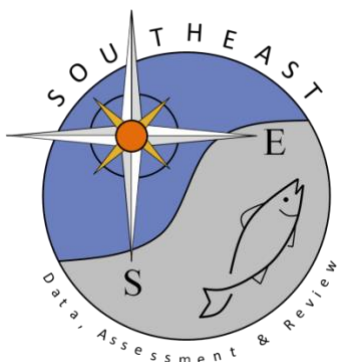


# General Recreational Survey Data for Gray Snapper in the Gulf of Mexico

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SEDAR75-WP-02

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# **General Recreational Survey Data for Gray Snapper in the Gulf of Mexico**

**WP**

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Southeast Fisheries Science Center  
Sustainable Fisheries Division  
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06-15-2022

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General recreational catch estimates for Gray Snapper are compiled from the following separate sampling programs:

1. Marine Recreational Information Program (MRIP) (SEDAR68-DW-13)
2. Texas Parks and Wildlife Department (TPWD) (SEDAR70-WP-03)
3. Louisiana Creel survey program (LA Creel; 2014+)

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Parameters for data prepared for SEDAR 75 recreational catch data:

- Species: Gray Snapper
- Year Range: 1981 - 2020
- Geographic Range: Gulf of Mexico states from Texas to western Florida, including the Florida Keys.
- Fishing Modes: Charter, Headboat (1981-1985), Private, Shore

- MRIP Survey Methodology: Fully calibrated estimates that take into account the change in the Fishing Effort Survey (FES), the redesigned Access Point Angler Intercept Survey (APAIS), and the For Hire Survey (FHS)
  - MRIP Data Gaps from COVID: Missing 2020 intercepts were imputed from all APAIS data collected in 2018 and 2019 from the same strata as the 2020 data gap, with original sample weights reduced by a factor of two to account for using two years of data (Cody 2021).
  - SEFSC Data QAQC: Size records above an allowable (max size) threshold are excluded from average weight estimation and the summary tables included in this working paper (Tables 8-15). For SEDAR 75 gray snapper, this includes any weights heavier than 46.2 pounds.
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#### Catch and Sample Size Information for Particular Domains:

Domains were selected based on strata-level catch estimates (year-state-mode-wave-area) that have a disproportionately large contribution to those total (annual) catch estimates that appear relatively large/small, as compared to adjacent years. Selected domains are more likely to be high catch estimates given the inherent zero-boundary constraint in all catch/effort data ( $\geq 0$ ) that complicates identification of low catch estimates.

- 1984 landings estimate: 9,689,657 fish
  - Strata: western Florida, private, wave 6, and ocean  $\leq 10$  miles
  - Intercept Records: a total of 14 angler trips that resulted in a landings estimate of 5,808,821 fish
    - One angler trip that harvested 25 Gray Snapper (seen by interviewer)
    - One angler trip that harvested 6 Gray Snapper (seen by interviewer)
    - One angler trip that harvested 4 Gray Snapper (seen by interviewer)
    - One angler trip that harvested 40 Gray Snapper (NOT seen by interviewer)
    - One angler trip that harvested 20 Gray Snapper (NOT seen by interviewer)
    - One angler trip that harvested 10 Gray Snapper (NOT seen by interviewer)
    - One angler trip that harvested 4 Gray Snapper (NOT seen by interviewer)
    - Four angler trips that harvested 3 Gray Snapper (NOT seen by interviewer)

- One angler trip that harvested 2 Gray Snapper (*NOT* seen by interviewer)
  - Two angler trips that harvested 1 Gray Snapper (*NOT* seen by interviewer)
- 1991 discard estimate: 13,242,630 fish
    - Strata: western Florida, shore, wave 1, and ocean <= 10 miles
    - Intercept Records: a total of 15 angler trips that resulted in a discard estimate of 2,182,623 fish

<i>Catch Observation</i>	<i>Minimum</i>	<i>Median</i>	<i>Mean</i>	<i>Maximum</i>
<i>Harvest seen by interviewer</i>	0	0	0.47	3
<i>Harvest not seen by interviewer</i>	0	0	0.00	0
<i>Released live fish</i>	0	3	3.53	12

- Strata: western Florida, shore, wave 2, and ocean <= 10 miles
- Intercept Records: a total of 25 angler trips that resulted in a discard estimate of 1,625,341 fish

<i>Catch Observation</i>	<i>Minimum</i>	<i>Median</i>	<i>Mean</i>	<i>Maximum</i>
<i>Harvest seen by interviewer</i>	0	0	1.94	17
<i>Harvest not seen by interviewer</i>	0	0	0.24	6
<i>Released live fish</i>	0	4	4.36	15

- Strata: western Florida, shore, wave 5, and ocean <= 10 miles
- Intercept Records: a total of 32 angler trips that resulted in a discard estimate of 1,345,770 fish

<i>Catch Observation</i>	<i>Minimum</i>	<i>Median</i>	<i>Mean</i>	<i>Maximum</i>
<i>Harvest seen by interviewer</i>	0	0	0.84	12
<i>Harvest not seen by interviewer</i>	0	0	0.00	0
<i>Released live fish</i>	0	3	4.50	20

- 2020 discard estimate: 23,150,755 fish
  - Strata: western Florida, private, wave 5, and inshore
  - Intercept Records: a total of 207 angler trips that resulted in a discard estimate of 1,856,640 fish

<i>Catch Observation</i>	<i>Minimum</i>	<i>Median</i>	<i>Mean</i>	<i>Maximum</i>
<i>Harvest seen by interviewer</i>	0	0	0.44	12
<i>Harvest not seen by interviewer</i>	0	0	0.30	5
<i>Released live fish</i>	0	2	3.03	20

- Strata: western Florida, shore, wave 1, and inshore
- Intercept Records: a total of 41 angler trips that resulted in a discard estimate of 1,761,187 fish

<i>Catch Observation</i>	<i>Minimum</i>	<i>Median</i>	<i>Mean</i>	<i>Maximum</i>
<i>Harvest seen by interviewer</i>	0	0	0.27	5
<i>Harvest not seen by interviewer</i>	0	0	0.00	0
<i>Released live fish</i>	0	2	3.46	13

- Strata: western Florida, shore, wave 4, and inshore
- Intercept Records: a total of 61 angler trips that resulted in a discard estimate of 1,827,137 fish

<i>Catch Observation</i>	<i>Minimum</i>	<i>Median</i>	<i>Mean</i>	<i>Maximum</i>
<i>Harvest seen by interviewer</i>	0	0	0.08	5
<i>Harvest not seen by interviewer</i>	0	0	0.26	3
<i>Released live fish</i>	0	2	3.36	20

- Strata: western Florida, shore, wave 5, and inshore
- Intercept Records: a total of 36 angler trips that resulted in a discard estimate of 1,765,955 fish

<i>Catch Observation</i>	<i>Minimum</i>	<i>Median</i>	<i>Mean</i>	<i>Maximum</i>
<i>Harvest seen by interviewer</i>	0	0	0.5	5
<i>Harvest not seen by interviewer</i>	0	0	0.22	2
<i>Released live fish</i>	0	2	2.90	20

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## Tables

**Table 1.** Annual landings (AB1) and discards (B2) of Gray Snapper in numbers of fish by state and year (MRIP, LACreel 2014+, TPWD).

**Table 2.** Annual landings (AB1) and discards (B2) of Gray Snapper in numbers of fish by mode and year (MRIP, LACreel 2014+, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey is added to the private mode.

**Table 3.** Gray Snapper landings in numbers of fish (AB1) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (**MRIP only**). **Table does not include any MRIP catch estimates imputed by the SEFSC for 1981 wave1.** Sample size is provided both as the total number of primary sampling units (PSU) and angler trips (Trp) intercepted by MRIP samplers within a specified strata and, in parentheses, the number of PSUs and angler trips that intercepted Gray Snapper.

**Table 4.** Gray Snapper discards in numbers of fish (B2) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (**MRIP only**). **Table does not include any MRIP catch estimates imputed by the SEFSC for 1981 wave1.** Sample size is provided both as the total number of primary sampling units (PSU) and angler trips (Trp) intercepted by MRIP samplers within a specified strata and, in parentheses, the number of PSUs and angler trips that intercepted Gray Snapper.

**Table 5.** Gray Snapper landings (AB1) and discards (B2), in numbers of fish, with associated coefficients of variation (CV; Dettloff et al. 2020) by year for all modes combined (**MRIP only**). **Table does not include any MRIP catch estimates imputed by the SEFSC for 1981 wave1.** Sample size is provided both as the total number of primary sampling units (PSU) and angler trips (Trp) intercepted by MRIP samplers within a specified strata and, in parentheses, the number of PSUs and angler trips that intercepted Gray Snapper.

**Table 6.** Estimated landings of Gray Snapper in pounds whole weight by state and year (MRIP, LACreel 2014+, TPWD). Average weight estimates are calculated by strata using the following hierarchy: species, region, year, state, mode, wave, and area (Matter and Rios 2013). The minimum number of weights used at each level of substitution is fifteen fish, except for the final species level where the minimum is one fish (Dettloff and Matter 2019b).

**Table 7.** Gray Snapper landings in pounds whole weight (LBS) (MRIP, LACreel 2014+, TPWD) with associated coefficients of variation (CV; Approach 2 described in Nuttall and Dettloff 2022) by mode and year. CV estimates shown are calculated using MRIP data only and do not include uncertainty from imputations for 1981 wave1.

**Table 8.** Summary of length measurements (millimeters fork length) from MRIP-intercepted Gray Snapper by state and year. Summaries include the number of fish measured by MRIP and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation

(SD), and maximum (Max) size of fish lengths. LA lengths are available from MRIP only until 2013.

**Table 9.** Summary of weight measurements (pounds whole weight) from MRIP-intercepted Gray Snapper by state and year. Summaries include the number of fish weighed by MRIP and, in parentheses, the number of angler trips from which those fish were weighed (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish weights. LA weights are available from MRIP only until 2013.

**Table 10.** Summary of length measurements (millimeters fork length) from MRIP-intercepted Gray Snapper by mode and year. Summaries include the number of fish measured by MRIP and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths.

**Table 11.** Summary of weight measurements (pounds whole weight) from MRIP-intercepted Gray Snapper by mode and year. Summaries include the number of fish weighed by MRIP and, in parentheses, the number of angler trips from which those fish were weighed (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish weights.

**Table 12.** Summary of length (millimeters fork length) and weight measurements (pounds whole weight) from MRIP-intercepted Gray Snapper by year. Summaries include the number of fish for which size information was collected by MRIP and, in parentheses, the number of angler trips from which those fish were sampled (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths and weights.

**Table 13.** Summary of length measurements (millimeters total length) from TPWD-intercepted Gray Snapper by mode and year. Summaries include the number of fish measured by TPWD and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths.

**Table 14.** Summary of length measurements (millimeters fork length) from Gray Snapper intercepted by the LA BIO sampling program by mode and year. Summaries include the number of fish measured by LDWF and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths.

**Table 15.** Summary of weight measurements (pounds whole weight) from Gray Snapper intercepted by the LA BIO sampling program by mode and year. Summaries include the number of fish weighed by LDWF and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish weights.

**Table 16.** Estimated average weights of landed Gray Snapper in pounds whole weight (WGT) with associated coefficients of variation (CV; Approach 2 described in Nuttall and



Dettloff 2022) by mode and year (MRIP, LACreel 2014+, TPWD). Average weight estimates are calculated from annual estimates (by-mode) of landings-in-weight (Table 7) divided by estimates of landings-in-number (Table 2). Sample size (N) is provided as the total number of angler trips and, in parentheses, number of fish from which weight information was collected (MRIP, LABIO 2014+, TPWD).

**Table 17.** Resolution of landings-in-weight estimates (pounds whole weight) for Gulf of Mexico Gray Snapper by year and hierarchy level (MRIP, LACreel 2014+, TPWD), defined by **species**, **region**, **year**, **state**, **mode**, **wave**, and **area**. Average weight estimates are calculated at the finest strata meeting a minimum sample size threshold (Dettloff and Matter 2019b). Larger sample sizes therefore allow average weights to be calculated at finer stratifications, the finest being at the srysmwa level (Matter and Rios 2013). Annual summaries include the number of fish and angler trips from which weight information was collected (N) and the landings-in-weight estimates (AB1.lbs) by hierarchy level. As an example, (srysmw) summarizes those landings-in-weight estimates originating from cells where average weights are specific to a particular **species**, **region**, **year**, **state**, **mode**, and **wave** (i.e., weight observations collapsed across areas).

**Table 18.** Recreational Fishing Effort (in angler trips) for Gulf of Mexico anglers by state and year (MRIP, LACreel 2014+, TPWD).

**Table 19.** Recreational Fishing Effort (in angler trips) for Gulf of Mexico anglers by mode and year (MRIP, LACreel 2014+, TPWD). Note that effort from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode.

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## Figures

**Figure 1.** Comparison of charterboat landings (AB1) and discard (B2) estimates (with standard error intervals shown) for Gray Snapper from the Coastal Household Telephone Survey (CHTS) and For-Hire Survey (FHS) from the Gulf of Mexico between 1981 and 1999 (MRIP). The charterboat calibration approach is discussed in Dettloff and Matter (2019a).

**Figure 2.** MRIP Base (BASE), APAIS Calibrated (ACAL), and Fully Calibrated APAIS and FES (FCAL) catch estimates for Gray Snapper in the Gulf of Mexico between 1981 and 2017. Landings (AB1) and discard (B2) estimates are in thousands of fish (NMFS).

**Figure 3.** Comparison of total general recreational landings (AB1) and discard estimates (B2) for Gulf of Mexico gray snapper between SEDAR 75 and SEDAR 51, the terminal years of which are 2020 and 2015 respectively. Differences in catch estimates, which are in thousands of fish, are largely a function of changes in the MRIP survey (i.e., FES in 2018).

**Figure 4.** Annual Gray Snapper landings (AB1) and discards (B2), in thousands of fish, by state from 1981 to 2020 (MRIP, LACreel 2014+, TPWD).

**Figure 4a.** Percent of Gray Snapper landings (AB1) and discards (B2), in numbers of fish, from each state by year (bar graph) and overall (pie chart) between 1981 and 2020 (MRIP, LACreel 2014+, TPWD).

**Figure 5.** Annual Gray Snapper landings (AB1) and discards (B2), in thousands of fish, by mode from 1981 to 2020 (MRIP, LACreel 2014+, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode.

**Figure 5a.** Percent of Gray Snapper landings (AB1) and discards (B2), in numbers of fish, from each mode by year (bar graph) and overall (pie chart) between 1981 and 2020 (MRIP, LACreel 2014+, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode.

**Figure 6.** Estimates of annual landings for Gray Snapper in the Gulf of Mexico (MRIP, LACreel 2014+, TPWD): estimated landings in thousands of fish (top), estimated landings in thousands of pounds whole weight (middle), and average weight of landed fish (estimated lbs/estimated fish) (bottom). Average weight estimates are calculated by strata using the following hierarchy: species, region, year, state, mode, wave, and area (Matter and Rios 2013). The minimum number of weights used at each level of substitution is fifteen fish, except for the final species level where the minimum is one fish (Dettloff and Matter 2019b).

**Figure 7.** Annual landings estimates of Gulf of Mexico Gray Snapper in thousands of pounds whole weight by hierarchy level (MRIP, LACreel 2014+, TPWD), defined by **species**, **region**, **year**, **state**, **mode**, **wave**, and **area**. Landings are grouped by the strata at which average weights were estimated, the finest stratification being at the srysmwa level (Matter and Rios 2013). As an example, (srysmw) summarizes those landings-in-weight estimates

originating from cells where average weights are specific to a particular **species**, **region**, **year**, **state**, **mode**, and **wave** (i.e., weight observations collapsed across areas). Landings are provided (A) in absolute pounds and (B) as a percentage of total landings-in-weight, which is summarized by year (stacked bar plot) and across all years (pie chart).

**Figure 8.** COVID data gaps in the MRIP APAIS and associated imputations for (positive) fishing trips that intercepted Gulf of Mexico gray snapper. No 2020 data were imputed for the FES or FHS. (A) Number of positive intercepts in 2020 from the 2020 APAIS (RAW) vs. those imputed from 2018 and 2019 intercepts (IMP). (B) Distribution of (log-transformed) APAIS catch observations between 2015-2019, in raw 2020 APAIS data, and in 2020 imputations. Refer to Cody (2021) for more information on COVID data gaps in MRIP.

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## Appendices

### **Appendix A.** Additional Details of Survey Data and SEFSC Estimation

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**Table 1.** Annual landings (AB1) and discards (B2) of Gray Snapper in numbers of fish by state and year (MRIP, LACreel 2014+, TPWD).

