



**NOAA
FISHERIES**

Large Pelagics Survey Overview

May-26-2021

**Large Pelagics Survey Team
Fisheries Statistics Division (ST1)
Office of Science & Technology
NOAA - Fisheries**

Outline

- LPS design and estimation overview
- LPS Redesign Project

Large Pelagics Survey (LPS)

- Estimate **catch** and **effort** for Atlantic highly migratory species (HMS) and other large pelagic species from offshore recreational fisheries in the Mid- and North Atlantic regions from June through October
- Complex design using complemented surveys approach
- Specialized to cover Atlantic bluefin tuna and related uncommon or pulse fisheries
- Used for stocks assessments, regulations, quota monitoring

LPS (*cont.*)

- Atlantic Tunas Convention Act (1975)
- HMS vessel-based permit is required, and reporting is mandatory
- Fulfills U.S. obligations to International Commission for the Conservation of Atlantic Tunas (ICCAT)
- [Link](#) to detailed technical MRIP design and estimation document (see Section 7. LPS)

Species in LPS

Tunas



Bluefin (by size class),
bigeye, albacore, yellowfin,
skipjack, little tunny, Atlantic
bonito, blackfin tuna

Billfish & Swordfish



white marlin, blue marlin, sailfish, roundscale
spearfish, longbill spearfish, swordfish

Sharks



threshers, makos, hammerheads, blue, white, porbeagle,
sandbar, bignose, dusky, silky, night, black tip, spinner,
bonnethead, bull, oceanic whitetip, tiger,
sand tiger, Atl. sharpnose

