

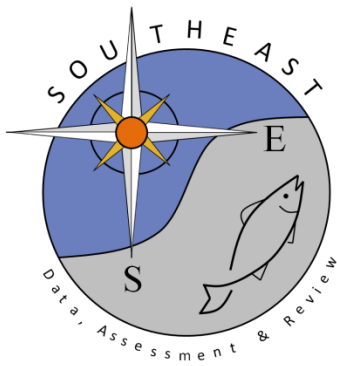
Historical Commercial Fishery Landings of Hogfish in the Southeastern U.S.

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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, stock, 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 1962-2024, 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 America), state, Hogfish stock, and gear. Hogfish stocks for this SEDAR were defined by Assessment Scientist Chris Swanson in the Data scoping webinar from 04/22/2025: North of Florida, East Florida and the Keys, West Florida, and West of Florida (Figure 1). Each dataset was then exported to Microsoft Excel where direct comparisons of the summary data were made, and preliminary historical landings by year, Hogfish stock 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. The stocks were divided into two management categories: no size limit and 12-inch size limit (before 2017) and current size limit (after 2017). TIP data was not available for West of Florida so values from West Florida were used as a proxy for calculating number of fish from landed pounds. This methodology was finalized at the data workshop. All tables and figures in this report have had confidential data removed or the data are expressed as proportions of a category. Assessment staff have received confidential data.

Historical Hogfish commercial landings by year and Hogfish stocks 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 2). When the within Florida landings are separated the landing between the Florida coasts shows great variability (Figure 3). 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 stock 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 4). 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, stock, 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					
	HL	LL	OT	TR	SP	HL	LL	OT	TR	SP	HL	LL	OT	TR	SP	HL	LL	OT	TR	SP	
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			6,668			44		1,328
1987						64,085							9,597			4,312	2,462				2,500
1988						64,458							11,612			6,741	1,725		47		1,654
1989						78,858							31,312			13,272	572			143	1,186
1990						76,460						29,423			5,044	1,164	4,505		14,051	983	12,828
1991						25,330	18	88	29,568	15,120	27,910		4,783	1,104	4,271	12,182	572		17	11,115	
1992						45,529	758	663	21,163	24,877	14,587	172	1,797	2,909	7,569	25,872				4,290	2,077
1993			3,503			48,439	12	133	21,450	24,848	21,658	58	1,207	10,496	8,985	28,025				78	
1994	5		0	2	10	32,544			150	6,886	23,439	15,269	182	221	5,055	10,216	19,038	102		75	3,848
1995	708		57	6	1,432	22,334	1,303	327	6,367	17,731	8,820	156	35	1,726	6,472	32,112			31	1,627	1,007
1996	8,607			1,241		20,084	80	200	5,901	17,435	5,722	319	173	2,390	8,406	6,966				498	
1997	8,562			1,017	58	23,366	11	135	8,452	15,331	5,853	213		4,015	9,040	15,513					205
1998	11,422			504		11,454	19	174	7,363	15,576	2,684	158		3,185	7,020	9,953					
1999	12,175			116	83	8,941	2	208	15,769	9,644	4,568	148	2	3,459	4,922	16,812					
2000	7,370			299	67	8,093	14	6	11,218	11,666	8,654	197		1,851	7,782	16,368					
2001	6,515				1,684	9,235	156	3	2,271	12,083	6,835	40	6	2,801	12,476	4,118			1,732	129	
2002	7,558				3,094	9,035		88	1,890	12,952	5,156			3,594	17,616	7,579			61	1,522	
2003	6,325				2,997	14,581	219	38	2,687	8,571	5,646	80	25	1,331	16,206	7,281			608	302	
2004	9,181				7,651	13,488	89	58	2,404	12,383	2,086	52		781	17,831	2,029					562
2005	12,107				2,883	6,718		6	1,337	8,787	2,554	149		24	13,211	3,554					671
2006	16,820				5,796	4,114		22	1,892	8,191	1,184				11,939	349					
2007	15,443				6,509	5,415	314	10	1,315	7,466	1,695	34			13,726	1,484					
2008	18,580				16,772	4,317	14	1	1,397	7,491	1,991	108			20,328	1,472					
2009	17,584				11,647	5,309		8	1,653	7,355	2,829				27,416	3,176					
2010	8,664				33,606	5,337		5	995	5,381	5,357			144	27,998						
2011	12,129				23,829	4,916		61	1,273	6,292	5,441			20	38,327						
2012	5,978				14,931	3,820		12	2,136	8,227	3,877		18		37,178						
2013	5,640				15,482	4,395			1,824	10,882	2,476	56		87	19,002						
2014	7,481				13,942	5,102		57	3,066	13,328	1,463			154	33,016						
2015	5,316				9,234	4,434			3,361	14,201	3,763			42	23,016						
2016	5,372				11,484	3,979			1,941	11,708	3,606			424	24,701						
2017	6,676				19,184	1,862			693	8,066	752		4	374	15,360						
2018	7,868				14,149	824			169	3,549	448			154	10,024						
2019	6,956				13,697	273			262	1,795	875			74	9,527						2,267
2020	5,674				13,591	211			95	2,624	326			40	8,173						
2021	5,940				12,023	333			78	2,972	427				10,458						5,008
2022	4,470				12,191	349			81	2,619	66			9	8,715						835
2023	13,895			17	5,031	135			95	2,276	427	36		6	8,244	47					
2024	1,970				11,799	181			54	2,220	586				6,734	227					

