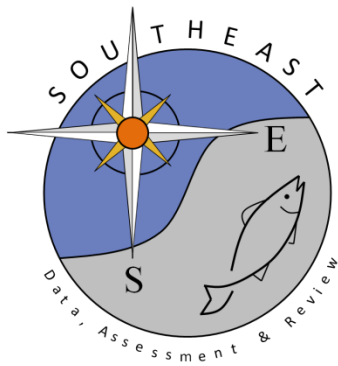


TPWD Boater Registration Analysis

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Executive Summary

This paper summarizes preliminary analysis of Texas boater registration data for License Year 2024 and the mean values for 2015 through 2024 (using license years that begin on September 1 of the previous year and end August 31). We compare these various estimates of saltwater boats to the estimated angler effort by the NMFS Office of Science and Technology which used MRIP data to convert TX Creel survey estimates (NMFS Office of Science and Technology 2022). The goal of this work is to serve as a “gut check” to assess if the NFMS angler effort estimate for Texas is reasonable or within the universe of possibilities given the angler and boater information.

There are over half a million boats registered in the entire state of Texas, the majority of those used for pleasure boating (Table 1, Figure 1). Pleasure boating is defined as non-commercial use in which the activity is recreational in nature and captures the majority of recreational fishing activity as well as non-fishing pleasure boating. We used several methods to estimate how many of these boats are fishing in saltwater and/or offshore. These included using Fishing, Hunting, and Wildlife-Associated Recreation Survey (FHWAR) to estimate the proportion of Texas anglers who fish in saltwater, assuming that only boats over 16 feet are able to reach offshore and using the proportion of trips offshore from TPWD’s Creel program (TX Creel). Those estimates are summarized in Table 3. We included information about boats registered in the 18 Texas counties adjacent to the coast for reference, although those were not used for calculations (Tables 1 and 2). It is important to note that not all registered boats are active; we are unable to determine the proportion of registered boats actively being used but assume this number is an overestimate.

The Texas Parks and Wildlife has additional data that can inform the effort of these vessels. According to the 2023 TX Creel survey, 4.6% of vessels are fishing offshore (outside of the bays). Of those boats fishing offshore, the vessels intercepted had a mean of 3.2 anglers on board, and a mean trip length of 6.8 hours. Additionally, Texas weather can be highly variable, especially on the densely populated upper coast, that can significantly limit anglers’ ability to travel offshore year-round and even in the high use fishing season.

Using all this information, we calculated how many trips each boat would need to take to reach the 11,172,597 saltwater angler trips NMFS estimates (including bay and offshore trips), summarized in Table 3. Depending on how the number of boats is calculated, results ranged from 41.2 to 60 trips per boat per year. When applying the mean 3.2 anglers aboard offshore trips to calculated angler trips, those numbers range from 12.9 to 19 saltwater trips per boat per year. These numbers are underestimates, as not all boats are active or capable of fishing offshore or even in saltwater.

To gauge whether these trip numbers are reasonable, we used FHWAR survey results. FHWAR estimated 1.7 million total saltwater anglers (resident and non-resident) taking 34% of the fishing trips and 30% of the fishing days. Applying these percentages to all fishing trips and anglers would yield 12,630,000 total saltwater days and an average of 7.4 fishing days per saltwater angler, including inshore and offshore trips for shore-based anglers as well as charter, head boats, and private boats. Factoring in the cost of trips and Texas creel data, we assume the majority of those fishing days are shore-based trips and that shore-based anglers might fish more frequently than those taking out a boat. If so, that would imply that less than 7 trips per year is a reasonable estimate for the number of boat trips taken by an average saltwater angler, including inshore and offshore.

Boater Registration Use

Total boats registration in Texas has been fairly consistent for the past ten years, with a mean of 578,336 (Figure 1, Table 1). Texas boater registration use categories include: charter fishing, commercial fishing, other commercial use, livery, commercial passenger, pleasure, and government/political subdivision. The statewide totals include boats that are registered to an “unknown” or “out of state” county.

