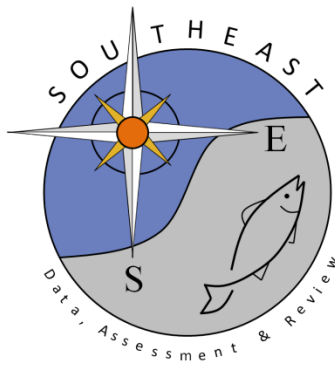


Historical Commercial Fishery Landings of Hogfish in the Southeastern U.S.

Christopher Bradshaw

SEDAR94-DW-06

8 July 2025



This information is distributed solely for the purpose of pre-dissemination peer review. It does not represent and should not be construed to represent any agency determination or policy.

Please cite this document as:

Bradshaw, Christopher. 2025. Historical Commercial Fishery Landings of Hogfish in the Southeastern U.S. SEDAR94-DW-06. SEDAR, North Charleston, SC. 7 pp.

Historical Commercial Fishery Landings of Hogfish in the Southeastern U.S.

Christopher Bradshaw

SEDAR 94

July 2025

Introduction

Fishery-dependent commercial landings or harvest data from the Southeastern U.S. for hogfish are available from three primary sources: NOAA Fisheries Accumulated Landings System (ALS) and Florida Marine Fisheries Trip Ticket (FL TTK). SEDAR 37 primarily used FL TTK data and trip ticket data from South Carolina and North Carolina to establish a commercial landings history. This report will compare and combine the ALS and FL TTK data as data sources for establishing appropriate commercial landings data by year, region, and gear to be included in the stock assessment model for hogfish.

Materials and Methods

Trip level commercial harvest (trip ticket) data were extracted from the Florida Fish and Wildlife Conservation Commission's (FWC) Marine Resources Information System for available years 1985-2024 (1985 will be dropped as it was not a complete year of trip tickets). FL TTK data include trip level catch and effort data such as area fished, county landed, gear used, fisher, dealer and trip identifiers, and species and pounds landed. Although a data element since the beginning, area fished was not required until 1995, and gear was not required until late 1991. Additionally, NOAA Fisheries provided ALS commercial landings data. ALS are summary data by year, state, county, waterbody, and gear from 1962-2022, and by state and gear from 1926-1961.

Florida TTK and ALS data were imported into SAS and data were formatted and summed by year, coast (South Atlantic or Gulf of Mexico), state, hogfish region, and gear. Hogfish regions for this SEDAR were defined by Assessment Scientist Chris Swanson via personal communication (North of Florida, East Florida and the Keys, West Florida, and west of Florida). Each dataset was then exported to Microsoft Excel where direct comparisons of the summary data were made, and preliminary historical landings by year, hogfish region fished (based on area fished when it was available), and gear were established in pounds whole weight. Landings further separated by month were provided to assessment staff at their request for exploratory analysis.

Results and Discussion

ALS landings were for a longer time series than the FL TTK data so all of the Florida landings before 1986 were from ALS data. ALS also provided all out of Florida landings for the entire time series and any Florida landings not reported to FL TTK (Table 1). Assessment staff requested that gears be broken into the following groups: Hook and Line (all hooked gears that are not longlines), Longline, Diving, Traps, Other, and Unknown. Unknown gears were assigned to regular gear categories by proportioning identified gears by year and using those proportions to assign unknown gears. When there was no identified gear available within a year it was proportioned by the next most available gear/year combination. The number of fish was calculated based on TIP data provided by NOAA (through 2023 currently but this paper will be updated once those data are provided) across all gears for a year and using the values from adjacent years when yearly averages were not available. All tables and figures in this report have had confidential data removed or the data are expressed as propositions of a category. Assessment staff have received confidential data.

Historical hogfish commercial landings by year and hogfish regions based on area fished show that most of the harvest occurs in Florida from the beginning of the time series until 2006 when it varies from 50% to 35% of the total landings (Figure 1). When the within Florida landings are separated the landing between the Florida coasts shows great variability (Figure 2). Preliminary effort in hogfish landings shown as number of trips indicate that most of the effort is taking place in the East Florida and Keys region for most years with it being closer in recent years. Statewide, the number of hogfish trips has been on the decline from a high of over 4,000 trips in 1989 to an average of 450 trips since 2010 (Table 2). The overall trend in decreasing landings seems to correspond with decreasing effort over the same period. When gear and year were examined most of the early landings were caught using Hook and Line gear [early landings had the unknown gear proportioned by known gear for that year or an adjacent period] (Figure 3). Other gear landings were significant throughout most of the 1980's and diving gear began to increase after the early 1990's.

