

# Recreational Survey Data for Greater Amberjack in the Gulf of Mexico

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## **Recreational Survey Data for Greater Amberjack in the Gulf of Mexico**

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Recreational catch estimates for Greater Amberjack 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 70 recreational catch data:

Species: Greater Amberjack (including a proportion of unidentified jack family and amberjack genus considered to be greater amberjack)

Year Range: 1981 - 2018

Geographic Range: Gulf of Mexico states from Texas to western Florida, excluding the Florida Keys.

Fishing Modes: Charter, Headboat (1981-1985), Private

Survey Methodology: Fully calibrated estimates that take into account the change in the Fishing Effort Survey, the redesigned Access Point Angler Intercept Survey, and the For Hire Survey

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## Tables

**Table 1.** Annual landings (AB1) and discards (B2) of Greater Amberjack in numbers of fish by state and year (MRIP, LACreel, TPWD). FLW excludes the Florida Keys.

**Table 2.** Annual landings (AB1) and discards (B2) of Greater Amberjack in numbers of fish by mode and year (MRIP, LACreel, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey is added to the private mode. MRIP Headboat estimates are available from 1981-1985.

**Table 3.** Greater Amberjack landings in numbers of fish (AB1) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (MRIP). Sample size (SS) is provided as the total number of angler trips intercepted by MRIP samplers within a specified strata and, in parentheses, the number of angler trips that intercepted Greater Amberjack. Intercepted fish include those landed (AB1) and discarded (B2). MRIP Headboat estimates are available from 1981-1985.

**Table 4.** Greater Amberjack discards in numbers of fish (B2) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (MRIP). Sample size (SS) is provided as the total number of angler trips intercepted by MRIP samplers within a specified strata and, in parentheses, the number of angler trips that intercepted Greater Amberjack. Intercepted fish include those landed (AB1) and discarded (B2). MRIP Headboat estimates are available from 1981-1985.

**Table 5.** Estimated landings of Greater Amberjack in pounds whole weight by state and year (MRIP, LACreel, TPWD). FLW excludes the Florida Keys.

**Table 6.** Summary of length measurements (millimeters fork length) from MRIP-intercepted Greater Amberjack by state and year. Summaries include the number of fish measured by MRIP (Fish), the number of angler trips from which those fish were measured (Trp), and the minimum (Min), geometric mean (Avg), and maximum (Max) size of fish lengths. FLW excludes the Florida Keys. LA lengths are available from MRIP only until 2013.

**Table 7.** Summary of weight measurements (pounds whole weight) from MRIP-intercepted Greater Amberjack by state and year. Summaries include the number of fish weighed by MRIP (Fish), the number of angler trips from which those fish were weighed (Trp), and the minimum (Min), geometric mean (Avg), and maximum (Max) size of fish weights. FLW excludes the Florida Keys. LA weights are available from MRIP only until 2013.

**Table 8.** Summary of length measurements (millimeters total length) from TPWD-intercepted Greater Amberjack by year. Summaries include the number of fish measured by TPWD (Fish), the number of angler trips from which those fish were measured (Trp), and the minimum (Min), geometric mean (Avg), and maximum (Max) size of fish lengths.

**Table 9.** Recreational Fishing Effort (in angler trips) for Gulf of Mexico anglers by mode and year (MRIP, LACreel, TPWD). Note that effort from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode. MRIP Headboat estimates are available from 1981-1985.

**Table 10.** Average ratios of greater amberjack over unidentified amberjacks and jacks by year group and catch type. Proportions of unidentified amberjack genus and jack family are assigned to greater amberjack following the same methodology as SEDAR 33. Proportions were updated to reflect additional years of data and updated MRIP estimates.

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## Figures

**Figure 1.** Comparison of charterboat landings (AB1) and discard (B2) estimates (with standard error intervals shown) for Greater Amberjack from the Coastal Household Telephone Survey (CHTS) and For-Hire Survey (FHS) from the Gulf of Mexico between 1981 to 1999.

**Figure 2.** MRIP Base (BASE), APAIS Calibrated (ACAL), and Fully Calibrated APAIS and FES (FCAL) catch estimates for Greater Amberjack in the Gulf of Mexico. Landings (AB1) and discard (B2) estimates are in thousands of fish. Estimates in this figure include the Florida Keys as that domain is not separable from those used by the MRIP online comparison tool for the Gulf of Mexico (NMFS). Shore mode is also included as uncertainty estimates for catch across multiple modes are only available when all modes are selected.

**Figure 3.** Annual Greater Amberjack landings (AB1) and discards (B2), in thousands of fish, by state from 1981 to 2018 (MRIP, TPWD, LACreel). FLW excludes the Florida Keys.

**Figure 3a.** Percent of Greater Amberjack landings (AB1) and discards (B2), in numbers of fish, from each state by year (bar graph) and overall (pie chart) between 1981 and 2018 (MRIP, TPWD, LACreel). FLW excludes the Florida Keys.

**Figure 4.** Annual Greater Amberjack landings (AB1) and discards (B2), in thousands of fish, by mode from 1981 to 2018 (MRIP, TPWD, LACreel). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode. MRIP Headboat estimates are available from 1981-1985.

**Figure 4a.** Percent of Greater Amberjack landings (AB1) and discards (B2), in numbers of fish, from each mode by year (bar graph) and overall (pie chart) between 1981 and 2018 (MRIP, TPWD, LACreel). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode. MRIP Headboat estimates are available from 1981-1985.

**Figure 5.** Estimates of annual landings for Greater Amberjack in the Gulf of Mexico, as estimated from MRIP: 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).

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**Table 1.** Annual landings (AB1) and discards (B2) of Greater Amberjack in numbers of fish by state and year (MRIP, LACreel, TPWD). FLW excludes the Florida Keys.

Year	TX		LA		MS		AL		FLW		Total	
	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2
1981	1,005	0	67,956	0	0	0	22,748	0	240,781	38,137	332,490	38,137
1982	1,005	0	74,640	15,563	0	77	8,799	40	1,122,009	81,418	1,206,454	97,099
1983	435	0	249,330	92,695	0	0	0	0	361,422	85,631	611,187	178,326
1984	1,026	0	103,616	836	0	0	0	0	61,866	33,028	166,508	33,864
1985	1,553	0	88,463	3,871	1,190	0	0	0	536,478	39,722	627,684	43,593
1986	1,559	0	3,713	43	0	0	6,707	4,383	477,727	106,493	489,706	110,919
1987	637	0	15,020	0	381	0	114,391	359	1,176,168	72,419	1,306,597	72,778
1988	446	0	3,012	0	0	0	41,129	444	284,801	119,445	329,389	119,888
1989	494	0	20,562	13,558	0	818	34,882	0	418,030	158,320	473,968	172,696
1990	268	0	153	2,756	38	0	15,877	70,767	72,796	112,081	89,132	185,604
1991	438	0	25,154	49,883	616	0	17,003	40,215	290,164	258,465	333,375	348,563
1992	303	0	11,760	19,900	1,382	2,851	70,855	57,783	294,926	241,777	379,227	322,310
1993	66	0	4,365	1,222	0	0	47,269	36,962	144,748	283,488	196,448	321,673
1994	302	0	4,499	26,443	28	382	43,463	77,023	85,900	78,768	134,192	182,616
1995	854	0	8,640	6,759	1,623	0	30,148	55,078	14,036	57,647	55,301	119,484
1996	1,087	0	30,177	562	0	0	46,720	54,381	59,651	24,620	137,635	79,563
1997	1,265	0	5,173	9,690	784	2,130	5,955	6,883	56,950	111,360	70,126	130,064
1998	359	0	381	906	0	11	5,326	12,885	62,044	182,420	68,110	196,222
1999	370	0	3,460	1,778	0	11	30,558	21,398	88,858	199,893	123,246	223,080
2000	247	0	4,921	64,057	0	1,537	15,544	28,038	78,349	246,715	99,061	340,347
2001	1,168	0	12,320	57,432	0	1,678	41,506	455,198	58,749	978,616	113,744	1,492,923
2002	2,239	0	17,523	9,897	0	4,628	59,367	160,067	155,637	574,049	234,766	748,640
2003	2,192	0	16,862	10,400	0	0	95,605	113,561	201,050	540,799	315,708	664,760
2004	765	0	20,417	6,037	0	0	23,473	42,831	201,781	337,505	246,435	386,374
2005	851	0	11,491	7,813	0	0	35,652	31,078	169,254	504,344	217,248	543,235
2006	427	0	20,719	11,019	0	0	24,226	58,317	88,692	438,662	134,064	507,998
2007	1,074	0	6,304	3,322	0	0	16,181	91,582	45,118	233,573	68,677	328,476
2008	645	0	16,469	8,246	1,473	0	10,010	20,725	113,544	340,400	142,140	369,371
2009	111	0	23,481	11,099	5,978	0	5,769	12,354	76,832	244,321	112,171	267,774
2010	287	0	4,164	1,665	0	0	14,836	32,587	130,479	1,029,011	149,766	1,063,263

Year	TX		LA		MS		AL		FLW		Total	
	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2	AB1	B2
2011	150	0	507	19,795	0	0	3,928	45,874	107,978	624,363	112,563	690,032
2012	229	0	12,951	4,093	0	0	9,020	5,717	126,900	361,066	149,101	370,876
2013	160	0	7,583	9,624	768	28,130	15,394	12,360	107,834	653,225	131,738	703,340
2014	799	0	7,591	0	1,757	0	58,757	125,220	76,588	297,519	145,492	422,740
2015	215	0	12,284	0	0	0	15,699	60,087	102,010	455,885	130,208	515,972
2016	24	0	8,692	3,862	8,977	432	13,133	131,315	85,404	541,251	116,230	676,861
2017	211	0	404	3,328	418	209	9,851	181,756	29,234	360,463	40,118	545,756
2018	214	0	10,222	2,798	1,524	1,676	26,617	47,831	53,799	254,578	92,377	306,883



**Table 2.** Annual landings (AB1) and discards (B2) of Greater Amberjack in numbers of fish by mode and year (MRIP, LACreel, TPWD). Note that catch from the combined private-shore fishing mode in the LA Creel survey is added to the private mode. MRIP Headboat estimates are available from 1981-1985.

