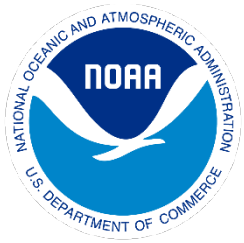
Commercial Landings of Gulf of America Tilefish Complex from 1965 – 2024

Micki Pawluk and Sarina Atkinson

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Commercial Landings of Gulf of America Tilefish Complex from 1965 – 2024

Submitted July 2026

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Introduction

Commercial landings statistics are the quantities and value of seafood products caught by fishermen in the U.S. and sold to established (licensed) wholesale and retail seafood dealers. These data have been collected as early as the late 1890s. Currently, these data are collected by trip ticket programs (TTPs) managed by state agencies. In addition to the quantity and value, basic information on the gear used to catch the fish, the area where the fishing occurred and the county and state where the catch was landed are recorded (Gloeckner, 2014).

Commercial landings of the Tilefish complex (Golden Tilefish - *Lopholatilus chamaeleonticeps*; Blueline Tilefish - *Caulolatilus microps*; Goldface Tilefish - *Caulolatilus chrysops*; and Tilefishes – unspecified) for the Gulf of America (formerly known as the Gulf of Mexico, and hereafter referred to as the Gulf) are provided in gutted weight (in pounds) for the period 1965-2024.

Methods

Commercial landings for the Gulf Tilefish complex were compiled using several data sources. Most of these data were accessed from an Oracle database housed at the Southeast Fisheries Science Center (SEFSC) in Miami, Florida. All landings were converted to gutted weight using the conversion factors listed in Table 1.

Data Sources

The Accumulated Landings System (ALS) is an Oracle database maintained by SEFSC. This database contains landings data from 1926 to present with data prior to 1962 considered historical. Most landings prior to 1977 are summarized annually. Beginning in 1977, landings were consistently provided as monthly summaries, while a few states for some species began reporting monthly in 1972. For more information on data collection of landings prior to the implementation of a state TTP (Trip Ticket Program) and ALS database structure, refer to Gloeckner (2014).

Data from state TTPs begin in various years, depending on the state (Donaldson, 2004). Trip ticket data for Texas, Louisiana, Mississippi, and Alabama were available through the Gulf States Marine Fisheries Commission (GSMFC). Florida trip ticket data were available through Atlantic Coastal Cooperative Statistics Program (ACCSP). Where data were available and considered reliable from state trip ticket programs, those data were used in lieu of data from ALS.

The Florida General Canvass dataset (housed within the ALS database) contains annual landings from 1976 to 1996. Originally collected by federal port agents at the county level, this dataset is primarily used to fill information gaps. Specifically, it provides estimated proportions of landings by gear and area; these proportions are then applied to Florida ALS or Trip Ticket records from 1977 to 1996 whenever specific gear or location data is missing.

Stock Boundary

Commercial landings for the Gulf Tilefish complex were compiled from Texas through West Florida. This boundary follows the Gulf Council boundary which is a line from Riley's Hump,

the Tortugas and US 1, where the North of US 1 is assigned to the Gulf region and South of US 1 is considered outside of the Gulf region and is assigned to the South Atlantic region. Fishing areas included within this assessment are shown in Figure 1.

Gear Groups

Similar to the previous assessment of Gulf Tilefish (SEDAR 22), commercial landings were summarized into 2 main gears (Handline and Longline). All other gears with reported Tilefish landings were assigned to an "other" gear group for initial analyses, and then combined with Handline to create a Handline+ group for the final data summary. Table 2 highlights the NMFS and FIN gear codes associated with each gear group.

Data Compilation

The SEFSC maintained materialized view in ORACLE appropriately joins all data sources based on best practices. All data housed within ALS use the NMFS coding system, whereas TTP data are provided in the Fisheries Information Network (FIN) standard. All gear, area, county, state, and species information are translated to the common FIN coding standard. The following data were used for each respective state:

Texas

- ALS from 1965-2013
- Trip ticket from 2014-2024

Louisiana

- ALS from 1965-1999
- Trip ticket from 2000-2024

Mississippi

- ALS from 1965-2014
- Trip ticket from 2015-2024

Alabama

- ALS from 1965-2001
- Trip ticket from 2002-2024

Florida

- ALS from 1965-1985
- Trip ticket from 1986-2024
- General Canvass to proportion landings by gear and area from 1977-1996

To align landings with specific stock boundaries, data are typically filtered using three primary variables: area fished, county landed, and state landed. County or state landing information alone

are insufficient to determine whether a catch originated from the Gulf, the South Atlantic, or foreign waters (Gloeckner, 2014). Therefore, the area of capture is prioritized when assigning catch to the appropriate region. However, in instances where area information is missing, the recorded county and/or state of landing is used to attribute those landings to the Gulf to ensure these removals are accurately accounted for in the stock biomass. Further details on this process are described in the analytical steps detailed below.

