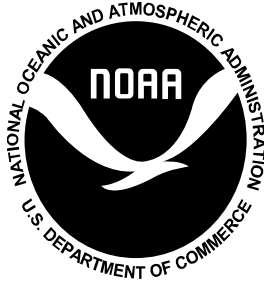




NOAA Technical Memorandum NMFS-NE-318

**2024 discard estimation, precision,
and sample size analysis for
14 federally managed species groups
in the waters off the northeastern
United States**

**US DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Fisheries Science Center
Woods Hole, Massachusetts
May 2024**



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2024 discard estimation, precision, and sample size analysis for 14 federally managed species groups in the waters off the northeastern United States

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**US DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Fisheries Science Center
Woods Hole, Massachusetts
May 2024**

Editorial Notes

Information Quality Act Compliance: In accordance with section 515 of Public Law 106-554, the Northeast Fisheries Science Center (NEFSC) completed both technical and policy reviews for this report. These pre-dissemination reviews are on file at the NEFSC Editorial Office.

Species Names: The NEFSC Editorial Office's policy on the use of species names in all technical communications is generally to follow the American Fisheries Society's lists of scientific and common names for fishes, mollusks, and decapod crustaceans and to follow the Society for Marine Mammalogy's guidance on scientific and common names for marine mammals. Exceptions to this policy occur when there are subsequent compelling revisions in the classifications of species, resulting in changes in the names of species.

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LIST OF ACRONYMS AND ABBREVIATIONS

AA = access area
AMS = Allocation Management System
ASM = At-Sea Monitoring Program
CFDBS = Commercial Fisheries Database System
CV = coefficient of variation
d/k = discard/kept
EFP = exempted fishing permit
EM = electronic monitoring
FMP = fishery management plan
FMRD = Fishery Monitoring and Research Division
GARFO = Greater Atlantic Regional Fisheries Office
GEN = general category
IFM = industry funded monitoring
IFS = Industry Funded Scallop Program
lg = large mesh
LIM = limited access category
MA = Mid-Atlantic
MAFMC = Mid-Atlantic Fishery Management Council
MPC = minimum pilot coverage
MREM = maximized retention electronic monitoring
MRIP = Marine Recreational Information Program
NE = New England
NEFMC = New England Fishery Management Council
NEFOP = Northeast Fisheries Observer Program
NEFSC = Northeast Fisheries Science Center
NOAA = National Oceanic and Atmospheric Administration
NMFS = National Marine Fisheries Service
OB = observed or observer
OBDBS = Observer Database System
OPEN = nonaccess area
SBRM = Standardized Bycatch Reporting Methodology
SE = standard error of the estimate
sm = small mesh
VTR = Vessel Trip Report
xlg = extra large mesh

EXECUTIVE SUMMARY

This report describes the analyses associated with the discard estimation of 14 federally managed fish and invertebrate species groups from the July 2022 through June 2023 reference period and the expected at-sea observer coverage for northeastern United States fisheries from April 2024 through March 2025 by using the Standardized Bycatch Reporting Methodology.

An estimated 50,457 mt (111,238,779 lb) of federally regulated species were discarded from nonconfidential fleets during the July 2022 through June 2023 reference period. The top species groups discarded were skates (Rajidae) and sea scallop (*Placopecten magellanicus*). Across all species groups examined, “no market” was the reason reported for the majority of discards. Analyses also revealed that for fleets with observer coverage, the coverage within a fleet corresponded with the spatial and temporal patterns of fishing activity in terms of kept weight of all species. The discards reported in this document may not necessarily correspond directly with the discard estimates derived for individual stock assessments because of differences in stratification and data. Hence, the discard estimates are not definitive, but they are indicative of where discarding occurred among commercial fleets and for which species groups.

An estimated 9,113 sea days are needed to achieve a precision-based performance standard (30% coefficient of variation of the discard estimate) for the 14 fish and invertebrate species groups across 58 fleets. The sea day analysis used a standardized protocol to account for the importance of the discarded species relative to the amount of discards by each fleet and total fishing mortality.