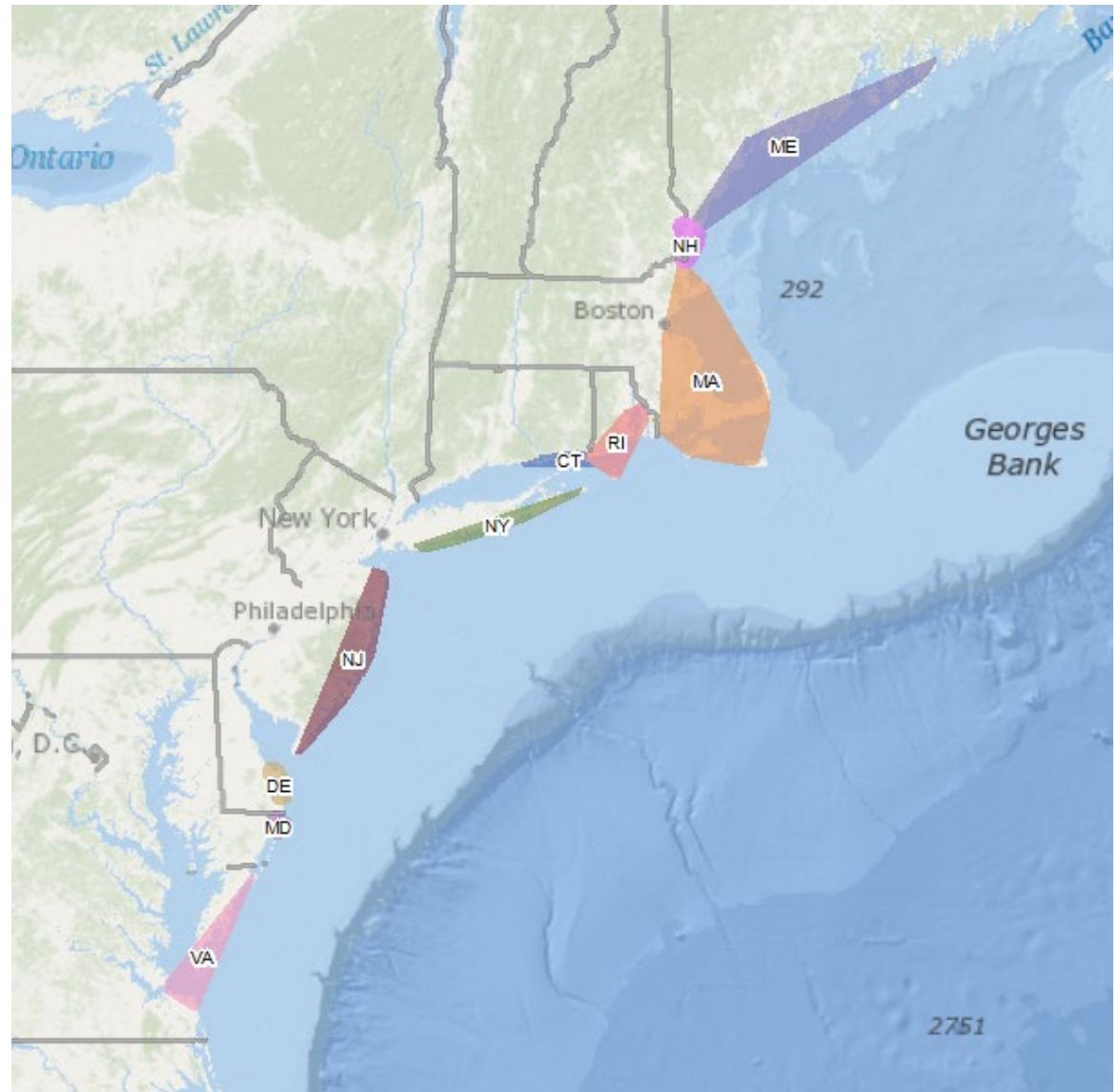
Other pelagics



dolphin, greater amberjack, wahoo

LPS Coverage

- Private and Charter boats
- 10 States ME-VA
- June-October



LPS Survey Components

- **LPTS:** Telephone Survey
 - Effort (vessel trips)
 - Separate surveys for private boat and charter boat modes
- **LPIS:** Intercept Survey
 - Catch rates
 - Detailed trip characteristics
- **LPBS:** Biological Sampling
 - Otoliths, muscle tissues, gonads
 - Opportunistic, data not used in catch and effort estimation

LPTS - Private

- Estimate effort (no. vessel trips) for private boat mode
- List frame telephone survey
- Sample frame: HMS vessel permit list (Angling & General permit categories)
- Reporting is mandatory
- Sample stratified by state, month, two-week reference period
 - Maine-Virginia, June-October
- Advance notification letters
- Calling for selected vessels done in the week immediately following the two-week reference period

LPTS - Private (*cont.*)