Tilefish complex – commercial landings analytical steps

The following analytical steps were used in compiling the Tilefish complex landings. Species specific analytical steps are titled in **red and bolded**, while our standard analytical steps are titled in **black and bolded**:

1) **Basic Exploratory Data Analysis –** Raw data are converted to a single weight type (i.e. gutted vs. whole weight). Region assignments are made in order to properly filter the data. When area information is not available, state and county of landing are used to assign region. One exception to this is for Florida landings with no area information, and county landed is Monroe, where all data are initially assigned to the gulf. Next, the landings coming from Monroe county are proportioned and assigned to either Gulf or South Atlantic (step 2).

2) **Proportioning Monroe county into Gulf and South Atlantic regions** – The general assumption is the area information reported by the dealer is considered less reliable than fisher-reported area information available in the coastal fisheries logbook. For ALS data and earlier years of the Florida Trip Ticket Program, area information is often missing. Therefore, when determining the stock boundary in the Florida Keys, logbook information is used to help apportion Monroe county landings between the South Atlantic and the Gulf back in time. For years prior to the availability of logbook data, an average proportion from 1993 – 1997 is used to apportion Monroe county landings. This 5-year period was selected due to 1993 being the first year that logbook data is considered reliable. From 1993 – 2009, the proportion of Monroe landings by year and gear is used to apportion between South Atlantic and the Gulf. Starting in 2010 the dealer-reported areas were considered accurate due to improved quality assurance and quality control measures, eliminating the need for further apportioning.

3) **Data gap filling for gear and area** – When gear and area information are missing, annual landings proportions by gear and area are used to attribute those landings to a gear group and fishing area. This method is used for all states and years with the exception of Texas landings from 1978-1983. In Texas in 1978 and 1979 gear information is missing for the entire year. Therefore, gear proportions by area are calculated as an average from 1973-1977. Additionally, from 1980-1983 the only gear reported by Texas is trawl gear. These landings are assumed to also include non-trawl gears, therefore, average gear and area proportions from 1984-1988 are used to proportion 1980-1983 Texas landings by gear and area. In the next step, landings occurring during the time period when the coastal fisheries logbook is considered to be representative (1999 on) are re-apportioned using logbook data, therefore, the gap filling procedure described in this step only

impacts data through 1998.

4) **Coastal Fisheries Logbook proportioning to assign gear and area to the landings** – For landings reported during 1993 and after, gear and area information from the CFLP data are used to assign gear and area to the landings. This decision is based on the general acceptance that records regarding gear(s) used and area(s) fished are more likely to be accurately reported on the fishermen's coastal logbook than the dealer reported trip tickets. The logbooks are completed by the fishing boat captains or designees, while the trip tickets are often reported online by secretarial staff. For a general description of the logbook data please review Atkinson et al. (2021) and Poffenberger (2003). This method involves calculating the proportion of logbook landings by year, state, gear (e.g., Handline, Gillnet, and Other) and fishing area. These proportions are applied to the species-specific landings by year, month, and state. *Note – In this case, Goldface Tilefish landings were excluded from this analytical step due to insufficient Goldface data in the logbook.

5) **Misidentification of Blueline Tilefish as Golden Tilefish** – During the SEDAR 22 data workshop, it was determined that landings from statistical areas 1 – 5 had been mis-identified as Golden Tilefish, while expert opinion suggested the predominant species landed was actually Blueline Tilefish. Analyses were conducted, and proportions were estimated to re-assign some of the Golden Tilefish landings from areas 1 – 5 from Golden Tilefish to Blueline Tilefish (SEDAR 22 Data Workshop Report). In SEDAR 22, this correction was applied to landings from 1965 – 1990, based on there being no recorded landings of Blueline Tilefish prior to 1991 in areas 1 – 5. However, for the current assessment, the FL Trip Ticket system did contain Blueline Tilefish landings for the years 1986 onward, and therefore, this re-assignment of Golden Tilefish landings was only applied to Golden Tilefish landings from areas 1 – 5 from 1965 – 1985. For further documentation on the analyses please see the SEDAR 22 Data Workshop report. The proportions used for reapportioning Golden Tilefish to Blueline Tilefish are shown in Table 3.

6) **IFQ Correction** – In 2010, the Gulf Council started a program whereby fishermen own a portion of the annually allocated Tilefish quota which is also tradeable from one permit holder to another. This is known as an Individual Fishing Quota (IFQ). The Program is administered by the NOAA Fisheries Southeast Regional Office (SERO). IFQ landings records lack gear and area information, both of which are needed for the assessment process. In order to ensure that the landings in the SEFSC Oracle databases are matching what is reported to SERO and which is deemed the most accurate data, Tilefish landings are corrected to match the IFQ landings data. Annual IFQ correction factors are calculated from the difference between the SEFSC landings to SERO landings and applied to the SEFSC landings from 2010-2024 (Table 4).

