

Non-Target Species – Directed Butterfish Fishery (summarized from draft Environmental Assessment (EA) for 2021-2022 Butterfish Specifications)

Staff was directed to include available discard information as part of all 2023 specifications processes. Since the Standardized Bycatch Reporting Methodology focuses on **discards of managed stocks** rather than discards in managed fisheries, staff analyses of discards vary fishery by fishery depending on data availability and historical practices. The EA for 2021-2022 butterfish specifications used discard ratios and recent landings to develop approximate bycatch amounts for various species encountered in the butterfish fishery. Due to reduced observer coverage in 2020-2022 (from COVID-19), observer data from 2017-2019 are still used for this document. Landings in recent years have been less than levels used in the extrapolations below (2020-2022 average of about 1,600 MT vs 2,900 MT over 2017-2019), but landings could increase going forward and one would expect a similar mix of species.

From 2017-2019 there were on average 22 observed trips annually where butterfish accounted for at least 50% of retained catch, and those trips form the basis of the following analysis. These trips made 267 hauls of which 93% were observed.

Using the discard ratio data from these observed hauls and 2017-2019 butterfish landings, Table 1 below approximates annual discards in the directed butterfish fishery from 2017-2019, for species with extrapolated catch of at least 10,000 pounds. The method used for the estimates in the table is a custom staff analysis, and is best considered as a relative indicator of discard species that may be affected by the fishery. On the trips identified in this analysis, the 2017-2019 overall discard rate was 17%. Species noted with a “*” were overfished, rebuilding, or otherwise depleted when the 2021-2022 Specifications EA was written.

The observer program creates individual animal records for some fish species of interest, mostly larger pelagics and/or elasmobranchs, as well as tagged fish. Non-expanded counts of these individual fish records from the same trips are provided in Table 2 below.

Table 1. Incidental Catch and Discards in the Butterfish Fishery.

NE Fisheries Science Center Common Name	Pounds Observed Caught	Pounds Observed Discarded	Of all discards observed, percent that comes from given species	Percent of given species that was discarded	Pounds of given species caught per mt Butterfish Kept	Pounds of given species discarded per mt butterfish Kept	Rough Annual Catch (pounds) based on 3-year (2017-2019) average of butterfish landings (2,933 mt)	Rough Annual Discards (pounds) based on 3-year (2017-2019) average of butterfish landings (2,933 mt)
BUTTERFISH	1,153,015	101,677	37%	9%	2,418	213	7,091,225	625,330
SQUID, ATL LONG-FIN	167,780	1,836	1%	1%	352	4	1,031,876	11,290
SQUID, SHORT-FIN	52,988	6,638	2%	13%	111	14	325,885	40,825
DOGFISH, SPINY	37,318	37,314	14%	100%	78	78	229,511	229,485
SCUP	37,271	28,763	11%	77%	78	60	229,222	176,898
HAKE, SILVER (WHITING	23,422	10,728	4%	46%	49	22	144,051	65,981
SKATE, LITTLE	15,201	15,125	6%	99%	32	32	93,490	93,021
SKATE, WINTER (BIG)	13,098	10,466	4%	80%	27	22	80,552	64,367
HAKE, SPOTTED	8,871	6,746	2%	76%	19	14	54,560	41,490
FLOUNDER, SUMMER (FLU	7,194	3,530	1%	49%	15	7	44,246	21,709
SEA ROBIN, NORTHERN	6,922	6,922	3%	100%	15	15	42,571	42,571
DOGFISH, SMOOTH	5,155	4,380	2%	85%	11	9	31,703	26,938
SEA BASS, BLACK	4,617	3,270	1%	71%	10	7	28,397	20,111
SEA ROBIN, STRIPED	3,922	3,891	1%	99%	8	8	24,118	23,933
HAKE, RED (LING) *	3,690	2,434	1%	66%	8	5	22,694	14,969
SKATE, CLEARNOSE	3,071	3,071	1%	100%	6	6	18,885	18,885
MENHADEN, ATLANTIC	2,329	2,040	1%	88%	5	4	14,324	12,545
WEAKFISH *	2,250	2,006	1%	89%	5	4	13,835	12,337
FLOUNDER, WINTER *	2,028	2,015	1%	99%	4	4	12,472	12,390
BLUEFISH *	1,898	1,395	1%	74%	4	3	11,674	8,581
SKATE, BARNDOR	1,774	1,774	1%	100%	4	4	10,910	10,910
FLOUNDER, SAND DAB *	1,765	1,765	1%	100%	4	4	10,856	10,856
FLOUNDER, FOURSPOT	1,724	1,724	1%	100%	4	4	10,602	10,602
ALEWIFE *	1,684	1,682	1%	100%	4	4	10,359	10,347

Table 2. Counts of fish in Individual Animal Records on observed butterfish trips from 2017-2019

COMNAME	count
BONITO, ATLANTIC	1
MOLA, OCEAN SUNFISH	2
RAY, TORPEDO	4
SHARK, BASKING	1
SHARK, BLUE (BLUE DOG	1
SHARK, PORBEAGLE (MAC	7
STINGRAY, BLUNTNOSE	2
STURGEON, ATLANTIC	3
TUNA, LITTLE (FALSE A	4