Table 1. Commercial hogfish landings (whole pounds) by year, region, and gear. Data from NOAA Fisheries ALS (blue) and FL Trip Ticket (green).

Year	North of Florida					East Florida & the Keys					West Florida					West of Florida				
	DV	HL	LL	OT	TR	DV	HL	LL	OT	TR	DV	HL	LL	OT	TR	DV	HL	LL	OT	TR
1977							11,381					32,852								
1978							2,260					37,472					522			
1979							2,024					48,094								
1980							19,658							46,650			966			
1981							18,050							44,459			709		10,430	
1982							2,267							29,921			4,659		11,521	
1983							4,624							32,403			2,526		7,340	
1984							2,317							36,843			2,486	61	425	
1985							4,437							42,553			5,843			
1986							47,928							6,634		1,328	6,668		44	
1987							64,211							9,471		2,500	4,312	2,462		
1988							64,581							11,489		1,654	6,741	1,725	47	
1989							79,674							30,496		1,186	13,272	572		143
1990							77,556				4,382	28,620		4,907	1,133		14,051	983		12,828
1991						15,226	25,521	18	89	29,775	4,216	27,537		4,721	1,090		12,182	572	17	11,115
1992						24,877	45,529	758	663	21,163	7,569	14,587	172	1,797	2,909	2,077	25,872			4,290
1993				3,503		24,959	48,439	12	133	21,461	8,874	21,658	58	1,207	10,485		28,025			78
1994	10	5		0	2	23,439	32,544		150	6,896	10,216	15,269	182	221	5,045	3,848	19,038	102		75
1995	1,432	708		57	6	17,731	22,514	1,303	330	6,367	6,472	8,640	156	31	1,726	1,007	32,112		31	1,627
1996		8,607			1,241	17,442	20,096	84	200	5,903	8,398	5,711	314	173	2,389		6,966			498
1997	58	8,562			1,017	15,331	23,517	11	135	8,452	9,040	5,702	213		4,015	205	15,513			
1998		11,422			504	15,576	11,454	19	174	7,363	7,020	2,684	158		3,185		9,953			
1999	83	12,175			116	9,644	8,948	2	208	15,769	4,922	4,560	148	2	3,459		16,812			
2000	67	7,370			299	11,666	8,104	14	6	11,218	7,782	8,642	197		1,851		16,368			
2001	1,684	6,515				12,083	9,308	156	3	2,275	12,476	6,762	40	6	2,796		4,118		1,732	129
2002	3,094	7,558				12,952	9,207		88	1,890	17,616	4,984			3,594		7,579		61	1,522
2003	2,997	6,325				8,571	14,581	219	38	2,687	16,206	5,646	80	25	1,331		7,281		608	302
2004	7,651	9,181				12,383	13,522	89	58	2,404	17,831	2,052	52		781	562	2,029			
2005	2,883	12,107				8,787	6,718		6	1,337	13,211	2,554	149		24	671	3,554			
2006	5,796	16,820				8,191	4,114		22	1,892	11,939	1,184					349			
2007	6,509	15,443				7,466	5,415	314	10	1,315	13,726	1,695	34				1,484			
2008	16,772	18,580				7,491	4,317	14	1	1,397	20,328	1,991	108				1,472			
2009	11,647	17,584				7,355	5,309		8	1,653	27,416	2,829					3,176			
2010	33,606	8,664				5,381	5,337		5	995	27,998	5,357			144					
2011	23,829	12,129				6,292	4,916		61	1,273	38,327	5,441			20					
2012	14,931	5,978				8,227	3,820		12	2,136	37,178	3,877		18						
2013	15,482	5,640				10,882	4,395			1,824	19,002	2,476	56		87					
2014	13,942	7,481				13,328	5,102		57	3,066	33,016	1,463			154					
2015	9,234	5,316				14,201	4,434			3,361	23,016	3,763			42					
2016	11,484	5,372				11,708	3,979			1,941	24,701	3,606			424					
2017	19,184	6,676				8,066	1,862			693	15,360	752		4	374					
2018	14,149	7,868				3,549	824			169	10,024	448			154					
2019	13,697	6,956				1,795	273			262	9,527	875			74	2,267				
2020	13,591	5,674				2,624	211			95	8,173	326			40					
2021	12,023	5,940				2,972	333			78	10,458	427				5,008				
2022	12,191	4,470				2,619	349			85	8,715	66				835				
2023	5,031	13,895			17	2,276	135			95	8,244	427	36		6		47			
2024	11,799	1,970				2,220	181			54	6,734	586					227			