Table 2. Florida commercial Hogfish landings (pounds and trips) by Hogfish stock (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	-	2,972	-	42,132	-
1985			4,437	-	42,553	-	5,843	-	52,833	-
1986			47,928	3,314	6,634	145	8,040	-	62,602	3,459
1987			64,085	3,962	9,597	263	9,274	-	82,956	4,225
1988			64,458	3,432	11,612	380	10,167	-	86,236	3,812
1989			78,858	4,006	31,312	499	15,173	-	125,343	4,505
1990			76,460	3,738	40,137	458	27,862	-	144,459	4,196
1991			70,125	3,429	38,068	515	23,886	-	132,079	3,944
1992			92,990	3,501	27,034	701	32,239	-	152,264	4,202
1993	3,503	-	94,881	3,066	42,403	918	28,103	-	168,890	3,984
1994	17	-	63,019	2,415	30,943	837	23,063	-	117,043	3,252
1995	2,203	3	48,061	2,280	17,208	373	34,777	-	102,249	2,656
1996	9,848	-	43,700	2,013	17,010	398	7,464	-	78,021	2,411
1997	9,637	1	47,294	2,023	19,121	365	15,718	-	91,770	2,389
1998	11,926	-	34,585	1,692	13,047	326	9,953	-	69,511	2,018
1999	12,374	-	34,564	1,250	13,099	362	16,812	-	76,849	1,612
2000	7,736	-	30,997	1,447	18,484	447	16,368	-	73,585	1,894
2001	8,199	-	23,749	1,522	22,158	497	5,979	-	60,085	2,019
2002	10,652	-	23,965	1,602	26,366	430	9,162	-	70,145	2,032
2003	9,322	2	26,096	1,498	23,288	346	8,192	-	66,898	1,846
2004	16,832	1	28,422	1,479	20,751	307	2,591	-	68,595	1,787
2005	14,990	-	16,848	1,082	15,938	191	4,225	-	52,001	1,273
2006	22,616	-	14,218	905	13,122	155	349	-	50,306	1,060
2007	21,952	4	14,520	873	15,456	139	1,484	-	53,412	1,016
2008	35,352	10	13,222	720	22,427	223	1,472	-	72,472	953
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	43,788	297			92,288	806
2012	20,909	3	14,194	615	41,073	320			76,176	938
2013	21,122	2	17,102	733	21,620	198			59,843	933
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	16,491	247			52,972	722
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	-	3,049	216	8,790	164	835	-	29,335	380
2023	18,943	-	2,507	193	8,712	146	47	-	30,209	339
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.