INTRODUCTION

The Standardized Bycatch Reporting Methodology (SBRM) Omnibus Amendment was implemented in February 2008 (NEFMC 2007; NMFS 2008) to address the requirements of the Magnuson-Stevens Fishery Conservation and Management Act to include standardized bycatch reporting methodology in all of the New England Fishery Management Council (NEFMC) and Mid-Atlantic Fishery Management Council (MAFMC) federal fishery management plans (FMPs). Because of a deficiency associated with an element of the amendment (the prioritization process), the regulations implementing the SBRM were removed by the National Marine Fisheries Service (NMFS) in December 2011 (NMFS 2011). A revised SBRM Omnibus Amendment was approved in March 2015, and the final rule became effective in July 2015 (NEFMC 2015). This report provides some of the information required by the annual discard report specified in the SBRM amendment.

The SBRM discard estimation methods described in Wigley et al. (2007) are still applicable, and the analyses conducted are similar to those conducted in 2023 (McAfee and Wigley 2023). The sample size analysis is based on the assumption that the pattern of fishing activity observed in the prior year will be similar to that in the upcoming year.

This document presents the estimated discards and associated precision as well as the number of sea days needed to obtain a 30% coefficient of variation (CV) on the discard estimates for the 14 species groups associated with NEFMC and MAFMC federal FMPs in northeastern United States fleets¹. Additionally, discard reasons associated with the discarded species are summarized. This document differs from SBRM documents prior to 2012 in that it does not include a sea day prioritization² and does not contain information about sea turtles.

METHODS

Data Sources

The analyses used fishery-dependent data collected from July 2022 through June 2023 from the Northeast Fisheries Science Center's (NEFSC) Observer Database System (OBDBS), the Vessel Trip Report (VTR; including logbooks from the surfclam [*Spisula solidissima*] and ocean quahog [*Arctica islandica*] fishery) database, the Greater Atlantic Regional Fisheries Office (GARFO) Commercial Fisheries Database System (CFDBS), the GARFO Allocation Management System (AMS), and the National Oceanic and Atmospheric Administration (NOAA) Marine Recreational Information Program (MRIP) database.

From July 2022 through June 2023, the NEFSC's Fishery Monitoring and Research Division (FMRD) managed 3 comprehensive observer programs (the Northeast Fisheries Observer Program [NEFOP], the Industry-Funded Scallop Program [IFS], and the At-Sea Monitoring Program [ASM]) that collect a broad range of data including information on all species, by disposition (retained and discarded), that are encountered during a fishing trip as well as gear characteristics data and economic information. Biological samples are collected in the NEFOP and IFS programs but not in the ASM program (NEFSC 2021a, 2021b). The FMRD contracts trained sea-going observers and monitors to collect these data. Fish and invertebrate species are recorded by weight. Conversion factors were applied to convert any dressed-weight data to live³-weight equivalents.

¹ "Fleet" is synonymous with "fishing mode."

² The [observer sea day allocation documents](#) are available online.

³ In this document, "live" is equivalent to "round" grade (i.e., includes the weight of the shell for shellfish).

Only observed hauls from non-state funded NEFOP⁴ and IFS trips with a “complete” sampling protocol were used in the analyses. An “observed” haul collects or estimates weights from all species of kept and discarded fish, invertebrates, protected species, rocks, and debris captured by the fishing gear. A “complete” sampling protocol includes obtaining species weights for both kept and discarded portions of all species in the catch (NEFSC 2021a). These trips are referred to collectively as observed (OB) trips. Observer training trips are included, while aborted trips and “set only” trips are excluded along with trips fishing in statistical areas associated with the Grand Banks (statistical areas < “400”) and the U.S. Southeast Region (statistical areas \geq “700”), trips landing outside the Greater Atlantic Region (e.g., trips landing in Canada), and “carrier” trips (*fleet_type* = “050”; no fishing effort occurred on these trips). Gear type was based on Northeast gear codes (*negear*). Trips using shrimp twinned trawl (*negear* = “450”) were removed from the analyses because these trips are subject to the South Atlantic Fishery Management Council’s shrimp FMP that has an SBRM provision and are therefore covered by the Southeast Fisheries Science Center’s observer program (Scott-Denton et al. 2012). Hauls with no catch reported, hauls using a try net⁵, and hauls that contained species with discard reason “090” (discards by mistake) were excluded. Species weights with discard reason “039” (previously discarded) and catch of nonliving matter (items such as debris or shells that would not be kept and sold) were also excluded.