Table 2. Florida commercial Hogfish landings (pounds and trips) by hogfish region (East Florida and Florida Keys [EFL & Keys], North of Florida [N of FL], West of Florida [W of FL], and West Florida [WFL]).

Year	N of FL		EFL & Keys		WFL		W of FL		Total	
	Pounds	Trips	Pounds	Trips	Pounds	Trips	Pounds	Trips	Pounds	Trips
1977			11,381		32,852				44,233	
1978			2,260		37,472		522		40,254	
1979			2,024		48,094				50,118	
1980			19,658		46,650		966		67,274	
1981			18,050		44,459		11,139		73,648	
1982			2,267		29,921		16,180		48,368	
1983			4,624		32,403		9,866		46,893	
1984			2,317		36,843		2,486		41,646	
1985			4,437		42,553		5,843		52,833	
1986			47,928	3,314	6,634	145	6,668		61,230	3,459
1987			64,211	3,967	9,471	258	9,274		82,956	4,225
1988			64,581	3,454	11,489	358	10,120		86,189	3,812
1989			79,674	4,054	30,496	451	15,030		125,200	4,505
1990			77,556	3,803	39,042	393	27,862		144,459	4,196
1991			70,629	3,469	37,564	475	23,886		132,079	3,944
1992			92,990	3,501	27,034	701	32,239		152,264	4,202
1993	3,503		95,003	3,068	42,281	916	28,025		168,812	3,984
1994	17		63,029	2,418	30,933	834	22,886		116,866	3,252
1995	2,203	3	48,244	2,294	17,025	359	34,746		102,218	2,656
1996	9,848		43,724	2,017	16,985	394	7,464		78,021	2,411
1997	9,637	1	47,445	2,029	18,970	359	15,513		91,565	2,389
1998	11,926		34,585	1,692	13,047	326	9,953		69,511	2,018
1999	12,175		34,572	1,251	13,091	361	16,812		76,650	1,612
2000	7,669		31,008	1,448	18,473	446	16,368		73,518	1,894
2001	8,199		23,826	1,526	22,081	493	5,979		60,085	2,019
2002	10,652		24,137	1,603	26,194	429	9,101		70,084	2,032
2003	9,322	2	26,096	1,498	23,288	346	7,890		66,596	1,846
2004	16,832	1	28,456	1,480	20,665	304	2,029		67,981	1,785
2005	14,990		16,842	1,080	15,938	191	4,225		51,995	1,271
2006	22,616		14,218	905	13,122	155	349		50,306	1,060
2007	21,952	4	14,206	871	15,422	137	1,484		53,064	1,012
2008	35,352	10	13,206	718	22,427	223	1,472		72,457	951
2009	29,231		14,325	748	30,245	236	3,176		76,977	984
2010	42,270	1	11,718	514	33,499	253			87,487	768
2011	35,958		12,542	509	43,768	295			92,268	804
2012	20,909	3	14,194	615	41,055	316			76,158	934
2013	21,122	2	17,102	733	21,565	195			59,788	930
2014	21,423	2	21,554	845	34,633	318			77,610	1,165
2015	14,550	2	21,996	935	26,820	325			63,367	1,262
2016	16,855	2	17,628	832	28,730	325			63,214	1,159
2017	25,860	2	10,622	473	16,486	245			52,967	720
2018	22,017	2	4,542	206	10,626	180			37,185	388
2019	20,653		2,330	192	10,476	204	2,267		35,726	396
2020	19,265	1	2,930	222	8,539	195			30,733	418
2021	17,963	1	3,382	223	10,886	206	5,008		37,239	430
2022	16,661		3,053	217	8,781	161	835		29,330	378
2023	18,926		2,507	193	8,670	140			30,103	333
2024	13,769		2,455	177	7,320	134	227		23,771	311

Figure 1. Commercial hogfish landings within Florida (East Florida and Florida Keys [EFL & Keys] and West Florida [WFL]) and outside of Florida (North of Florida [N of FL] and West of Florida [W of FL]) expressed as a percentage of total landings.