7) **Data summary** – Final data available to the lead stock assessment analyst are summarized by species, year, gear, and area.

Results

Annual calculated Tilefish complex landings totals are summarized by gear in Figure 2 and Table 5, with the fishery initially being dominated by the handline fleet until the establishment of the longline fishery in 1979, at which point the longline fleet became the dominant gear in the fishery. Total landings showed the highest peak in 1988; however, they have remained relatively stable throughout the majority of the time series. Annual landings totals summarized by species (Golden Tilefish vs. others) are shown in Figure 3 and Table 6, with the majority of landings coming from Golden Tilefish.

Changes from SEDAR 22

Landings provided here were compared to the landings estimates provided in SEDAR 22 (S22), which assessed only Golden and Blueline Tilefish. Landings comparisons of the current estimates to those provided in the S22 data workshop report are shown in Figures 4 and 5 for Golden Tilefish and Blueline Tilefish, respectively.

- One difference between S22 and the current assessment protocol was the year range for which mis-identification of Golden Tilefish was considered (step 5 above). For S22, ALS data was used for the entire time series. The mis-identification proportions were applied to Golden Tilefish landings through 1990 due to no Blueline Tilefish landings being reported in ALS until 1991. For the current assessment, the standard practice is to use FL trip ticket data starting in 1986. The FL trip ticket data showed Blueline Tilefish landings starting in 1986, therefore, proportions were only applied to data from 1985 and earlier, leading to potential differences in annual species totals (although this would not impact overall landings totals for the complex).

- Another difference from the S22 protocol was the inclusion of "Tilefishes" landings (i.e. unspecified Tilefish). Those landings were excluded in S22, however, as this assessment is taking the entire complex into consideration, those landings were included, but not apportioned to any one species. This will allow the analyst to include or exclude them as necessary. The inclusion of these landings naturally will lead to slightly higher landings in some years when compared to S22, but the difference is minimal as they make up less than 1% of the landings in most years. Additionally, Goldface Tilefish was included in this assessment but not in S22, leading to slightly higher total landings in some years. Goldface Tilefish make up approximately 5% or less of the total landings in most years.

Overall, the landings trends for SEFSC 01 follow the trends shown in S22 very closely. Some years had more total landings, but generally agreement was very good between the two landings streams. The current provision uses the most up-to date and standardized methodologies for commercial landings data provision resulting in more reliable and reproducible estimates of Tilefish complex commercial landings. Finally, estimates of landings uncertainty have been provided in Table 7. These uncertainties are unidirectional, representing the possibility of underreporting, rather than a general misreporting of totals.

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Tables

Table 1. Conversion factors used to convert between landings in gutted weight (lbs) and landings in whole weight (lbs).

Species	Conversion Factor	Source
Golden Tilefish	1.065	SEDAR 98
Blueline Tilefish	1.06	SEDAR 50
Goldface Tilefish	1.12	NMFS 1981 COM ACL
Tilefishes	1.12	NMFS 1981 COM ACL

Table 2. Gears observed in the commercial Tilefish complex dataset, and their respective gear groupings used to aggregate the data.

FIN Gear Code	Gear Name	SEDAR Gear Group
300	HOOK AND LINE	HANDLINE
301	HOOK AND LINE, MANUAL	HANDLINE
302	HOOK AND LINE, ELECTRIC	HANDLINE
303	ELECTRIC/HYDRAULIC, BANDIT REELS	HANDLINE
320	TROLL LINES	HANDLINE
324	TROLL LINE, GREEN-STICK	HANDLINE
700	HAND LINE	HANDLINE
400	LONG LINES	LONGLINE
402	LONG LINES, SURFACE	LONGLINE
403	LONG LINES, BOTTOM	LONGLINE
404	LONG LINES, SURFACE, MIDWATER	LONGLINE
405	LONG LINES, TROT	LONGLINE
408	BUOY GEAR	LONGLINE
092	OTTER TRAWL BOTTOM, FISH	OTHER
095	OTTER TRAWL BOTTOM, SHRIMP	OTHER
110	OTHER TRAWLS	OTHER
116	TRAWL, SKIMMER	OTHER
130	POTS AND TRAPS	OTHER
139	POTS AND TRAPS, FISH	OTHER
140	POTS AND TRAPS, SPINY LOBSTER	OTHER
145	POTS AND TRAPS, STONE CRAB	OTHER
180	POTS AND TRAPS, OTHER	OTHER
200	GILL NETS	OTHER
410	GILL NETS, CRAB	OTHER
550	DIP NETS	OTHER
551	CAST NETS	OTHER
660	SPEARS	OTHER
671	SPONGE HOOKS	OTHER
750	BY HAND, DIVING GEAR	OTHER

Table 3: Proportions used to reapportion Golden Tilefish landings from areas 1 – 5 from 1965 – 1985.