Year	Cbt		Hbt		Priv		Total	
	AB1	B2	AB1	B2	AB1	B2	AB1	B2
1981	11,050	11	4,609	7	316,830	38,119	332,490	38,137
1982	501,872	14,616	310,349	9,142	394,232	73,341	1,206,454	97,099
1983	331,811	26,354	128,442	16,240	150,933	135,732	611,187	178,326
1984	86,330	0	11,459	0	68,719	33,864	166,508	33,864
1985	161,389	22	57,168	6	409,128	43,565	627,684	43,593
1986	331,775	80,303			157,931	30,616	489,706	110,919
1987	395,462	3,295			911,135	69,484	1,306,597	72,778
1988	196,553	722			132,835	119,166	329,389	119,888
1989	149,024	7,690			324,943	165,006	473,968	172,696
1990	24,322	39,086			64,810	146,518	89,132	185,604
1991	296,258	301,272			37,117	47,291	333,375	348,563
1992	308,211	174,641			71,016	147,669	379,227	322,310
1993	96,495	132,512			99,953	189,161	196,448	321,673
1994	83,921	66,897			50,272	115,718	134,192	182,616
1995	10,515	6,652			44,787	112,832	55,301	119,484
1996	62,719	37,407			74,917	42,155	137,635	79,563
1997	32,250	18,843			37,876	111,222	70,126	130,064
1998	22,880	47,860			45,230	148,362	68,110	196,222
1999	38,485	62,975			84,761	160,105	123,246	223,080
2000	32,322	29,358			66,739	310,989	99,061	340,347
2001	24,498	53,698			89,246	1,439,225	113,744	1,492,923
2002	69,857	78,743			164,909	669,897	234,766	748,640
2003	71,242	60,221			244,466	604,539	315,708	664,760
2004	55,322	25,708			191,113	360,666	246,435	386,374
2005	21,837	20,450			195,411	522,785	217,248	543,235
2006	42,860	23,781			91,204	484,217	134,064	507,998
2007	30,563	33,803			38,114	294,674	68,677	328,476
2008	26,033	58,018			116,107	311,353	142,140	369,371
2009	32,296	57,881			79,875	209,893	112,171	267,774
2010	21,496	33,583			128,270	1,029,681	149,766	1,063,263
2011	34,545	46,164			78,018	643,868	112,563	690,032
2012	25,984	27,996			123,117	342,880	149,101	370,876
2013	25,287	48,927			106,452	654,413	131,738	703,340
2014	19,702	82,209			125,790	340,530	145,492	422,740
2015	40,268	69,716			89,940	446,255	130,208	515,972
2016	24,528	80,406			91,702	596,455	116,230	676,861
2017	4,560	74,958			35,558	470,797	40,118	545,756
2018	23,108	39,454			69,268	267,429	92,377	306,883

**Table 3.** Greater Amberjack landings in numbers of fish (AB1) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (MRIP). Sample size (SS) is provided as the total number of angler trips intercepted by MRIP samplers within a specified strata and, in parentheses, the number of angler trips that intercepted Greater Amberjack. Intercepted fish include those landed (AB1) and discarded (B2). MRIP Headboat estimates are available from 1981-1985.

Year	Cbt			Hbt			Priv			Total		
	AB1	CV	SS	AB1	CV	SS	AB1	CV	SS	AB1	CV	SS
1981	11,050	0.42	76 ( 10)	4,609	0.50	76 (10)	308,415	0.59	221 ( 7)	324,075	0.57	297 ( 17)
1982	478,344	0.53	76 ( 18)	295,634	0.54	76 (18)	362,555	0.63	467 (14)	1,136,533	0.42	543 ( 32)
1983	325,659	0.43	123 ( 30)	127,904	0.54	123 (30)	106,321	0.62	203 ( 7)	559,884	0.38	326 ( 37)
1984	85,830	0.56	116 ( 18)	11,270	0.48	116 (18)	12,555	1.00	209 ( 2)	109,655	0.50	325 ( 20)
1985	160,608	0.52	89 ( 17)	56,707	0.41	89 (17)	111,575	0.68	294 ( 4)	328,890	0.38	383 ( 21)
1986	325,378	0.23	306 ( 66)				129,334	0.39	1,125 (17)	454,711	0.20	1,431 ( 83)
1987	393,564	0.23	262 ( 82)				891,048	0.67	1,060 (53)	1,284,612	0.47	1,322 (135)
1988	194,660	0.31	258 ( 48)				107,167	0.36	1,155 (26)	301,827	0.24	1,413 ( 74)
1989	148,758	0.26	201 ( 44)				322,226	0.32	732 (33)	470,984	0.23	933 ( 77)
1990	24,284	0.52	135 ( 20)				63,267	0.51	584 ( 7)	87,552	0.40	719 ( 27)
1991	296,258	0.41	185 ( 70)				34,723	0.36	630 (15)	330,980	0.36	815 ( 85)
1992	308,211	0.28	356 (129)				69,489	0.25	1,199 (45)	377,700	0.23	1,555 (174)
1993	92,474	0.31	180 ( 43)				88,163	0.34	843 (30)	180,637	0.23	1,023 ( 73)
1994	83,816	0.46	188 ( 38)				49,810	0.53	841 (16)	133,626	0.35	1,029 ( 54)
1995	10,286	0.70	178 ( 18)				43,481	0.61	731 (16)	53,767	0.51	909 ( 34)
1996	62,669	0.34	213 ( 29)				73,880	0.34	1,041 (18)	136,548	0.24	1,254 ( 47)
1997	32,040	0.38	368 ( 37)				35,904	0.45	990 (16)	67,943	0.30	1,358 ( 53)
1998	22,695	0.19	625 ( 71)				27,727	0.39	1,159 (15)	50,422	0.23	1,784 ( 86)
1999	38,063	0.14	855 (133)				81,147	0.32	1,642 (36)	119,210	0.22	2,497 (169)
2000	32,247	0.12	875 (181)				62,256	0.39	1,456 (29)	94,503	0.26	2,331 (210)
2001	24,160	0.16	733 (133)				86,954	0.26	1,346 (60)	111,114	0.21	2,079 (193)
2002	68,485	0.11	753 (225)				164,018	0.24	1,464 (55)	232,503	0.17	2,217 (280)
2003	69,909	0.10	861 (248)				242,750	0.25	1,575 (53)	312,659	0.19	2,436 (301)
2004	55,049	0.15	837 (207)				190,621	0.49	1,356 (53)	245,670	0.38	2,193 (260)
2005	21,555	0.15	647 (134)				189,339	0.46	1,216 (43)	210,894	0.41	1,863 (177)
2006	42,629	0.19	550 (129)				91,008	0.51	1,503 (28)	133,637	0.35	2,053 (157)
2007	29,739	0.17	591 (119)				37,864	0.36	1,460 (30)	67,603	0.21	2,051 (149)
2008	25,047	0.27	521 (113)				114,665	0.27	1,619 (41)	139,711	0.22	2,140 (154)
2009	32,242	0.20	508 ( 97)				77,211	0.26	1,632 (42)	109,453	0.19	2,140 (139)
2010	21,322	0.16	479 (107)				125,614	0.33	1,616 (42)	146,936	0.29	2,095 (149)
2011	34,545	0.13	610 (140)				77,868	0.48	1,729 (41)	112,413	0.33	2,339 (181)
2012	25,969	0.12	686 (145)				109,564	0.27	1,859 (42)	135,533	0.22	2,545 (187)
2013	25,220	0.29	355 ( 51)				103,785	0.39	1,569 (58)	129,005	0.32	1,924 (109)
2014	18,889	0.31	490 ( 70)				75,167	0.29	1,318 (80)	94,056	0.24	1,808 (150)
2015	36,835	0.25	533 ( 99)				76,252	0.37	1,409 (81)	113,087	0.26	1,942 (180)
2016	22,421	0.43	583 ( 79)				81,617	0.33	1,472 (96)	104,038	0.27	2,055 (175)
2017	4,138	0.59	500 ( 45)				33,911	0.36	1,178 (50)	38,049	0.32	1,678 ( 95)
2018	18,699	0.31	491 ( 45)				61,080	0.43	1,091 (43)	79,779	0.34	1,582 ( 88)

**Table 4.** Greater Amberjack discards in numbers of fish (B2) with associated coefficients of variation (CV; Dettloff et al. 2020) by mode and year (MRIP). Sample size (SS) is provided as the total number of angler trips intercepted by MRIP samplers within a specified strata and, in parentheses, the number of angler trips that intercepted Greater Amberjack. Intercepted fish include those landed (AB1) and discarded (B2). MRIP Headboat estimates are available from 1981-1985.