Year	TX		LA		MS		AL		FLW		Total	
	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2
1981	297	0	0	0	0	0	879	0	3,771,487	1,510,439	3,772,663	1,510,439
1982	297	0	0	0	0	0	251	0	3,818,722	1,240,628	3,819,270	1,240,628
1983	550	0	4,594	0	0	0	151	0	2,091,517	1,824,364	2,096,812	1,824,364
1984	174	0	0	0	0	0	0	0	9,689,483	963,513	9,689,657	963,513
1985	167	0	0	0	0	0	0	0	1,651,913	1,275,277	1,652,080	1,275,277
1986	505	0	2,747	12,212	3,853	9,973	0	0	1,972,471	670,451	1,979,575	692,636
1987	2,220	0	331	6,412	8,008	1,589	12,212	2,439	2,994,966	469,093	3,017,737	479,533
1988	363	0	3,240	6,603	5,735	566	3,882	0	2,554,901	1,194,533	2,568,120	1,201,702
1989	361	0	13,256	26,165	48,406	11,342	4,481	0	4,727,694	1,852,766	4,794,198	1,890,273
1990	202	0	12,450	3,559	27,636	121,240	9,275	0	3,049,654	3,418,953	3,099,217	3,543,752
1991	41	0	31,208	20,153	5,989	21,774	8,450	7,054	5,025,819	13,193,649	5,071,507	13,242,630
1992	795	0	17,112	18,692	12,050	10,787	28,594	8,259	2,380,428	8,833,365	2,438,980	8,871,103
1993	7,863	0	31,451	4,433	25,899	22,299	67,476	3,490	2,629,531	9,325,755	2,762,220	9,355,977
1994	13,553	0	57,195	59,370	9,033	0	18,876	4,220	2,082,888	7,369,635	2,181,545	7,433,225
1995	10,342	0	30,790	95,697	34,086	7,211	26,069	42,067	2,379,202	7,361,781	2,480,490	7,506,757
1996	11,659	0	4,744	92,117	71,507	20,011	15,298	46,430	2,235,750	8,589,724	2,338,959	8,748,281
1997	1,645	0	21,755	18,770	9,381	7,934	1,246	14,376	1,768,102	7,829,836	1,802,129	7,870,916
1998	5,247	0	43,958	66,429	9,728	4,745	30,566	10,111	2,322,227	9,400,159	2,411,727	9,481,445
1999	16,820	0	95,991	24,668	14,429	17,193	23,946	53,835	1,871,103	8,055,614	2,022,289	8,151,310
2000	25,478	0	62,140	118,232	23,604	41,032	90,245	297,376	1,736,286	7,976,550	1,937,754	8,433,190
2001	4,370	0	118,327	19,740	38,038	10,445	44,627	93,684	2,157,249	6,230,105	2,362,611	6,353,973
2002	10,478	0	110,440	40,172	1,550	13,249	67,730	95,097	1,495,421	6,551,918	1,685,618	6,700,436
2003	12,547	0	130,819	131,445	9,775	25,276	36,601	153,796	2,183,347	11,180,380	2,373,089	11,490,897
2004	32,394	0	205,505	37,776	16,884	3	27,474	43,400	2,539,537	9,527,051	2,821,793	9,608,230
2005	47,974	0	119,083	86,582	0	0	62,825	248,280	1,916,423	10,797,112	2,146,305	11,131,974
2006	40,991	0	208,452	158,483	9,557	54,796	18,409	678,988	1,512,445	6,496,598	1,789,855	7,388,865
2007	12,626	0	84,811	59,091	17,547	11,794	31,871	341,625	2,043,201	8,903,255	2,190,056	9,315,765
2008	17,345	0	104,367	56,643	1,576	3,981	44,111	142,318	3,010,607	14,547,014	3,178,006	14,749,956
2009	66,636	0	127,220	47,400	36,268	14,100	33,713	220,226	2,748,790	6,698,114	3,012,626	6,979,839
2010	3,846	0	8,615	13,362	1,553	1,355	23,164	20,452	1,396,380	5,093,980	1,433,559	5,129,150

Year	TX		LA		MS		AL		FLW		Total	
	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2
2011	6,286	0	163,248	14,146	0	0	82,077	19,827	1,528,458	7,115,512	1,780,068	7,149,486
2012	31,302	0	178,041	89,138	1,892	117,181	32,679	564,922	3,877,100	10,026,571	4,121,013	10,797,813
2013	46,527	0	101,210	227,771	9,019	90,232	13,379	283,297	3,561,354	15,084,039	3,731,489	15,685,339
2014	9,273	0	124,695	0	1,757	1,444	12,676	113,782	4,609,372	17,621,059	4,757,773	17,736,285
2015	2,889	0	143,663	0	2,690	115,964	23,570	309,897	3,474,101	15,712,065	3,646,913	16,137,927
2016	26,044	0	112,147	33,603	17,415	65,126	90,050	619,756	3,786,888	12,922,013	4,032,544	13,640,498
2017	54,506	0	79,865	44,236	21,781	170,584	106,961	1,543,380	3,097,705	13,954,169	3,360,817	15,712,369
2018	20,120	0	74,568	7,177	22,201	11,021	66,695	344,614	3,170,835	13,777,899	3,354,419	14,140,711
2019	51,671	0	84,304	18,176	44,284	236,374	48,810	304,999	3,501,932	12,628,033	3,731,001	13,187,581
2020	69,123	0	43,276	46,685	34,859	143,148	57,818	1,069,252	3,655,597	21,891,669	3,860,673	23,150,755

**Table 2.** Annual landings (AB1) and discards (B2) of Gray Snapper in numbers of fish by mode and year (MRIP, LACreel 2014+, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey is added to the private mode.

Year	Cbt		Hbt		Priv		Shore		Total	
	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2
1981	111,197	18,249	67,006	10,628	2,333,365	645,683	1,261,095	835,879	3,772,663	1,510,439
1982	349,426	113,815	218,099	71,184	1,835,937	608,777	1,415,808	446,852	3,819,270	1,240,628
1983	236,802	44,359	141,313	27,744	535,256	99,646	1,183,441	1,652,615	2,096,812	1,824,364
1984	60,960	6,071	30,723	960	8,387,582	660,573	1,210,392	295,909	9,689,657	963,513
1985	50,554	11,467	29,489	5,389	974,810	914,096	597,227	344,325	1,652,080	1,275,277
1986	111,134	12,678			842,745	561,141	1,025,696	118,816	1,979,575	692,636
1987	76,059	6,120			1,772,352	430,237	1,169,326	43,176	3,017,737	479,533
1988	18,910	3,712			1,326,650	816,772	1,222,560	381,218	2,568,120	1,201,702
1989	61,904	18,819			2,421,003	1,189,613	2,311,290	681,841	4,794,198	1,890,273
1990	27,903	48,228			1,953,384	2,222,315	1,117,930	1,273,208	3,099,217	3,543,752
1991	173,700	193,673			1,750,093	5,213,406	3,147,714	7,835,551	5,071,507	13,242,630

Year	Cbt		Hbt		Priv		Shore		Total	
	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2
1992	161,549	59,066			1,318,498	4,896,293	958,933	3,915,744	2,438,980	8,871,103
1993	57,563	38,048			1,731,418	5,226,032	973,239	4,091,897	2,762,220	9,355,977
1994	89,189	56,953			1,424,975	3,996,091	667,381	3,380,181	2,181,545	7,433,225
1995	52,342	185,861			1,803,451	3,853,972	624,697	3,466,924	2,480,490	7,506,757
1996	74,482	27,416			1,322,923	4,119,728	941,554	4,601,138	2,338,959	8,748,281
1997	24,914	58,300			1,309,017	4,269,255	468,198	3,543,360	1,802,129	7,870,916
1998	129,692	146,962			1,830,662	5,878,807	451,372	3,455,676	2,411,727	9,481,445
1999	91,085	101,085			1,574,755	4,666,779	356,449	3,383,446	2,022,289	8,151,310
2000	73,275	117,022			1,365,867	4,815,223	498,612	3,500,946	1,937,754	8,433,190
2001	138,611	79,447			1,591,273	3,576,123	632,727	2,698,404	2,362,611	6,353,973
2002	82,427	94,140			1,298,275	4,307,791	304,916	2,298,504	1,685,618	6,700,436
2003	168,184	120,499			1,763,137	5,406,503	441,768	5,963,895	2,373,089	11,490,897
2004	145,878	92,490			2,173,806	4,735,098	502,109	4,780,642	2,821,793	9,608,230
2005	138,132	97,915			1,490,890	5,118,421	517,283	5,915,638	2,146,305	11,131,974
2006	139,058	91,967			1,385,621	4,339,792	265,176	2,957,106	1,789,855	7,388,865
2007	160,168	114,311			1,645,434	4,176,029	384,455	5,025,425	2,190,056	9,315,765
2008	182,339	170,558			2,297,914	7,288,358	697,753	7,291,040	3,178,006	14,749,956
2009	239,116	113,076			2,275,323	4,547,172	498,188	2,319,591	3,012,626	6,979,839
2010	111,104	136,030			1,193,182	3,371,951	129,274	1,621,169	1,433,559	5,129,150
2011	119,638	145,173			1,272,516	3,755,022	387,914	3,249,291	1,780,068	7,149,486
2012	105,299	144,093			3,332,876	6,307,317	682,838	4,346,403	4,121,013	10,797,813
2013	251,344	280,092			2,859,362	8,823,140	620,783	6,582,108	3,731,489	15,685,339
2014	269,080	258,945			3,507,781	11,593,216	980,912	5,884,124	4,757,773	17,736,285
2015	201,111	256,387			2,803,683	9,381,165	642,119	6,500,374	3,646,913	16,137,927
2016	310,702	254,007			2,744,664	6,393,908	977,178	6,992,583	4,032,544	13,640,498
2017	259,867	241,439			1,861,514	7,489,678	1,239,436	7,981,252	3,360,817	15,712,369
2018	252,122	356,050			1,995,588	5,977,118	1,106,709	7,807,543	3,354,419	14,140,711
2019	315,047	305,698			1,813,149	6,005,286	1,602,805	6,876,598	3,731,001	13,187,581
2020	251,824	487,968			2,464,499	10,487,137	1,144,350	12,175,650	3,860,673	23,150,755



**Table 3.** Gray Snapper landings in numbers of fish (AB1) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (MRIP only). Table does not include any MRIP catch estimates imputed by the SEFSC for 1981 wave1. Sample size is provided both as the total number of primary sampling units (PSU) and angler trips (Trp) intercepted by MRIP samplers within a specified strata and, in parentheses, the number of PSUs and angler trips that intercepted Gray Snapper.

Year	Cbt				Hbt				Priv				Shore			
	AB1	CV	PSU	Trp	AB1	CV	PSU	Trp	AB1	CV	PSU	Trp	AB1	CV	PSU	Trp
1981	37,155	0.41	85 (14)	706 (36)	23,161	0.41	76 (14)	691 (36)	1,752,733	0.61	243 (23)	1,973 (38)	736,974	0.45	345 (16)	2,109 (33)
1982	349,421	0.56	88 (17)	673 (35)	218,099	0.56	76 (17)	658 (35)	1,835,645	0.54	509 (27)	4,151 (47)	1,415,808	0.51	571 (31)	3,971 (48)
1983	236,802	0.62	149 (25)	1,626 (68)	141,313	0.65	123 (25)	1,626 (68)	534,706	0.53	222 (11)	1,822 (19)	1,183,441	0.59	387 (17)	2,739 (30)
1984	60,960	0.40	157 (24)	1,841 (84)	30,723	0.47	116 (20)	1,776 (78)	8,387,408	0.49	231 (16)	2,301 (35)	1,210,392	0.35	420 (15)	3,130 (33)
1985	50,539	0.40	110 (19)	1,380 (61)	29,489	0.43	89 (18)	1,354 (60)	974,658	0.54	304 (9)	2,792 (21)	597,227	0.58	503 (19)	3,679 (26)
1986	111,096	0.45	335 (27)	2,601 (55)					842,278	0.29	1,171 (44)	9,597 (68)	1,025,696	0.58	430 (12)	2,108 (15)
1987	75,441	0.56	298 (22)	2,421 (31)					1,770,750	0.30	1,168 (67)	8,951 (108)	1,169,326	0.42	400 (15)	2,323 (17)
1988	18,910	0.54	298 (21)	1,952 (27)					1,326,287	0.32	1,200 (89)	9,343 (115)	1,222,560	0.32	627 (29)	3,771 (45)
1989	61,904	0.43	236 (14)	1,510 (16)					2,420,642	0.23	783 (84)	6,304 (119)	2,311,290	0.39	438 (34)	3,060 (54)
1990	27,903	0.56	161 (11)	1,145 (12)					1,953,182	0.35	644 (53)	5,485 (73)	1,117,930	0.34	417 (25)	2,641 (33)
1991	173,700	0.63	245 (23)	1,778 (26)					1,750,052	0.20	733 (71)	6,203 (90)	3,147,714	0.34	488 (34)	3,096 (42)
1992	161,549	0.61	434 (40)	3,243 (64)					1,317,703	0.13	1,359 (164)	14,523 (231)	958,933	0.23	919 (52)	6,162 (69)
1993	57,282	0.33	248 (31)	1,825 (44)					1,723,836	0.14	1,051 (156)	10,676 (247)	973,239	0.18	1,080 (95)	8,408 (128)
1994	86,542	0.32	252 (34)	1,909 (44)					1,414,069	0.14	1,008 (157)	12,644 (237)	667,381	0.19	1,020 (77)	9,625 (99)
1995	50,896	0.39	241 (25)	1,739 (29)					1,794,555	0.17	867 (126)	10,945 (215)	624,697	0.19	874 (68)	8,768 (93)
1996	70,846	0.42	281 (21)	1,966 (24)					1,314,900	0.17	1,209 (154)	14,014 (204)	941,554	0.22	823 (48)	6,324 (77)
1997	24,744	0.26	526 (61)	3,193 (74)					1,307,542	0.16	1,134 (129)	14,027 (180)	468,198	0.21	742 (47)	6,241 (63)
1998	127,327	0.27	839 (120)	6,273 (151)					1,827,780	0.13	1,257 (178)	16,086 (261)	451,372	0.21	817 (58)	7,009 (87)
1999	90,308	0.21	1,183 (193)	10,759 (258)					1,558,712	0.14	1,754 (229)	20,494 (327)	356,449	0.21	998 (50)	9,162 (60)
2000	70,675	0.18	1,256 (222)	13,504 (304)					1,342,989	0.13	1,529 (186)	16,890 (241)	498,612	0.29	867 (33)	7,410 (43)
2001	138,016	0.40	991 (167)	11,553 (223)					1,587,498	0.12	1,399 (205)	18,399 (300)	632,727	0.44	831 (42)	7,650 (62)
2002	80,271	0.15	1,001 (208)	11,563 (294)					1,289,953	0.12	1,508 (222)	19,901 (303)	304,916	0.24	808 (39)	7,648 (52)
2003	165,813	0.16	1,081 (279)	12,309 (400)					1,752,961	0.13	1,629 (223)	19,054 (316)	441,768	0.25	949 (51)	8,277 (66)
2004	142,453	0.13	1,006 (270)	12,218 (388)					2,144,837	0.19	1,387 (191)	17,869 (291)	502,109	0.45	710 (30)	6,630 (44)
2005	129,052	0.19	808 (212)	10,092 (339)					1,451,996	0.15	1,233 (159)	16,060 (259)	517,283	0.28	670 (34)	6,526 (48)
2006	134,902	0.20	661 (153)	7,925 (221)					1,348,786	0.23	1,528 (157)	18,039 (245)	265,176	0.29	730 (31)	6,578 (37)
2007	158,120	0.22	760 (156)	8,161 (226)					1,634,856	0.14	1,516 (176)	18,385 (280)	384,455	0.27	771 (38)	6,881 (54)
2008	179,554	0.20	755 (184)	7,509 (244)					2,283,354	0.15	1,691 (217)	19,207 (361)	697,753	0.30	792 (55)	6,877 (76)
2009	229,027	0.38	651 (139)	6,307 (184)					2,218,776	0.15	1,673 (232)	19,690 (362)	498,188	0.40	828 (41)	7,405 (56)
2010	110,605	0.17	651 (142)	6,442 (222)					1,189,835	0.21	1,663 (127)	18,160 (169)	129,274	0.44	768 (19)	7,328 (23)
2011	118,817	0.17	798 (126)	8,104 (185)					1,267,051	0.19	1,765 (123)	18,615 (161)	387,914	0.43	804 (14)	7,240 (16)

Year	Cbt				Hbt				Priv				Shore			
	AB1	CV	PSU	Trp	AB1	CV	PSU	Trp	AB1	CV	PSU	Trp	AB1	CV	PSU	Trp
2012	99,989	0.14	878 (166)	9,153 (232)					3,306,884	0.44	1,919 (135)	19,939 (200)	682,838	0.38	870 (34)	8,155 (45)
2013	246,817	0.28	462 (94)	3,834 (140)					2,817,362	0.16	1,674 (235)	16,838 (385)	620,783	0.36	671 (33)	6,625 (48)
2014	249,535	0.17	625 (197)	5,975 (334)					3,393,358	0.12	1,517 (364)	16,300 (687)	980,912	0.29	453 (29)	4,461 (49)
2015	195,209	0.18	681 (167)	5,702 (242)					2,663,033	0.11	1,591 (358)	16,061 (672)	642,119	0.36	480 (27)	4,378 (61)
2016	286,505	0.29	695 (189)	5,241 (278)					2,630,670	0.12	1,626 (338)	15,890 (604)	977,178	0.25	723 (54)	4,856 (73)
2017	229,822	0.21	590 (162)	4,889 (246)					1,757,188	0.16	1,293 (206)	13,432 (389)	1,239,436	0.35	580 (34)	4,354 (53)
2018	227,375	0.24	596 (139)	5,069 (201)					1,925,647	0.13	1,223 (218)	11,286 (393)	1,106,709	0.39	567 (36)	4,551 (54)
2019	266,513	0.21	572 (161)	4,486 (255)					1,725,708	0.13	1,244 (216)	11,421 (383)	1,602,805	0.45	606 (28)	4,556 (48)
2020	217,189	0.16	628 (166)	4,824 (253)					2,386,735	0.13	1,388 (254)	12,792 (424)	1,144,350	0.26	651 (45)	4,571 (67)

**Table 4.** Gray Snapper discards in numbers of fish (B2) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (MRIP only). Table does not include any MRIP catch estimates imputed by the SEFSC for 1981 wave1. Sample size is provided both as the total number of primary sampling units (PSU) and angler trips (Trp) intercepted by MRIP samplers within a specified strata and, in parentheses, the number of PSUs and angler trips that intercepted Gray Snapper.

Year	Cbt				Hbt				Priv				Shore			
	B2	CV	PSU	Trp	B2	CV	PSU	Trp	B2	CV	PSU	Trp	B2	CV	PSU	Trp
1981	2,238	0.76	85 (2)	706 (2)	1,400	0.76	76 (2)	691 (2)	510,349	0.68	243 (7)	1,973 (17)	402,520	0.51	345 (11)	2,109 (19)
1982	113,815	0.54	88 (5)	673 (12)	71,184	0.54	76 (5)	658 (12)	608,777	0.58	509 (16)	4,151 (28)	446,852	0.44	571 (19)	3,971 (36)
1983	44,359	0.96	149 (3)	1,626 (4)	27,744	0.96	123 (3)	1,626 (4)	99,646	0.48	222 (5)	1,822 (5)	1,652,615	0.70	387 (14)	2,739 (29)
1984	6,071	0.50	157 (6)	1,841 (8)	960	1.00	116 (5)	1,776 (6)	660,573	0.72	231 (5)	2,301 (9)	295,909	0.42	420 (13)	3,130 (19)
1985	11,467	0.50	110 (6)	1,380 (9)	5,389	0.63	89 (5)	1,354 (8)	914,096	0.48	304 (9)	2,792 (19)	344,325	0.38	503 (15)	3,679 (23)
1986	12,678	0.40	335 (8)	2,601 (23)					561,141	0.48	1,171 (38)	9,597 (52)	118,816	0.43	430 (9)	2,108 (10)
1987	6,120	0.57	298 (5)	2,421 (7)					430,237	0.40	1,168 (28)	8,951 (35)	43,176	0.74	400 (2)	2,323 (2)
1988	3,712	0.46	298 (7)	1,952 (9)					816,772	0.32	1,200 (57)	9,343 (70)	381,218	0.34	627 (20)	3,771 (29)
1989	18,819	1.00	236 (1)	1,510 (2)					1,189,613	0.22	783 (62)	6,304 (96)	681,841	0.33	438 (22)	3,060 (47)
1990	48,228	0.99	161 (2)	1,145 (3)					2,222,315	0.35	644 (56)	5,485 (98)	1,273,208	0.34	417 (25)	2,641 (40)
1991	193,673	0.82	245 (11)	1,778 (12)					5,213,406	0.20	733 (98)	6,203 (204)	7,835,551	0.24	488 (55)	3,096 (129)