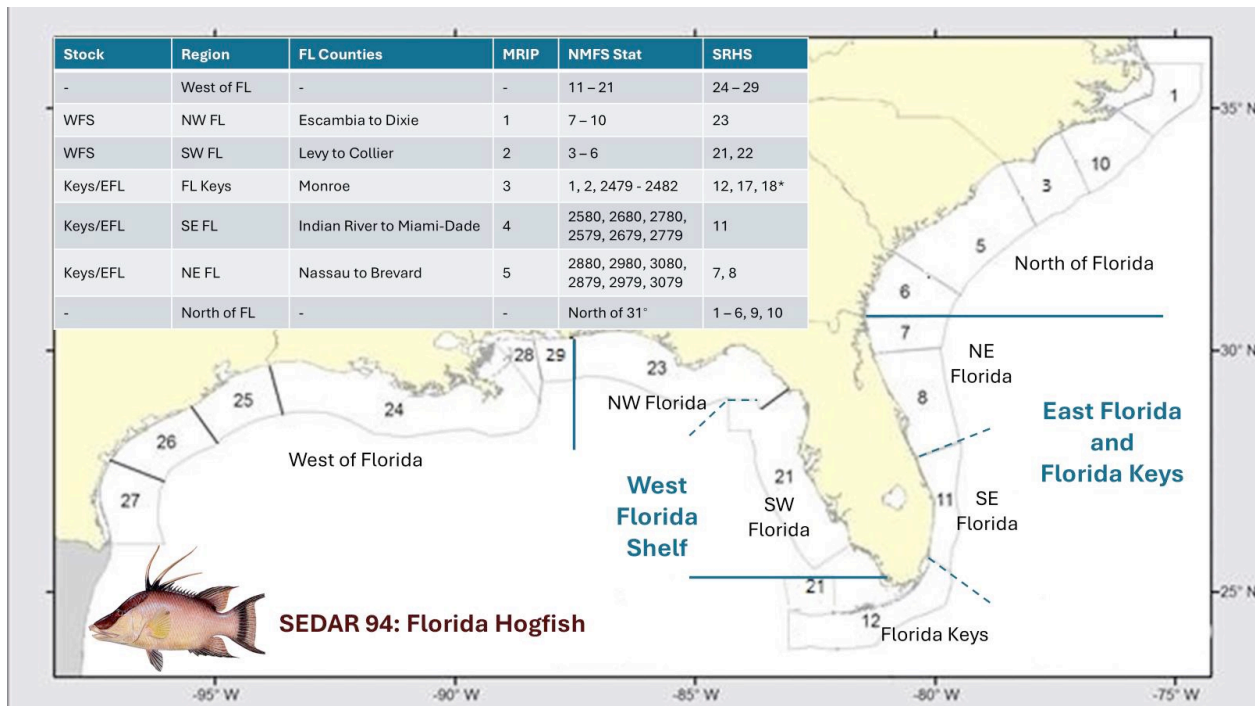


Figure 2. Commercial Hogfish landings within Florida (East Florida and Florida Keys [EFL & Keys] and West Florida [WFL]) and outside of Florida (North of Florida [N of FL] and West of Florida [W of FL]) expressed as a percentage of total landings.

