- Process improvement (part of regional implementation plans)
- Access and information management

Standards 1 - 5 are related to NOAA Fisheries' certification, transition policies, and procedural directives.

We are here in implementation.



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Implementation Timeline

2020

Phased Implementation Begins in Late 2020

- Phased implementation helps provide adequate adaptation time for fisheries stock assessors and managers.

2021
2022

Implementation Continues

- Delivered presentations to regional FINs.
- Published MRIP Data User Handbook.
- Added preview query to Query Tool to support data users.
- Hosted Data User Seminar Series.

2023+

Final Phase (Access and Information Management)

- Shift from producing estimates in 2-month waves to cumulative estimates, produced every two months.
- New fishing-year options added.
- Delivered presentations to fisheries management councils and the Northeast Region Coordinating Council, among others.
- Implementation of precision standard.



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Precision Standard

- Intent of standard is to **mask highly imprecise estimates** with a percent standard error above 50.
 - Will not affect public access to survey respondent data (used to produce estimates).
- Estimates with a percent standard error exceeding 50 are typically not statistically different from zero.
- **Implementation has been delayed** to allow additional time to work with data users to prepare for the transition.



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What Does the Precision Standard Do?

- **Conforms to OMB's requirement** for statistical programs to establish criteria for determining when an estimate is too unreliable to publicly release.
- **Highlights gaps** in the availability of sufficiently precise estimates.
- Provides analysts with **more flexibility** to determine appropriate methods for filling data gaps, rather than needing to rely on highly imprecise estimates.
- **Reduces risk of using highly imprecise estimates** to inform fisheries management decisions.
- **Aligns NOAA with standards and best practices of other federal statistical agencies** that produce statistics for decision-making.



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How Was the Precision Standard Developed?

- With **collaborative feedback** from partners who explored effects of **imprecise estimates on stock assessment results**.
- Partners determined estimates above 40 PSE should be used with caution.
- The U.S. Census Bureau does not provide estimates with a PSE above 30.
- Atlantic Coastal Cooperative Statistics Program continues to set goal of achieving PSEs below 30.
- In 2019, prior to implementation, we solicited feedback from partners on all of the standards through leveraging our partnerships with fisheries commissions and FINs.



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Shift to Cumulative Estimates

Estimates prior to 2023

	2-month "wave" estimates	Preliminary Data Available (Approx. Date)
Wave 1	January-February	April 15
Wave 2	March-April	June 15
Wave 3	May-June	August 15
Wave 4	July-August	October 15
Wave 5	September-October	December 15
Wave 6	November-December	February 15

New Estimates

	Cumulative Estimates	Preliminary Data Available (Approx. Date)
Wave 1	January-February	April 15
Wave 2	January-April	June 15
Wave 3	January-June	August 15
Wave 4	January-August	October 15
Wave 5	January-October	December 15
Wave 6	January-December	February 15

Cumulative estimates are still produced every two months.



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Why are we now producing estimates Cumulatively?

- To make **better use of existing data** to best inform fisheries management.
- Aggregating data is a **common statistical approach** to increase sample sizes and smooth spikes/anomalies in data.
- **More data** feeding into the estimates means there is a better chance of the **sample being representative** of the recreational fishing community's activities.
- To produce **more reliable estimates** that improve in precision throughout year as a result of increased sample sizes.
- Survey respondent raw data still publicly available, as needed, to customize estimates.



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New Fishing Year Options

Cumulative estimates for:

- **March** fishing year (March 1 - Feb. 28)
- **May** fishing year (May 1 - April 30)
- **July** fishing year (July 1 - June 30)
- **September** fishing year (Sept. 1 - Aug. 31)
- **November** fishing year (Nov. 1 - Oct. 31)

*New fishing year options **reduce need for data users to produce their own custom estimates** for fisheries that don't align with the traditional calendar year. These were added based on customer feedback.*



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What this means

Estimates are provided cumulatively by wave.

Imprecise estimates (PSE > 30%) are flagged and those that do not meet the standard (PSE > 50%) identified.

Microdata and tools will remain available to analysts to produce custom domain level estimates

Interpretation of custom domain estimates will continue to rely on analytical justifications and assumptions outside of survey design constraints on estimation.



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Next Steps

Working with the Science Centers and Regional Offices to develop a decision framework for the use of the estimates

Scoping meeting on July 10 (OST, SEFSC, SERO, OSF)

Meeting looked at:

Estimation Options

Alternative estimation approaches

Custom domain estimation (tools and methods)

Presentation of estimates

Options for full workshop



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