Year	Cbt				Hbt				Priv				Shore			
	B2	CV	PSU	Trp	B2	CV	PSU	Trp	B2	CV	PSU	Trp	B2	CV	PSU	Trp
1992	59,066	0.37	434 ( 21)	3,243 ( 36)					4,896,293	0.11	1,359 (215)	14,523 ( 589)	3,915,744	0.29	919 ( 81)	6,162 (189)
1993	38,048	0.45	248 ( 12)	1,825 ( 17)					5,226,032	0.13	1,051 (219)	10,676 ( 540)	4,091,897	0.14	1,080 (181)	8,408 (371)
1994	56,953	0.39	252 ( 11)	1,909 ( 20)					3,996,091	0.13	1,008 (202)	12,644 ( 564)	3,380,181	0.16	1,020 (134)	9,625 (330)
1995	185,861	0.75	241 ( 12)	1,739 ( 24)					3,853,972	0.15	867 (161)	10,945 ( 419)	3,466,924	0.14	874 (147)	8,768 (337)
1996	27,416	0.50	281 ( 11)	1,966 ( 15)					4,119,728	0.18	1,209 (193)	14,014 ( 514)	4,601,138	0.28	823 (102)	6,324 (254)
1997	58,300	0.38	526 ( 25)	3,193 ( 43)					4,269,255	0.11	1,134 (234)	14,027 ( 578)	3,543,360	0.18	742 (119)	6,241 (270)
1998	146,962	0.31	839 ( 69)	6,273 (137)					5,878,807	0.12	1,257 (287)	16,086 ( 796)	3,455,676	0.16	817 (145)	7,009 (340)
1999	101,085	0.27	1,183 ( 74)	10,759 (172)					4,666,779	0.11	1,754 (371)	20,494 ( 825)	3,383,446	0.19	998 (143)	9,162 (322)
2000	117,022	0.44	1,256 ( 60)	13,504 (125)					4,815,223	0.13	1,529 (306)	16,890 ( 700)	3,500,946	0.22	867 (117)	7,410 (234)
2001	79,447	0.45	991 ( 39)	11,553 ( 79)					3,576,123	0.10	1,399 (290)	18,399 ( 644)	2,698,404	0.34	831 (108)	7,650 (200)
2002	94,140	0.22	1,001 ( 81)	11,563 (184)					4,307,791	0.09	1,508 (376)	19,901 ( 914)	2,298,504	0.19	808 (107)	7,648 (241)
2003	120,499	0.20	1,081 (114)	12,309 (286)					5,406,503	0.08	1,629 (379)	19,054 (1,067)	5,963,895	0.17	949 (162)	8,277 (435)
2004	92,490	0.21	1,006 ( 90)	12,218 (220)					4,735,098	0.13	1,387 (270)	17,869 ( 686)	4,780,642	0.20	710 (106)	6,630 (267)
2005	97,915	0.18	808 ( 89)	10,092 (249)					5,118,421	0.16	1,233 (268)	16,060 ( 817)	5,915,638	0.20	670 (118)	6,526 (351)
2006	91,967	0.28	661 ( 50)	7,925 (129)					4,339,792	0.16	1,528 (268)	18,039 ( 740)	2,957,106	0.24	730 ( 85)	6,578 (206)
2007	114,311	0.22	760 ( 69)	8,161 (186)					4,176,029	0.12	1,516 (288)	18,385 ( 765)	5,025,425	0.18	771 (120)	6,881 (393)
2008	170,558	0.17	755 (110)	7,509 (319)					7,288,358	0.11	1,691 (363)	19,207 (1,069)	7,291,040	0.22	792 (111)	6,877 (302)
2009	113,076	0.23	651 ( 65)	6,307 (168)					4,547,172	0.10	1,673 (367)	19,690 (1,022)	2,319,591	0.21	828 (117)	7,405 (282)
2010	136,030	0.20	651 ( 80)	6,442 (225)					3,371,951	0.17	1,663 (218)	18,160 ( 515)	1,621,169	0.22	768 ( 83)	7,328 (187)
2011	145,173	0.22	798 ( 73)	8,104 (233)					3,755,022	0.19	1,765 (217)	18,615 ( 454)	3,249,291	0.26	804 ( 76)	7,240 (163)
2012	144,093	0.16	878 (106)	9,153 (306)					6,307,317	0.15	1,919 (331)	19,939 ( 793)	4,346,403	0.19	870 (133)	8,155 (271)
2013	280,092	0.30	462 ( 72)	3,834 (206)					8,823,140	0.17	1,674 (372)	16,838 (1,037)	6,582,108	0.19	671 (123)	6,625 (349)
2014	258,945	0.19	625 (124)	5,975 (364)					11,593,216	0.11	1,517 (482)	16,300 (1,790)	5,884,124	0.21	453 (100)	4,461 (276)
2015	256,387	0.20	681 (127)	5,702 (328)					9,381,165	0.11	1,591 (490)	16,061 (1,570)	6,500,374	0.25	480 ( 97)	4,378 (235)
2016	253,203	0.21	695 (118)	5,241 (253)					6,361,109	0.09	1,626 (434)	15,890 (1,374)	6,992,583	0.17	723 (134)	4,856 (304)
2017	240,541	0.18	590 (126)	4,889 (340)					7,446,340	0.11	1,293 (352)	13,432 (1,136)	7,981,252	0.20	580 (115)	4,354 (291)
2018	355,376	0.19	596 ( 96)	5,069 (245)					5,970,615	0.12	1,223 (272)	11,286 ( 858)	7,807,543	0.23	567 ( 93)	4,551 (284)
2019	304,962	0.28	572 (113)	4,486 (253)					5,987,846	0.12	1,244 (315)	11,421 ( 960)	6,876,598	0.19	606 (121)	4,556 (271)
2020	487,533	0.30	628 (139)	4,824 (364)					10,440,887	0.13	1,388 (407)	12,792 (1,207)	12,175,650	0.17	651 (157)	4,571 (413)

**Table 5.** Gray Snapper landings (AB1) and discards (B2), in numbers of fish, with associated coefficients of variation (CV; Dettloff et al. 2020) by year for all modes combined (MRIP only). Table does not include any MRIP catch estimates imputed by the SEFSC for 1981 wave1. Sample size is provided both as the total number of primary sampling units (PSU) and angler trips (Trp) intercepted by MRIP samplers within a specified strata and, in parentheses, the number of PSUs and angler trips that intercepted Gray Snapper.

Year	AB1				B2			
	Total	CV	PSU	Trp	Total	CV	PSU	Trp
1981	2,550,022	0.43	673 ( 53)	4,788 ( 107)	916,508	0.43	673 ( 20)	4,788 ( 38)
1982	3,818,973	0.32	1,168 ( 75)	8,795 ( 130)	1,240,628	0.33	1,168 ( 40)	8,795 ( 76)
1983	2,096,262	0.38	758 ( 53)	6,187 ( 117)	1,824,364	0.63	758 ( 22)	6,187 ( 38)
1984	9,689,483	0.37	808 ( 55)	7,272 ( 152)	963,513	0.51	808 ( 24)	7,272 ( 36)
1985	1,651,913	0.38	917 ( 47)	7,851 ( 108)	1,275,277	0.33	917 ( 30)	7,851 ( 51)
1986	1,979,070	0.33	1,936 ( 83)	14,306 ( 138)	692,636	0.40	1,936 ( 55)	14,306 ( 85)
1987	3,015,517	0.24	1,866 (104)	13,695 ( 156)	479,533	0.36	1,866 ( 35)	13,695 ( 44)
1988	2,567,757	0.22	2,125 (139)	15,066 ( 187)	1,201,702	0.24	2,125 ( 84)	15,066 ( 108)
1989	4,793,837	0.21	1,457 (132)	10,874 ( 189)	1,890,273	0.18	1,457 ( 85)	10,874 ( 145)
1990	3,099,015	0.25	1,222 ( 89)	9,271 ( 118)	3,543,752	0.25	1,222 ( 83)	9,271 ( 141)
1991	5,071,466	0.22	1,466 (128)	11,077 ( 158)	13,242,630	0.16	1,466 (164)	11,077 ( 345)
1992	2,438,185	0.12	2,712 (256)	23,928 ( 364)	8,871,103	0.14	2,712 (317)	23,928 ( 814)
1993	2,754,357	0.10	2,379 (282)	20,909 ( 419)	9,355,977	0.09	2,379 (412)	20,909 ( 928)
1994	2,167,992	0.10	2,280 (268)	24,178 ( 380)	7,433,225	0.10	2,280 (347)	24,178 ( 914)
1995	2,470,148	0.13	1,982 (219)	21,452 ( 337)	7,506,757	0.10	1,982 (320)	21,452 ( 780)
1996	2,327,300	0.13	2,313 (223)	22,304 ( 305)	8,748,281	0.17	2,313 (306)	22,304 ( 783)
1997	1,800,484	0.13	2,402 (237)	23,461 ( 317)	7,870,916	0.09	2,402 (378)	23,461 ( 891)
1998	2,406,480	0.11	2,913 (356)	29,368 ( 499)	9,481,445	0.09	2,913 (501)	29,368 (1,273)
1999	2,005,469	0.11	3,935 (472)	40,415 ( 645)	8,151,310	0.10	3,935 (588)	40,415 (1,319)
2000	1,912,276	0.12	3,652 (441)	37,797 ( 588)	8,433,190	0.12	3,652 (483)	37,797 (1,059)
2001	2,358,241	0.14	3,221 (414)	37,602 ( 585)	6,353,973	0.15	3,221 (437)	37,602 ( 923)
2002	1,675,140	0.10	3,317 (469)	39,112 ( 649)	6,700,436	0.08	3,317 (564)	39,112 (1,339)
2003	2,360,542	0.11	3,659 (553)	39,640 ( 782)	11,490,897	0.09	3,659 (655)	39,640 (1,788)
2004	2,789,399	0.17	3,103 (491)	36,717 ( 723)	9,608,230	0.11	3,103 (466)	36,717 (1,173)
2005	2,098,331	0.12	2,711 (405)	32,678 ( 646)	11,131,974	0.12	2,711 (475)	32,678 (1,417)
2006	1,748,864	0.18	2,919 (341)	32,542 ( 503)	7,388,865	0.13	2,919 (403)	32,542 (1,075)
2007	2,177,430	0.11	3,047 (370)	33,427 ( 560)	9,315,765	0.10	3,047 (477)	33,427 (1,344)
2008	3,160,661	0.12	3,238 (456)	33,593 ( 681)	14,749,956	0.12	3,238 (584)	33,593 (1,690)
2009	2,945,990	0.13	3,152 (412)	33,402 ( 602)	6,979,839	0.09	3,152 (549)	33,402 (1,472)
2010	1,429,713	0.18	3,082 (288)	31,930 ( 414)	5,129,150	0.13	3,082 (381)	31,930 ( 927)
2011	1,773,782	0.16	3,367 (263)	33,959 ( 362)	7,149,486	0.15	3,367 (366)	33,959 ( 850)
2012	4,089,711	0.36	3,667 (335)	37,247 ( 477)	10,797,813	0.11	3,667 (570)	37,247 (1,370)
2013	3,684,962	0.14	2,807 (362)	27,297 ( 573)	15,685,339	0.12	2,807 (567)	27,297 (1,592)
2014	4,623,805	0.11	2,595 (590)	26,736 (1,070)	17,736,285	0.10	2,595 (706)	26,736 (2,430)
2015	3,500,361	0.10	2,752 (552)	26,141 ( 975)	16,137,927	0.11	2,752 (714)	26,141 (2,133)
2016	3,894,353	0.10	3,044 (581)	25,987 ( 955)	13,606,895	0.09	3,044 (686)	25,987 (1,931)
2017	3,226,446	0.16	2,463 (402)	22,675 ( 688)	15,668,133	0.10	2,463 (593)	22,675 (1,767)
2018	3,259,731	0.15	2,386 (393)	20,906 ( 648)	14,133,534	0.14	2,386 (461)	20,906 (1,387)
2019	3,595,026	0.21	2,422 (405)	20,463 ( 686)	13,169,405	0.11	2,422 (549)	20,463 (1,484)

Year	Total	AB1			B2			
		CV	PSU	Trp	Total	CV	PSU	Trp
2020	3,748,274	0.11	2,667 (465)	22,187 ( 744)	23,104,070	0.10	2,667 (703)	22,187 (1,984)

**Table 6.** *Estimated landings of Gray Snapper in pounds whole weight by state and year (MRIP, LACreel 2014+, TPWD). Average weight estimates are calculated by strata using the following hierarchy: species, region, year, state, mode, wave, and area (Matter and Rios 2013). The minimum number of weights used at each level of substitution is fifteen fish, except for the final species level where the minimum is one fish (Dettloff and Matter 2019b).*

Year	TX	LA	MS	AL	FLW	Total
1981	593	0	0	1,071	3,814,079	3,815,742
1982	593	0	0	256	3,096,952	3,097,801
1983	1,125	10,349	0	324	2,079,362	2,091,159
1984	255	0	0	0	6,145,217	6,145,472
1985	398	0	0	0	2,011,875	2,012,272
1986	1,224	6,657	9,338	0	2,149,001	2,166,221
1987	1,117	519	12,565	36,457	2,997,405	3,048,063
1988	453	4,042	7,154	4,842	2,327,762	2,344,252
1989	317	11,630	30,061	3,931	3,478,099	3,524,037
1990	291	17,956	39,859	13,378	4,011,904	4,083,388
1991	56	101,164	8,186	9,527	5,016,464	5,135,397
1992	1,243	39,867	11,295	85,721	2,536,539	2,674,665
1993	4,267	58,341	23,415	150,392	2,737,805	2,974,220
1994	12,115	203,987	11,451	50,900	2,233,852	2,512,304
1995	8,922	118,770	25,170	32,547	3,051,671	3,237,079
1996	11,655	6,866	148,538	37,286	2,879,181	3,083,526
1997	2,072	115,001	19,284	2,561	2,048,849	2,187,767
1998	10,599	138,701	14,686	31,199	2,640,961	2,836,145
1999	11,939	462,584	28,447	86,641	2,223,266	2,812,877
2000	20,178	323,600	36,140	181,693	2,168,820	2,730,430
2001	7,186	541,913	37,166	126,462	3,190,455	3,903,182
2002	13,365	298,134	3,711	283,957	1,808,112	2,407,279
2003	11,312	765,552	22,026	184,006	2,984,204	3,967,100
2004	28,491	992,186	60,789	107,451	3,917,587	5,106,504
2005	40,689	731,124	0	306,616	2,556,360	3,634,790
2006	36,080	943,082	21,425	50,983	1,905,495	2,957,066
2007	14,681	380,496	35,208	72,038	2,672,607	3,175,030
2008	17,051	409,969	2,715	116,784	3,276,891	3,823,410
2009	63,587	342,363	51,441	107,658	2,826,953	3,392,002
2010	7,343	61,860	3,077	109,499	2,254,908	2,436,687
2011	9,888	844,209	0	494,420	2,007,569	3,356,086
2012	23,387	665,944	2,913	103,473	4,397,723	5,193,439
2013	36,693	446,537	12,064	64,046	4,080,791	4,640,130
2014	15,115	570,423	2,605	27,181	4,534,388	5,149,712
2015	7,800	703,451	4,315	42,178	3,732,480	4,490,224
2016	16,564	411,725	32,016	164,194	4,298,061	4,922,561
2017	41,483	297,700	28,478	185,648	4,210,874	4,764,183
2018	23,100	277,882	29,694	229,802	3,582,744	4,143,222
2019	47,075	250,861	105,461	148,595	3,858,229	4,410,221
2020	50,313	196,162	107,420	132,763	4,059,360	4,546,019

**Table 7.** Gray Snapper landings in pounds whole weight (LBS) (MRIP, LACreel 2014+, TPWD) with associated coefficients of variation (CV; Approach 2 described in Nuttall and Dettloff 2022) by mode and year. CV estimates shown are calculated using MRIP data only and do not include uncertainty from imputations for 1981 wave 1.

Year	Cbt		Hbt		Priv		Shore		Total	
	LBS	CV	LBS	CV	LBS	CV	LBS	CV	LBS	CV
1981	278,959	0.50	160,843	0.44	2,907,399	0.76	468,541	0.48	3,815,742	0.55
1982	413,564	0.62	435,901	0.57	1,640,983	0.59	607,353	0.55	3,097,801	0.38
1983	572,985	0.65	371,641	0.67	507,104	0.55	639,429	0.63	2,091,159	0.44
1984	128,471	0.48	72,721	0.50	5,054,300	0.55	889,980	0.38	6,145,472	0.43
1985	168,713	0.41	113,134	0.45	1,311,181	0.59	419,245	0.60	2,012,272	0.41
1986	374,189	0.47			939,179	0.34	852,852	0.80	2,166,221	0.39
1987	270,296	0.59			2,318,616	0.33	459,151	0.45	3,048,063	0.32
1988	38,179	0.55			1,606,147	0.44	699,926	0.36	2,344,252	0.32
1989	122,320	0.68			2,016,369	0.28	1,385,348	0.40	3,524,037	0.47
1990	57,666	0.57			3,142,745	0.50	882,977	0.37	4,083,388	0.41
1991	307,157	0.67			2,659,254	0.32	2,168,986	0.40	5,135,397	0.36
1992	395,811	0.67			1,535,963	0.22	742,891	0.44	2,674,665	0.39
1993	173,997	0.48			1,991,672	0.21	808,551	0.46	2,974,220	0.37
1994	153,874	0.53			1,789,689	0.25	568,741	0.31	2,512,304	0.36
1995	120,408	0.45			2,635,514	0.22	481,157	0.24	3,237,079	0.22
1996	235,036	0.44			2,092,715	0.25	755,774	0.24	3,083,526	0.22
1997	120,227	0.31			1,637,237	0.31	430,303	0.26	2,187,767	0.27
1998	451,061	0.35			1,987,907	0.28	397,177	0.26	2,836,145	0.30
1999	273,718	0.37			2,224,931	0.29	314,228	0.28	2,812,877	0.34
2000	228,132	0.24			1,935,454	0.32	566,843	0.32	2,730,430	0.24
2001	363,833	0.44			2,979,142	0.27	560,207	0.46	3,903,182	0.27
2002	298,897	0.30			1,646,229	0.30	462,153	0.31	2,407,279	0.31
2003	475,177	0.21			3,086,843	0.25	405,080	0.27	3,967,100	0.20
2004	385,705	0.20			4,370,032	0.30	350,767	0.92	5,106,504	0.26
2005	344,826	0.28			2,795,893	0.31	494,071	0.33	3,634,790	0.27
2006	401,111	0.28			2,255,725	0.29	300,230	0.36	2,957,066	0.27
2007	332,492	0.27			2,527,171	0.28	315,367	0.29	3,175,030	0.24
2008	505,497	0.32			2,753,998	0.25	563,915	0.32	3,823,410	0.28
2009	484,035	0.42			2,589,732	0.25	318,236	0.42	3,392,002	0.24
2010	231,820	0.26			2,133,931	0.31	70,936	0.46	2,436,687	0.28
2011	255,236	0.26			2,721,917	0.33	378,933	0.48	3,356,086	0.28
2012	236,554	0.29			4,226,255	0.54	730,630	0.44	5,193,439	0.45
2013	437,457	0.44			3,750,404	0.27	452,269	0.40	4,640,130	0.30
2014	457,506	0.28			4,168,826	0.24	523,380	0.31	5,149,712	0.25
2015	294,904	0.32			3,753,870	0.24	441,450	0.39	4,490,224	0.25
2016	469,256	0.41			3,754,046	0.25	699,259	0.40	4,922,561	0.30
2017	375,506	0.45			3,482,595	0.28	906,082	0.36	4,764,183	0.35
2018	396,727	0.40			3,063,255	0.27	683,241	0.41	4,143,222	0.33
2019	551,442	0.32			2,538,594	0.26	1,320,185	0.61	4,410,221	0.32
2020	355,953	0.26			3,375,031	0.28	815,035	0.29	4,546,019	0.26

**Table 8.** Summary of length measurements (millimeters fork length) from MRIP-intercepted Gray Snapper by state and year. Summaries include the number of fish measured by MRIP and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths. LA lengths are available from MRIP only until 2013.