These analyses employed the same broad stratification scheme used in previous SBRM analyses, in which trips were partitioned into nonoverlapping fleets by using 5 classification variables: geographic region, gear type, mesh, access area, and trip category. Calendar quarter, based on the landing date of the trip, was used to capture seasonal variations in fishing activity and discard rates. Two broad geographical regions were defined: the New England (NE) and Mid-Atlantic (MA) regions are based on port of departure⁶; ports in states from Maine to Rhode Island constituted the NE region, and ports in states from Connecticut to North Carolina constituted the MA region. Some gear codes were combined because of their similarity or the inability to differentiate them from one another given the available VTR gear codes: hand line and troll line; sink, anchored, and drift gillnets; herring, menhaden, and unclassified purse seine; and single and paired midwater trawls. Trips for which gear was unknown were excluded. Mesh size groups were formed for all trawl⁷ and gillnet gear types. For trawls, 2 mesh groups were formed: small (sm; mesh less than 5.50 in) and large (lg; mesh 5.50 in and greater). For gillnets, 3 mesh groups were formed: small (mesh less than 5.50 in), large (mesh from 5.50 to 7.99 in), and extra large (xlg;

⁴ State-funded NEFOP trips, such as Atlantic States Marine Fisheries Commission funded trips (program code = 042) and the New York State Department of Environmental Conservation funded trips (program code = 045) are excluded from the analyses. Additionally, the ASM trips (program codes = 230-235 and 242) associated with Northeast Multispecies (groundfish) FMP are also excluded. These trips may have different goals/objectives and/or different stratification/sea day allocations than the other NEFOP trips and IFS trips. To reduce potential bias within SBRM, these observed trips have not been used in the 2018-current analyses. This exclusion differs from the previous analyses conducted from 2012 to 2017.

⁵ A try net is often used concurrently with shrimp trawl and shrimp twin trawls but has not been reported in the VTR (no corresponding gear code in the VTR database); hence, a sampling frame is not available for this gear type.

⁶ Wigley et al. (2007) found that the majority (over 93%) of 2004 observed trips both originated and fished in the same region and exhibited the same general pattern as in the VTR data. An updated analysis with July 2007 through June 2011 data found similar results (Wigley et al. 2012). While data from both the VTR and OB are summarized by port landed, the allocation of sea day coverage is necessarily based on port of departure since an observer must physically board the vessel. A review of the NEFOP and VTR databases revealed few instances (approximately 2%) where the change of port of landing from port of departure results in a change in region (i.e., NE to MA or vice versa).

⁷ In the 2018 analyses (Wigley and Tholke 2018) and onward, specific mesh size groups were applied to all trawl gears. In analyses prior to 2018, only otter trawl, Ruhle trawl, and haddock separator trawl had specific mesh size groups. The application of specific mesh size groups to all trawl gear represents a refinement and resolves the inconsistent use of mesh size among trawl gear.

mesh 8.00 in and greater). Three access area categories⁸ were formed: access area (AA), all (access and nonaccess areas combined), and nonaccess area (OPEN). The sea scallop fishery was divided into general (GEN) and limited (LIM) access trip categories by using the AMS activity code. Trips from all other fleets were assigned a trip category called “all.” Fleet stratification abbreviations are given in Table 1A.