Year	Cbt			Hbt			Priv			Total		
	B2	CV	SS	B2	CV	SS	B2	CV	SS	B2	CV	SS
1981	0	0.00	76 ( 10)	0	0.00	76 (10)	12,235	1.00	221 ( 7)	12,235	1.00	297 ( 17)
1982	0	0.00	76 ( 18)	0	0.00	76 (18)	49,200	0.58	467 (14)	49,200	0.58	543 ( 32)
1983	25,768	0.99	123 ( 30)	16,083	1.00	123 (30)	126,884	0.76	203 ( 7)	168,735	0.62	326 ( 37)
1984	0	0.00	116 ( 18)	0	0.00	116 (18)	7,963	1.00	209 ( 2)	7,963	1.00	325 ( 20)
1985	0	0.00	89 ( 17)	0	0.00	89 (17)	0	0.00	294 ( 4)	0	0.00	383 ( 21)
1986	75,165	0.84	306 ( 66)				13,611	0.55	1,125 (17)	88,775	0.71	1,431 ( 83)
1987	2,017	0.84	262 ( 82)				29,334	0.45	1,060 (53)	31,351	0.42	1,322 (135)
1988	0	0.00	258 ( 48)				19,427	0.61	1,155 (26)	19,427	0.61	1,413 ( 74)
1989	6,967	0.60	201 ( 44)				146,522	0.71	732 (33)	153,490	0.68	933 ( 77)
1990	39,086	0.45	135 ( 20)				138,508	0.68	584 ( 7)	177,594	0.54	719 ( 27)
1991	301,042	0.31	185 ( 70)				34,125	0.52	630 (15)	335,167	0.28	815 ( 85)
1992	174,641	0.22	356 (129)				141,623	0.31	1,199 (45)	316,264	0.19	1,555 (174)
1993	126,316	0.39	180 ( 43)				179,985	0.43	843 (30)	306,302	0.30	1,023 ( 73)
1994	66,449	0.35	188 ( 38)				93,091	0.58	841 (16)	159,540	0.37	1,029 ( 54)
1995	6,637	0.41	178 ( 18)				107,527	0.38	731 (16)	114,164	0.36	909 ( 34)
1996	37,402	0.28	213 ( 29)				40,753	0.54	1,041 (18)	78,156	0.31	1,254 ( 47)
1997	14,724	0.35	368 ( 37)				100,909	0.51	990 (16)	115,633	0.45	1,358 ( 53)
1998	26,294	0.40	625 ( 71)				90,856	0.72	1,159 (15)	117,150	0.57	1,784 ( 86)
1999	26,171	0.22	855 (133)				99,503	0.34	1,642 (36)	125,674	0.27	2,497 (169)
2000	19,384	0.17	875 (181)				267,716	0.51	1,456 (29)	287,100	0.48	2,331 (210)
2001	31,944	0.23	733 (133)				1,304,640	0.29	1,346 (60)	1,336,584	0.28	2,079 (193)
2002	69,342	0.12	753 (225)				534,757	0.24	1,464 (55)	604,100	0.21	2,217 (280)
2003	56,748	0.16	861 (248)				556,420	0.30	1,575 (53)	613,168	0.28	2,436 (301)
2004	25,038	0.16	837 (207)				349,367	0.46	1,356 (53)	374,405	0.43	2,193 (260)
2005	19,874	0.17	647 (134)				480,371	0.53	1,216 (43)	500,245	0.51	1,863 (177)
2006	23,396	0.28	550 (129)				428,204	0.65	1,503 (28)	451,599	0.62	2,053 (157)
2007	32,042	0.21	591 (119)				283,120	0.37	1,460 (30)	315,162	0.33	2,051 (149)
2008	57,335	0.28	521 (113)				269,659	0.23	1,619 (41)	326,994	0.20	2,140 (154)
2009	57,850	0.27	508 ( 97)				203,030	0.24	1,632 (42)	260,880	0.20	2,140 (139)
2010	33,421	0.18	479 (107)				1,016,158	0.30	1,616 (42)	1,049,579	0.29	2,095 (149)
2011	43,808	0.17	610 (140)				639,108	0.48	1,729 (41)	682,917	0.45	2,339 (181)
2012	27,506	0.20	686 (145)				293,704	0.27	1,859 (42)	321,210	0.25	2,545 (187)
2013	43,643	0.31	355 ( 51)				594,143	0.37	1,569 (58)	637,786	0.35	1,924 (109)
2014	76,692	0.35	490 ( 70)				245,314	0.21	1,318 (80)	322,006	0.18	1,808 (150)
2015	64,168	0.25	533 ( 99)				376,927	0.21	1,409 (81)	441,095	0.18	1,942 (180)
2016	72,121	0.20	583 ( 79)				438,522	0.22	1,472 (96)	510,642	0.19	2,055 (175)
2017	64,868	0.28	500 ( 45)				273,491	0.24	1,178 (50)	338,359	0.20	1,678 ( 95)
2018	27,894	0.37	491 ( 45)				215,396	0.27	1,091 (43)	243,290	0.24	1,582 ( 88)

**Table 5.** *Estimated landings of Greater Amberjack in pounds whole weight by state and year (MRIP, LACreel, TPWD). FLW excludes the Florida Keys.*

<b>Year</b>	<b>TX</b>	<b>LA</b>	<b>MS</b>	<b>AL</b>	<b>FLW</b>	<b>Total</b>
1981	7,243	143,011	0	111,391	678,410	940,056
1982	7,243	315,707	0	94,788	13,933,429	14,351,166
1983	6,801	4,050,737	0	0	5,081,381	9,138,919
1984	8,479	1,238,843	0	0	793,917	2,041,239
1985	6,449	748,974	14,457	0	8,878,552	9,648,432
1986	10,712	9,673	0	71,966	7,039,393	7,131,744
1987	4,919	43,442	3,338	1,257,397	16,449,120	17,758,216
1988	4,273	28,851	0	253,886	2,986,427	3,273,437
1989	9,441	236,536	0	258,228	6,203,143	6,707,347
1990	4,007	2,280	562	274,980	1,098,926	1,380,755
1991	2,736	390,520	10,210	309,847	4,956,837	5,670,149
1992	6,924	285,870	31,581	1,297,465	8,677,843	10,299,684
1993	1,573	89,253	0	1,121,913	3,749,493	4,962,231
1994	5,516	98,360	603	886,632	2,132,468	3,123,579
1995	11,786	134,111	24,122	461,588	207,260	838,867
1996	16,013	690,621	0	676,141	981,229	2,364,004
1997	12,452	136,015	20,601	152,617	1,658,458	1,980,143
1998	8,893	9,445	0	128,771	1,611,833	1,758,941
1999	3,909	66,819	0	738,808	1,643,003	2,452,539
2000	5,083	139,320	0	484,103	1,463,596	2,092,102
2001	19,073	319,197	0	842,834	1,017,381	2,198,484
2002	37,457	400,222	0	1,532,237	2,178,579	4,148,495
2003	40,696	424,805	0	2,445,442	3,328,485	6,239,428
2004	22,913	513,937	0	445,368	5,569,905	6,552,123
2005	17,257	254,428	0	568,793	2,433,519	3,273,997
2006	8,400	600,849	0	636,924	1,704,324	2,950,497
2007	16,385	182,996	0	264,900	727,743	1,192,024
2008	10,891	401,340	26,461	150,567	1,917,520	2,506,779
2009	2,237	614,710	120,088	115,888	1,566,266	2,419,189
2010	5,886	103,712	0	297,096	2,441,102	2,847,795
2011	2,874	9,718	0	70,380	1,924,578	2,007,549
2012	4,889	455,829	0	168,914	2,560,310	3,189,942
2013	6,158	273,030	20,469	336,167	2,605,327	3,241,151
2014	25,714	151,880	35,164	979,019	1,535,861	2,727,637
2015	5,177	263,470	0	335,400	1,924,901	2,528,949
2016	619	224,118	231,476	295,961	1,705,772	2,457,946
2017	5,510	10,550	10,909	276,326	697,529	1,000,824
2018	9,639	286,144	42,662	722,427	1,345,244	2,406,116

**Table 6.** Summary of length measurements (millimeters fork length) from MRIP-intercepted Greater Amberjack by state and year. Summaries include the number of fish measured by MRIP (Fish), the number of angler trips from which those fish were measured (Trp), and the minimum (Min), geometric mean (Avg), and maximum (Max) size of fish lengths. FLW excludes the Florida Keys. LA lengths are available from MRIP only until 2013.