Year	LA					MS					AL					FLW				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1981	0 (0)	0	0	0	0	0 (0)	0	0	0	0	5 (1)	180	282	111	470	324 (105)	107	276	113	620
1982	0 (0)	0	0	0	0	0 (0)	0	0	0	0	2 (1)	279	284	6	288	449 (127)	107	266	99	585
1983	26 (6)	200	326	139	660	0 (0)	0	0	0	0	1 (1)	530	530	0	530	232 (102)	140	358	129	700
1984	0 (0)	0	0	0	0	0 (0)	0	0	0	0	0 (0)	0	0	0	0	372 (145)	150	313	93	590
1985	0 (0)	0	0	0	0	0 (0)	0	0	0	0	0 (0)	0	0	0	0	214 (102)	173	373	112	630
1986	11 (4)	280	464	171	720	5 (3)	193	208	12	223	0 (0)	0	0	0	0	409 (131)	129	361	109	575
1987	3 (3)	280	438	145	565	6 (4)	163	258	57	330	16 (4)	245	461	115	654	516 (145)	10	322	105	685
1988	4 (4)	170	262	103	410	7 (5)	200	264	43	314	7 (3)	260	455	121	654	538 (175)	152	279	76	615
1989	9 (7)	206	280	67	421	23 (13)	171	240	43	397	2 (1)	296	348	74	400	589 (168)	116	267	66	577
1990	8 (4)	310	435	130	638	1 (1)	210	210	0	210	9 (8)	160	309	116	512	277 (105)	160	312	81	695
1991	35 (11)	210	366	124	608	6 (3)	230	316	84	431	28 (7)	240	267	27	355	428 (137)	153	297	69	522
1992	58 (18)	210	395	141	675	29 (16)	230	307	108	667	53 (23)	205	375	112	689	862 (307)	176	302	66	668
1993	45 (16)	194	372	97	675	27 (11)	230	305	87	667	26 (14)	210	337	114	806	1,010 (378)	75	298	75	890
1994	76 (22)	150	431	115	644	10 (6)	195	284	86	463	29 (13)	238	388	89	645	915 (339)	155	307	55	613
1995	39 (15)	160	392	137	643	27 (12)	192	259	59	370	26 (10)	224	304	67	460	820 (300)	174	324	66	542
1996	9 (5)	205	423	159	680	41 (15)	197	335	102	547	15 (7)	224	365	124	600	754 (278)	212	331	71	615
1997	23 (13)	173	441	153	680	5 (4)	180	247	90	406	10 (6)	340	408	54	479	803 (294)	180	325	79	765
1998	55 (17)	170	410	107	625	17 (6)	213	312	82	495	28 (15)	192	268	64	479	1,436 (461)	170	330	83	667
1999	109 (35)	303	476	83	661	16 (9)	213	305	96	499	93 (39)	217	378	124	720	1,517 (562)	145	335	76	614
2000	98 (34)	115	480	92	715	32 (12)	194	303	81	499	104 (47)	165	322	85	607	1,306 (495)	185	355	87	681
2001	74 (27)	245	469	109	715	18 (6)	194	279	60	459	109 (48)	226	385	105	665	1,427 (504)	132	339	88	711
2002	272 (45)	281	478	117	718	6 (5)	310	358	60	443	98 (48)	270	422	107	693	1,516 (551)	157	346	89	702
2003	241 (39)	230	519	95	678	8 (3)	298	480	150	662	120 (44)	243	432	107	686	2,174 (696)	179	346	86	810
2004	287 (65)	181	468	108	675	16 (8)	219	439	161	662	51 (29)	282	465	103	720	1,791 (621)	191	361	95	708
2005	215 (61)	280	509	94	646	0 (0)	0	0	0	0	56 (37)	288	455	117	677	1,576 (548)	204	361	93	686
2006	604 (91)	222	476	89	688	6 (5)	174	276	53	310	34 (22)	212	400	142	661	1,061 (385)	191	346	99	670
2007	347 (45)	266	458	108	698	7 (3)	260	304	52	375	51 (22)	237	352	107	639	1,342 (490)	190	334	82	635
2008	196 (35)	291	479	109	674	7 (3)	274	313	37	386	50 (23)	213	368	105	699	1,818 (620)	152	326	84	770
2009	158 (30)	287	410	75	668	8 (5)	218	423	134	703	85 (37)	250	353	104	636	1,711 (530)	221	321	73	686
2010	24 (3)	334	566	88	658	3 (2)	308	391	74	448	22 (16)	289	480	120	705	1,258 (393)	198	351	86	642
2011	140 (18)	357	510	81	674	0 (0)	0	0	0	0	21 (13)	288	511	134	665	981 (331)	203	339	77	639



Year	LA					MS					AL					FLW				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
2012	135 (29)	212	469	98	687	3 (2)	232	244	17	263	16 (13)	288	419	107	630	1,217 (433)	204	324	75	791
2013	132 (34)	295	488	114	684	8 (5)	211	276	29	309	30 (18)	235	435	130	731	1,590 (516)	202	311	69	776
2014						3 (1)	500	576	93	680	67 (38)	260	360	104	668	3,705 (1,031)	184	313	66	678
2015						3 (2)	327	386	99	500	35 (24)	280	383	97	668	2,962 (949)	195	310	61	693
2016						20 (11)	256	325	99	698	128 (50)	228	335	92	740	2,761 (894)	176	321	72	678
2017						11 (5)	236	291	40	355	108 (47)	240	321	63	612	1,905 (636)	204	319	75	680
2018						25 (11)	230	319	70	503	123 (51)	248	361	98	713	1,923 (557)	206	313	69	652
2019						32 (15)	270	392	100	609	97 (62)	210	376	95	656	1,810 (567)	208	318	69	679
2020						48 (14)	271	417	96	600	259 (88)	199	337	71	672	1,884 (571)	206	310	66	768

**Table 9.** Summary of weight measurements (pounds whole weight) from MRIP-intercepted Gray Snapper by state and year. Summaries include the number of fish weighed by MRIP and, in parentheses, the number of angler trips from which those fish were weighed (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish weights. LA weights are available from MRIP only until 2013.

Year	LA					MS					AL					FLW				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1981	0 (0)	0.0	0.0	0.0	0.0	0 (0)	0.0	0.0	0.0	0.0	5 (1)	0.2	1.2	1.4	3.7	324 (105)	0.1	1.2	1.5	9.5
1982	0 (0)	0.0	0.0	0.0	0.0	0 (0)	0.0	0.0	0.0	0.0	2 (1)	1.1	1.1	0.0	1.1	449 (127)	0.2	1.0	1.3	8.2
1983	26 (6)	0.6	3.0	3.0	11.3	0 (0)	0.0	0.0	0.0	0.0	1 (1)	7.1	7.1	0.0	7.1	232 (102)	0.2	2.2	2.2	12.5
1984	0 (0)	0.0	0.0	0.0	0.0	0 (0)	0.0	0.0	0.0	0.0	0 (0)	0.0	0.0	0.0	0.0	372 (145)	0.2	1.5	1.5	8.3
1985	0 (0)	0.0	0.0	0.0	0.0	0 (0)	0.0	0.0	0.0	0.0	0 (0)	0.0	0.0	0.0	0.0	214 (102)	0.2	2.4	1.9	8.2
1986	11 (4)	1.4	5.8	4.6	12.6	5 (3)	0.2	0.3	0.1	0.5	0 (0)	0.0	0.0	0.0	0.0	405 (131)	0.1	2.4	2.2	12.0
1987	3 (3)	1.4	2.7	1.1	3.4	6 (4)	0.2	0.8	0.4	1.3	16 (4)	0.7	3.0	1.2	4.8	514 (145)	0.0	1.6	1.7	10.8
1988	0 (0)	0.0	0.0	0.0	0.0	0 (0)	0.0	0.0	0.0	0.0	1 (1)	0.7	0.7	0.0	0.7	109 (41)	0.2	1.3	1.1	5.2
1989	9 (7)	0.5	1.1	0.7	2.9	23 (13)	0.2	0.6	0.4	2.0	2 (1)	0.9	1.4	0.8	2.0	587 (168)	0.1	0.9	0.8	9.0
1990	8 (4)	1.1	5.6	5.2	15.0	1 (1)	0.4	0.4	0.0	0.4	9 (8)	0.3	1.4	1.5	4.1	277 (105)	0.2	1.3	1.1	8.0
1991	35 (11)	0.5	3.2	3.0	11.2	6 (3)	0.7	1.6	0.9	3.1	28 (7)	0.7	1.2	0.4	2.1	428 (137)	0.2	1.2	0.9	6.2
1992	56 (16)	0.4	4.2	4.7	17.4	22 (12)	0.4	0.9	0.4	2.0	53 (23)	0.2	3.4	3.7	18.1	819 (283)	0.2	1.3	1.0	6.4
1993	45 (16)	0.5	2.4	2.4	14.1	27 (11)	0.7	2.1	4.2	22.3	26 (14)	0.4	2.2	2.4	12.5	1,010 (378)	0.2	1.1	1.0	11.1

Year	LA					MS					AL					FLW				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1994	76 (22)	0.2	3.3	2.1	8.3	10 (6)	0.2	1.0	0.9	3.3	29 (13)	0.6	2.6	2.1	10.8	915 (339)	0.2	1.1	0.7	9.0
1995	39 (15)	0.2	3.5	3.5	11.7	27 (12)	0.2	0.7	0.5	1.9	26 (10)	0.5	1.2	0.8	3.4	820 (300)	0.2	1.3	0.9	5.5
1996	9 (5)	0.4	5.5	5.8	16.9	41 (15)	0.2	1.8	1.7	7.1	15 (7)	0.4	2.4	2.1	7.7	754 (278)	0.3	1.4	1.1	8.5
1997	23 (13)	0.2	5.3	4.4	16.5	5 (4)	0.1	0.8	1.0	2.5	10 (6)	1.8	3.7	1.9	7.9	802 (294)	0.2	2.0	2.6	20.2
1998	55 (17)	0.2	3.6	2.8	13.8	17 (6)	0.1	1.5	1.7	7.2	28 (15)	0.2	1.0	1.1	5.0	1,436 (461)	0.2	1.9	2.0	18.4
1999	109 (35)	1.0	5.2	2.9	17.7	14 (7)	0.7	1.4	1.5	5.7	93 (39)	0.3	5.8	5.9	25.8	1,517 (562)	0.1	1.7	1.4	9.6
2000	98 (34)	0.1	5.5	3.3	16.6	32 (12)	0.2	1.5	1.7	8.5	104 (47)	0.3	2.5	2.6	14.3	1,306 (495)	0.2	2.1	1.8	12.2
2001	74 (27)	0.5	4.5	3.0	13.4	18 (6)	0.2	1.1	0.9	3.8	109 (48)	0.5	3.8	3.5	16.6	1,427 (504)	0.1	1.8	1.6	13.6
2002	272 (45)	0.6	4.9	3.2	12.1	6 (5)	1.2	2.1	1.0	3.7	98 (48)	0.8	5.3	4.5	20.9	1,516 (551)	0.2	1.9	1.7	14.0
2003	241 (39)	0.4	5.9	2.8	11.5	8 (3)	0.9	4.2	3.3	8.5	120 (44)	0.6	4.9	3.7	20.7	2,174 (696)	0.2	1.8	1.6	17.2
2004	287 (65)	0.2	4.4	2.7	11.0	16 (8)	0.5	3.6	3.1	8.5	51 (29)	1.0	4.0	2.3	9.4	1,791 (621)	0.2	2.0	1.7	12.1
2005	215 (61)	0.9	5.1	2.6	9.9	0 (0)	0.0	0.0	0.0	0.0	56 (37)	0.9	4.1	3.1	12.3	1,576 (548)	0.3	2.0	1.7	10.6
2006	604 (91)	0.3	4.3	2.3	11.6	6 (5)	0.2	0.8	0.4	1.1	34 (22)	0.4	3.3	3.2	10.2	1,061 (385)	0.2	1.8	1.7	10.2
2007	347 (45)	0.7	4.2	2.8	12.1	7 (3)	0.6	1.1	0.6	1.9	51 (22)	0.7	2.1	2.2	8.8	1,342 (490)	0.2	1.6	1.4	9.1
2008	186 (34)	0.9	4.9	3.1	13.8	2 (2)	0.9	1.6	0.9	2.2	50 (23)	0.3	2.4	2.4	13.1	1,818 (620)	0.1	1.5	1.5	14.1
2009	158 (30)	0.9	2.7	1.7	9.9	8 (5)	0.4	3.4	3.0	10.4	85 (37)	0.4	2.1	2.3	9.5	1,711 (530)	0.3	1.4	1.3	12.3
2010	24 (3)	1.4	6.8	2.4	9.9	3 (2)	0.9	1.9	1.5	3.7	22 (16)	1.1	4.7	3.5	12.8	1,258 (393)	0.3	1.8	1.5	9.9
2011	140 (18)	0.9	5.2	2.6	13.2	0 (0)	0.0	0.0	0.0	0.0	21 (13)	0.9	5.8	3.5	11.0	981 (331)	0.3	1.6	1.3	9.5
2012	135 (29)	0.3	4.3	2.5	11.1	3 (2)	0.4	0.5	0.1	0.5	16 (13)	0.8	3.2	2.3	9.4	1,217 (433)	0.4	1.4	1.6	19.8
2013	132 (34)	0.9	4.8	3.1	11.5	8 (5)	0.4	0.8	0.2	1.1	30 (18)	0.4	3.5	3.1	13.2	1,590 (516)	0.2	1.3	1.2	15.1
2014						3 (1)	4.5	7.1	3.0	10.5	67 (38)	0.8	2.2	2.4	11.2	3,705 (1,031)	0.3	1.2	1.0	11.3
2015						3 (2)	1.2	2.4	1.9	4.5	35 (24)	0.9	2.5	2.3	10.4	2,962 (949)	0.3	1.2	1.0	12.0
2016						20 (11)	0.6	1.6	2.3	11.1	128 (50)	0.5	1.9	2.2	14.8	2,761 (894)	0.3	1.4	1.2	10.8
2017						11 (5)	0.4	0.9	0.3	1.5	108 (47)	0.6	1.4	1.3	9.3	1,905 (636)	0.4	1.4	1.3	11.2
2018						25 (11)	0.5	1.4	1.1	5.7	123 (51)	0.4	2.4	2.3	13.8	1,923 (557)	0.3	1.3	1.1	10.6
2019						32 (15)	0.7	2.3	1.8	8.4	97 (62)	0.7	2.2	2.1	11.0	1,810 (567)	0.3	1.3	1.1	10.8
2020						48 (14)	0.7	2.9	2.2	7.9	259 (88)	0.3	1.6	1.4	10.6	1,884 (571)	0.3	1.2	1.1	15.5

**Table 10.** Summary of length measurements (millimeters fork length) from MRIP-intercepted Gray Snapper by mode and year. Summaries include the number of fish measured by MRIP and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths.

Year	Cbt					Hbt					Priv					Shore				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1981	16 (6)	107	389	138	565	51 (29)	180	376	82	510	151 (38)	160	288	110	620	111 (33)	120	198	52	400
1982	50 (12)	132	278	115	560	62 (21)	107	340	129	585	154 (47)	175	292	82	550	185 (48)	135	217	66	485
1983	46 (9)	200	364	124	660	105 (51)	205	456	99	700	42 (19)	215	297	69	465	66 (30)	140	225	44	310
1984	33 (8)	230	353	103	590	126 (69)	230	383	96	590	118 (35)	185	271	59	435	95 (33)	150	260	40	340
1985	32 (9)	365	436	51	485	65 (46)	365	477	88	630	65 (21)	173	319	78	450	52 (26)	180	272	55	390
1986	207 (55)	200	427	104	670						159 (68)	129	305	87	720	59 (15)	181	283	52	457
1987	112 (31)	158	426	125	685						373 (108)	10	312	84	600	56 (17)	95	219	53	320
1988	82 (27)	270	375	80	654						337 (115)	170	277	70	615	137 (45)	152	234	44	360
1989	57 (16)	190	310	111	577						411 (119)	175	266	55	459	155 (54)	116	254	63	397
1990	35 (12)	260	382	80	638						183 (73)	160	324	86	695	77 (33)	160	261	53	360
1991	108 (26)	240	340	87	608						266 (90)	205	310	67	522	123 (42)	153	246	45	389
1992	188 (64)	228	390	103	689						636 (231)	181	304	61	668	178 (69)	176	255	47	472
1993	107 (44)	250	403	90	806						681 (247)	185	306	65	711	320 (128)	75	260	69	890
1994	143 (44)	262	387	81	645						669 (237)	181	317	66	644	218 (99)	150	278	47	548
1995	79 (29)	277	392	95	643						643 (215)	180	331	67	475	190 (93)	160	275	43	458
1996	73 (24)	295	437	102	680						566 (204)	197	330	68	547	180 (77)	208	299	48	590
1997	201 (74)	250	406	100	680						500 (180)	173	308	66	765	140 (63)	180	293	43	432
1998	560 (151)	220	392	89	667						797 (261)	170	301	64	625	179 (87)	192	279	37	483
1999	706 (258)	230	387	86	720						918 (327)	161	323	78	655	111 (60)	145	274	46	412
2000	763 (304)	190	399	92	681						675 (241)	115	326	80	715	102 (43)	185	285	50	491
2001	650 (223)	240	393	93	711						839 (300)	194	325	85	715	139 (62)	132	268	48	427
2002	990 (294)	240	424	99	718						803 (303)	157	310	79	656	99 (52)	226	298	43	448
2003	1,490 (400)	239	397	97	686						924 (316)	218	335	100	810	129 (66)	179	258	29	341
2004	1,227 (388)	225	403	104	720						814 (291)	191	355	98	662	104 (44)	181	268	43	627
2005	1,016 (339)	241	407	90	686						727 (259)	204	359	118	677	104 (48)	217	276	49	425
2006	886 (221)	212	428	106	688						744 (245)	194	362	114	656	75 (37)	174	281	42	552
2007	834 (226)	239	390	102	698						795 (280)	190	340	94	660	118 (54)	202	271	35	410
2008	831 (244)	237	392	110	699						1,070 (361)	204	313	75	770	170 (76)	152	275	35	377
2009	645 (184)	226	375	92	686						1,188 (362)	218	311	62	703	129 (56)	234	275	24	370
2010	781 (222)	231	379	96	705						475 (169)	220	335	76	650	51 (23)	198	238	38	325
2011	702 (185)	221	375	98	674						398 (161)	214	349	99	665	42 (16)	203	287	48	401

Year	Cbt					Hbt					Priv					Shore				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
2012	746 (232)	225	358	95	791						507 (200)	212	324	82	643	118 (45)	204	283	43	577
2013	539 (140)	234	345	85	776						1,107 (385)	223	323	92	731	114 (48)	202	269	33	356
2014	1,321 (334)	226	333	78	678						2,338 (687)	201	307	58	680	116 (49)	184	244	34	313
2015	864 (242)	215	326	68	668						2,003 (672)	218	307	58	693	133 (61)	195	274	44	370
2016	968 (278)	234	349	82	740						1,779 (604)	176	311	65	698	162 (73)	187	266	46	595
2017	904 (246)	223	320	61	680						1,006 (389)	204	325	85	622	114 (53)	220	264	22	335
2018	760 (189)	220	332	76	713						1,186 (378)	207	311	69	648	125 (52)	206	264	30	353
2019	838 (244)	208	333	76	668						988 (354)	222	319	69	679	113 (46)	208	275	45	609
2020	861 (228)	224	322	65	635						1,188 (384)	207	317	74	768	142 (61)	199	266	28	346

**Table 11.** Summary of weight measurements (pounds whole weight) from MRIP-intercepted Gray Snapper by mode and year. Summaries include the number of fish weighed by MRIP and, in parentheses, the number of angler trips from which those fish were weighed (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish weights.

