



# **Collecting Consistent Scientific Data on Recreational Boating & Other Off-Road Recreational Vehicles**

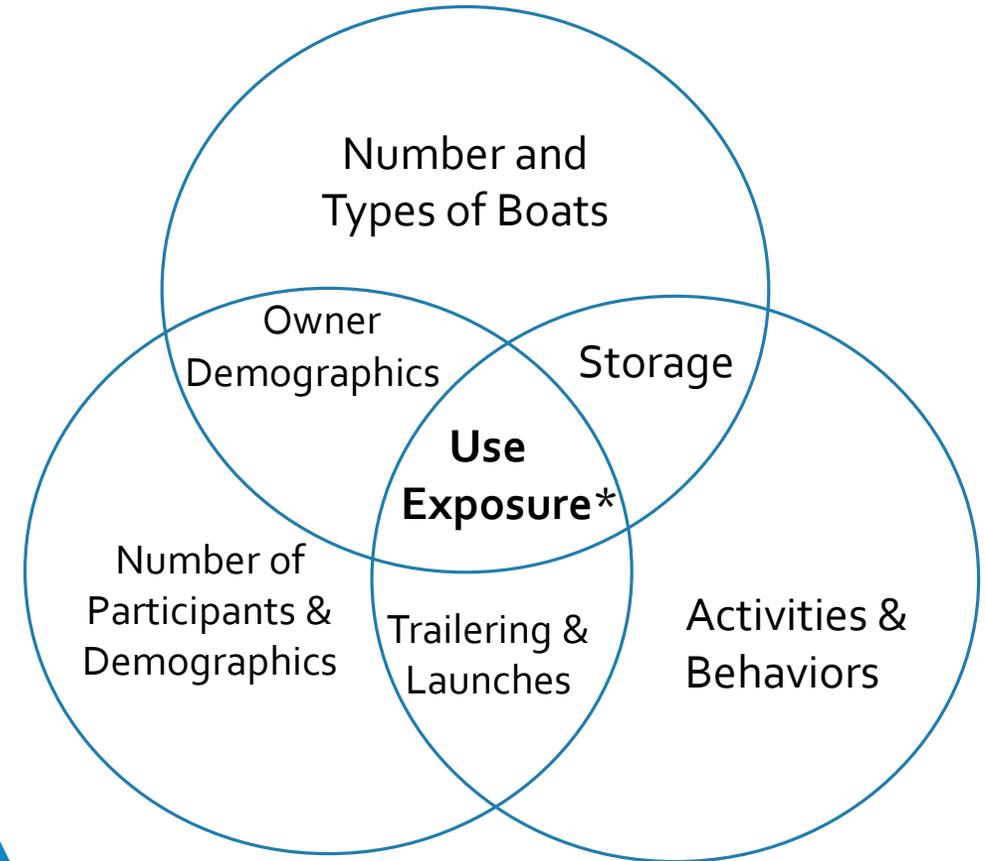
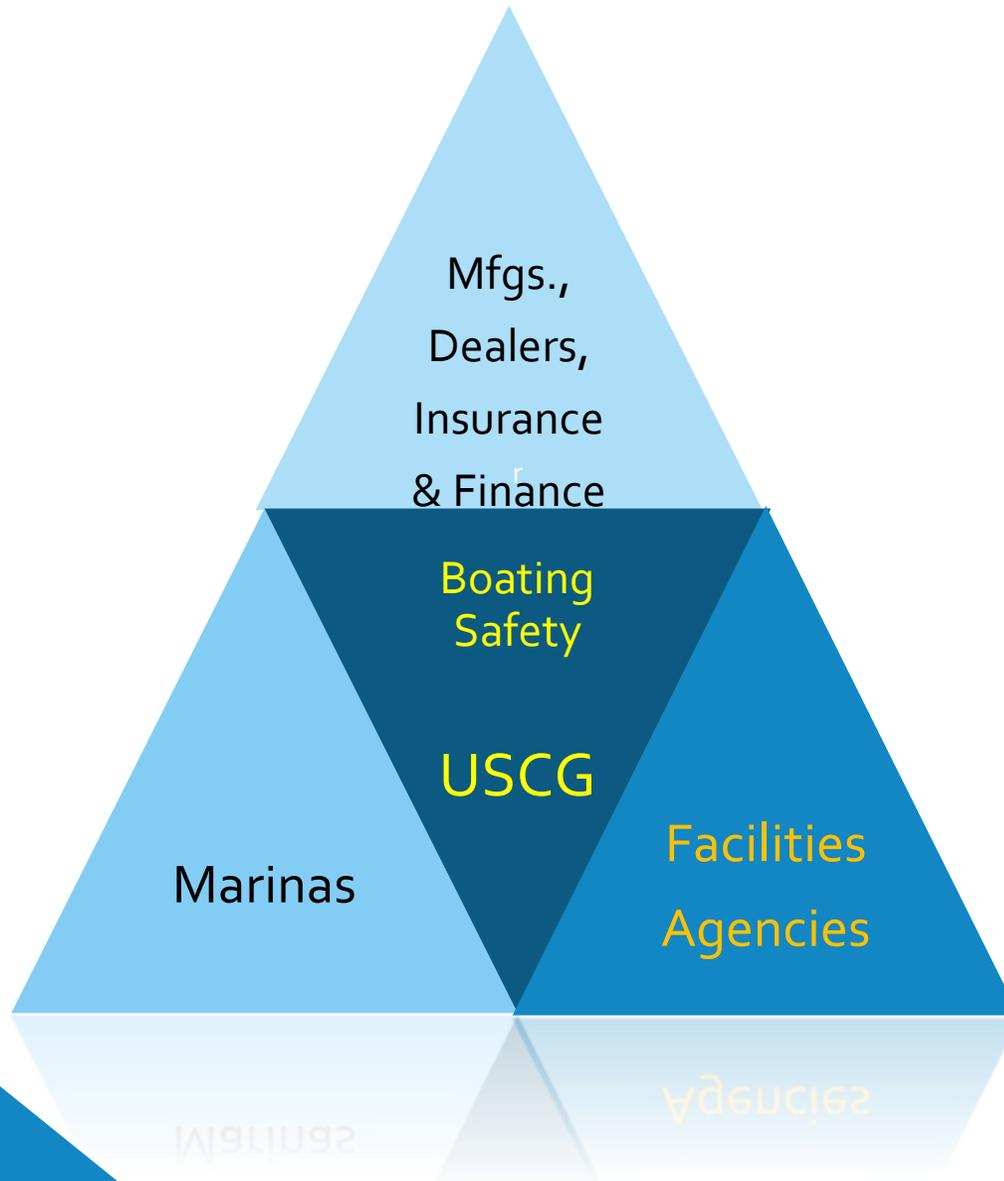
## **Case Study: The National Recreational Boating Safety Survey**