Year	LA					MS					AL					FLW				
	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max
1981	18	4	170	382	860	0	0	0	0	0	23	4	350	504	620	44	15	265	470	1,160
1982	32	17	200	494	940	0	0	0	0	0	6	4	390	548	763	181	52	255	587	1,350
1983	173	35	73	592	1,170	0	0	0	0	0	0	0	0	0	0	162	62	255	744	1,200
1984	177	37	200	636	1,510	0	0	0	0	0	0	0	0	0	0	25	16	190	577	1,200
1985	21	4	270	447	960	1	1	1,070	1,070	1,070	0	0	0	0	0	149	89	129	744	1,370
1986	72	26	250	382	780	0	0	0	0	0	28	8	372	620	1,000	698	210	129	721	1,350
1987	136	16	250	377	547	0	0	0	0	0	215	36	315	583	1,132	809	147	275	593	1,330
1988	4	3	331	600	690	0	0	0	0	0	168	41	263	577	1,000	273	68	297	657	1,342
1989	24	6	353	644	925	0	0	0	0	0	227	46	321	592	1,585	232	70	215	769	1,560
1990	1	1	711	711	711	0	0	0	0	0	37	17	342	755	1,090	26	10	215	570	832
1991	93	21	400	745	1,012	11	3	220	680	895	118	32	519	734	910	155	41	225	696	1,330
1992	132	29	440	800	1,312	2	1	931	967	1,003	590	119	625	757	1,113	255	57	230	804	1,513
1993	22	7	515	820	1,004	0	0	0	0	0	115	27	230	823	1,157	172	56	230	677	1,292
1994	7	5	515	723	1,210	1	1	1,213	1,213	1,213	104	34	300	825	1,262	75	23	355	832	1,135
1995	18	5	520	731	905	1	1	601	601	601	28	13	670	768	871	16	4	511	769	910
1996	25	7	700	816	1,028	0	0	0	0	0	79	26	664	757	955	40	17	559	775	1,300
1997	10	8	390	805	1,000	1	1	420	420	420	35	12	690	790	955	102	24	355	855	1,470
1998	5	3	390	642	926	0	0	0	0	0	35	15	680	764	905	190	63	355	812	1,162
1999	13	3	702	1,042	1,185	0	0	0	0	0	91	27	593	753	1,420	614	145	356	769	1,397
2000	20	6	711	879	1,105	0	0	0	0	0	151	44	400	793	1,100	874	191	490	798	1,233
2001	49	15	701	873	1,156	0	0	0	0	0	122	48	443	809	1,226	461	122	572	800	1,371
2002	178	53	691	856	1,221	0	0	0	0	0	198	55	670	796	1,120	1,046	223	449	766	1,894
2003	134	29	675	883	1,228	0	0	0	0	0	337	79	520	777	1,020	1,119	274	335	793	1,355
2004	113	30	710	923	1,160	0	0	0	0	0	106	33	684	835	1,119	881	243	588	822	1,463
2005	69	23	704	884	1,602	0	0	0	0	0	81	33	582	792	1,120	430	135	511	803	1,155
2006	184	43	691	946	1,411	0	0	0	0	0	51	14	686	892	1,235	478	110	445	807	1,210
2007	56	18	572	926	1,186	0	0	0	0	0	56	12	668	790	1,075	395	109	620	799	1,205
2008	39	18	797	926	1,530	1	1	833	833	833	22	11	650	769	1,045	311	97	140	789	1,805
2009	37	11	798	915	1,106	1	1	733	733	733	13	9	714	800	980	370	104	620	852	1,213
2010	19	7	760	913	1,116	0	0	0	0	0	53	14	365	849	1,160	410	130	558	866	1,310
2011	24	6	901	1,010	1,200	0	0	0	0	0	38	10	716	832	1,005	788	201	653	841	1,650

Year	LA					MS					AL					FLW				
	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max
2012	48	17	865	1,044	1,300	0	0	0	0	0	42	15	464	816	1,100	705	184	359	878	1,378
2013	55	21	750	1,027	1,263	2	1	810	869	928	38	17	726	879	1,210	148	55	355	915	1,320
2014						3	1	976	990	1,014	87	30	645	815	1,210	149	68	460	849	1,300
2015						0	0	0	0	0	94	40	525	876	1,210	259	89	397	867	1,244
2016						5	2	901	1,086	1,235	23	11	806	916	1,055	91	42	405	919	1,493
2017						2	1	535	680	825	23	9	879	953	1,091	37	17	810	916	1,089
2018						2	2	889	902	915	67	20	773	946	1,213	89	33	853	937	1,206

**Table 7.** Summary of weight measurements (pounds whole weight) from MRIP-intercepted Greater Amberjack by state and year. Summaries include the number of fish weighed by MRIP (Fish), the number of angler trips from which those fish were weighed (Trp), and the minimum (Min), geometric mean (Avg), and maximum (Max) size of fish weights. FLW excludes the Florida Keys. LA weights are available from MRIP only until 2013.

Year	LA					MS					AL					FLW				
	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max
1981	18	4	0.2	2.1	17.4	0	0	0.0	0.0	0.0	23	4	1.6	4.9	8.5	44	15	0.7	5.3	42.4
1982	32	17	0.9	8.9	31.1	0	0	0.0	0.0	0.0	6	4	2.7	6.6	14.8	181	52	0.4	9.9	51.1
1983	173	35	0.2	14.5	56.4	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	162	62	0.4	14.1	40.8
1984	177	37	0.9	12.6	118.5	0	0	0.0	0.0	0.0	0	0	0.0	0.0	0.0	25	16	0.2	11.8	42.7
1985	21	4	1.2	7.8	49.8	1	1	37.5	37.5	37.5	0	0	0.0	0.0	0.0	149	89	0.2	15.6	69.0
1986	72	26	0.7	3.0	16.2	0	0	0.0	0.0	0.0	28	8	1.8	10.3	32.6	698	210	0.2	16.5	114.5
1987	136	16	0.8	2.8	9.0	0	0	0.0	0.0	0.0	215	36	1.2	7.7	45.2	809	147	0.9	10.1	95.5
1988	0	3	0.0	0.0	0.0	0	0	0.0	0.0	0.0	32	41	5.1	6.2	7.7	134	68	2.9	10.8	75.6
1989	24	6	1.3	11.3	27.7	0	0	0.0	0.0	0.0	215	46	1.1	8.4	82.5	232	70	0.4	30.6	87.7
1990	1	1	18.0	18.0	18.0	0	0	0.0	0.0	0.0	37	17	1.7	17.2	36.8	26	10	0.4	13.9	36.4