Year	Cbt					Hbt					Priv					Shore				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1981	16 (6)	0.2	2.7	1.8	6.3	51 (29)	0.2	2.1	1.2	5.1	151 (38)	0.2	1.4	1.7	9.5	111 (33)	0.1	0.4	0.3	2.2
1982	50 (12)	0.2	1.2	1.7	5.5	62 (21)	0.3	2.1	1.9	8.2	154 (47)	0.2	1.1	1.1	7.3	185 (48)	0.2	0.5	0.6	3.8
1983	46 (9)	0.5	2.7	2.3	11.3	105 (51)	0.2	3.7	2.5	12.5	42 (19)	0.4	1.0	0.7	3.3	66 (30)	0.2	0.5	0.3	1.4
1984	33 (8)	0.5	2.3	1.8	7.7	126 (69)	0.4	2.5	1.8	8.3	118 (35)	0.2	0.7	0.6	3.0	95 (33)	0.2	0.8	0.3	1.6
1985	32 (9)	2.0	3.3	0.9	4.4	65 (46)	2.0	4.2	2.0	8.2	65 (21)	0.2	1.5	1.0	4.4	52 (26)	0.2	0.8	0.6	2.2
1986	207 (55)	0.2	3.8	2.4	12.6						155 (68)	0.1	1.3	1.4	12.5	59 (15)	0.2	0.8	0.6	3.5
1987	112 (31)	0.2	3.5	2.5	10.8						373 (108)	0.0	1.2	0.8	4.9	54 (17)	0.2	0.5	0.3	1.3
1988	24 (7)	0.9	2.3	1.2	5.2						58 (23)	0.4	1.3	0.9	4.2	28 (12)	0.2	0.6	0.2	0.9
1989	57 (16)	0.3	1.8	1.9	9.0						411 (119)	0.2	0.8	0.5	3.0	153 (54)	0.1	0.7	0.4	2.0
1990	35 (12)	0.7	2.9	2.8	15.0						183 (73)	0.2	1.5	1.3	8.0	77 (33)	0.2	0.7	0.3	1.1
1991	108 (26)	0.4	2.2	2.0	11.2						266 (90)	0.4	1.4	0.9	5.4	123 (42)	0.2	0.7	0.4	2.2
1992	179 (58)	0.7	3.6	3.3	18.1						606 (213)	0.2	1.2	0.8	6.4	165 (63)	0.2	0.7	0.5	4.0

Year	Cbt					Hbt					Priv					Shore				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1993	107 (44)	0.7	3.2	2.7	22.3						681 (247)	0.2	1.1	0.8	6.7	320 (128)	0.2	0.8	0.7	11.1
1994	143 (44)	0.7	2.4	1.8	10.8						669 (237)	0.2	1.3	0.9	9.0	218 (99)	0.2	0.8	0.5	4.5
1995	79 (29)	0.7	2.8	2.6	11.7						643 (215)	0.2	1.4	0.9	4.0	190 (93)	0.2	0.7	0.4	3.6
1996	73 (24)	0.7	3.6	2.8	16.9						566 (204)	0.2	1.5	1.0	7.1	180 (77)	0.3	0.8	0.4	4.0
1997	200 (74)	0.8	5.0	4.1	20.2						500 (180)	0.2	1.2	1.3	14.4	140 (63)	0.1	0.9	0.5	2.4
1998	560 (151)	0.4	3.3	2.6	18.4						797 (261)	0.1	1.1	1.0	12.9	179 (87)	0.2	0.9	0.6	5.3
1999	704 (256)	0.5	3.0	3.0	25.8						918 (327)	0.3	1.6	1.6	14.8	111 (60)	0.1	0.8	0.4	2.7
2000	763 (304)	0.3	3.1	2.4	16.6						675 (241)	0.1	1.6	1.5	16.5	102 (43)	0.2	1.0	0.6	4.4
2001	650 (223)	0.4	2.9	2.3	16.6						839 (300)	0.2	1.6	1.7	13.4	139 (62)	0.1	0.8	0.5	2.9
2002	990 (294)	0.5	3.5	2.8	20.9						803 (303)	0.2	1.4	1.5	14.3	99 (52)	0.4	1.1	0.5	3.2
2003	1,490 (400)	0.5	2.8	2.5	20.7						924 (316)	0.4	1.8	2.0	17.2	129 (66)	0.2	0.7	0.2	1.3
2004	1,227 (388)	0.4	2.8	2.2	12.1						814 (291)	0.2	2.0	1.8	8.8	104 (44)	0.2	0.8	0.8	8.2
2005	1,016 (339)	0.4	2.7	1.9	12.3						727 (259)	0.4	2.2	2.4	12.1	104 (48)	0.3	0.9	0.6	3.2
2006	886 (221)	0.4	3.2	2.3	11.6						744 (245)	0.2	2.3	2.2	9.9	75 (37)	0.2	0.9	0.7	6.0
2007	834 (226)	0.3	2.6	2.3	12.1						795 (280)	0.2	1.8	1.9	10.5	118 (54)	0.2	0.7	0.3	2.5
2008	816 (242)	0.5	2.7	2.5	13.8						1,070 (361)	0.3	1.3	1.4	14.1	170 (76)	0.1	0.8	0.3	1.7
2009	645 (184)	0.4	2.2	2.0	12.3						1,188 (362)	0.3	1.2	1.0	10.4	129 (56)	0.3	0.7	0.2	1.5
2010	781 (222)	0.5	2.2	1.9	12.8						475 (169)	0.4	1.6	1.3	10.6	51 (23)	0.3	0.6	0.3	1.4
2011	702 (185)	0.5	2.2	2.0	13.2						398 (161)	0.4	2.0	2.1	11.0	42 (16)	0.3	1.0	0.6	2.8
2012	746 (232)	0.4	2.0	2.2	19.8						507 (200)	0.3	1.5	1.4	10.1	118 (45)	0.5	1.0	0.8	7.7
2013	539 (140)	0.4	1.7	1.7	15.1						1,107 (385)	0.4	1.6	1.8	13.2	114 (48)	0.2	0.8	0.3	1.5
2014	1,321 (334)	0.3	1.5	1.4	11.3						2,338 (687)	0.3	1.2	0.9	11.2	116 (49)	0.3	0.6	0.2	1.1
2015	864 (242)	0.4	1.4	1.1	10.4						2,003 (672)	0.3	1.2	1.0	12.0	133 (61)	0.3	0.8	0.4	1.8
2016	968 (278)	0.3	1.8	1.6	14.8						1,779 (604)	0.3	1.2	1.0	11.1	162 (73)	0.3	0.8	0.6	6.5
2017	904 (246)	0.4	1.3	1.0	11.2						1,006 (389)	0.4	1.5	1.5	10.3	114 (53)	0.4	0.7	0.2	1.5
2018	760 (189)	0.4	1.6	1.5	13.8						1,186 (378)	0.3	1.3	1.1	10.6	125 (52)	0.3	0.7	0.2	1.5
2019	838 (244)	0.3	1.5	1.4	10.8						988 (354)	0.4	1.3	1.1	11.0	113 (46)	0.3	0.9	0.8	8.4
2020	861 (228)	0.4	1.4	1.0	8.9						1,188 (384)	0.3	1.3	1.4	15.5	142 (61)	0.3	0.7	0.2	1.5

**Table 12.** Summary of length (millimeters fork length) and weight measurements (pounds whole weight) from MRIP-intercepted Gray Snapper by year. Summaries include the number of fish for which size information was collected by MRIP and, in parentheses, the number of angler trips from which those fish were sampled (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths and weights.

Year	Length					Weight				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1981	329 (106)	107	276	112	620	329 (106)	0.1	1.2	1.5	9.5
1982	451 (128)	107	266	99	585	451 (128)	0.2	1.0	1.3	8.2
1983	259 (109)	140	355	130	700	259 (109)	0.2	2.3	2.3	12.5
1984	372 (145)	150	313	93	590	372 (145)	0.2	1.5	1.5	8.3
1985	214 (102)	173	373	112	630	214 (102)	0.2	2.4	1.9	8.2
1986	425 (138)	129	361	113	720	421 (138)	0.1	2.5	2.3	12.6
1987	541 (156)	10	326	108	685	539 (156)	0.0	1.6	1.7	10.8
1988	556 (187)	152	281	79	654	110 (42)	0.2	1.3	1.1	5.2
1989	623 (189)	116	267	65	577	621 (189)	0.1	0.9	0.8	9.0
1990	295 (118)	160	315	86	695	295 (118)	0.2	1.4	1.5	15.0
1991	497 (158)	153	301	75	608	497 (158)	0.2	1.4	1.3	11.2
1992	1,002 (364)	176	311	81	689	950 (334)	0.2	1.6	1.9	18.1
1993	1,108 (419)	75	302	79	890	1,108 (419)	0.2	1.2	1.3	22.3
1994	1,030 (380)	150	319	72	645	1,030 (380)	0.2	1.3	1.1	10.8
1995	912 (337)	160	324	73	643	912 (337)	0.2	1.4	1.2	11.7
1996	819 (305)	197	333	76	680	819 (305)	0.2	1.5	1.4	16.9
1997	841 (317)	173	329	85	765	840 (317)	0.1	2.1	2.8	20.2
1998	1,536 (499)	170	332	85	667	1,536 (499)	0.1	1.9	2.0	18.4
1999	1,735 (645)	145	346	87	720	1,733 (643)	0.1	2.1	2.4	25.8
2000	1,540 (588)	115	359	93	715	1,540 (588)	0.1	2.3	2.1	16.6
2001	1,628 (585)	132	347	95	715	1,628 (585)	0.1	2.0	2.0	16.6
2002	1,892 (649)	157	369	106	718	1,892 (649)	0.2	2.5	2.5	20.9
2003	2,543 (782)	179	367	103	810	2,543 (782)	0.2	2.3	2.3	20.7
2004	2,145 (723)	181	378	105	720	2,145 (723)	0.2	2.4	2.1	12.1
2005	1,847 (646)	204	381	106	686	1,847 (646)	0.3	2.4	2.1	12.3
2006	1,705 (503)	174	392	115	688	1,705 (503)	0.2	2.7	2.3	11.6
2007	1,747 (560)	190	359	101	698	1,747 (560)	0.2	2.1	2.1	12.1
2008	2,071 (681)	152	342	98	770	2,056 (679)	0.1	1.8	2.0	14.1
2009	1,962 (602)	218	330	79	703	1,962 (602)	0.3	1.5	1.5	12.3
2010	1,307 (414)	198	358	93	705	1,307 (414)	0.3	2.0	1.8	12.8
2011	1,142 (362)	203	363	99	674	1,142 (362)	0.3	2.1	2.0	13.2
2012	1,371 (477)	204	339	90	791	1,371 (477)	0.3	1.7	1.9	19.8
2013	1,760 (573)	202	326	89	776	1,760 (573)	0.2	1.6	1.7	15.1
2014	3,775 (1,070)	184	314	68	680	3,775 (1,070)	0.3	1.3	1.1	11.3
2015	3,000 (975)	195	311	62	693	3,000 (975)	0.3	1.2	1.0	12.0
2016	2,909 (955)	176	321	74	740	2,909 (955)	0.3	1.4	1.2	14.8
2017	2,024 (688)	204	319	74	680	2,024 (688)	0.4	1.4	1.3	11.2
2018	2,071 (619)	206	316	72	713	2,071 (619)	0.3	1.3	1.3	13.8
2019	1,939 (644)	208	322	73	679	1,939 (644)	0.3	1.4	1.2	11.0
2020	2,191 (673)	199	316	70	768	2,191 (673)	0.3	1.3	1.2	15.5

**Table 13.** Summary of length measurements (millimeters total length) from TPWD-intercepted Gray Snapper by mode and year. Summaries include the number of fish measured by TPWD and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths.

Year	Cbt					Priv					Total				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
1983	0 (0)	0	0	0	0	12 (8)	212	251	31	328	12 (8)	212	251	31	328
1984	0 (0)	0	0	0	0	6 (2)	189	229	56	342	6 (2)	189	229	56	342
1985	1 (1)	235	235	0	235	3 (2)	201	254	50	300	4 (3)	201	249	42	300
1986	1 (1)	277	277	0	277	11 (7)	240	265	34	354	12 (8)	240	266	32	354
1987	4 (2)	231	247	14	265	25 (14)	202	248	28	324	29 (16)	202	248	26	324
1988	0 (0)	0	0	0	0	8 (7)	165	247	53	326	8 (7)	165	247	53	326
1989	0 (0)	0	0	0	0	7 (6)	208	256	23	274	7 (6)	208	256	23	274
1990	0 (0)	0	0	0	0	4 (4)	240	320	70	407	4 (4)	240	320	70	407
1991	0 (0)	0	0	0	0	0 (0)	0	0	0	0	0 (0)	0	0	0	0
1992	0 (0)	0	0	0	0	12 (9)	245	284	47	411	12 (9)	245	284	47	411
1993	4 (2)	122	208	89	312	92 (44)	196	256	34	392	96 (46)	122	254	38	392
1994	18 (6)	247	314	46	410	141 (70)	217	295	43	381	159 (76)	217	298	44	410
1995	19 (9)	212	289	52	411	160 (78)	177	298	61	478	179 (87)	177	297	60	478
1996	31 (11)	229	310	55	432	95 (44)	206	310	57	586	126 (55)	206	310	57	586
1997	5 (3)	360	471	64	524	32 (22)	196	331	63	480	37 (25)	196	350	79	524
1998	29 (11)	224	441	103	671	53 (30)	189	348	137	688	82 (41)	189	381	133	688
1999	16 (8)	257	325	92	560	189 (76)	152	276	50	471	205 (84)	152	280	56	560
2000	32 (10)	171	289	64	553	291 (132)	175	295	88	722	323 (142)	171	295	86	722
2001	13 (8)	302	365	60	494	74 (36)	201	361	68	560	87 (44)	201	362	67	560
2002	19 (9)	255	372	78	565	134 (56)	167	315	106	858	153 (65)	167	322	105	858
2003	25 (12)	213	304	98	608	168 (79)	116	311	101	630	193 (91)	116	310	101	630
2004	51 (18)	225	298	50	452	379 (138)	152	313	95	654	430 (156)	152	312	91	654
2005	93 (36)	227	321	62	604	562 (200)	171	295	63	590	655 (236)	171	299	64	604
2006	65 (28)	203	324	67	634	631 (258)	134	303	76	637	696 (286)	134	305	76	637
2007	37 (17)	212	321	84	552	231 (123)	190	333	77	619	268 (140)	190	331	78	619
2008	71 (28)	212	307	90	611	330 (140)	149	316	91	719	401 (168)	149	314	90	719
2009	101 (39)	196	339	84	609	906 (280)	188	316	91	717	1,007 (319)	188	318	90	717
2010	12 (5)	345	525	99	645	93 (47)	226	390	94	644	105 (52)	226	405	103	645
2011	15 (9)	187	301	122	636	96 (51)	213	359	113	601	111 (60)	187	352	115	636
2012	86 (26)	207	289	84	689	350 (140)	179	286	84	667	436 (166)	179	286	84	689
2013	92 (32)	197	290	55	466	685 (262)	109	291	58	669	777 (294)	109	291	58	669
2014	43 (18)	234	391	123	667	128 (62)	200	345	99	660	171 (80)	200	356	107	667
2015	3 (3)	320	404	78	474	80 (34)	187	388	149	701	83 (37)	187	389	147	701
2016	106 (33)	211	258	50	659	267 (101)	147	278	74	623	373 (134)	147	272	68	659
2017	151 (53)	183	295	72	616	707 (236)	172	291	69	690	858 (289)	172	291	70	690
2018	60 (24)	264	337	72	722	243 (118)	181	337	101	686	303 (142)	181	337	96	722
2019	118 (43)	210	340	115	688	287 (124)	190	334	109	674	405 (167)	190	336	111	688
2020	214 (65)	183	285	87	669	712 (259)	163	290	80	684	926 (324)	163	289	81	684

**Table 14.** Summary of length measurements (millimeters fork length) from Gray Snapper intercepted by the LA BIO sampling program by mode and year. Summaries include the number of fish measured by LDWF and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish lengths.

Year	Cbt					Priv					Total				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
2014	177 (22)	261	477	102	690	249 (45)	293	447	88	692	426 (67)	261	459	95	692
2015	120 (14)	305	491	90	692	86 (24)	298	445	97	658	206 (38)	298	472	96	692
2016	69 (12)	302	460	94	686	44 (17)	293	432	99	664	113 (29)	293	449	97	686
2017	21 (5)	370	465	85	668	65 (11)	328	456	77	652	86 (16)	328	458	79	668
2018	126 (27)	299	464	93	707	62 (11)	294	413	86	645	188 (38)	294	447	94	707
2019	94 (14)	278	436	82	657	59 (14)	307	410	81	693	153 (28)	278	426	82	693
2020	96 (11)	336	488	94	683	52 (9)	221	447	112	685	148 (20)	221	473	102	685

**Table 15.** Summary of weight measurements (pounds whole weight) from Gray Snapper intercepted by the LA BIO sampling program by mode and year. Summaries include the number of fish weighed by LDWF and, in parentheses, the number of angler trips from which those fish were measured (N), and the minimum (Min), arithmetic mean (Avg), standard deviation (SD), and maximum (Max) size of fish weights.

Year	Cbt					Priv					Total				
	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max	N	Min	Avg	SD	Max
2014	122 (19)	0.6	5.3	3.3	12.7	138 (29)	0.9	3.8	2.4	11.6	260 (48)	0.6	4.5	2.9	12.7
2015	106 (12)	1.1	4.8	2.6	12.8	67 (20)	0.9	4.1	2.5	10.1	173 (32)	0.9	4.5	2.5	12.8
2016	69 (12)	0.9	3.7	2.4	11.0	38 (15)	1.0	3.5	2.4	9.7	107 (27)	0.9	3.6	2.4	11.0
2017	21 (5)	1.9	3.7	2.5	11.2	64 (10)	1.1	3.8	2.0	9.7	85 (15)	1.1	3.7	2.1	11.2
2018	105 (24)	0.6	4.1	2.4	10.3	46 (9)	0.9	2.5	1.5	7.3	151 (33)	0.6	3.6	2.3	10.3
2019	87 (13)	0.9	3.2	2.0	11.0	48 (12)	1.0	2.6	1.5	8.6	135 (25)	0.9	3.0	1.9	11.0
2020	96 (11)	1.5	4.9	2.7	11.7	49 (8)	0.6	3.8	2.8	12.1	145 (19)	0.6	4.5	2.8	12.1



**Table 16.** Estimated average weights of landed Gray Snapper in pounds whole weight (WGT) with associated coefficients of variation (CV; Approach 2 described in Nuttall and Dettloff 2022) by mode and year (MRIP, LACreel 2014+, TPWD). Average weight estimates are calculated from annual estimates (by-mode) of landings-in-weight (Table 7) divided by estimates of landings-in-number (Table 2). Sample size (N) is provided as the total number of angler trips and, in parentheses, number of fish from which weight information was collected (MRIP, LABIO 2014+, TPWD).