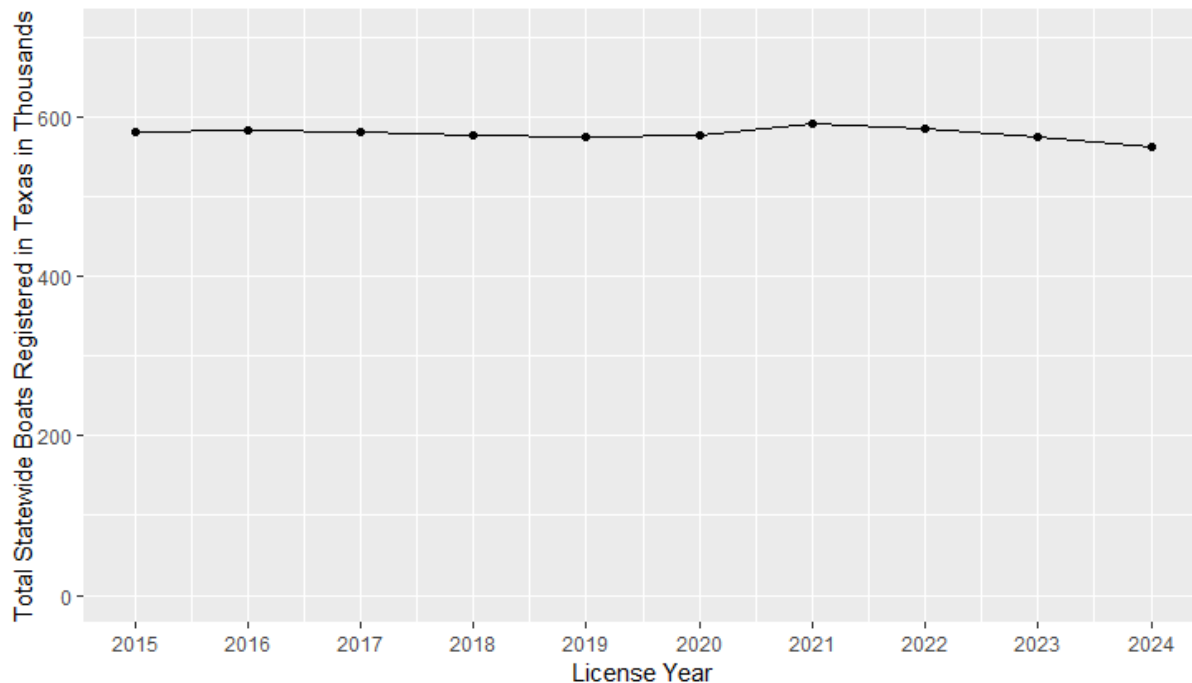


Figure 1. Statewide Total Boats Registered in Texas from 2015 to 2024. The y-axis is in thousands of boats.

We also looked at boater registration information broken down by counties that are near the coast as a way to inform offshore fishing pressure in Texas. Coastal counties were defined by Texas General Land Office Coastal Zone area and include 18 counties on or near the coast. Coastal counties defined by Texas General Land Office Coastal Zone area. These include Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Harris, Jackson, Jefferson, Kenedy, Kleberg, Matagorda, Nueces, Orange, Refugio, San Patricio, Victoria, Willacy.

Table 1. Breakdown of statewide and coastal county boat registrations totals by use type

	Statewide Totals by Use Category	
	2024	Mean 2015-2024
All uses (grand total registered)	562,128	578,336
Charter Boats	179	93*
Pleasure Boats	556,625	573,605
	Coastal County Totals by Use Category	
	2024	Mean 2015-2024
All uses (grand total registered)	111,001	119,515
Charter Boats	99	41*
Pleasure Boats	108,879	117,433

*There is no charter boat data for 2015 and 2016

The majority of boats registered in Texas are registered for “pleasure” (Table 1). These are the boats that would include recreational fishing, in addition to other recreational boating. For the last ten years, 99.2% of boats in the state were registered as pleasure boats. The ratio of pleasure boats to the total number of boats has remained fairly consistent but dropped slightly in recent years, as have the total number of boat registrations (Figures 2, Figure 1).