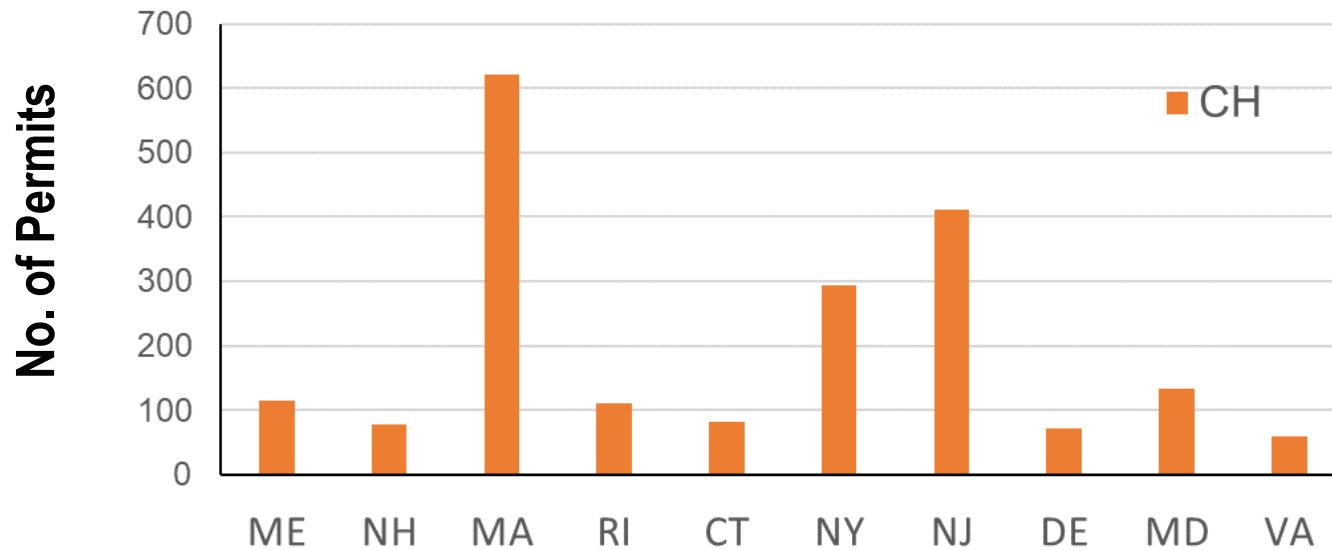
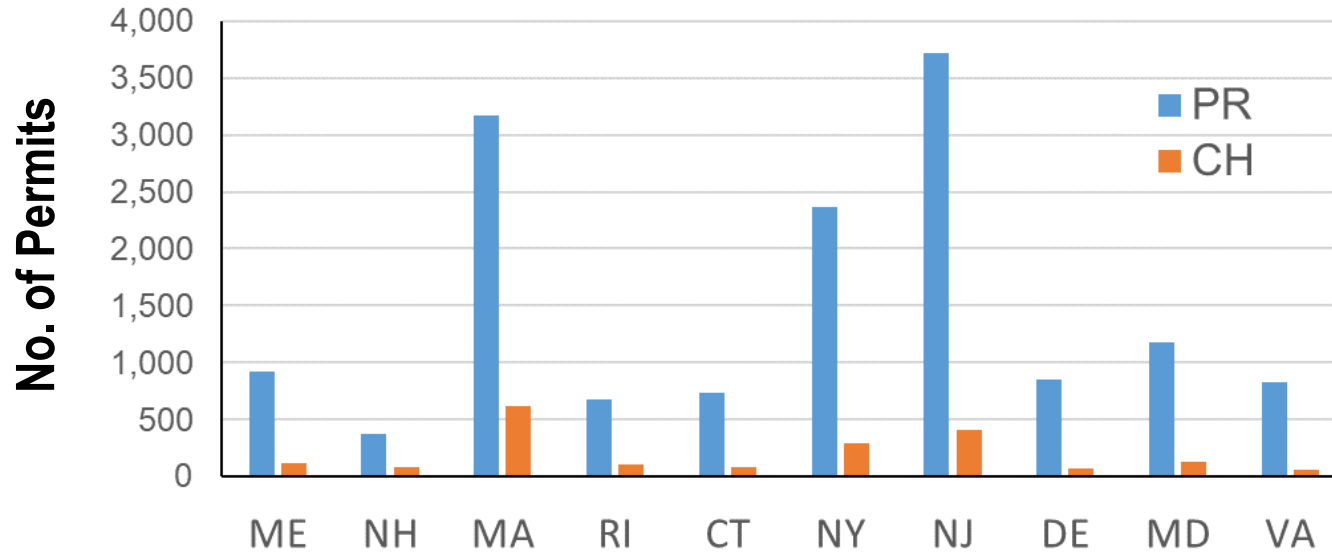
- Interviewer administered questionnaire via CATI
- Trip profile questionnaire format
- Detail information collected for each trip (examples):
 - Fishing access site
 - Primary target species (or size class)
 - Tournament
 - Limited catch data (bluefin, bigeye tuna, white marlin, select shark species)



LPTS - Charter

- Estimate effort (no. vessel trips) for charter mode
- Conducted as add-on to For-Hire Survey (FHS); list frame telephone survey
- Sample frame: vessels with HMS Charter/Headboat permit in the FHS frame
- Sample stratified by state, month, one-week reference period
 - Maine-Virginia
 - June-October
- Advance notification letters
- Calling for selected vessels done in the week immediately following the one-week reference period

Number of HMS Permits by State - 2020



LPTS Sample Sizes and Response Rates

- 2019 Sample Sizes
 - PR completed interviews: 5,063
 - CH completed interviews: 3,356
- 2019 Response Rates
 - PR: 64%
 - CH: 59%

