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Office of Science
and Technology

Marine
Recreational
Information
Program

MRIP Data User Seminar: An Introduction to MRIP Data

October 26, 2021

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Seminar Series

Companion to the [MRIP Data User Handbook](#)

Sign up for individual sessions using the links below.

- [Statistical Methods and Procedures](#) (November 30, 2021)
- [MRIP Query Tool](#) (January 25, 2022)
- [Custom Domain Analyses](#) (February 22, 2022)
- Using Fishing Effort Survey Data (Date and Event Link TBD)
- Using Large Pelagics Survey Data (Date and Event Link TBD)



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Topics

- Understanding Microdata
- Understanding Estimate Data
- Impact of Standards
- Limitations and Considerations
- Accessing Data Products
 - Downloads
 - Site Register
 - Queries
 - Metadata



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Microdata are the recreational fishing information gathered through our recreational fishing surveys.



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Understanding Microdata

General survey microdata are available in SAS and CSV formats. Each file includes **final sample weights**. Each .zip file (labeled either PS_YYYY_sas.zip or PS_YYYY_csv.zip) contains the following datasets, organized by year (YYYY) and two-month sampling period, or wave (W):

- CATCH_YYYYW
- TRIP_YYYYW
- SIZE_YYYYW

Complete information about variable formats and descriptions can be found in the [MRIP Survey Variables](#) guide on the [Recreational Fishing Data Downloads](#) webpage.

CATCH_YYYYW

Catch-level data and variables required for estimation. Contains one record per species per angler trip interview (identified by the variable `id_code`). Each record contains catch totals by catch type in numbers, weight (kg), and length (mm).

Design variables include:

- `Strat_id`: Identifier for the design stratum.
- `Psu_id`: Identifier for the primary sampling unit (site-day).
- `Id_code`: Identifier for the angler trip.
- `Wp_catch`: Post-stratified sampling weight for use in weighted estimation.

TRIP_YYYYW

Trip-level data and variables required for estimation. Contains one record per angler trip interview (identified by the variable `id_code`).

Design variables include:

- `Strat_id`: Identifier for the design stratum.
- `Psu_id`: Identifier for the primary sampling unit (site-day).
- `Id_code`: Identifier for the angler trip.
- `Wp_int`: Post-stratified sampling weight for use in weighted estimation.

Both the FES, which covers private/rental boat and shore fishing modes, and the FHS, which covers charter and headboat fishing modes, provide estimates for individual collapsed areas of fishing (`area_x`).

TRIP_YYYYW: Charter and Headboat Modes

It is possible to have a for-hire effort estimate for a given area (inland, ocean ≤ 3 miles, ocean > 3 miles) with no corresponding trip data from the APAIS. To account for these situations, charter and/or headboat records are included in the trip dataset. While there are no catch data associated with these records, their inclusion allows data users to calculate trip totals that match those reported by the MRIP Query Tool for charter and headboat effort.

These records may be identified by:

- Month=99 o KOD="xx"
- Last 4 characters of psu_id="0000"
- Last 4 characters of strat_id="99xx"
- Id_code=year| |wave| |sub_reg| |st| |fl_reg| |mode_fx| |month| |kod| |"0000", with area_x appended.



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SIZE_YYYYW

Fish-level length and weight data and variables required for estimation. Contains one record per fish caught and measured or weighed by the APAIS interviewer. Missing lengths and/or weights are imputed as needed for individual fish records.

Design variables include:

- strat_id: Identifier for the design stratum.
- Psu_id: Identifier for the primary sampling unit (site-day).
- Id_code: Identifier for the angler trip.
- Wp_size: Post-stratified sampling weight for use in weighted estimation for the size dataset.S