The VTR data are used as a basis for defining the sampling frame, since all federally permitted vessels are required to file a VTR for each fishing trip except those vessels that hold only a federal commercial lobster permit⁹ (see GARFO VTR instructions for guidance¹⁰). These self-reported data¹¹ constitute the basis of commercial fishing activity. While dealer data are preferred because of more accurate weights, VTR data are used as a surrogate because dealer data do not contain mesh size or area fished information. Therefore, VTR data from commercial trips were used to expand the OB discard ratios to total discards. Conversion factors were applied to convert various units of measure to pounds and all weight to live weight. VTR trip data were grouped into fleets as defined above. Trips participating in the U.S./Canada access area, other special access programs, or those operating under the authority of an exempted fishing permit (EFP) could not be identified in the VTR data. These trips were grouped by the other stratification variables and not partitioned separately.

There are some fleets that contain few VTR trips. If a fleet has 3 or more VTR trips in any quarter, then the fleet is included as a unique fleet¹². If a fleet had fewer than 3 trips per quarter for all quarters, then there were too few trips to analyze as a fleet, and these trips were aggregated into “Other minor fleets.” This aggregated fleet had no discard estimation and no observer coverage estimated for the upcoming year (Appendix Table 1); however, landings from these trips were aggregated and reported to allow tracking of industry activity not included in the analyses.

Gear types that continue to be aggregated into “Other minor fleets” are: gear unknown (negear = “999”), harpoon (negear = “030”), longline pelagic (negear = “040”), rakes (negear = “250”), and diving (negear = “330”).

NE small mesh midwater trawl trips fishing in the groundfish access area (an exempted fishery for which 100% monitoring coverage was required¹³) were grouped¹⁴ together with NE small mesh midwater trawl trips fishing in open areas to form the NE small mesh midwater trawl fleet (Row 44 – row references in this text refer to Tables 2-7).

The clam fishery has a logbook system separate from the VTR logbook. The clam logbook data were used to augment the VTR data for the clam dredge fishery. The commercial¹⁵ and recreational landings (in live weight; from the CFDBS and MRIP databases) for the federally

⁸ Trips associated with the scallop trawl and scallop dredge fleets were partitioned into “AA” or “OPEN” access categories based on AMS activity code; Northern Gulf of Maine Scallop Management Area scallop trips are considered “AA” access category. Trips associated with the NE small mesh midwater fleet (including exempted groundfish access area trips) were grouped into “all” access category. All other trips associated with the remaining fleets were assigned “OPEN” access category.

⁹ NMFS published an [interim final rule](#) in October 2023 that implements mandatory electronic VTR reporting for all federally permitted lobster vessels beginning April 1, 2024. The 2024 SBRM discard estimation and sample size analyses rely on VTR data before April 1, 2024, and therefore do not include fishing trips of vessels that hold only a federal commercial lobster permit.

¹⁰ [GARFO VTR instructions](#).

¹¹ See Wigley et al. (2007) for more details on self-reported VTR data.

¹² Prior to 2018, fleets with few trips were handled in a similar fashion qualitatively and not formally described in the documents.

¹³ For further information, see the [Federal Register RIN 0648-AY47](#).

¹⁴ The 2019-current SBRM analyses do not separate groundfish access area exempted fishery and nonexempted trips in the small mesh midwater trawl fleets, regardless of spatial area fished (Wigley and Tholke 2019).

¹⁵ Aquaculture landings (*catch_source* = “A”) for Atlantic salmon (*Salmo salar*) have been excluded from the CFDBS because these landings are not removals from the wild population.

managed species were used only in the sample size analysis and not in the discard estimation analysis.

A list of the 14 federally managed fish and invertebrate species groups that were analyzed and the individual species that compose each species group are given in Table 1B. Summaries of the data used, in terms of number of trips and number of sea days by fleet, calendar quarter, and data source (OB and VTR) are given in Tables 2 and 3.