Handline		Longline	
Golden Tilefish	Blueline Tilefish	Golden Tilefish	Blueline Tilefish
0.27	0.73	0.41	0.59

Table 4: Individual Fishing Quota (IFQ) landings correction factor to scale Accumulated Landings System (ALS) and state trip ticket totals to the official IFQ reported totals managed by the Southeast Regional Office (SERO). *Note, due to very low Goldface Tilefish landings, the correction factors vary dramatically. The trip ticket landings for Goldface Tilefish represent less than 2% of the total landings for the majority of this time period.

Year	Golden Tilefish	Blueline Tilefish	Goldface Tilefish
2010	0.954	0.763	
2011	1.054	1.154	0.002
2012	1.087	1.008	530.227
2013	0.966	0.988	53.324
2014	0.988	1.033	2.391
2015	1.010	1.060	0.321
2016	1.025	1.063	0.061
2017	1.001	0.951	0.025
2018	1.098	0.987	1.244
2019	1.004	0.981	0.296
2020	0.960	1.013	46.615
2021	0.984	1.001	28.121
2022	0.931	0.991	139.148
2023	0.954	0.986	154.305
2024	0.994	1.002	23.713

Table 5: The annual calculated Tilefish complex landings by gear grouping from 1965 – 2024 in gutted weight (lbs).

Year	Handline Plus	Longline
1965	9,493	
1966	5,129	
1967	4,831	
1968	4,552	
1969	970	
1970	1,894	
1971	5,002	
1972	4,520	
1973	5,688	
1974	5,809	
1975	14,332	
1976	39,875	
1977	71,728	
1978	53,692	
1979	45,234	14,132
1980	36,656	16,325
1981	247,137	153,508
1982	101,025	249,281
1983	38,001	219,422
1984	32,093	282,058
1985	43,480	263,289
1986	50,619	292,570
1987	73,004	492,657
1988	105,832	848,454
1989	101,708	359,105
1990	80,559	288,511
1991	62,493	266,784
1992	93,372	310,912
1993	57,641	325,542
1994	45,872	441,103
1995	22,013	496,551
1996	18,648	231,504
1997	22,787	434,667
1998	16,683	353,957
1999	29,405	399,178
2000	46,571	517,476
2001	39,572	494,018
2002	20,009	547,432
2003	20,682	468,452
2004	16,459	602,303

2005	18,450	629,968
2006	17,078	413,472
2007	16,587	423,694
2008	9,725	497,283
2009	12,943	543,285
2010	14,550	222,335
2011	15,730	376,535
2012	73,504	403,344
2013	21,004	419,356
2014	30,100	489,463
2015	28,411	509,303
2016	30,281	398,740
2017	6,719	478,176
2018	16,946	369,192
2019	18,311	404,615
2020	15,032	333,852
2021	25,362	458,681
2022	34,896	349,281
2023	22,655	291,172
2024	18,855	243,483

Table 6. The annual calculated commercial landings for Golden Tilefish vs. all others (Blueline Tilefish, Goldface Tilefish, and Tilefishes - unspecified) combined, as well as the full Tilefish complex from 1965 – 2024 in gutted weight (lbs). At the request of the analyst, landings have been provided for Golden Tilefish, as well as total landings for the complex.

Year	Golden Tilefish	All Others	Tilefish complex
1965	2,563	6,930	9,493
1966	1,385	3,744	5,129
1967	1,304	3,527	4,831
1968	1,754	2,798	4,552
1969	350	619	970
1970	1,578	316	1,894
1971	1,351	3,652	5,002
1972	2,843	1,678	4,520
1973	1,536	4,152	5,688
1974	1,568	4,241	5,809
1975	3,870	10,462	14,332
1976	18,452	21,423	39,875
1977	41,322	30,406	71,728
1978	31,254	22,438	53,692
1979	31,135	28,232	59,367
1980	34,849	18,132	52,981
1981	252,260	148,386	400,646
1982	310,227	40,079	350,306
1983	231,849	25,574	257,423
1984	294,924	19,228	314,151
1985	275,938	30,832	306,770
1986	274,259	68,931	343,190
1987	427,080	138,581	565,661
1988	800,064	154,222	954,286
1989	410,443	50,370	460,813
1990	272,738	96,332	369,070
1991	175,802	153,475	329,277
1992	202,869	201,415	404,284
1993	260,831	122,352	383,183
1994	357,377	129,599	486,975
1995	441,646	76,918	518,564
1996	193,297	56,856	250,153
1997	300,458	156,996	457,454
1998	269,844	100,796	370,639
1999	340,542	88,041	428,582
2000	429,370	134,677	564,047
2001	419,403	114,186	533,589
2002	488,609	78,833	567,441