Year	Cbt			Hbt			Priv			Shore			Total		
	WGT	CV	N	WGT	CV	N	WGT	CV	N	WGT	CV	N	WGT	CV	N
1981	2.51	0.31	6 (16)	2.40	0.17	29 (51)	1.25	0.57	38 (151)	0.37	0.19	33 (111)	1.01	0.38	106 (329)
1982	1.18	0.33	12 (50)	2.00	0.11	21 (62)	0.89	0.27	47 (154)	0.43	0.23	48 (185)	0.81	0.22	128 (451)
1983	2.42	0.25	9 (46)	2.63	0.20	51 (105)	0.95	0.15	27 (54)	0.54	0.28	30 (66)	1.00	0.25	117 (271)
1984	2.11	0.29	8 (33)	2.37	0.19	69 (126)	0.60	0.28	37 (124)	0.74	0.17	33 (95)	0.63	0.23	147 (378)
1985	3.34	0.12	10 (33)	3.84	0.15	46 (65)	1.35	0.27	23 (68)	0.70	0.21	26 (52)	1.22	0.18	105 (218)
1986	3.37	0.17	56 (208)				1.11	0.19	75 (166)	0.83	0.68	15 (59)	1.09	0.23	146 (433)
1987	3.55	0.21	33 (116)				1.31	0.16	122 (398)	0.39	0.19	17 (54)	1.01	0.22	172 (568)
1988	2.02	0.09	7 (24)				1.21	0.32	30 (66)	0.57	0.16	12 (28)	0.91	0.24	49 (118)
1989	1.98	0.58	16 (57)				0.83	0.17	125 (418)	0.60	0.11	54 (153)	0.74	0.44	195 (628)
1990	2.07	0.10	12 (35)				1.61	0.39	77 (187)	0.79	0.15	33 (77)	1.32	0.33	122 (299)
1991	1.77	0.31	26 (108)				1.52	0.25	90 (266)	0.69	0.22	42 (123)	1.01	0.29	158 (497)
1992	2.45	0.34	58 (179)				1.16	0.18	222 (618)	0.77	0.39	63 (165)	1.10	0.37	343 (962)
1993	3.02	0.37	46 (111)				1.15	0.16	291 (773)	0.83	0.43	128 (320)	1.08	0.35	465 (1,204)
1994	1.73	0.45	50 (161)				1.26	0.22	307 (810)	0.85	0.25	99 (218)	1.15	0.35	456 (1,189)
1995	2.30	0.24	38 (98)				1.46	0.14	293 (803)	0.77	0.15	93 (190)	1.31	0.18	424 (1,091)
1996	3.16	0.14	35 (104)				1.58	0.19	248 (661)	0.80	0.11	77 (180)	1.32	0.18	360 (945)
1997	4.83	0.17	77 (205)				1.25	0.27	202 (532)	0.92	0.15	63 (140)	1.21	0.24	342 (877)
1998	3.48	0.24	162 (589)				1.09	0.26	291 (850)	0.88	0.16	87 (179)	1.18	0.28	540 (1,618)
1999	3.01	0.31	264 (720)				1.41	0.25	403 (1,107)	0.88	0.18	60 (111)	1.39	0.33	727 (1,938)
2000	3.11	0.17	314 (795)				1.42	0.30	373 (966)	1.14	0.13	43 (102)	1.41	0.21	730 (1,863)
2001	2.62	0.21	231 (663)				1.87	0.24	336 (913)	0.89	0.15	62 (139)	1.65	0.23	629 (1,715)
2002	3.63	0.27	303 (1,009)				1.27	0.27	359 (937)	1.52	0.20	52 (99)	1.43	0.29	714 (2,045)
2003	2.83	0.14	412 (1,515)				1.75	0.22	395 (1,092)	0.92	0.09	66 (129)	1.67	0.17	873 (2,736)
2004	2.64	0.15	406 (1,278)				2.01	0.23	429 (1,193)	0.70	0.90	44 (104)	1.81	0.20	879 (2,575)
2005	2.50	0.21	375 (1,109)				1.88	0.27	459 (1,289)	0.96	0.18	48 (104)	1.69	0.24	882 (2,502)
2006	2.88	0.20	249 (951)				1.63	0.18	503 (1,375)	1.13	0.22	37 (75)	1.65	0.20	789 (2,401)
2007	2.08	0.17	243 (871)				1.54	0.25	403 (1,026)	0.82	0.12	54 (118)	1.45	0.21	700 (2,015)
2008	2.77	0.25	270 (887)				1.20	0.21	501 (1,400)	0.81	0.10	76 (170)	1.20	0.25	847 (2,457)
2009	2.02	0.19	223 (746)				1.14	0.21	642 (2,094)	0.64	0.14	56 (129)	1.13	0.21	921 (2,969)
2010	2.09	0.20	227 (793)				1.79	0.23	216 (568)	0.55	0.15	23 (51)	1.70	0.21	466 (1,412)
2011	2.13	0.19	194 (717)				2.14	0.28	212 (494)	0.98	0.24	16 (42)	1.89	0.24	422 (1,253)
2012	2.25	0.25	258 (832)				1.27	0.34	340 (857)	1.07	0.24	45 (118)	1.26	0.29	643 (1,807)
2013	1.74	0.35	172 (631)				1.31	0.22	647 (1,792)	0.73	0.18	48 (114)	1.24	0.27	867 (2,537)
2014	1.70	0.23	371 (1,486)				1.19	0.21	778 (2,604)	0.53	0.11	49 (116)	1.08	0.22	1,198 (4,206)
2015	1.47	0.27	257 (973)				1.34	0.22	726 (2,150)	0.69	0.15	61 (133)	1.23	0.24	1,044 (3,256)
2016	1.51	0.30	323 (1,143)				1.37	0.22	720 (2,084)	0.72	0.32	73 (162)	1.22	0.28	1,116 (3,389)
2017	1.44	0.41	304 (1,076)				1.87	0.23	635 (1,777)	0.73	0.08	53 (114)	1.42	0.31	992 (2,967)
2018	1.57	0.33	249 (925)				1.54	0.24	520 (1,475)	0.62	0.13	54 (125)	1.24	0.30	823 (2,525)
2019	1.75	0.25	311 (1,043)				1.40	0.23	519 (1,323)	0.82	0.46	48 (113)	1.18	0.25	878 (2,479)
2020	1.41	0.21	329 (1,171)				1.37	0.25	691 (1,949)	0.71	0.13	67 (142)	1.18	0.23	1,087 (3,262)

**Table 17.** Resolution of landings-in-weight estimates (pounds whole weight) for Gulf of Mexico Gray Snapper by year and hierarchy level (MRIP, LACreel 2014+, TPWD), defined by species, region, year, state, mode, wave, and area. Average weight estimates are calculated at the finest strata meeting a minimum sample size threshold (Dettloff and Matter 2019b). Larger sample sizes therefore allow average weights to be calculated at finer stratifications, the finest being at the srysmwa level (Matter and Rios 2013). Annual summaries include the number of fish and angler trips from which weight information was collected (N) and the landings-in-weight estimates (AB1.lbs) by hierarchy level. As an example, (srysmw) summarizes those landings-in-weight estimates originating from cells where average weights are specific to a particular species, region, year, state, mode, and wave (i.e., weight observations collapsed across areas).

Year	N	AB1.lbs				
		sry	srys	srysm	srysmw	srysmwa
1981	329 ( 106)	1,071	0	325,942	23,014	2,498,545
1982	451 ( 128)	256	0	702,987	208,747	2,185,219
1983	271 ( 117)	1,334	1,111	825,975	32,474	1,230,150
1984	378 ( 147)	255	0	636,934	438,249	5,070,034
1985	218 ( 105)	398	0	785,213	299,167	927,494
1986	433 ( 146)	17,219	0	658,889	363,465	1,126,647
1987	568 ( 172)	13,085	36,767	312,125	1,038,631	1,647,457
1988	118 ( 49)	16,490	0	1,677,217	381,020	269,524
1989	628 ( 195)	15,878	15,794	358,252	530,832	2,603,281
1990	299 ( 122)	71,484	0	1,313,226	1,050,852	1,647,826
1991	497 ( 158)	8,242	103,460	499,892	1,456,426	3,067,378
1992	962 ( 343)	1,243	54,109	252,004	334,251	2,033,057
1993	1,204 ( 465)	0	161,310	118,780	243,309	2,450,821
1994	1,189 ( 456)	11,451	90,371	126,876	267,126	2,016,480
1995	1,091 ( 424)	0	111,413	145,103	94,199	2,886,364
1996	945 ( 360)	6,866	88,189	249,673	512,632	2,226,166
1997	877 ( 342)	21,845	115,251	183,438	117,352	1,749,881
1998	1,618 ( 540)	0	45,885	181,211	247,905	2,361,145
1999	1,938 ( 727)	28,447	27,957	237,077	172,687	2,346,709
2000	1,863 ( 730)	0	184,037	290,895	315,888	1,939,609
2001	1,715 ( 629)	0	60,318	185,146	370,244	3,287,474
2002	2,045 ( 714)	3,711	140,577	133,778	300,283	1,828,930
2003	2,736 ( 873)	22,026	107,606	252,579	170,719	3,414,170
2004	2,575 ( 879)	0	74,737	162,888	609,595	4,259,284
2005	2,502 ( 882)	0	8,648	594,004	319,992	2,712,146
2006	2,401 ( 789)	21,425	95,145	71,531	353,602	2,415,364
2007	2,015 ( 700)	35,208	7,256	238,592	419,982	2,473,993
2008	2,457 ( 847)	2,715	34,394	294,745	184,981	3,306,575
2009	2,969 ( 921)	51,441	2,105	115,282	221,189	3,001,984
2010	1,412 ( 466)	3,077	147,440	226,186	70,487	1,989,497
2011	1,253 ( 422)	0	4,437	931,804	544,878	1,874,966
2012	1,807 ( 643)	2,913	238,832	410,414	135,080	4,406,200
2013	2,537 ( 867)	12,064	4,819	83,628	421,610	4,118,010
2014	4,206 (1,410)	2,605	510,557	166,927	136,195	4,333,429
2015	3,256 (1,185)	4,315	683,465	58,241	86,245	3,657,957
2016	3,389 (1,196)	0	404,826	73,780	91,237	4,352,717
2017	2,967 (1,062)	28,478	234,919	432,462	192,559	3,875,766

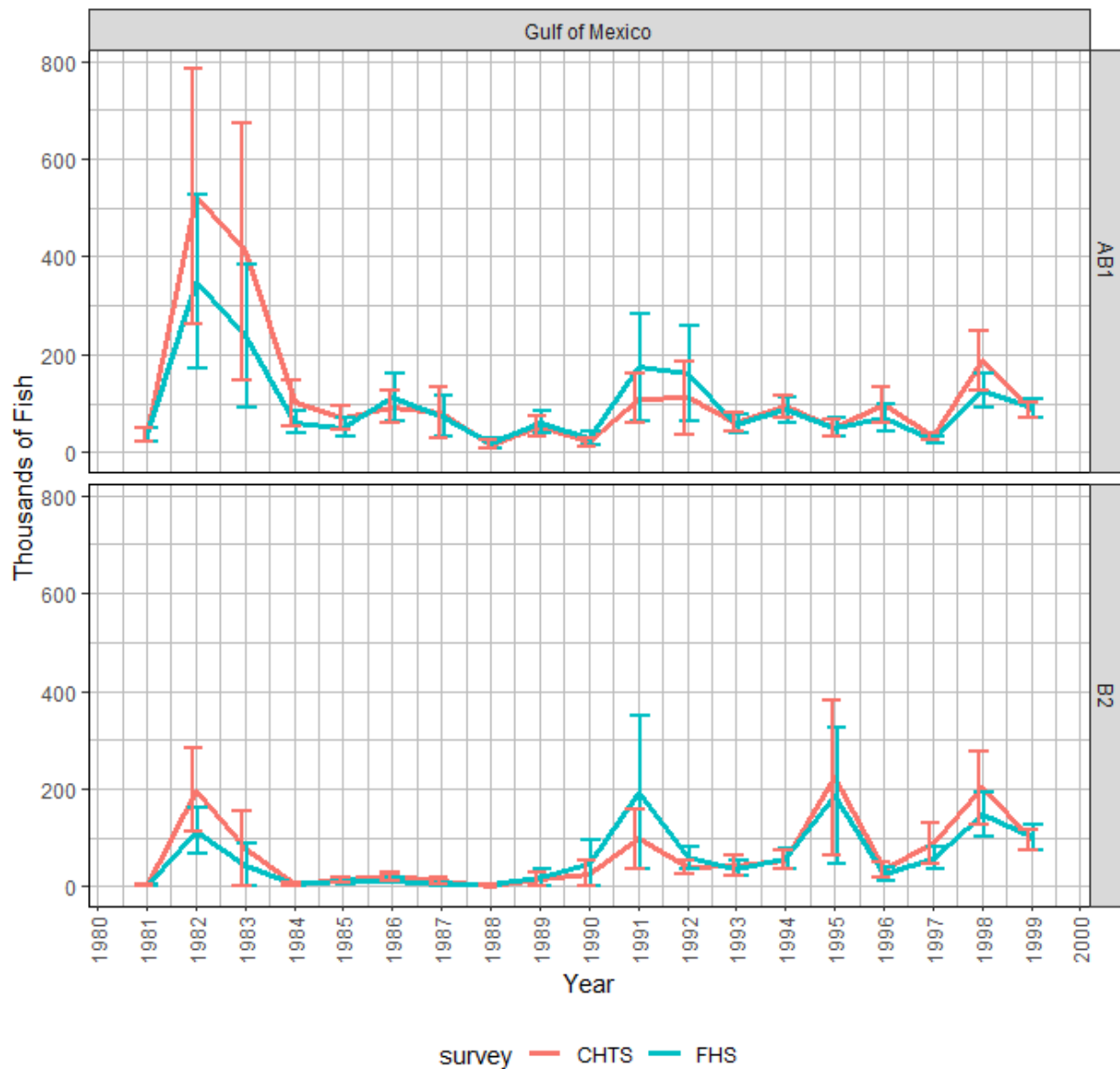
Year	N	AB1.lbs				
		sry	srys	srysm	srysmw	srysmwa
2018	2,525 ( 912)	0	219,264	164,256	266,611	3,493,092
2019	2,479 ( 946)	0	245,503	256,382	257,208	3,651,128
2020	3,262 (1,142)	0	192,949	167,981	565,840	3,619,249

**Table 18.** *Recreational Fishing Effort (in angler trips) for Gulf of Mexico anglers by state and year (MRIP, LACreel 2014+, TPWD).*

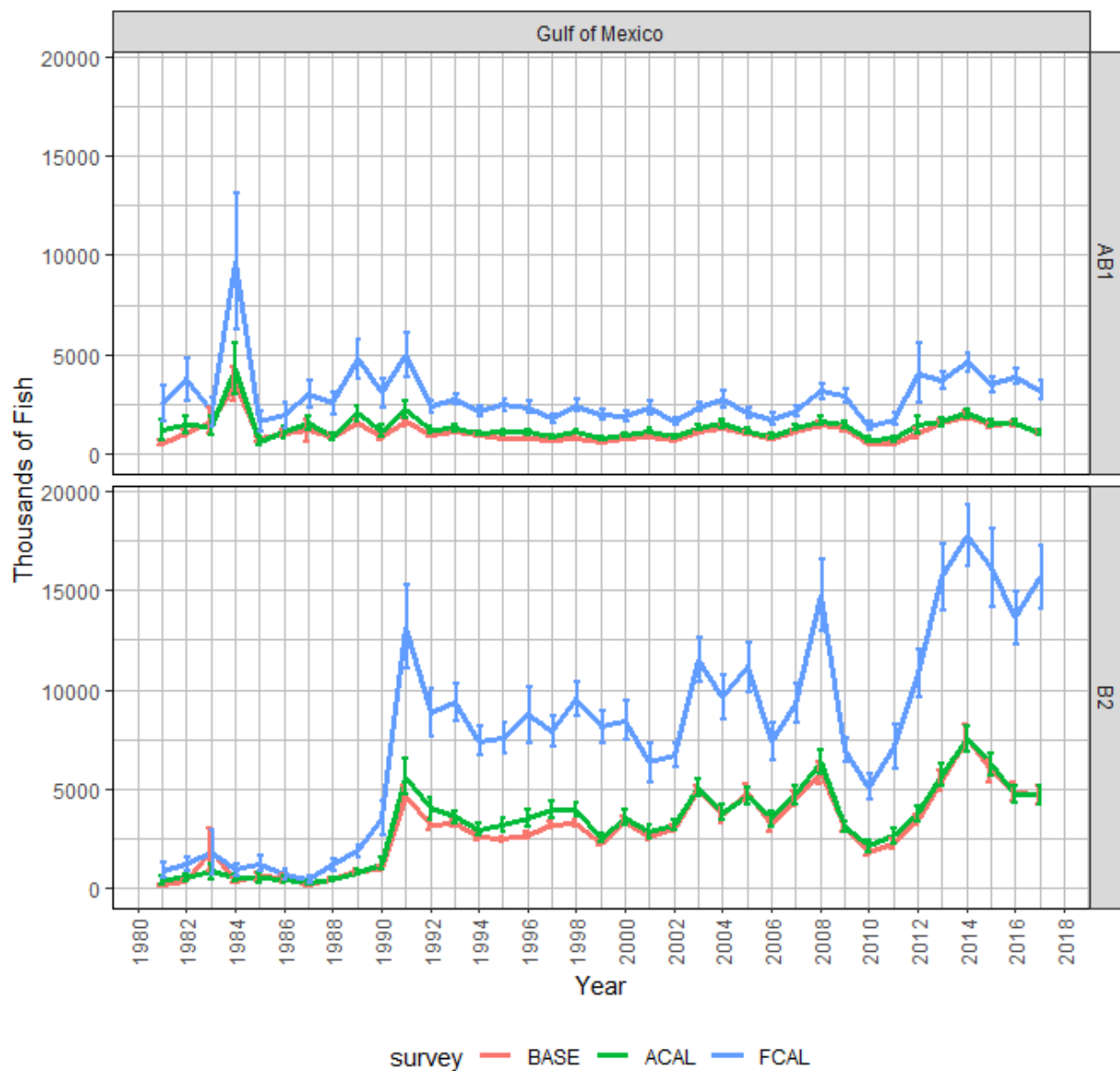
Year	TX	LA	MS	AL	FLW	Total
1981		5,443,324	1,500,488	1,961,664	17,542,861	26,448,337
1982		6,258,398	1,886,936	2,018,892	22,317,804	32,482,030
1983	555,681	6,727,736	2,065,413	2,034,552	27,384,677	38,768,059
1984	643,796	6,504,247	1,964,113	1,965,413	29,340,428	40,417,997
1985	710,725	6,572,069	1,946,516	2,051,290	28,503,697	39,784,297
1986	704,809	6,124,846	1,969,197	2,094,987	23,871,605	34,765,444
1987	889,371	5,858,078	1,917,560	2,007,343	24,860,626	35,532,978
1988	857,643	5,923,422	2,074,776	2,030,477	29,767,330	40,653,648
1989	791,653	5,959,837	2,176,386	2,050,077	31,638,372	42,616,325
1990	760,711	6,522,225	2,614,859	2,189,778	29,175,885	41,263,458
1991	775,674	6,551,479	2,830,732	2,496,457	36,274,793	48,929,135
1992	865,301	6,811,348	2,652,416	2,534,167	29,967,800	42,831,032
1993	897,527	7,200,313	2,683,955	2,580,832	34,255,631	47,618,258
1994	997,059	7,261,962	2,708,473	2,790,868	33,459,971	47,218,333
1995	982,649	7,272,037	2,720,561	2,811,817	31,249,275	45,036,339
1996	979,300	7,832,054	2,842,940	2,873,857	29,972,391	44,500,542
1997	894,328	8,129,630	3,125,302	3,201,557	30,078,541	45,429,358
1998	924,659	8,272,438	3,272,402	3,242,880	32,302,803	48,015,182
1999	1,098,251	8,751,059	3,568,584	3,418,511	37,211,088	54,047,493
2000	1,119,611	9,835,541	3,791,218	3,744,313	38,312,644	56,803,327
2001	943,350	10,047,817	3,904,563	4,018,024	40,356,323	59,270,077
2002	935,055	9,366,820	3,743,348	4,109,359	36,897,038	55,051,620
2003	968,522	9,770,130	3,760,258	4,397,398	40,094,000	58,990,308
2004	988,042	9,111,752	3,718,305	4,742,003	48,059,682	66,619,784
2005	898,897	8,548,931	3,259,936	4,376,978	41,879,648	58,964,390
2006	1,005,097	8,029,154	3,857,950	5,110,383	37,528,052	55,530,636
2007	887,696	8,952,616	4,031,282	5,219,235	40,137,729	59,228,558
2008	873,237	9,805,845	4,353,513	4,977,530	40,894,492	60,904,617
2009	925,446	10,515,738	4,573,165	5,441,596	36,207,467	57,663,412
2010	870,541	11,222,564	4,509,351	5,329,293	39,446,328	61,378,077
2011	989,955	11,453,646	4,503,301	5,737,821	40,063,360	62,748,083
2012	1,000,270	10,889,486	4,492,747	6,150,613	44,997,654	67,530,770
2013	997,827	10,770,452	4,341,700	6,768,525	46,293,290	69,171,794
2014	963,087	2,226,868	4,311,510	6,481,789	38,625,282	52,608,536
2015	920,172	2,425,434	4,593,570	6,829,718	35,730,006	50,498,900
2016	1,071,428	2,241,734	4,717,914	7,319,601	38,936,416	54,287,093
2017	1,002,941	2,308,352	4,847,581	8,493,459	41,840,176	58,492,509
2018	1,120,640	2,275,932	4,554,960	6,680,646	40,996,400	55,628,578
2019	1,227,588	2,108,454	4,226,768	6,676,884	35,644,843	49,884,537
2020	1,117,929	2,501,305	4,297,896	6,623,029	42,197,504	56,737,663