Year	LA					MS					AL					FLW				
	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max	Fish	Trp	Min	Avg	Max
1991	93	21	2.9	17.0	41.2	11	3	0.8	14.2	25.7	118	32	6.2	17.8	34.0	155	41	0.7	16.2	57.3
1992	112	29	4.7	24.7	79.4	2	1	24.2	25.8	27.3	559	119	9.9	21.1	66.0	238	57	0.9	25.6	106.5
1993	22	7	8.5	20.1	31.0	0	0	0.0	0.0	0.0	115	27	0.9	25.0	78.4	172	56	0.9	19.2	67.8
1994	7	5	6.1	18.5	63.9	1	1	92.4	92.4	92.4	104	34	1.2	20.7	50.4	75	23	1.8	24.0	61.3
1995	17	5	7.2	15.5	22.1	1	1	7.9	7.9	7.9	28	13	9.5	15.3	23.0	16	4	5.1	14.8	17.6
1996	25	7	11.0	22.9	51.9	0	0	0.0	0.0	0.0	79	26	9.5	15.8	30.5	40	17	5.3	16.4	71.1
1997	10	8	3.3	22.5	35.0	1	1	2.4	2.4	2.4	35	12	15.2	26.4	52.1	102	24	1.7	33.4	191.7
1998	5	3	2.6	16.3	40.1	0	0	0.0	0.0	0.0	35	15	15.5	24.1	43.6	190	63	1.7	25.3	63.3
1999	13	3	22.0	39.7	52.9	0	0	0.0	0.0	0.0	91	27	12.4	30.2	96.0	614	145	2.0	17.5	79.8
2000	20	6	13.4	27.9	54.7	0	0	0.0	0.0	0.0	151	44	4.4	30.8	95.9	874	191	4.4	18.6	63.4
2001	49	15	12.6	24.8	48.0	0	0	0.0	0.0	0.0	122	48	2.8	27.5	92.8	461	122	7.3	18.3	78.9
2002	178	53	10.5	23.5	66.8	0	0	0.0	0.0	0.0	198	55	9.4	26.7	73.5	1,046	223	3.7	15.3	168.3
2003	134	29	10.4	25.1	63.9	0	0	0.0	0.0	0.0	337	79	9.8	24.8	63.5	1,119	274	1.9	16.9	71.6
2004	113	30	11.7	25.2	45.0	0	0	0.0	0.0	0.0	106	33	9.7	18.6	41.1	881	243	7.3	17.6	95.9
2005	54	23	10.5	22.8	107.4	0	0	0.0	0.0	0.0	81	33	6.6	16.2	40.7	430	135	5.0	16.2	42.9
2006	184	43	11.0	27.9	89.0	0	0	0.0	0.0	0.0	51	14	10.5	24.0	55.5	478	110	4.3	17.5	48.5
2007	56	18	8.3	28.5	52.7	0	0	0.0	0.0	0.0	56	12	9.5	16.3	35.8	395	109	7.4	16.9	51.1
2008	39	18	11.7	27.3	85.0	1	1	11.9	11.9	11.9	22	11	7.7	14.9	36.3	311	97	0.2	17.1	155.6
2009	37	11	11.7	25.6	41.9	1	1	12.2	12.2	12.2	13	9	10.9	17.8	43.0	370	104	7.4	19.6	49.4
2010	19	7	13.8	24.8	44.6	0	0	0.0	0.0	0.0	53	14	1.8	20.2	43.3	410	130	6.2	20.4	53.8
2011	6	6	20.9	37.8	49.6	0	0	0.0	0.0	0.0	38	10	11.5	18.0	32.1	788	201	9.4	18.8	96.4
2012	48	17	18.3	35.3	68.1	0	0	0.0	0.0	0.0	42	15	3.5	18.6	47.4	705	184	1.7	20.3	59.2
2013	55	21	12.7	34.0	63.1	2	1	14.4	19.3	24.3	38	17	12.8	21.8	49.6	148	55	1.5	24.0	65.1
2014						3	1	25.1	28.4	32.2	87	30	9.0	16.7	49.6	149	68	3.6	20.5	60.7
2015						0	0	0.0	0.0	0.0	94	40	4.6	21.7	49.6	259	89	2.5	21.2	51.4
2016						5	2	16.1	36.4	48.5	23	11	16.1	22.7	31.5	91	42	2.4	25.9	95.1
2017						2	1	4.4	9.6	14.8	23	9	22.0	28.1	44.6	37	17	16.1	23.7	39.1
2018						2	2	23.1	24.5	25.9	67	20	16.0	27.2	54.6	89	33	16.4	25.0	50.2

**Table 8.** Summary of length measurements (millimeters total length) from TPWD-intercepted Greater Amberjack by year. Summaries include the number of fish measured by TPWD (Fish), the number of angler trips from which those fish were measured (Trp), and the minimum (Min), geometric mean (Avg), and maximum (Max) size of fish lengths.

Year	Fish	Trp	Min	Avg	Max
1983	15	7	295	867	1,210
1984	14	9	327	667	1,032
1985	84	31	222	499	1,410
1986	61	21	195	487	1,470
1987	23	10	325	665	990
1988	15	9	227	608	797
1989	11	7	304	484	1,027
1990	7	6	374	533	1,000
1991	16	5	220	545	930
1992	13	7	340	876	1,180
1993	11	4	317	754	982
1994	20	11	285	830	1,455
1995	37	19	389	856	1,300
1996	48	24	359	882	1,189
1997	39	25	225	784	1,197
1998	7	7	477	826	1,057
1999	15	9	241	723	1,035
2000	13	7	667	944	1,182
2001	36	14	625	898	1,217
2002	60	23	537	908	1,311
2003	66	32	429	926	1,199
2004	35	14	819	1,032	1,483
2005	35	12	254	968	1,331
2006	27	16	420	955	1,538
2007	45	15	205	880	1,174
2008	25	16	409	886	1,187
2009	13	7	276	694	1,169
2010	10	4	855	939	986
2011	12	7	329	1,070	1,443
2012	6	4	341	966	1,421
2013	16	7	595	1,128	1,700
2014	26	8	283	896	1,421
2015	17	8	908	1,019	1,283
2016	1	1	1,153	1,153	1,153
2017	7	3	978	1,165	1,284
2018	19	7	992	1,222	1,613

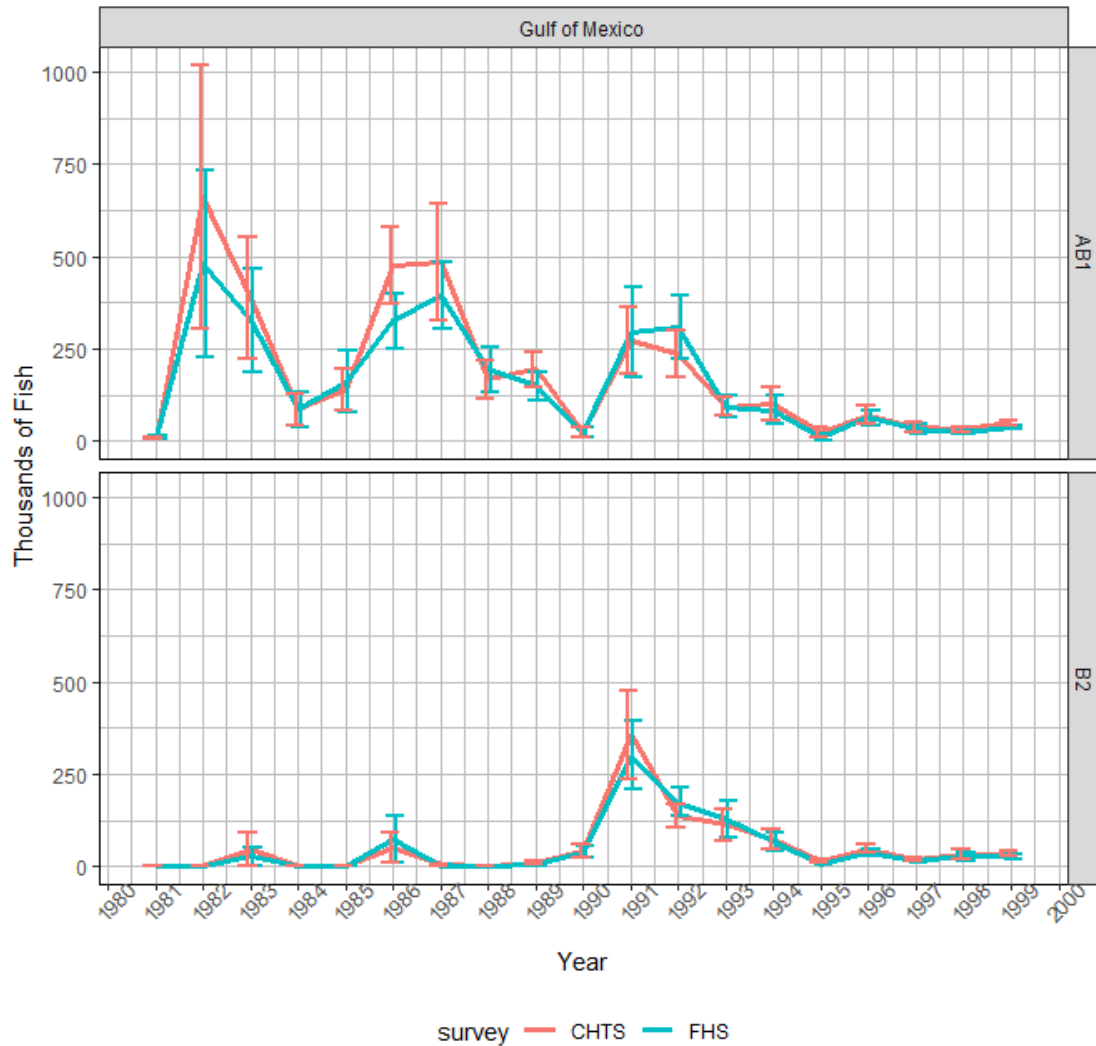


**Table 9.** *Recreational Fishing Effort (in angler trips) for Gulf of Mexico anglers by mode and year (MRIP, LACreel, TPWD). Note that effort from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode. MRIP Headboat estimates are available from 1981-1985.*