2003	366,312	122,822	489,134
2004	423,818	194,944	618,762
2005	531,619	116,799	648,417
2006	278,972	151,578	430,550
2007	298,560	141,721	440,281
2008	316,053	190,955	507,008
2009	454,644	101,584	556,228
2010	209,641	27,244	236,885
2011	341,260	51,005	392,265
2012	366,763	110,086	476,849
2013	383,132	57,229	440,361
2014	442,992	76,571	519,563
2015	483,779	53,935	537,714
2016	380,125	48,896	429,021
2017	423,054	61,841	484,895
2018	318,133	68,005	386,138
2019	295,691	127,235	422,926
2020	246,168	102,716	348,884
2021	355,304	128,739	484,043
2022	288,744	95,433	384,177
2023	225,939	87,888	313,827
2024	207,468	54,870	262,338

Table 7. Uncertainty estiamtes by state and time block for the Tilefish complex commercial landings.

Year	TX	LA	MS	AL	FL	Comments
1926-1976	0.20	0.20	0.20	0.20	0.20	Annual state summaries
1977-1985	0.10	0.10	0.10	0.10	0.10	Monthly state summaries
1986-1999	0.10	0.10	0.10	0.10	0.05	FL starts state trip ticket in 1985; used starting in 1986
2000-2001	0.10	0.05	0.10	0.10	0.05	LA starts state trip ticket in 1997; used starting in 2000
2002-2009	0.10	0.05	0.10	0.05	0.05	AL starts state trip ticket and used starting in 2002
2010-Present	0.025	0.025	0.025	0.025	0.025	Start of IFQ Program where Tilefish complex landings monitored by SERO

Figures

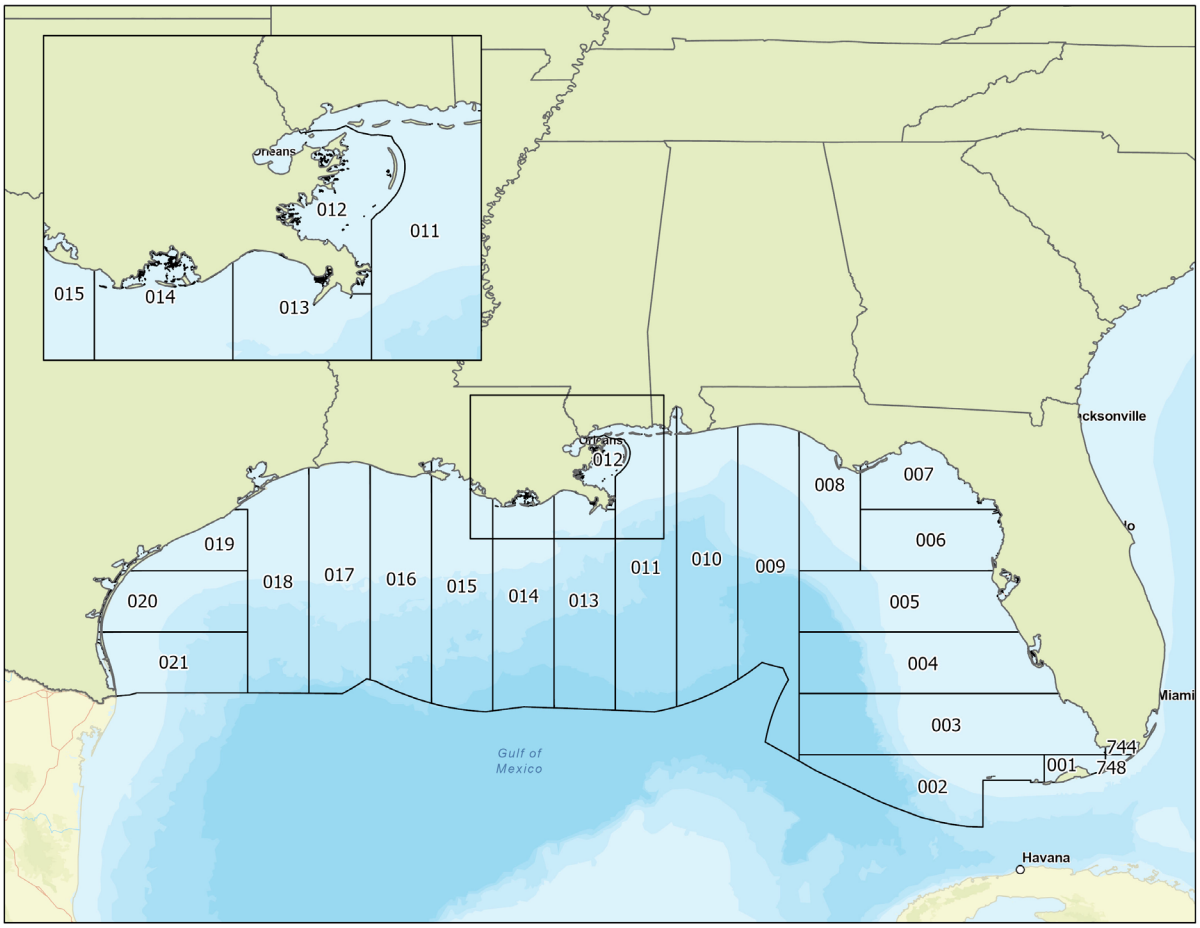


Figure 1: Gulf of America commercial fishing areas.