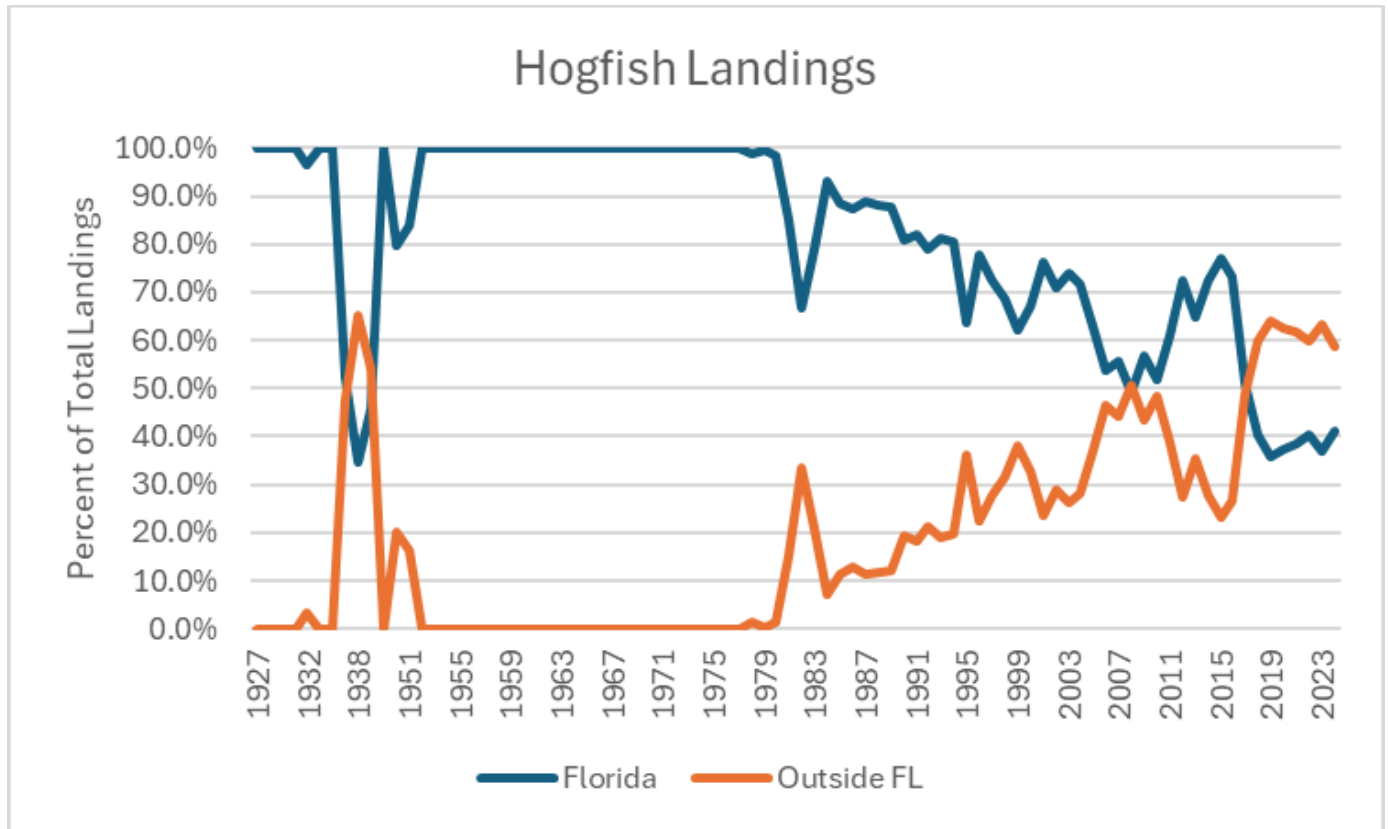


Figure 2. Commercial hogfish landings within Florida within Florida (East Florida and Florida Keys [EFL & Keys] by coast and West Florida [WFL]) and outside of Florida (North of Florida [N of FL] and West of Florida [W of FL]) expressed as a percentage of total landings.