MRIP_Survey_Variables.xls

MEMNAME	NAME	TYPE	LENGTH	LABEL	FORMAT	Code/Description
						(0.) = Sample weights produced from standard 2-month wave level estimation; 1 = Sample weights produced from annual level estimation used to address small sample size issue in the specific ST,MODE_FX,YEAR combination;
SIZE	ALT_FLAG	1	8	ALTERNATE ESTIMATION FLA		
SIZE	ARX_METHOD	2	15	AREA_X GROUPIN \$		Grouping of AREA_X values in annual level estimation used to address small sample size issue in specific ST,MODE_FX,YEAR combinations: area_x = estimation by standard AREA_X values (1, 2, 3, 4, 5); area_x2 = estimation for combined state areas (1,3,5) separate from federal (2,4); area_x3 = estimation for inland (5) separate from combined ocean areas (1,2,3,4); all = estimation from all areas combined
SIZE	AREA_X	2	1	COLLAPSED AREA/\$F		Collapsed area of fishing 1 = Ocean <= 3 mi (all but WFL) 2 = Ocean > 3 mi (all but WFL) 3 = Ocean <= 10 mi (WFL only) 4 = Ocean > 10 mi (WFL only) 5 = Inland
SIZE	COMMON	2	30	COMMON NAME		Common name of species
SIZE	ID_CODE	2	16	ASSIGNMENT NUM\$F		Assignment number (1 digit), interviewer code (4 digit), date (YYYYMMDD), Interview number (3 digit)
SIZE	KOD	2	2	KIND OF DAY (WEEKDAY:WD		Kind of day wd = Weekday we = Weekend
SIZE	L_CM_BIN	1	8	LENGTH ROUNDED DOWN TO		Length of fish rounded down to the nearest cm.
SIZE	L_IN_BIN	1	8	LENGTH ROUNDED DOWN TO		Length of fish rounded down to the nearest in

Estimates are the calculated statistical values produced from microdata.



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Estimate Data for General Surveys

Calibrated recreational catch and effort estimates are available in **SAS** and **CSV** formats for the Atlantic and Gulf coasts beginning in 1981.

Generally speaking, estimates from Maine through Mississippi may be compared across extended periods of time, because calibration methodologies have been applied to account for changes in survey design and sample coverage over the years.

More information about variable formats and descriptions can be found in the [MRIP Estimate Variables](#) guide on the [Recreational Fishing Data Downloads](#) webpage.

MRIP Effort & MRIP Catch

EFFORT estimates include one record per MODE, AREA, STATE, SUBREGION, and YEAR.

CATCH estimates include one record per SPECIES, MODE, AREA, STATE, SUBREGION, and YEAR.

WAVE estimates will be replaced by cumulative estimates in 2023.

MRIP_Estimate_Variables.xls

NAME	LABEL	Code/Description	TYPE
status	Estimate Status	PRELIMINARY or FINAL	CHAR
year	Year	Year (4-digit)	NUM
		Two-month sampling period 1 = January/February 2 = March/April 3 = May/June 4 = July/August 5 = September/October 6 = November/December	
wave	Wave		NUM
wave_f	Wave (Formatted)	Wave description/formatted value (see wave)	CHAR
		Subregion code for region of trip 4 = North Atlantic (ME; NH; MA; RI; CT) 5 = Mid-Atlantic (NY; NJ; DE; MD; VA) 6 = South Atlantic (NC; SC; GA; EFL) 7 = Gulf of Mexico (WFL; AL; MS; LA) 8 = West Pacific (HI) 11 = U. S. Caribbean (Puerto Rico and Virgin Islands	
sub_reg	Region		NUM

Impact of Recreational Fishing Survey and Data Standards



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Why were the standards developed?

Promote **data quality, consistency, and comparability** across state, regional, and federal recreational fishing surveys, and respond to recommendations from the National Academies that we **establish performance standards**.

Will further ensure:

- The **integrity and transparency of our data collection efforts**;
- The **quality of our recreational fisheries statistics**; and
- The **strength of our science-based management decisions**.

Learn more: [Recreational Fishing Survey and Data Standards](#)

How will the standards impact the way our estimates are presented?

- Wave estimates will be replaced with cumulative estimates.
- Estimates with PSEs over 50% will not be published.



Image: Chesapeake Bay Program



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Limitations



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Data Revisions

Preliminary estimates may be revised before they are published as final, and final estimates may be revised if errors are found. We cannot predict how they will change. When substantial revisions are made, subscribers to our [email service](#) are notified and notes are posted to the [MRIP Query Tool](#) and [Recreational Fishing Estimate Updates](#) webpage.

Sample Size

Small sample sizes may result in imprecise estimates. Catch estimates for rare-event species, for example, are often less precise than catch estimates for commonly caught species. But when we group year, state, wave, or mode estimates together, sample sizes increase and precision improves. For this reason, **our estimates are best viewed in aggregate: annually and at the state or regional level.**

Time Series

Generally speaking, estimates from Maine through Mississippi may be compared across extended periods of time, because calibration methodologies have been applied to account for changes in survey design and sample coverage over the years. However, we advise caution in using the National Summary Query to make such long-term comparisons for estimates in Louisiana, California, Oregon, Washington, and Hawaii.