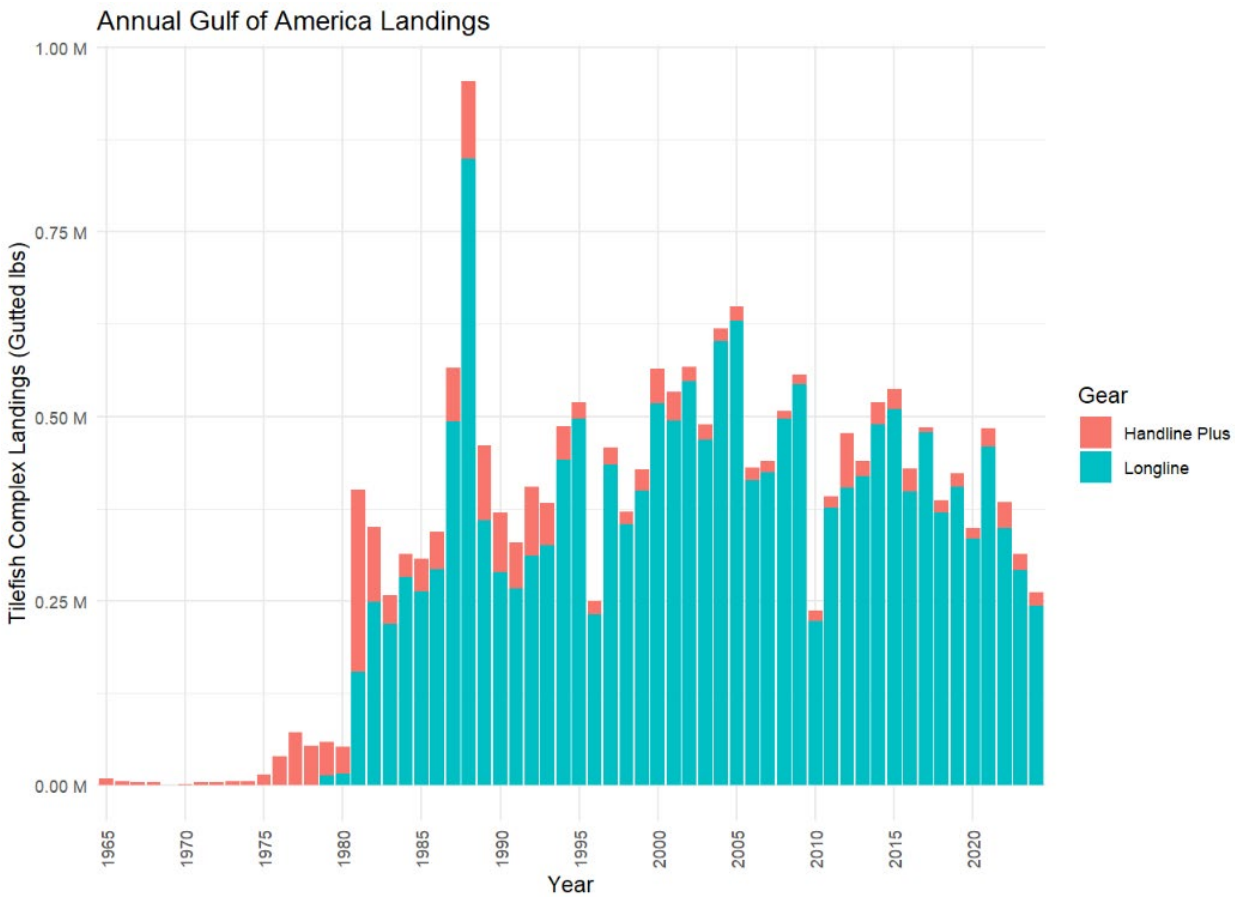


Figure 2: Annual calculated Tilefish complex commercial landings by gear group for the Gulf of America.