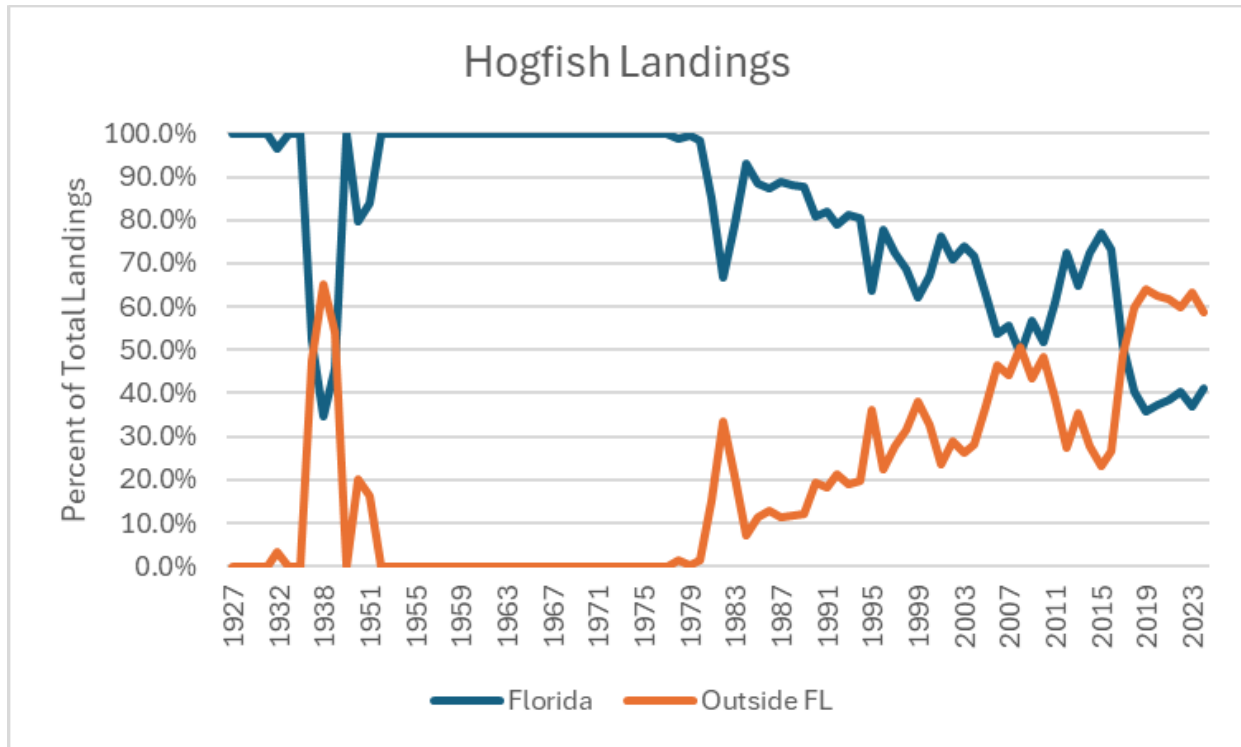


Figure 3. Commercial Hogfish landings within Florida within Florida (East Florida and Florida Keys [EFL & Keys] by coast and West Florida [WFL]) and outside of Florida (North of Florida [N of FL] and West of Florida [W of FL]) expressed as a percentage of total landings.

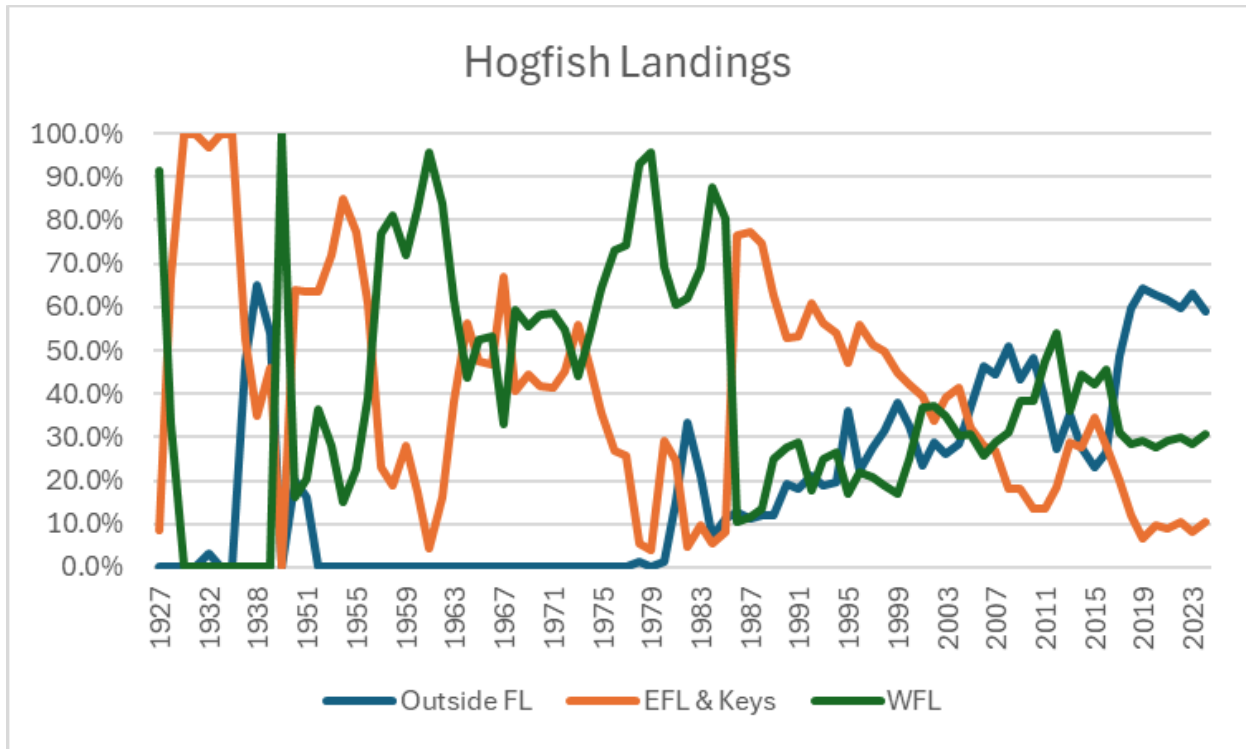


Figure 4. Commercial Hogfish landings by gear category (Hook and Line Gear [HL], Longline Gear [LL], Other Gear [OT], Trap Gear [TR], and Spearfishing [SP]) from within Florida and outside of Florida expressed as a percentage of total landings.