Weight Estimates

In some cases, landed fish may not be represented in weight data. This can occur when no fish were observed, or when observed fish were too large for a weight measurement to take place. Furthermore, weight estimates published in the MRIP Query Tool may differ from weight estimates published by the Southeast Fisheries Science Center, which follows [a different weight estimation procedure](#) for South Atlantic and Gulf of Mexico managed species. More information about how weight estimates are produced can be found in the [Weight Data](#) entry of the [Recreational Fishing Data Glossary](#).

Accessing Data Products



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Data Downloads

From the [Recreational Fishing Data Downloads](#) page, you have access to:

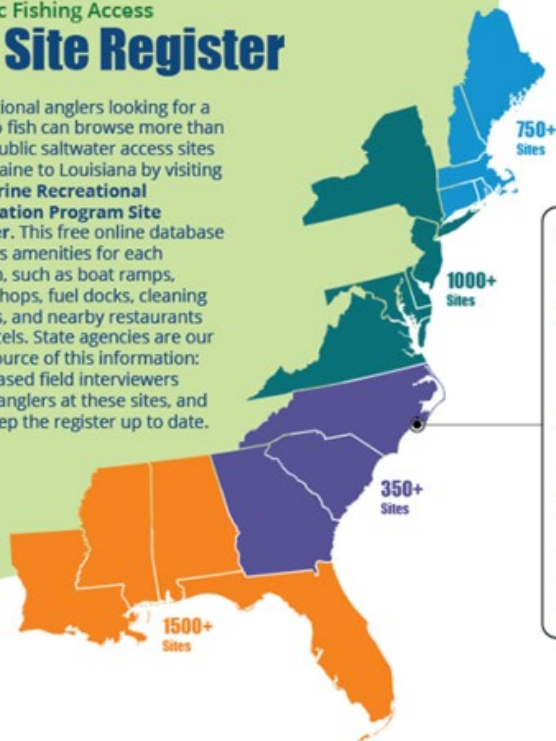
- Microdata for general surveys
- Estimates for general surveys
- Microdata for LPS
- Estimates for LPS
- Domain analysis programs in SAS/R (seminar on February 22, 2022)



Image: J. Newsome

Site Register

Recreational anglers looking for a place to fish can browse more than 3,800 public saltwater access sites from Maine to Louisiana by visiting the **Marine Recreational Information Program Site Register**. This free online database also lists amenities for each location, such as boat ramps, tackle shops, fuel docks, cleaning stations, and nearby restaurants and hotels. State agencies are our main source of this information: State-based field interviewers survey anglers at these sites, and help keep the register up to date.



Sample Site Register Entry

Bogue Inlet Fishing Pier
Emerald Isle, NC
Weekend Day (Fri.-Sun.) | June
11 a.m. - 5 p.m.

Fishing Mode
Shore

Site Pressure
50-79 anglers

Characteristics
Fishing activity not affected by tide.
Fee charged for public use.

Amenities
Bait and tackle shops, cleaning stations, lighting at night, restaurant and lodging onsite and in vicinity.

The Public Fishing Access **Site Register** is an online database of marinas, boat ramps, beaches, and other public fishing access sites along the Atlantic and Gulf coasts. [Click "Guest Login" to start searching.](#)

The Public Fishing Access Site Register includes information about the amount and kind of recreational fishing expected to take place at each site. An understanding of **fishing mode** and **site pressure** helps us determine when and where to sample recreational fishing trips.

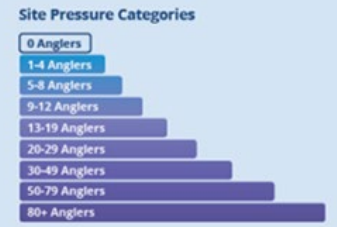
Fishing Mode

Fishing mode describes a particular type of fishing. Anglers fishing in different modes may target different species or catch different size fish.



Site Pressure

Site pressure categories describe the estimated number of anglers expected to complete a fishing trip at a particular site during a particular time. Pressure at a single site can vary based on month, time of day, and whether it's a weekday or weekend.



Queries

The [MRIP Query Tool](#) allows users to filter catch and effort data by time series, geographic area, species, mode, and other characteristics. Query results can be viewed in table or graph form, or downloaded as a CSV file.