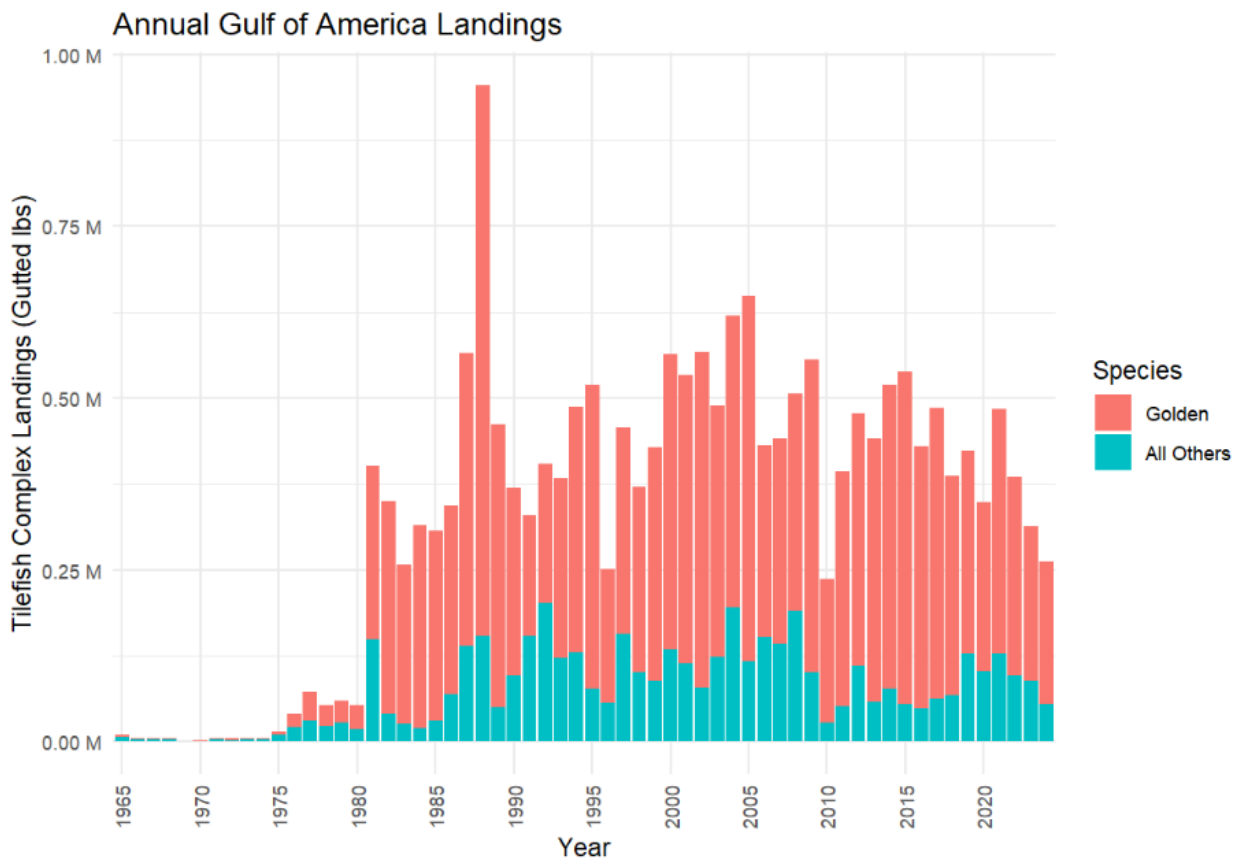


Figure 3: Annual calculated commercial landings for Golden Tilefish and All others combined (Blueline Tilefish, Goldface Tilefish, and Tilefishes – unspecified).