**Table 19.** *Recreational Fishing Effort (in angler trips) for Gulf of Mexico anglers by mode and year (MRIP, LACreel 2014+, TPWD). Note that effort from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode.*

<b>Year</b>	<b>Cbt</b>	<b>Hbt</b>	<b>Priv</b>	<b>Shore</b>	<b>Total</b>
1981	421,104	184,590	12,186,947	13,655,697	26,448,338
1982	628,429	260,912	13,959,437	17,633,253	32,482,031
1983	637,248	256,493	16,100,466	21,773,853	38,768,060
1984	601,741	242,211	18,000,839	21,573,205	40,417,996
1985	650,994	277,516	16,401,453	22,454,336	39,784,299
1986	635,401		15,830,087	18,299,956	34,765,444
1987	694,259		16,854,478	17,984,240	35,532,977
1988	561,286		18,245,612	21,846,750	40,653,648
1989	715,802		18,929,169	22,971,354	42,616,325
1990	670,487		19,531,087	21,061,884	41,263,458
1991	737,662		20,786,015	27,405,457	48,929,134
1992	683,733		20,545,567	21,601,733	42,831,033
1993	784,728		21,727,500	25,106,032	47,618,260
1994	826,869		21,573,409	24,818,057	47,218,335
1995	941,440		22,347,428	21,747,470	45,036,338
1996	882,976		22,485,061	21,132,504	44,500,541
1997	868,221		23,850,996	20,710,142	45,429,359
1998	910,489		24,357,759	22,746,934	48,015,182
1999	876,478		26,440,425	26,730,589	54,047,492
2000	874,539		26,097,662	29,831,126	56,803,327
2001	919,223		28,203,344	30,147,509	59,270,076
2002	925,995		26,992,624	27,133,001	55,051,620
2003	860,599		28,252,451	29,877,258	58,990,308
2004	956,168		32,081,597	33,582,018	66,619,783
2005	818,973		29,922,907	28,222,510	58,964,390
2006	958,119		28,453,143	26,119,374	55,530,636
2007	1,014,728		29,239,206	28,974,624	59,228,558
2008	963,971		32,125,714	27,814,931	60,904,616
2009	929,263		30,276,890	26,457,258	57,663,411
2010	733,320		31,309,204	29,335,553	61,378,077
2011	902,984		31,352,669	30,492,429	62,748,082
2012	1,111,425		33,576,329	32,843,015	67,530,769
2013	1,055,300		31,633,629	36,482,865	69,171,794
2014	1,067,151		25,302,755	26,238,629	52,608,535
2015	1,211,008		23,465,065	25,822,827	50,498,900
2016	1,269,811		24,602,878	28,414,402	54,287,091
2017	1,248,715		25,115,957	32,127,838	58,492,510
2018	1,427,375		23,594,435	30,606,767	55,628,577
2019	1,687,526		21,205,828	26,991,183	49,884,537
2020	1,382,600		23,842,855	31,512,207	56,737,662



**Figure 1.** Comparison of charterboat landings (AB1) and discard (B2) estimates (with standard error intervals shown) for Gray Snapper from the Coastal Household Telephone Survey (CHTS) and For-Hire Survey (FHS) from the Gulf of Mexico between 1981 and 1999 (MRIP). The charterboat calibration approach is discussed in Dettloff and Matter (2019a).

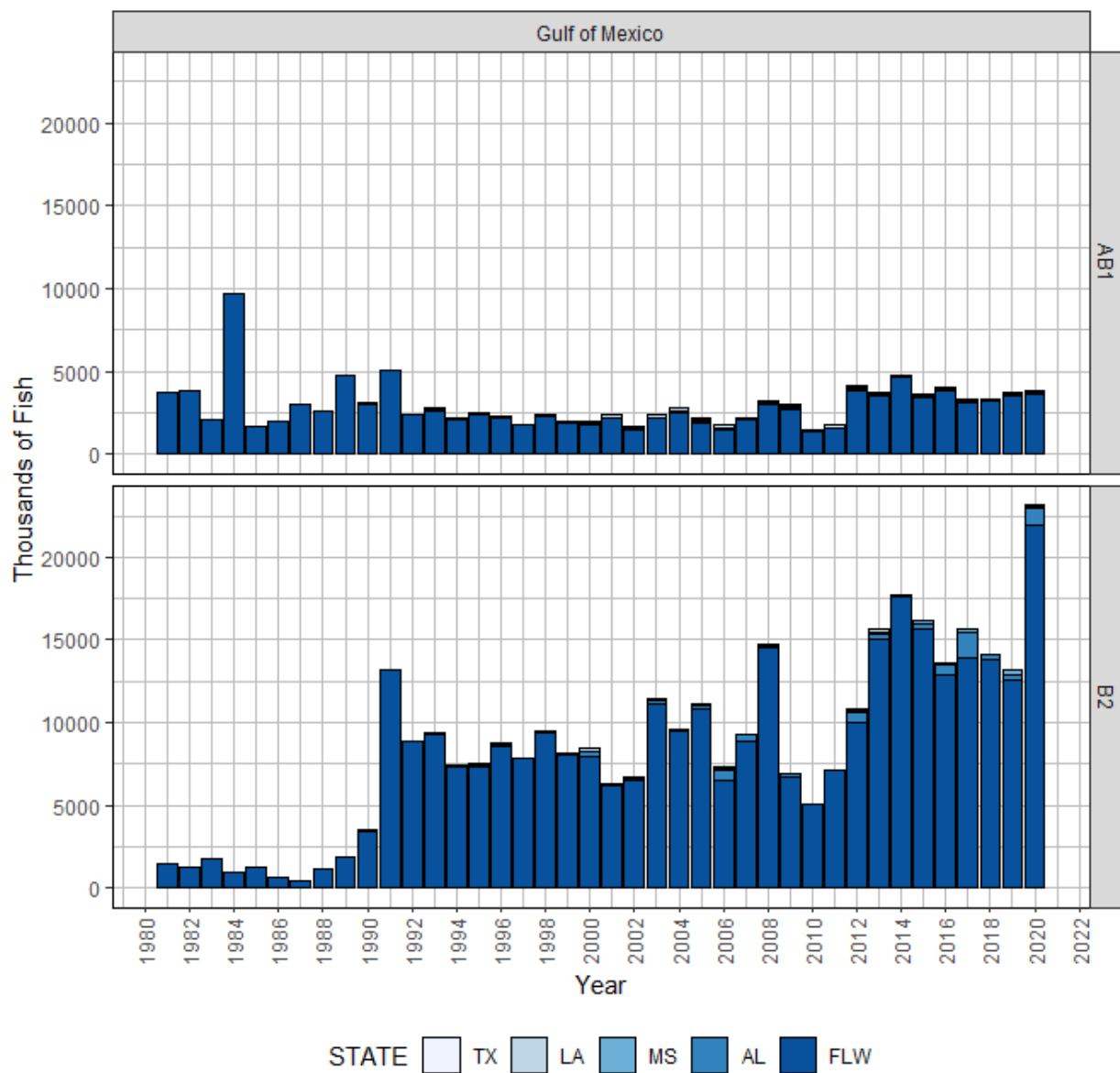


**Figure 2.** MRIP Base (BASE), APAIS Calibrated (ACAL), and Fully Calibrated APAIS and FES (FCAL) catch estimates for Gray Snapper in the Gulf of Mexico between 1981 and 2017. Landings (AB1) and discard (B2) estimates are in thousands of fish (NMFS).

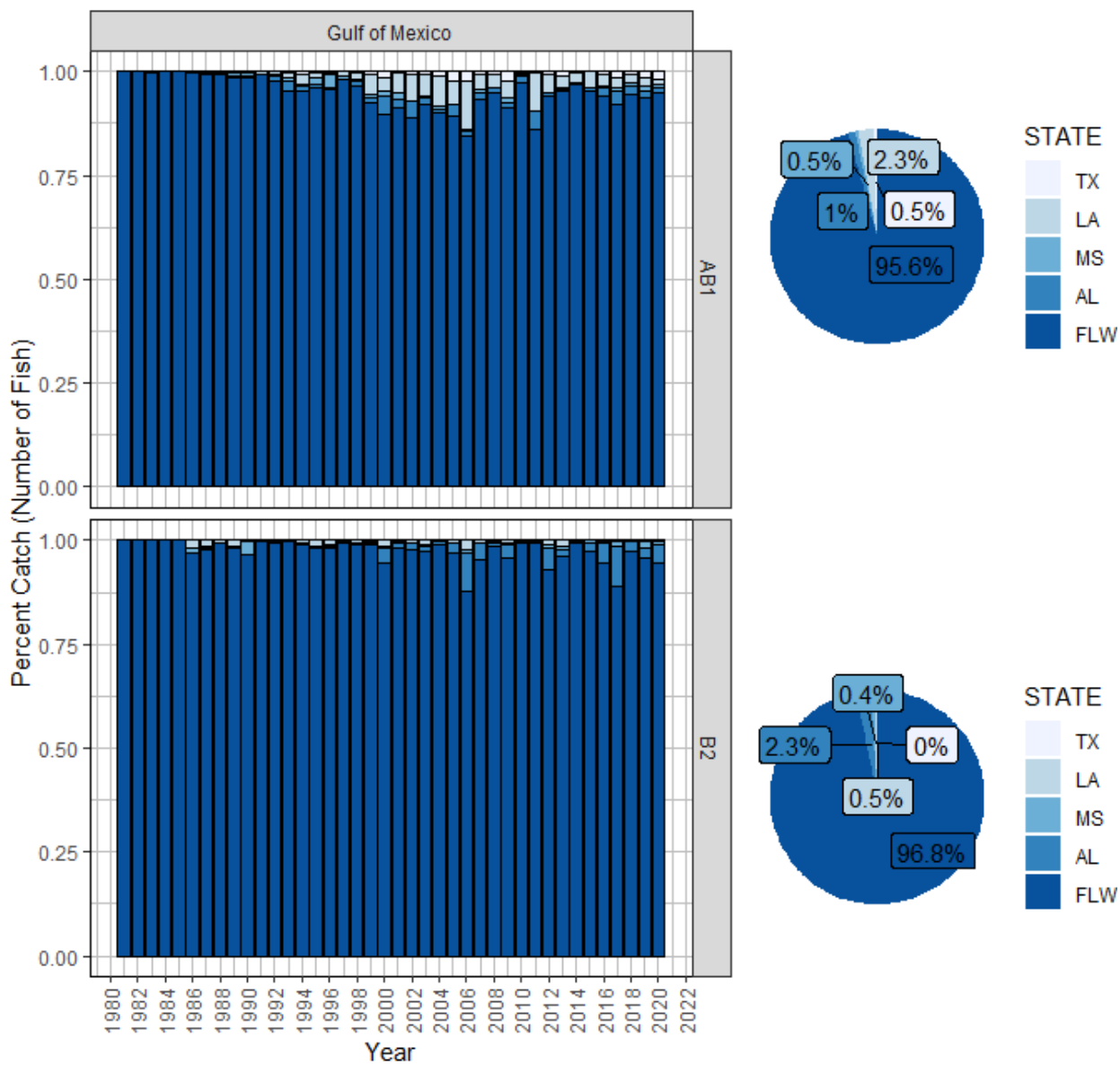


**Figure 3.** Comparison of total general recreational landings (AB1) and discard estimates (B2) for Gulf of Mexico gray snapper between SEDAR 75 and SEDAR 51, the terminal years of which are 2020 and 2015 respectively. Differences in catch estimates, which are in thousands of fish, are largely a function of changes in the MRIP survey (i.e., FES in 2018).

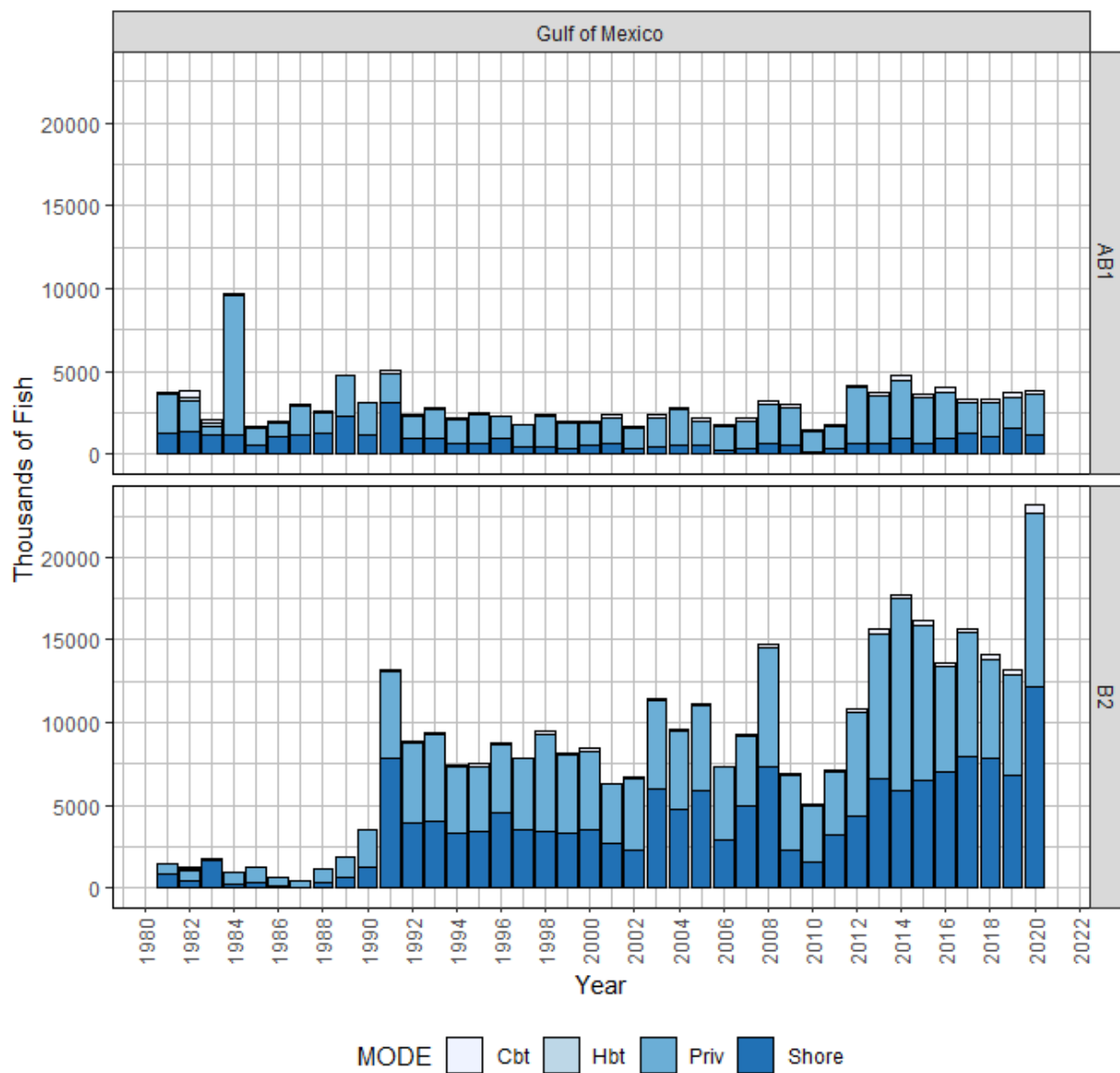




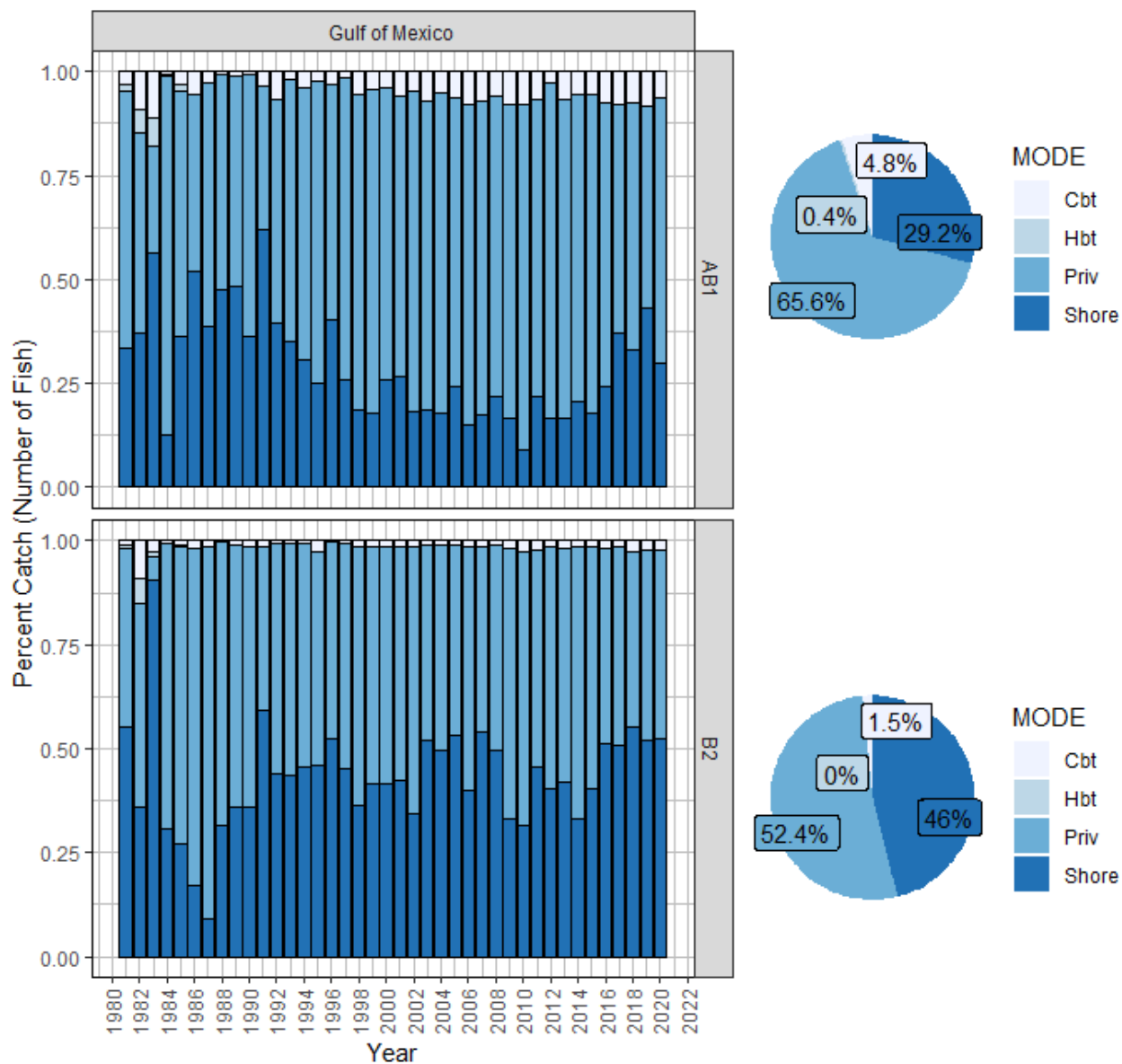
**Figure 4.** Annual Gray Snapper landings (AB1) and discards (B2), in thousands of fish, by state from 1981 to 2020 (MRIP, LACreel 2014+, TPWD).