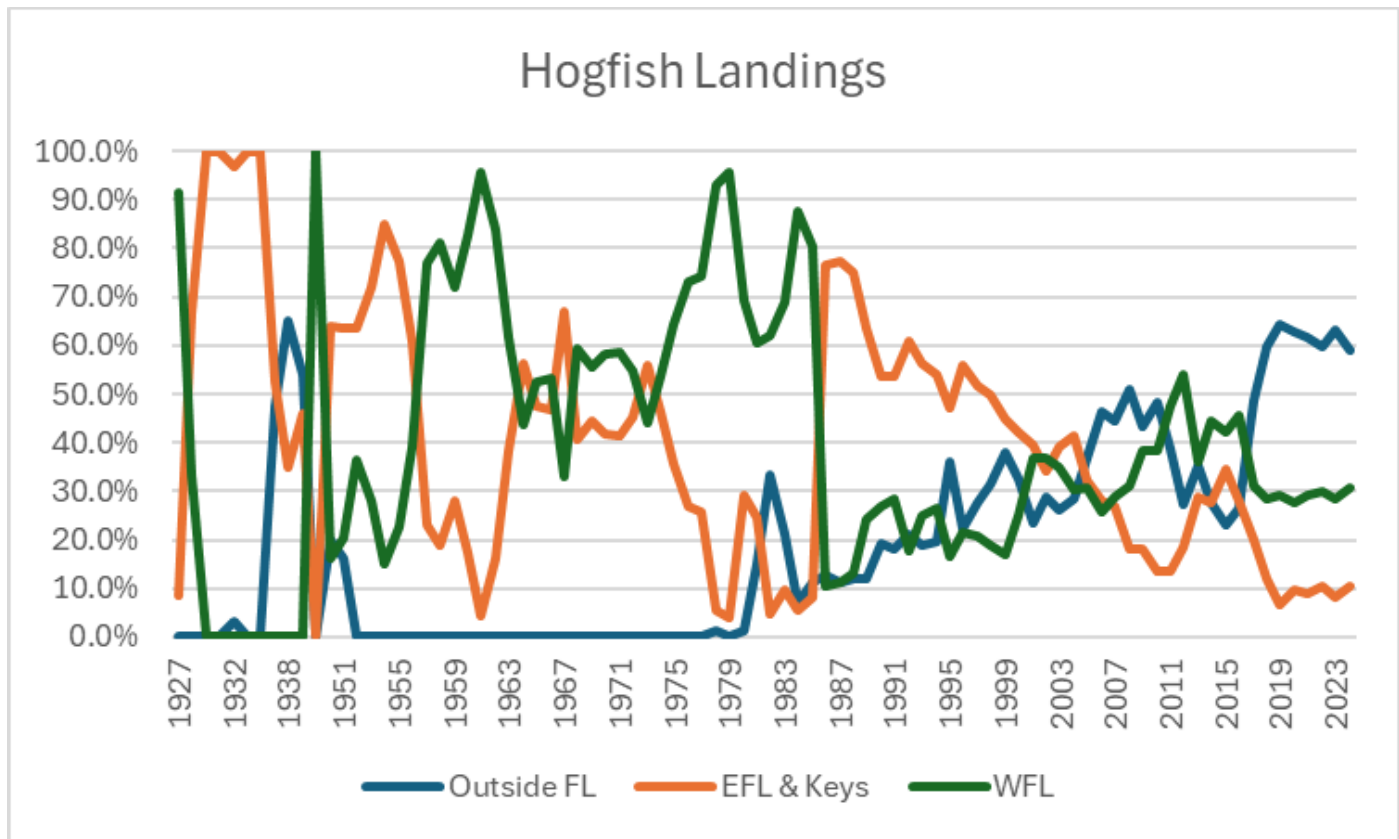


Figure 3. Commercial hogfish landings by gear category (Diving Gear [DV], Hook and Line Gear [HL], Longline Gear [LL], Other Gear [OT], and Trap Gear [TR]) from within Florida and outside of Florida expressed as a percentage of total landings.