Queries include:

- Catch and Effort Data
 - Note New Query: “Preview of Data Standards”
- Large Pelagics Survey
- National Summary
- Data Download



MRIP Catch Time Series Query

Please view the [glossary](#) or click the highlighted links in the left hand column for more information about select query options

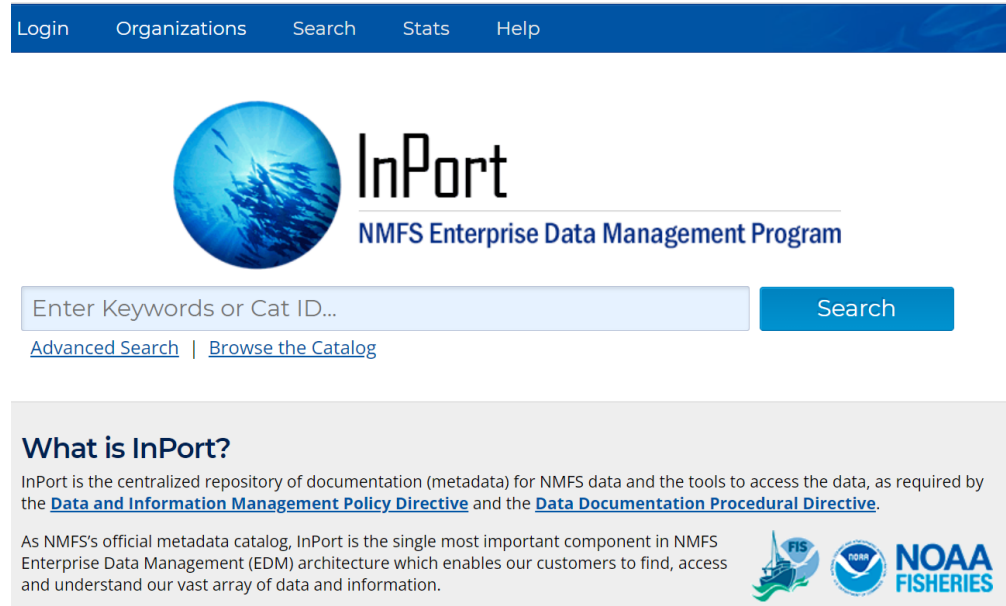
FROM (Earliest Year):	2021 ▾	Glossary
TO (Latest Year):	2021 ▾	
SUMMARIZE BY:	ANNUAL ▾	
GEOGRAPHICAL AREA STATE/AREA:	UNITED STATES BY SUB-REGION ▾	
SPECIES: For species not in the drop-down list please click the 'Other Species' button to the right.	ALBACORE ▾	<input type="button" value="Other Species"/>
TYPE OF FISHING:	ALL MODES COMBINED ▾	
FISHING AREA :	ALL AREAS COMBINED ▾	
TYPE OF CATCH:	TOTAL CATCH (TYPE 1, 2, 3)	

* Query Tool Seminar on January 25, 2022




Metadata

Metadata that describes the “what, when, how, where, and who” of MRIP’s data is available in [InPort](#), the centralized repository of NOAA Fisheries’ data documentation in machine readable format.



The screenshot shows the InPort website interface. At the top is a dark blue navigation bar with links for Login, Organizations, Search, Stats, and Help. Below this is a circular image of fish underwater. To the right of the image is the InPort logo and the text "NMFS Enterprise Data Management Program". Below the logo is a search bar with the placeholder text "Enter Keywords or Cat ID..." and a blue "Search" button. Under the search bar are two links: "Advanced Search" and "Browse the Catalog". Below the search bar is a section titled "What is InPort?" with a paragraph of text explaining its purpose. At the bottom right of the section are three logos: FIS, NOAA, and NOAA FISHERIES.

Login Organizations Search Stats Help

 **InPort**
NMFS Enterprise Data Management Program



Enter Keywords or Cat ID... [Search](#)

[Advanced Search](#) | [Browse the Catalog](#)

What is InPort?

InPort is the centralized repository of documentation (metadata) for NMFS data and the tools to access the data, as required by the [Data and Information Management Policy Directive](#) and the [Data Documentation Procedural Directive](#).

As NMFS’s official metadata catalog, InPort is the single most important component in NMFS Enterprise Data Management (EDM) architecture which enables our customers to find, access and understand our vast array of data and information.

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Questions?

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