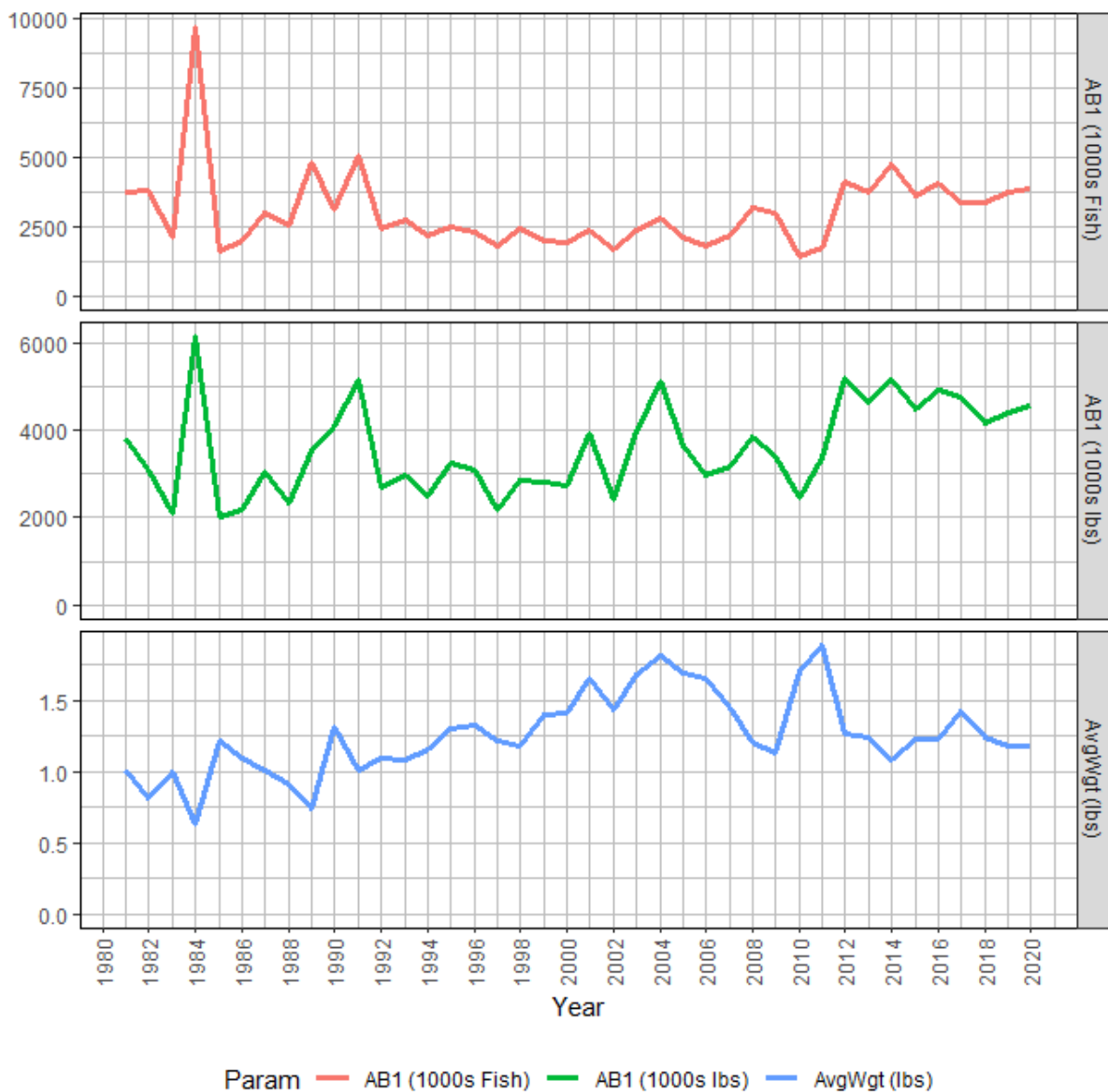
**Figure 4a.** Percent of Gray Snapper landings (AB1) and discards (B2), in numbers of fish, from each state by year (bar graph) and overall (pie chart) between 1981 and 2020 (MRIP, LACreel 2014+, TPWD).



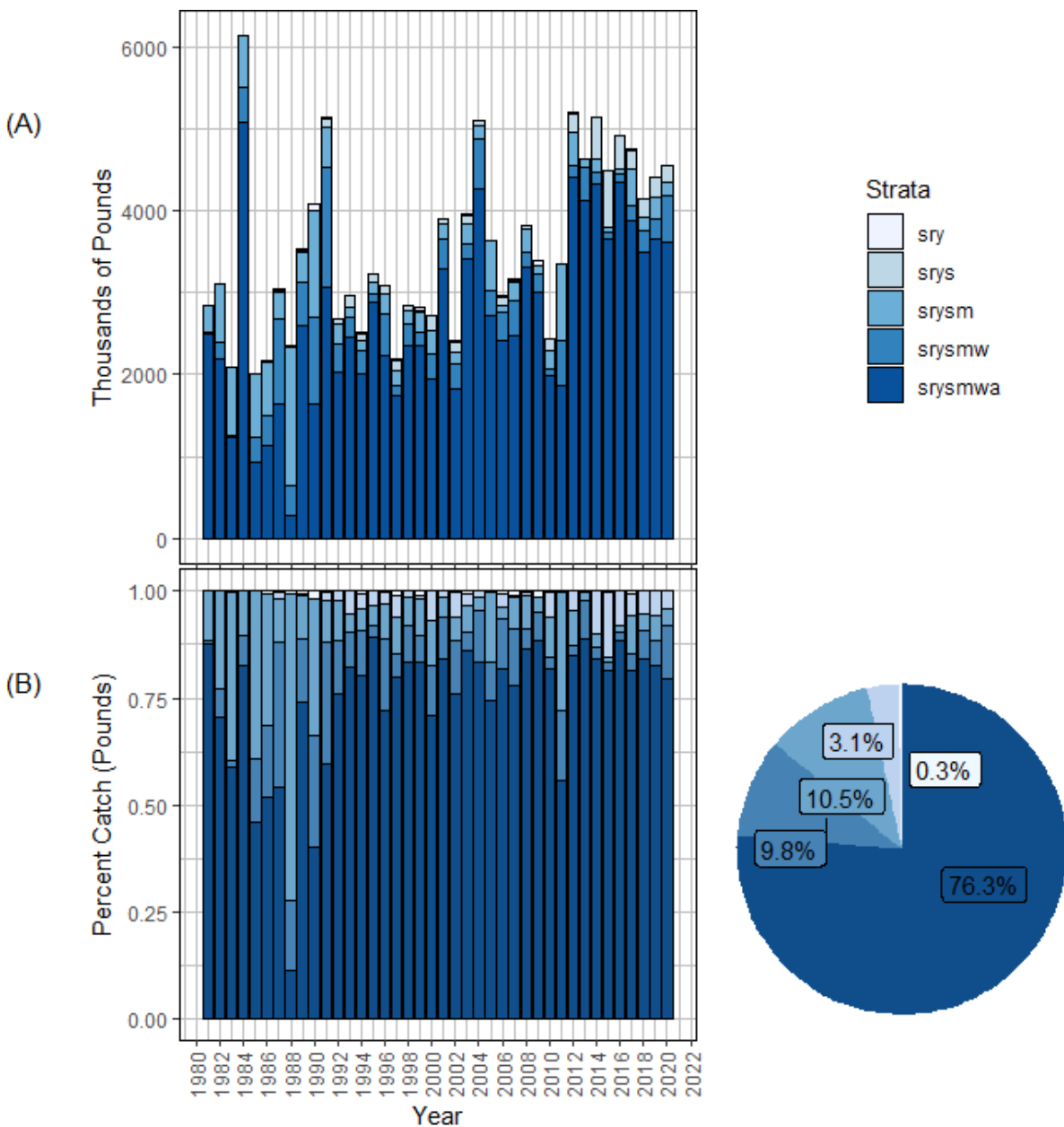
**Figure 5.** Annual Gray Snapper landings (AB1) and discards (B2), in thousands of fish, by mode from 1981 to 2020 (MRIP, LACreel 2014+, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode.



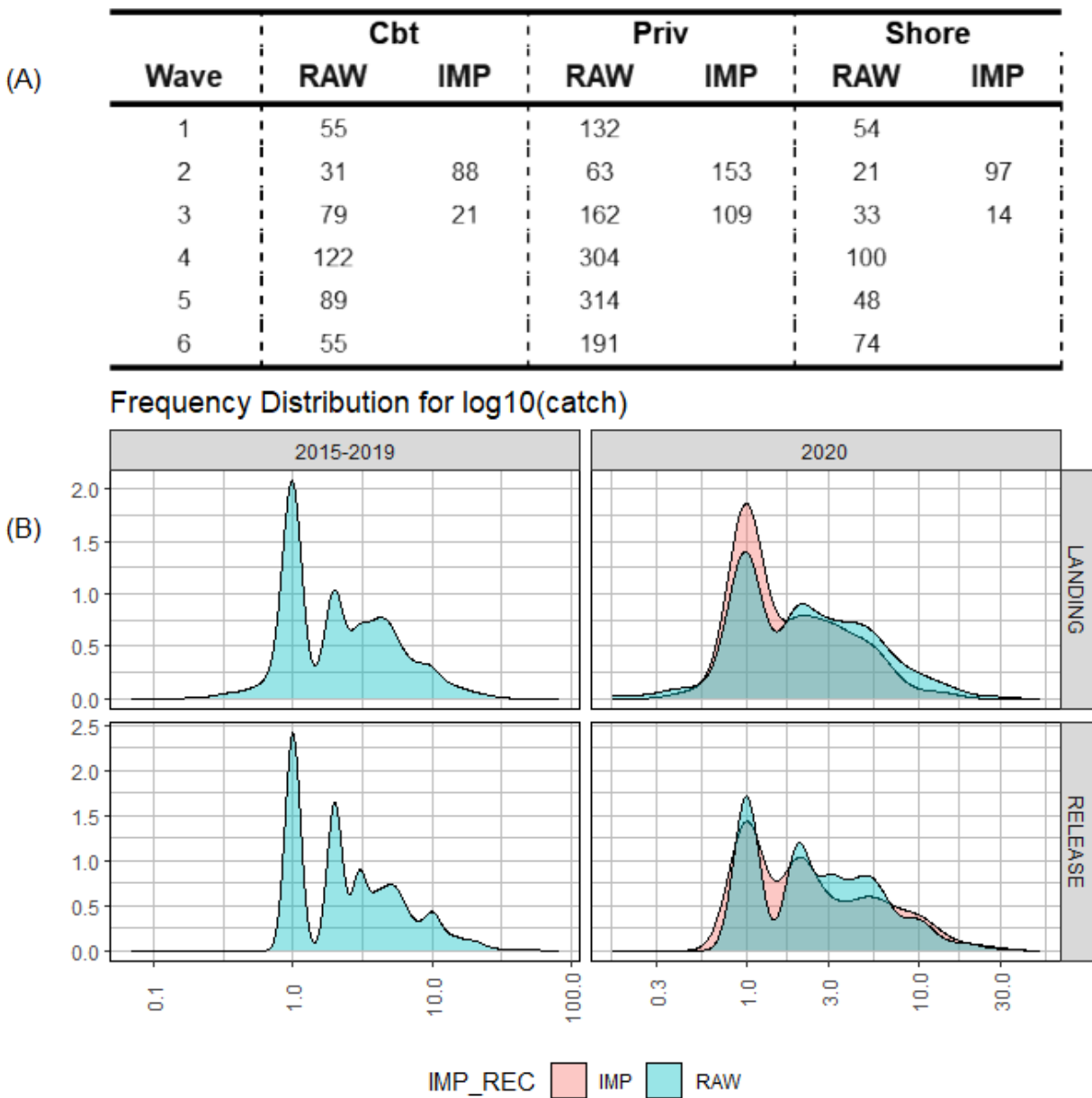
**Figure 5a.** Percent of Gray Snapper landings (AB1) and discards (B2), in numbers of fish, from each mode by year (bar graph) and overall (pie chart) between 1981 and 2020 (MRIP, LACreel 2014+, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode.



**Figure 6.** Estimates of annual landings for Gray Snapper in the Gulf of Mexico (MRIP, LACreel 2014+, TPWD): estimated landings in thousands of fish (top), estimated landings in thousands of pounds whole weight (middle), and average weight of landed fish (estimated lbs/estimated fish) (bottom). Average weight estimates are calculated by strata using the following hierarchy: species, region, year, state, mode, wave, and area (Matter and Rios 2013). The minimum number of weights used at each level of substitution is fifteen fish, except for the final species level where the minimum is one fish (Dettloff and Matter 2019b).



**Figure 7.** Annual landings estimates of Gulf of Mexico Gray Snapper in thousands of pounds whole weight by hierarchy level (MRIP, LACreel 2014+, TPWD), defined by *species*, *region*, *year*, *state*, *mode*, *wave*, and *area*. Landings are grouped by the strata at which average weights were estimated, the finest stratification being at the srysmwa level (Matter and Rios 2013). As an example, (srysmw) summarizes those landings-in-weight estimates originating from cells where average weights are specific to a particular *species*, *region*, *year*, *state*, *mode*, and *wave* (i.e., weight observations collapsed across areas). Landings are provided (A) in absolute pounds and (B) as a percentage of total landings-in-weight, which is summarized by year (stacked bar plot) and across all years (pie chart).



**Figure 8.** COVID data gaps in the MRIP APAIS and associated imputations for (positive) fishing trips that intercepted Gulf of Mexico gray snapper. No 2020 data were imputed for the FES or FHS. (A) Number of positive intercepts in 2020 from the 2020 APAIS (RAW) vs. those imputed from 2018 and 2019 intercepts (IMP). (B) Distribution of (log-transformed) APAIS catch observations between 2015-2019, in raw 2020 APAIS data, and in 2020 imputations. Refer to Cody (2021) for more information on COVID data gaps in MRIP.

## Appendix A

### Additional Details of Survey Data and SEFSC Estimation

- **MRIP Survey Methodology:** Fully calibrated estimates that take into account the change in the Fishing Effort Survey (FES; 2018), the redesigned Access Point Angler Intercept Survey (APAIS; 2013), and the For Hire Survey (FHS; 2000 for all Gulf of Mexico states).
  - Papacostas and Foster (2021) provide descriptions of the approaches used by the Office of Science and Technology to calibrate MRIP (1) effort estimates derived from the legacy Coastal Household Telephone Survey (CHTS) into FES units for the private and shore modes and (2) catch rate estimates between the original and redesigned APAIS for all modes.
  - SEFSC calibrations of catch and effort estimates between CHTS and FHS units are calculated for for-hire by year, region, state, wave, and area fished according to Dettloff and Matter (2019a). Figure 1 summarizes the resultant scaling of CHTS catch estimates under the FHS calibration ratios.
- **MRIP Data Gap from COVID:** Missing 2020 intercepts were imputed from all APAIS data collected in 2018 and 2019 from the same strata as the 2020 data gap, with original sample weights reduced by a factor of two to account for using two years of data (Cody 2021).
- **SEFSC Weight Estimation:** Average (fish) weight estimates are calculated by strata using the following hierarchy: species, region, year, state, mode, wave, and area (Matter and Rios 2013). The minimum number of weights used at each level of substitution is fifteen fish, except for the final species level where the minimum is one fish (Dettloff and Matter 2019b). Size records above an allowable (max size) threshold are excluded from weight estimation and the summary tables included in this working paper (Tables 8-15). For SEDAR 75 gray snapper, this includes any weights heavier than 46.2 pounds.
- **SEFSC Estimates derived using SEDAR best practices (SEDAR-PW-07):**
  - The MRFSS survey began in wave2 of 1981. To fill-in this (1981 wave1) MRIP data gap, the average wave1 catch in years 1982-1984 was applied to that in 1981.
  - Landings estimates from the TPWD survey are available starting in May (wave3) 1983. The average catch (by mode and wave) from waves 1-2 in 1984-1985 and average catch from waves 3-6 in years 1983-1985 were used to fill-in these (1981-1983) data gaps in Texas recreational landings.
  - To ensure sampling can support MRIP estimates at finer stratifications than for which the survey was designed, (sub-state) domain estimates are only generated for established geographic domains. For Florida, this includes the sub-state domains of Florida in the FHS (1 = Florida panhandle, Escambia to Dixie; 2 = western Florida, Levy to Collier; 3 = Florida Keys).



- Between 1981 and 1985 in the Gulf of Mexico, MRIP charter and headboat modes were combined into a single (for-hire) mode for estimation purposes. Since the NMFS Southeast Region Headboat Survey (SRHS) began in 1986 in the Gulf, the MRIP combined for-hire mode must be split to provide estimates of headboat landings in these early years. Estimates for the MRIP for-hire mode (1981-1985) were split using a ratio of SRHS headboat angler trip estimates to MRIP charterboat angler trip estimates for 1986-1990, calculated by state (or state equivalent to match SRHS areas to MRIP states).