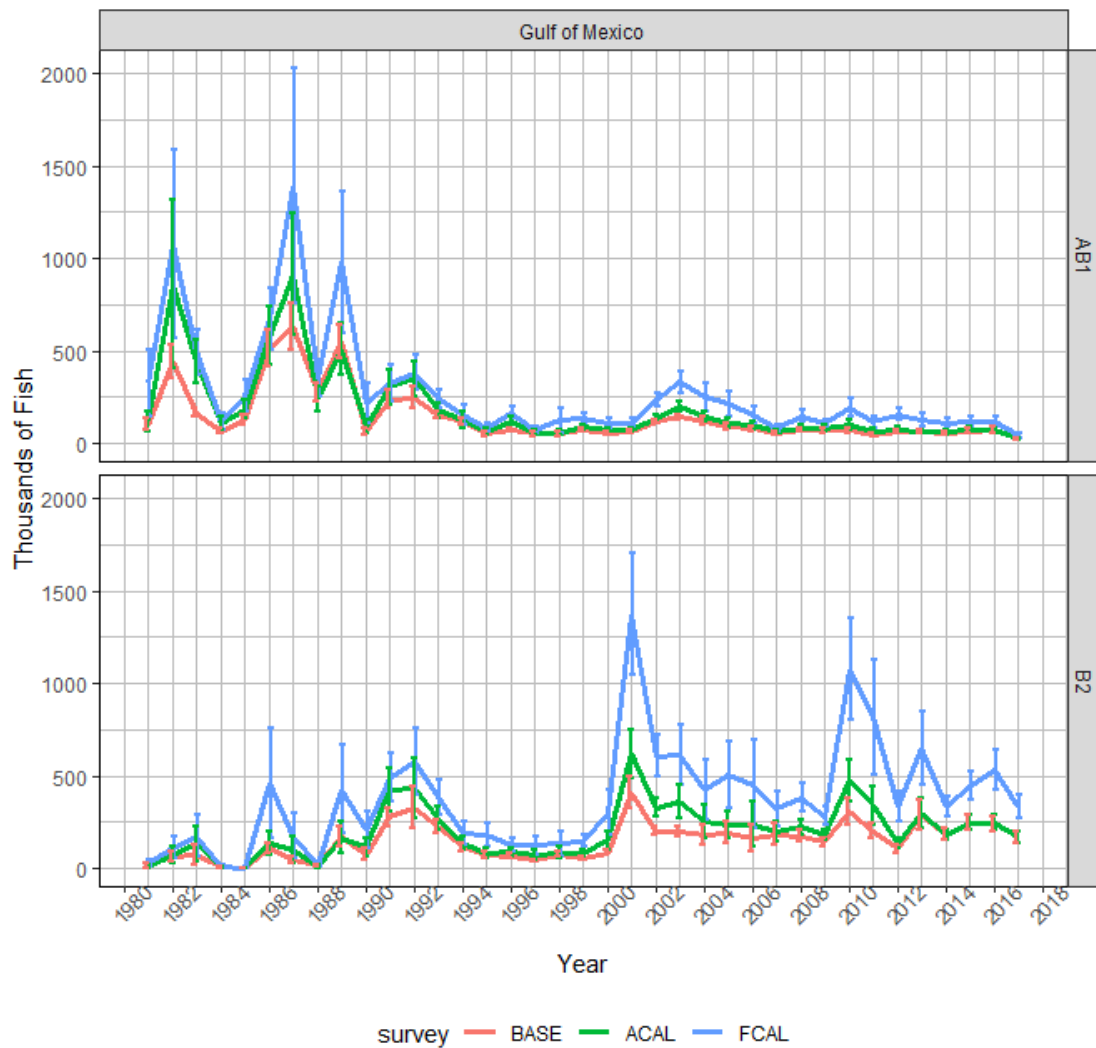
<b>Year</b>	<b>Cbt</b>	<b>Hbt</b>	<b>Priv</b>	<b>Total</b>
1981	393,653	184,590	9,788,741	10,366,984
1982	523,703	260,912	11,539,636	12,324,251
1983	577,982	256,493	14,486,938	15,321,413
1984	538,634	242,211	14,092,265	14,873,110
1985	590,627	277,516	15,254,933	16,123,076
1986	568,071		14,774,401	15,342,472
1987	589,079		14,797,442	15,386,521
1988	514,257		17,206,317	17,720,574
1989	598,554		16,639,761	17,238,315
1990	582,562		17,643,786	18,226,348
1991	538,436		17,342,858	17,881,294
1992	562,637		17,960,471	18,523,108
1993	632,103		18,369,691	19,001,794
1994	674,540		18,879,440	19,553,980
1995	767,107		19,483,060	20,250,167
1996	728,968		19,486,760	20,215,728
1997	775,426		20,868,517	21,643,943
1998	770,950		22,378,087	23,149,037
1999	785,377		24,652,366	25,437,743
2000	764,302		24,235,439	24,999,741
2001	779,587		26,736,316	27,515,903
2002	747,306		25,968,811	26,716,117
2003	705,784		26,781,055	27,486,839
2004	784,050		30,051,274	30,835,324
2005	693,307		29,101,391	29,794,698
2006	824,855		27,001,186	27,826,041
2007	867,716		27,430,701	28,298,417
2008	815,284		29,704,327	30,519,611
2009	777,345		28,971,676	29,749,021
2010	598,246		30,041,475	30,639,721
2011	761,822		30,443,129	31,204,951
2012	942,070		31,766,244	32,708,314
2013	872,550		29,690,881	30,563,431
2014	864,446		23,290,379	24,154,825
2015	994,732		22,093,560	23,088,292
2016	1,058,564		23,433,797	24,492,361
2017	1,092,177		24,321,168	25,413,345
2018	1,230,739		22,674,462	23,905,201

**Table 10.** Average ratios of greater amberjack over unidentified amberjacks and jacks by year group and catch type. Proportions of unidentified amberjack genus and jack family are assigned to greater amberjack following the same methodology as SEDAR 33. Proportions were updated to reflect additional years of data and updated MRIP estimates.

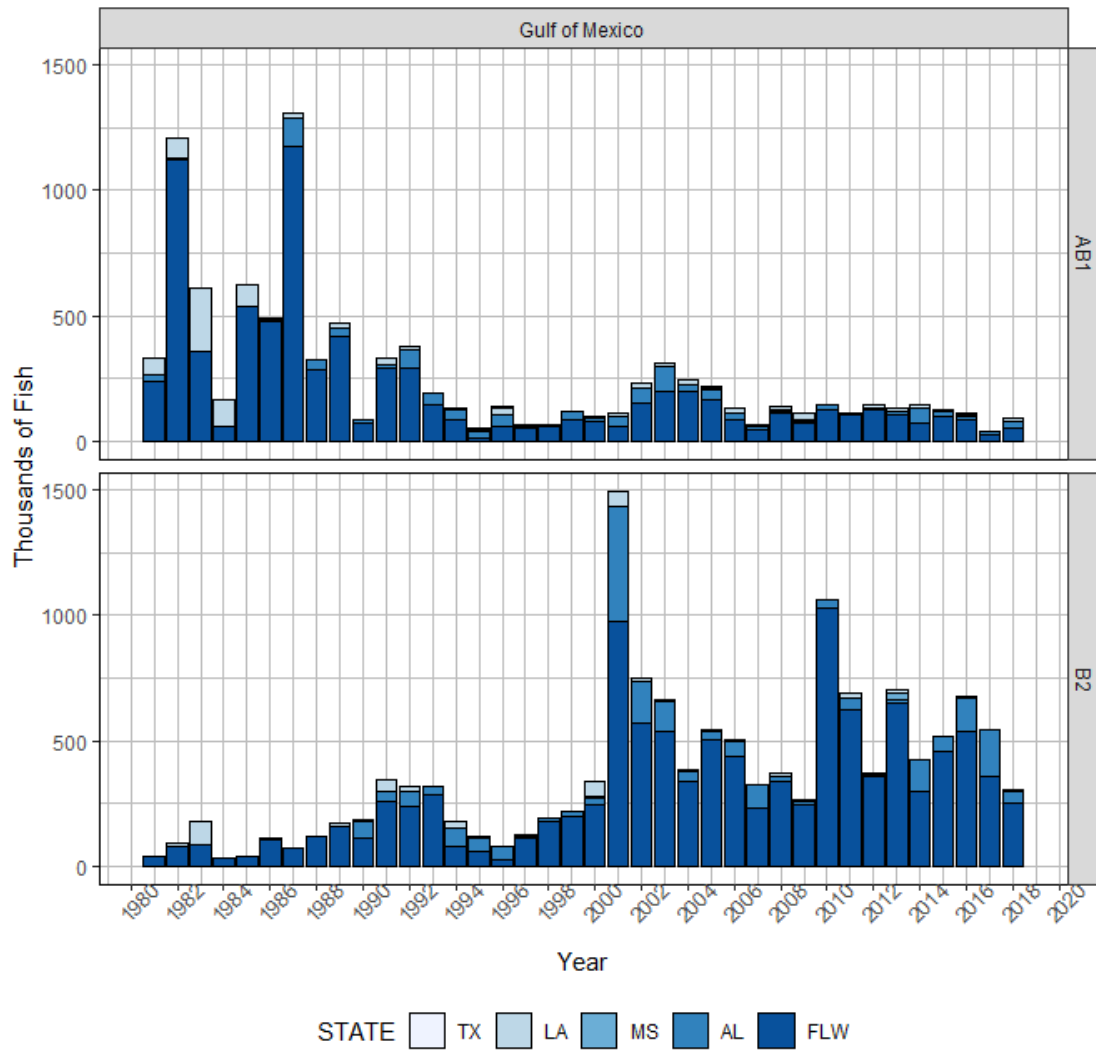
Unidentified taxa	Year group	Landings	Discards
Seriola	1981-1990	0.93	0.91
(unidentified amberjack genus)	1991-2018	0.77	0.97
Carangidae	1981-1990	0.44	0.06
(unidentified jack family)	1991-2018	0.09	0.11