LPIS

- Estimate catch rates by species and disposition (catch type)
- Dockside survey of captains returning from large pelagic fishing trips
- Complex design employing stratification, clustering, and unequal selection probabilities
- Stratified by state, month, and fishing mode
 - Maine-Virginia
 - June-October
 - PR, CH

LPIS (*cont.*)

Information collected:

- **Catch counts per vessel trip by species and disposition**
- **Vessel ID and HMS permit information**
- Boat effort (number of lines, people, hours)
- Primary & secondary target species
- Fishing location (miles offshore, latitude/longitude, area)
- Fishing method
- Water temperature, depth
- Individual fish observations (length, sex)

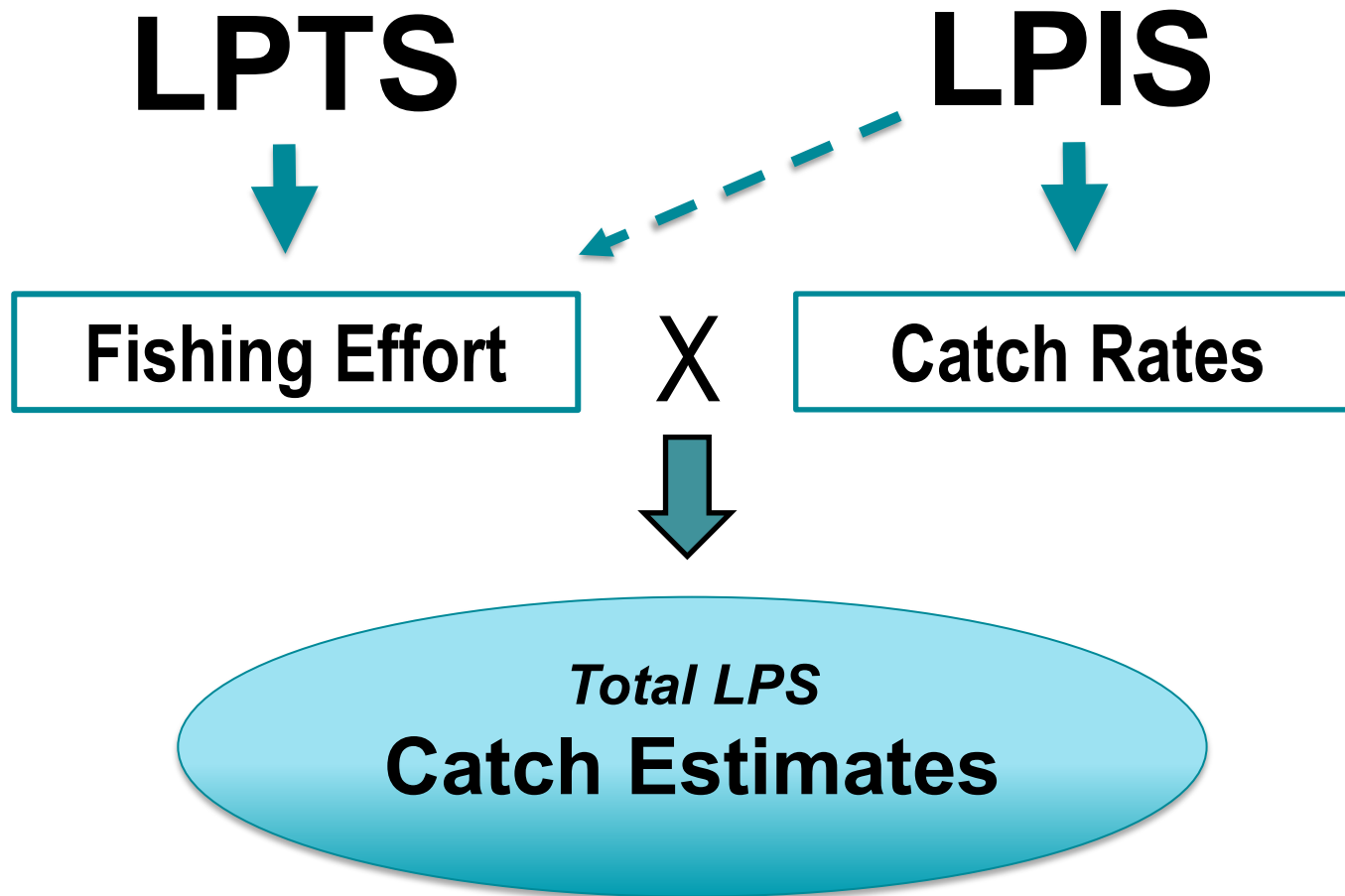
LPIS Sample Sizes and Response Rates

- 2019 Sample Sizes
 - Assignments completed: 2,344
 - PR vessel intercepts: 2,417
 - CH vessel intercepts: 1,606
- 2019 Response Rate
 - 98%

LPS Quality Assurance

- Interviewer training and performance monitoring
 - Species identification
 - Survey objectives, design, interviewing procedures
 - Silent Monitoring/Remote Screen Viewing (LPTS)
 - Dockside-unannounced visits by supervisors (LPIS)
 - Validation phone calls to interviewed captains/owners (LPIS)
- Layered data QA/QC process
- Transition to electronic data collection (LPIS)
- Data review meetings (weekly calls, mid-season & end-season comprehensive reviews)
- Refusal tracking and follow-up coordination with NOAA Fisheries Atlantic HMS Management Division

LPS Estimation



- [Link](#) to detailed technical MRIP design and estimation document (see Section 7. LPS)

LPS Estimates

Effort – no. vessel trips

- By boat type: private, charter
- By month: June-October
- By **area**: VA, MD/DE, NJ-North, NJ-South, NY, CT/RI, MA, NH/ME

Catch – no. fish

- By boat type: private, charter
- By disposition (catch type): kept, released dead, released alive
- By species (including specific bluefin tuna size classes)
- By month: June-October
- By **area**: VA, MD/DE, NJ-North, NJ-South, NY, CT/RI, MA, NH/ME
- Length frequencies

LPS Web Query Tool

<https://www.fisheries.noaa.gov/data-tools/recreational-fisheries-statistics-queries>