MSTRS Meeting, April 2, 2019  
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# Producing Reliable Estimates of (Off-Road) Recreational Vehicles/Boats and Their Use, Fuel Consumption, Emissions

- How much of the equipment is still operational (i.e., sold, junked, not operable, repurposed as lawn ornaments)?
- The age of the equipment?
- Is it required to be registered?
- Maintenance of the equipment?
- How many and what types of equipment/boats are operated?
- How much are they operated?
- What engines/motors (i.e., size, type) power this equipment?
- What activities is the equipment used for – fishing, skiing?

# NRBSS – An Effort to Produce Valid, Reliable and Consistent Data Needed by the “Boating System”



\* Exposure data needed by USCG to produce RISK RATIOS

## Recreational Boating in the U.S.

- Boating is a very significant recreational activity and contributor to our economy
- Estimated there are 22 million boats and 74 million boating participants in the U.S.
- In 2017 about 11.96 million registered boats – meaning in “most” states MOTORIZED
- Compared to about 12.94 million registered boats in 2005.
- Requirements to be registered are different (and complicated) across states and DC.
- In 2012 there were 12,101,936 registered and (NRBS) estimated 950,000 unregistered (most having no no motors or engines) boats.

# Some Observations Concerning Boating Research in the U.S.

- RESEARCH CONCERNING RECREATIONAL PARTICIPATION AND EQUIPMENT OWNERSHIP/USAGE is assumed to be SIMPLE/EASY. It is anything BUT, if conducted scientifically!
- Often studies are designed/intended to generate proof/evidence/collaboration and not CONSISTENT AND OBJECTIVE (e.g., reliable, valid) data and information.
- Big/Growth Numbers are often wanted/intended... until those numbers give rise to “unfavorable” policies, regulations, fees.....
- The quality of secondary data (govt/industry/university produced) must be carefully dissected and not always trusted
- Many of the studies employ questionable scientific methods (e.g., samples, instruments, biases/weighting, implications/conclusions).
- The methods, definitions and data collected change often and without concern about comparability (e.g., trend analysis, modeling)

## Reasons for the NRBSS

- Decades ago, U.S. Congress directed the Coast Guard to conduct research in order to obtain valid data about boating activity and about which initiatives are effective in enhancing safety
- Different performance audits of the RBS Program have concluded that the USCG had not established criteria for monitoring the state's RBS Program efforts and recommended that it improve data to conduct program evaluations.
- OMB concluded that there was no evidence that the USCG had identified or systematically monitored the key drivers of the marine safety program performance. The report recommended that the USCG should work to normalize its existing performance measures to reflect the effect of a changing boating population (e.g., number of boats, types of boats used, demographic aspects of boating participants) on the Program's performance.

## Authorization of NRBSS: 129 STAT. 1622 PUBLIC LAW 114-94-DEC. 4, 2015

- The Secretary may use amounts made available each fiscal year under section 4(b)(2) of the Dingell-Johnson Sport Fish Restoration Act (16 U.S.C. 777c(b)(2)) for payment of expenses of the Coast Guard for investigations, personnel, and activities directly related to: (i) administering State recreational boating safety programs under this chapter; or (ii) coordinating or carrying out the national recreational boating safety program under this title.
- Of the amounts used by the Secretary each fiscal year under subparagraph A: "**not more than \$1,500,000 is available** to conduct by grant or contract a survey of levels of recreational boating participation and related matters in the United States."

# 2018 NRBSS – Consists of Two Surveys:

## I. Participation Survey

- National estimates of the number of persons that go boating, their socioeconomic characteristics, whether they own boats and what types, whether they operate boats.
- Surveys collected data covering January 2018-December 2018
- National and Census Division-level estimates
- Surveys sent quarterly; three month reference period
- Address-based general population (ABS) sample
- 5K + completions and met 100 percent of division and national targets

## Types of NRBSS/Participation Survey Data/Estimates

1. The number and percentage of persons in the general population that go recreational boating. Socio-economic profile of persons that go boating (i.e., age, race, marital/family status, income).
2. The average and total annual number of days that persons of various socio-economic segments (i.e., age) go recreational boating.
3. Activities (i.e., fishing, skiing) engaged in while boating (for boat type and size segments).
4. The number and percentage of boat-owning households by boat type and size (i.e. the average number of boats owned per household).
5. The characteristics of households owning different numbers and types of boats

## II. NRBSS Exposure Survey

- Monthly Surveys collected data covering January 2018-December 2018
- State-level estimates of exposure/use for different types of boats owned by residents
- Respondent reports days of use of boats owned, and detailed information about the last outing during the month (e.g., hours, persons aboard)
- Registered boat sample and Address-Based general population sample (ABS) and
- 30K completions , 100%+ state targets and 100 percent of national targets

## Types of NRBSS/Exposure Survey Data/Estimates

1. The total number recreational boats of different types and sizes owned in all States, the District of Columbia.
2. The number and percentage of recreational boats by type and size that were used/operated in 2018 (not at the dock).
3. The (average) number of days, boats by type and size are used out on the water (not at the dock, i.e., boat-days).
4. The (average) number of hours boats by type and size are used on days when they are in use out on the water (not at the dock, i.e., boat-hours).
5. The number of boat-person hours (hours the boat is out on the water [not at the dock] multiplied by number of people aboard that boat) by type and size of boats

## Estimation of Risk Ratios

- The number of different types of boats
- The number of different types of boats operated
- The number of days they are operated = BOAT DAYS
- The number of hours they are operated = Boat Hours
- The number of persons aboard when operated = Person boat hours

# Boats involved in accidents/ Boat Days, Boat Hours

# Boating Fatalities/ Boat Days, Boat Hours