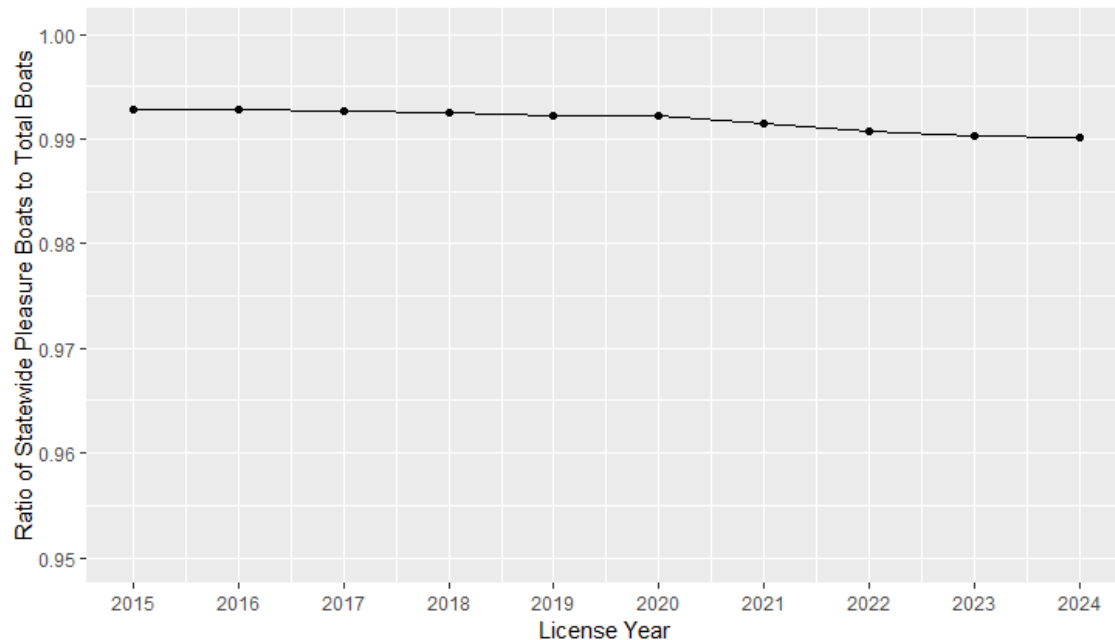


Figure 2. Ratio of statewide registered pleasure boats to total boats. Note that the y-axis starts at 0.95 to show detail.

Boat Length

As Texas weather and wave height typically limit the type of vessel suitable to take offshore, we also looked at the size of the vessel registered (Table 2). Notably, this analysis could not distinguish by both boat length and use type, so these totals include boats registered for all uses and are overestimates for recreational angling. Livery boats less than 16" in length are registered in a separate category. All larger livery boats are included in the large length categories. Based on staff input, only boats over 26" were consistently suitable to take offshore. Statewide there are 39,124 registered boats over 26" and in coastal counties there are 6,665.

Coastal counties defined by Texas General Land Office Coastal Zone area. These include Aransas, Brazoria, Calhoun, Cameron, Chambers, Galveston, Harris, Jackson, Jefferson, Kenedy, Kleberg, Matagorda, Nueces, Orange, Refugio, San Patricio, Victoria, Willacy.

Table 2. Breakdown of statewide and coastal county boat registrations totals by boat length.

	Statewide Totals by Boat Length	
	2024	Mean 2015-2024
Under 16"	172,867	182,984
16 to 26"	368,918	374,594
26 to 40"	16,419	16,796
40 to 65"	2,638	2,874
over 65"	505	559
Livery Boats (<16")	781	530
	Coastal County Totals by Boat Length	
	2024	Mean 2015-2024
Under 16"	30,230	33,721
16 to 26"	73,965	78,538
26 to 40"	4,989	5,349
40 to 65"	1,270	1,380
over 65"	406	428
Livery Boats (<16")	141	100

Calculations

The NMFS Office of Science and Technology produced an estimate of Texas's effort using a single year of MRIP data to convert TX Creel survey estimates. It determined a point estimate of 11,172,596.5 saltwater angler trips (Table 3 Line 1; NMFS Office of Science and Technology 2022). To determine if this estimate is feasible, that number is compared to the number of registered boats.