[Find A Species](#) [Fishing & Seafood](#) [Protecting Marine Life](#) [Environment](#) [Regions](#) [Resources & Services](#) [About Us](#)

Recreational Fisheries Statistics Queries

Recent Updates

For a full list of updates, please see our [Estimate Updates](#) page.

April 26, 2021

The following estimates from the Marine Recreational Information Program are now available for the Atlantic and Gulf Coasts and Hawaii:

- Preliminary Wave 1, 2021 Catch and Effort estimates

April 16, 2021

The following estimates from the Marine Recreational Information Program are now available for the Atlantic and Gulf Coasts and Hawaii:

- Final 2020 Catch and Effort estimates

While the COVID-19 pandemic disrupted the Access Point Angler Intercept Survey (APAIS), its overall impact on recreational fishing data collection was lower than first expected, and NOAA Fisheries was able to fill gaps in 2020 catch data with data collected in 2018 and 2019. These imputed data—also known as proxy, or replacement, data—match the time, place, and fishing mode combinations that would have been sampled had the APAIS continued uninterrupted. Imputed data were combined with observed data to produce catch estimates using our standard estimation methodology. To ensure imputed data weren't over-

Catch Data

Select a Catch Query ▾

Goto Query

Effort Data

Select an Effort Query ▾

Goto Query

Participation Data

Select a Participation Query ▾

Goto Query

National Summary Query

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Download Query

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LPS Redesign Project

- Focused on LPIS
- Coordinated with MRIP consultants at Colorado State University
- Improve intercept survey design to be statistically valid while maintaining sampling productivity
- Combining fixed probability sampling with “adaptive” sampling
- Adaptive sampling allows for movement of a subset of assignments based on field conditions (e.g. weather, fishery conditions – fish availability, regulations)
- In second year of a 3-year field testing period for new design



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