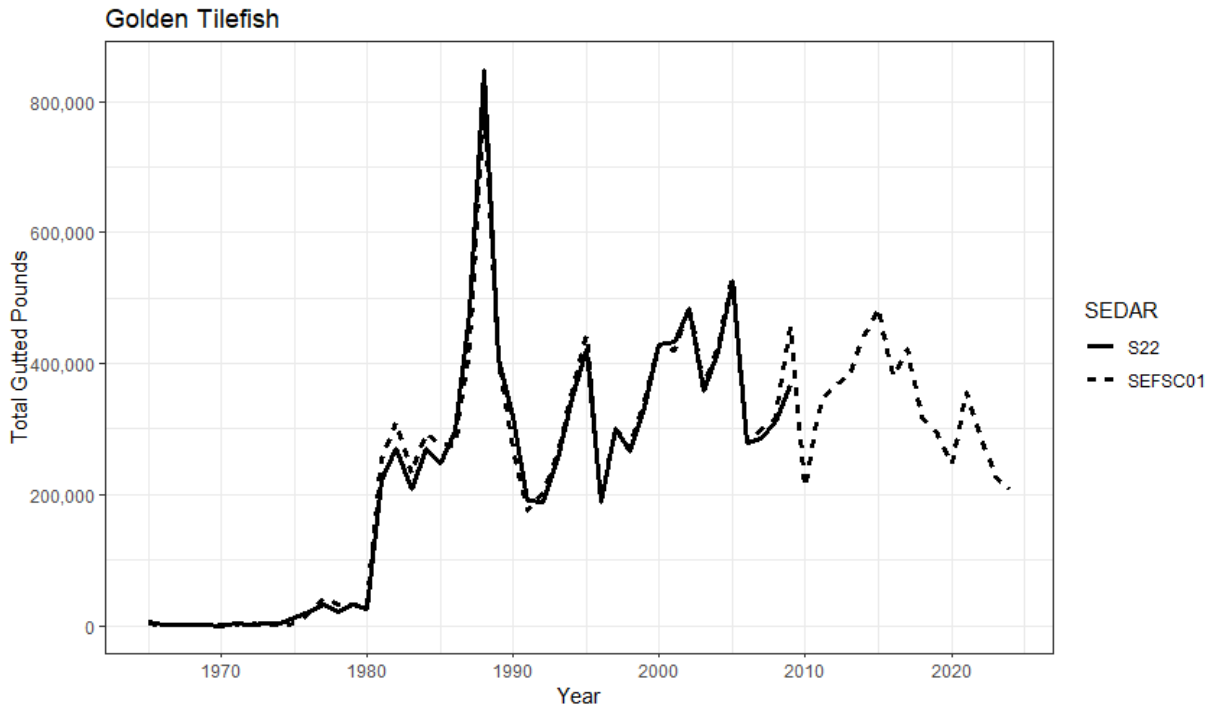


Figure 4: Annual calculated Golden Tilefish commercial landings (in gutted weight pounds) for the current assessment (SEFSC01) compared to the previous assessment SEDAR 22 from 1965 - 2024.

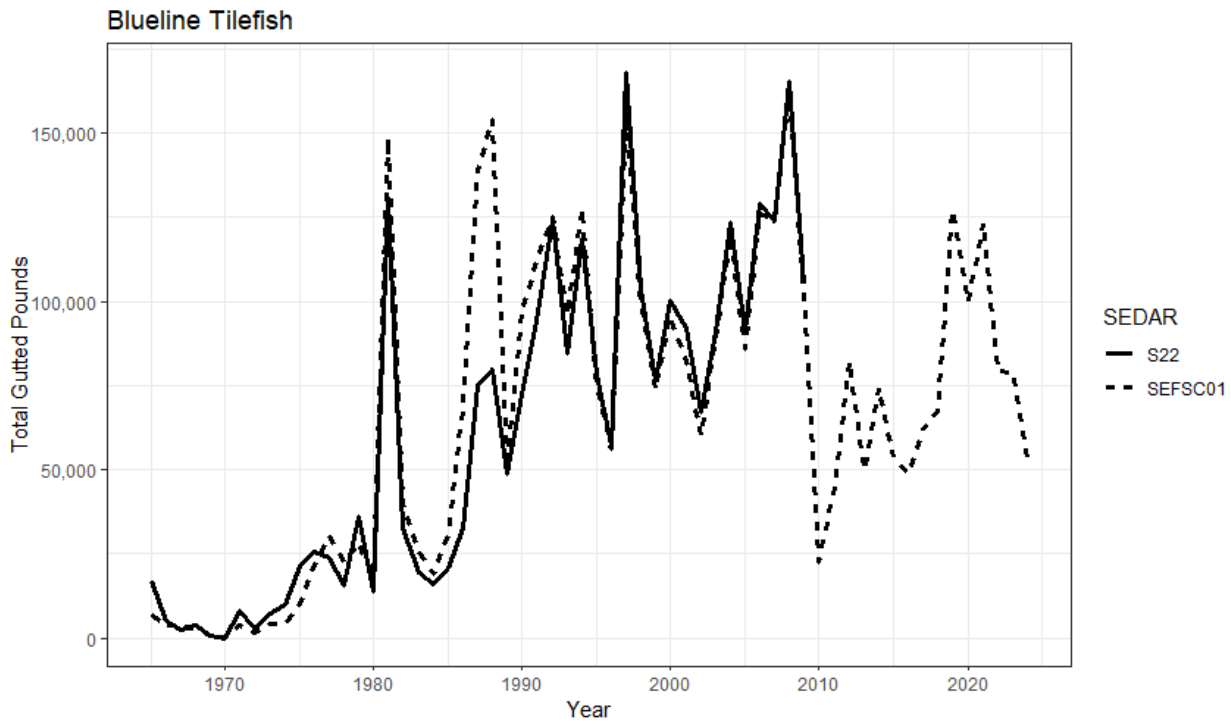


Figure 5: Annual calculated Blueline Tilefish commercial landings (in gutted weight pounds) for the current assessment (SEFSC01) compared to the previous assessment SEDAR 22 from 1965 - 2024.