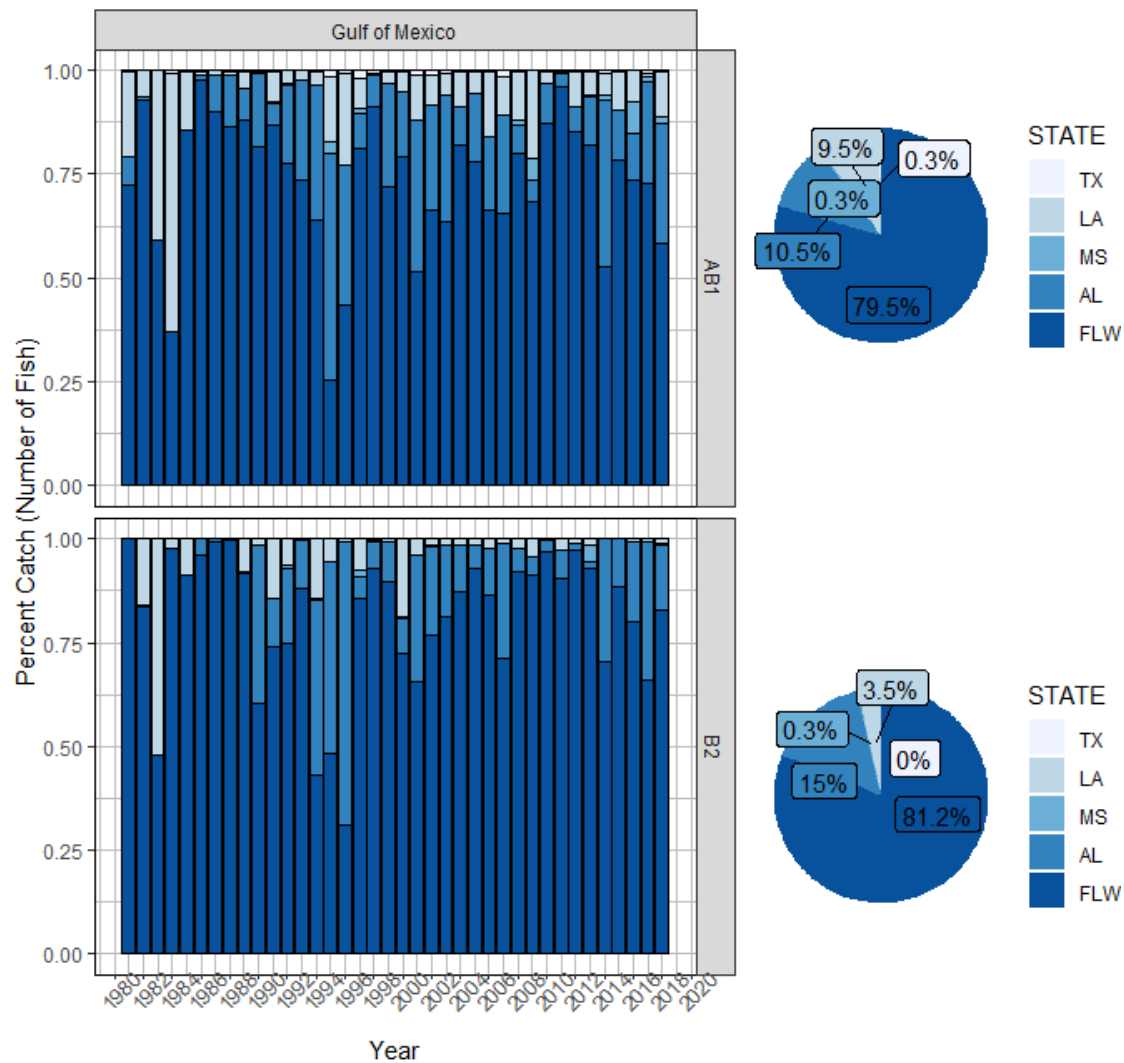
**Figure 1.** Comparison of charterboat landings (AB1) and discard (B2) estimates (with standard error intervals shown) for Greater Amberjack from the Coastal Household Telephone Survey (CHTS) and For-Hire Survey (FHS) from the Gulf of Mexico between 1981 to 1999.



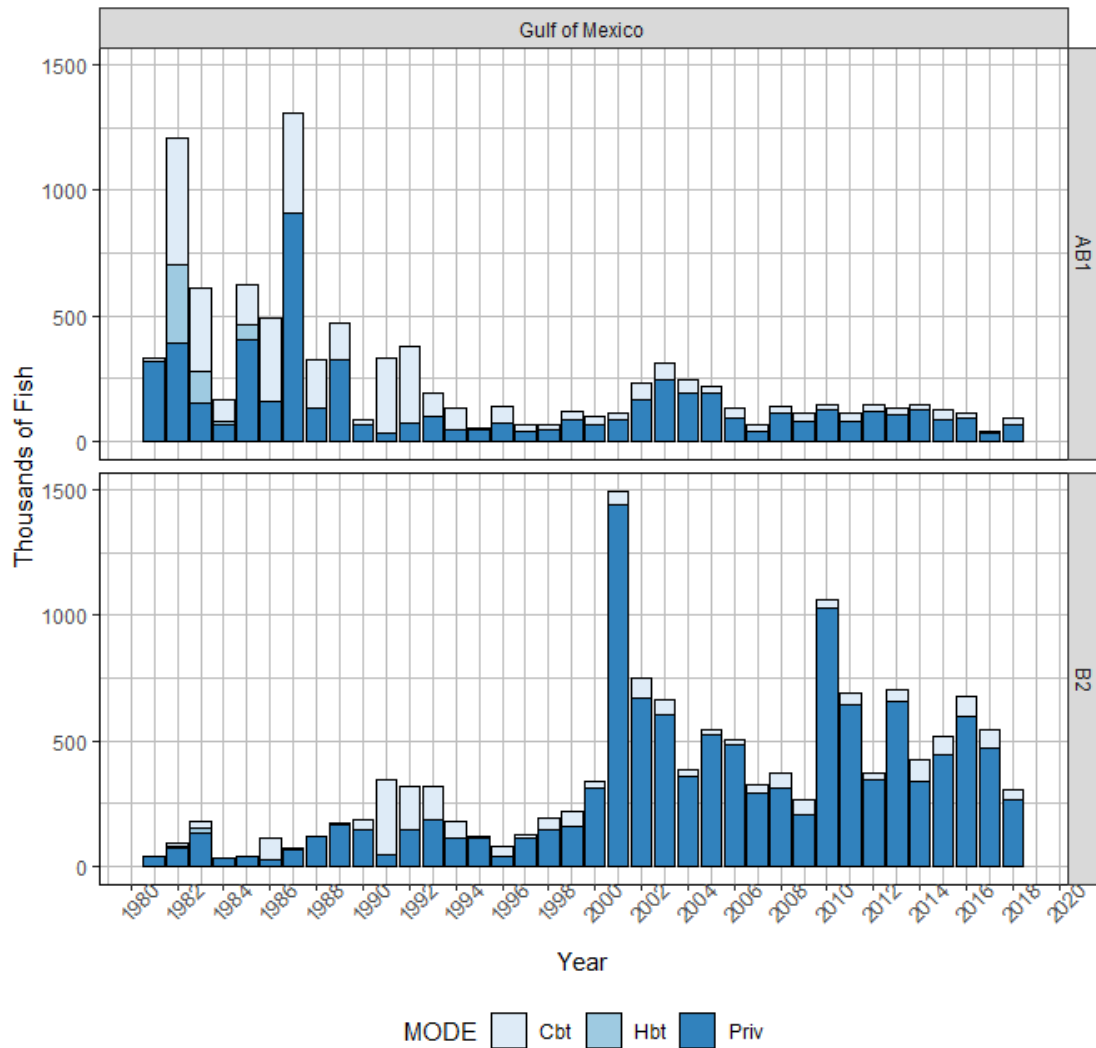
**Figure 2.** MRIP Base (BASE), APAIS Calibrated (ACAL), and Fully Calibrated APAIS and FES (FCAL) catch estimates for Greater Amberjack in the Gulf of Mexico. Landings (AB1) and discard (B2) estimates are in thousands of fish. Estimates in this figure include the Florida Keys as that domain is not separable from those used by the MRIP online comparison tool for the Gulf of Mexico (NMFS). Shore mode is also included as uncertainty estimates for catch across multiple modes are only available when all modes are selected.