The boat registration data is not parsed by freshwater and saltwater fishing. To estimate saltwater angling, we first used FHWAR data to estimate the distribution of saltwater anglers compared to freshwater counterparts. In 2022, there were a total of 3,687,088 anglers in Texas. Of those, 3,084,141 (84%) freshwater fished, and 1,717,632 (47%) saltwater fished (NORC at University of Chicago, 2022). The sum of freshwater and saltwater fishing exceeds the total number of anglers because some individuals engaged in both. If we simply apply the 47% estimate to the total pleasure boat registrations in Texas from 2015-2024 (578,336, Table 1), an estimated 271,818 registered boats fish in saltwater in Texas (Table 3 Line 2). That number would be 245,917 using only 2024 registrations (Table 3 Line 3). It is important to note that this

is an overestimate as it assumes all boats registered for pleasure use are used for recreational fishing and that all registered boats are active, nor does it account that many smaller boats are unsuitable to take in saltwater or outside of the protected bays. This number also does not provide any indicator as to the intensity of the fishing pressure applied by these boat registrations, as the majority are not located near the coast.

Using the 271,818 saltwater boats above, understanding that it is an overestimate, we can calculate how many angler trips per boat per year are needed to reach that number. Each boat would need to take 41.2 trips per year to achieve the total angler effort calculated by NMFS (Table 3 Line 6). TX Creel data shows that there is a mean of 3.2 anglers on board for boats fishing offshore and can be applied to calculate 12.9 angler trips per year for each registered boat.

The boater registration also does not parse by offshore and bay fishing. One method to parse if a boat can fish offshore is to assume that boats less than 16 feet cannot safely fish offshore. We are not able to determine the proportion of those boats larger than 16 feet are pleasure boats, but as the majority of boats registered in Texas are pleasure boats (99.2%), we proceeded with the inclusive number. 394,823 boats in the entire state were over 16 feet in length from 2015-2024 (Table 2). We can apply the FHWAR 47% ratio to determine that 185,567 boats greater than 16 feet fish in saltwater (Table 3 Line 4). If every one of those boats fished offshore, each boat would need to fish 60.2 days in saltwater (Table 3 Line 7). This Again, applying the mean of 3.2 angler per offshore trip, the individual boat would go out 18.8 times per year with three anglers.

Table 3. Estimate of Boats fishing in Saltwater and/or offshore and the applications of those numbers to calculate effort needed to corroborate NMFS effort estimate.

Estimates of Saltwater/Offshore Boats			
Line	Item	Value	Source
1	NMFS angler trip estimate	11,172,596.5 Angler Trips	Converting TX Creel data to MRIP units
2	FHWAR saltwater mean boat estimate	271,181 boats	Multiplying mean statewide pleasure boats by 47% FHWAR saltwater angler estimate
3	FHWAR saltwater 2024 boat estimate	245,917 boats	Multiplying 2024 statewide pleasure boats by 47% FHWAR saltwater angler estimate
4	Estimate boats over 16 ft fishing in saltwater	185,567 boats	Multiplying the mean statewide boats over 16 ft by the 47% FHWAR angler estimate
Calculations to Compare to NMFS effort Estimate			
Line	Item	Value	Source
6	Estimated angler trips per boat per year (FHWAR only)	41.2 trips per boat per year	Line 1 divided by Line 2
7	Estimated angler trips per boat per year (boats over 16 ft)	60.2 trips per boat per year	Line 1 divided by Line 4

Citations

NMFS Office of Science and Technology. 2022. Methodology Description for a Simple Ratio Calibration of Texas Private Boat Red Snapper Annual Landings Estimates. SEDAR74-DW-10. SEDAR, North Charleston, SC. 5 pp.

NORC at the University of Chicago. 2022. 2022 Final Report National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Report Prepared for the Texas Parks and Wildlife Department.

Appendix: Boater Registration Requirements and Definitions

A Texas boat registration is valid for two years. The following vessels/boats are required to have current registration when on Texas public water, including when docked, moored, or stored:

- All motorized vessels, regardless of length (including any sailboat with an auxiliary engine);
- All non-motorized vessels (including sailboats) 14 feet in length or longer; and
- USCG documented vessels.

Texas Parks and Wildlife Code § 31.003 offers the following definitions:

- “Boat” means a vessel not more than 65 feet in length, measured from the tip of the bow in a straight line to the stern.
- “Vessel” means any watercraft, other than a seaplane on water, used or capable of being used for transportation on water.
- “Motorboat” means any vessel propelled or designed to be propelled by machinery, whether or not the machinery is permanently or temporarily affixed or is the principal source of propulsion.

The Vessel use type codes allowable by the Coast Guard are: Pleasure, Livery, Charter Fishing, Commercial Fishing, Commercial Passenger, Other Commercial, Govt./Political Subdivision