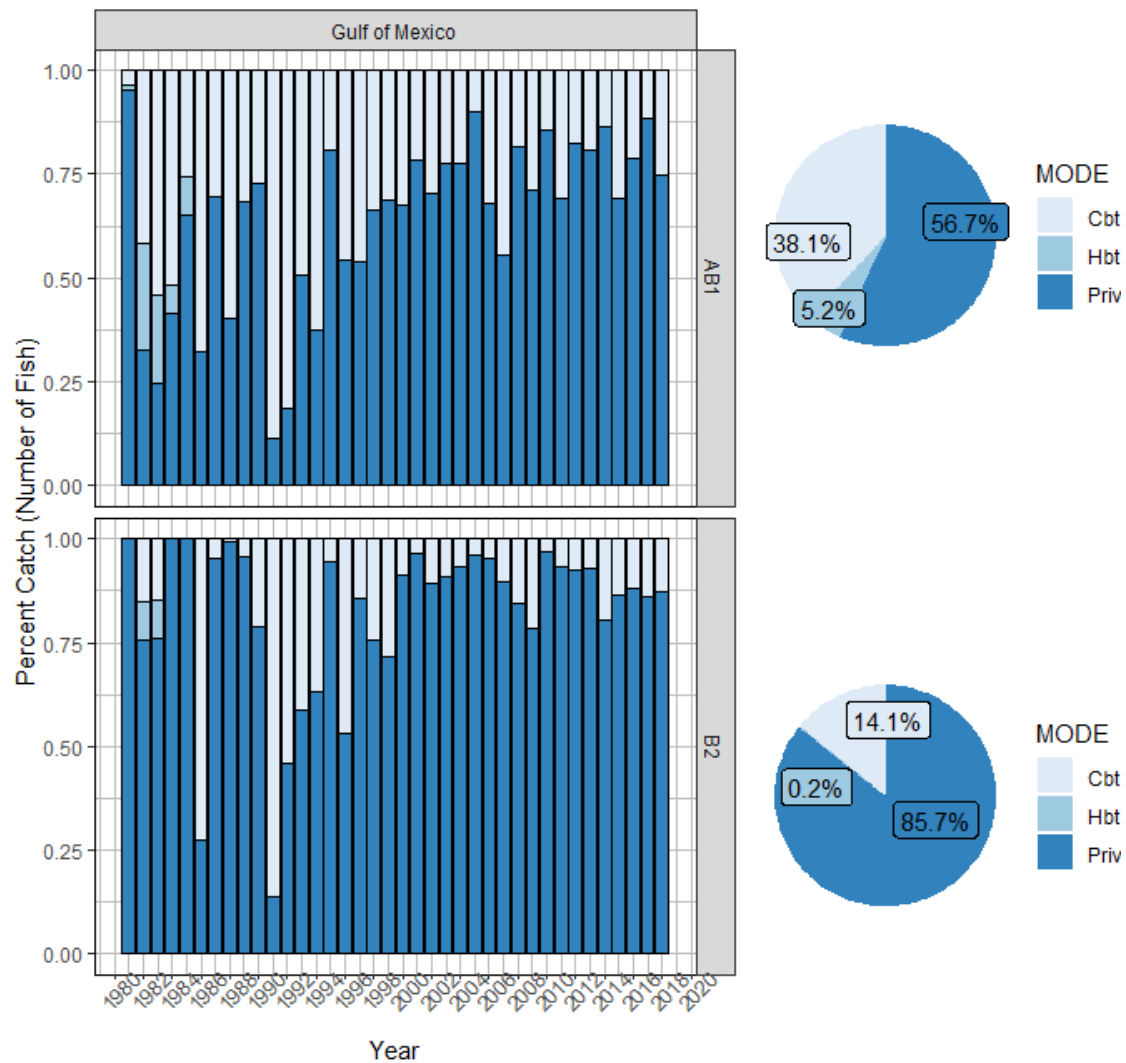
**Figure 3.** Annual Greater Amberjack landings (AB1) and discards (B2), in thousands of fish, by state from 1981 to 2018 (MRIP, TPWD, LACreel). FLW excludes the Florida Keys.



**Figure 3a.** Percent of Greater Amberjack landings (AB1) and discards (B2), in numbers of fish, from each state by year (bar graph) and overall (pie chart) between 1981 and 2018 (MRIP, TPWD, LACreel). FLW excludes the Florida Keys.

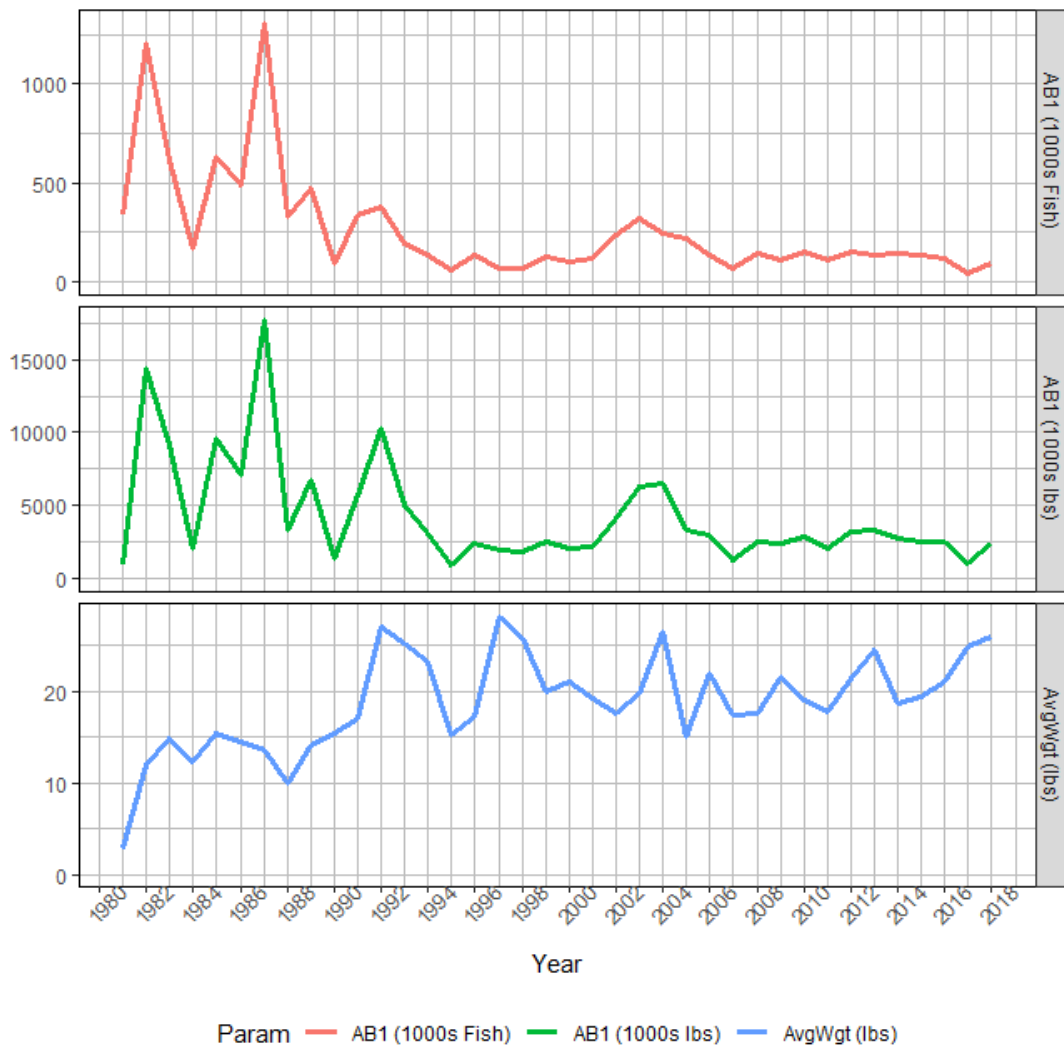


**Figure 4.** Annual Greater Amberjack landings (AB1) and discards (B2), in thousands of fish, by mode from 1981 to 2018 (MRIP, TPWD, LACreel). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode. MRIP Headboat estimates are available from 1981-1985.



**Figure 4a.** Percent of Greater Amberjack landings (AB1) and discards (B2), in numbers of fish, from each mode by year (bar graph) and overall (pie chart) between 1981 and 2018 (MRIP, TPWD, LACreel). Note that catch from the combined private-shore fishing mode in the LA Creel survey has been added to the private mode. MRIP Headboat estimates are available from 1981-1985.





**Figure 5.** Estimates of annual landings for Greater Amberjack in the Gulf of Mexico, as estimated from MRIP: 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).