The spatial and temporal patterns of observer coverage within a fleet were evaluated. Rather than the number of trips (a trip-based metric), the kept weight of all species reported in the VTR was used. The “kept weight with observer coverage” was derived as the kept weight of all species reported in the VTR summed by fleet, statistical area, and quarter, where at least 1 observed trip occurred in the fleet-quarter-statistical area cell and at least 3 observed trips¹⁶ occurred in the fleet-quarter stratum. The “kept weight” was derived as the kept weight of all species reported in the VTR summed over all statistical areas and quarters within a fleet. The percentages of “kept weight with observer coverage” were calculated by dividing the “kept weight with observer coverage” by the “kept weight.” These percentages were derived for the individual fleets, confidential fleets combined into “Confidential fleets,” “Other minor fleets,” and all fleets combined. Additionally, as a relative measure of fleet activity among all fleets, the percentage of “kept weight” was derived by dividing the “kept weight” by the sum of the “kept weight” across all fleets.

Discard Estimation

Total discards of each of the 14 federally managed species groups were estimated for July 2022 through June 2023 by using a combined discard/kept (d/k) ratio estimator (Cochran 1963), where d = discarded pounds of a given species group and k = the kept pounds of all species (i.e., any species retained during the trip). Total discards (in weight) were derived by multiplying the estimated discard rate of each fleet by the corresponding fleet landings in the VTR database and then summing over fleets. In this analysis, no survival ratios were applied to discard estimates.

Simple imputation methods were used to fill quarterly cells for which there were fewer than 3 observed trips. Data from adjoining strata were pooled to impute estimates for cells with 0, 1, or 2 trips. In this imputation, only the temporal stratification (calendar quarter) was relaxed to an annual aggregation even though seasonal variation can occur for some species. This simple imputation could not be applied to fleets where observer coverage was low or missing throughout the year (i.e., too few data to support the simple imputation approach). In these cases, imputed values were not used, and the fleet was designated as a fleet in need of pilot coverage¹⁷. If some data were available, then discard estimates were derived, but these results were not used in the sample size analysis.

The variances and standard errors (SE) of the discard estimates were also derived. In this document, CV is defined as the ratio of the SE of the total discards divided by the total discards. The appendix presents the equations used in the analysis.

For each species group and fleet, the landings from the VTR and clam logbook are presented to provide perspective for the discard estimates.

Discard Reasons

For each species group and fleet, the fish dispositions associated with discarding (as reported by the at-sea observer) were grouped into 6 discard reason categories: no market,

¹⁶ The 3 trips for fleet-quarter correspond with a minimum threshold for allocating observer coverage.

¹⁷ Pilot coverage is defined as a minimum level of observer coverage necessary to acquire bycatch information with which to calculate variance estimates that can then be used to further define the level of sampling needed (NMFS 2004).

regulation (size), regulation (quota), regulation (other), poor quality, and other. The discard reason categories and the associated fish dispositions are summarized in Appendix Table 2. The discard reasons “No Market” and “Poor Quality” are considered economic discards and not regulatory discards.

The observed (nonextrapolated) discards associated with each of the 6 discard reason categories were summed for each species group for the fleets where discards could be estimated. For individual fleets, the percentage of observed discards by discard reason category was derived by dividing the sum of the observed discards for each discard reason category by the sum of the total observed discards for each species group and fleet. The discard reason category percentages were taken from the observed discard reason category percentages. For each fleet that composes the “Other fleets filtered out” (an aggregated fleet that represents fleets where the variance of the discard estimate was not used in the annual sample size analysis), the observed discard reason category percentages were then multiplied by the total estimated (extrapolated) discards for each species group to derive the estimated discards by discard reason category. The total estimated discards by discard reason category were summed over the fleets that compose the fleet aggregation for each species group. The estimated discard reason category percentage was derived by dividing the estimated discards for each discard reason category by the sum of the total estimated discards for each species group and fleet. In other words, the “Other fleets filtered out” group represents the weighted percentage where the weighting factor was the fleet extrapolated discards.

Sample Size Analysis

A sample size analysis (also referred to as sea day analysis) was conducted to estimate the number of baseline trips and sea days needed to monitor the 14 federally managed species groups in each fleet. As described in Wigley et al. (2007; and given in the Appendix), the number of trips and sea days needed to achieve a given precision level was based on the variance of the total discard estimate for a species group, with the assumption that the pattern of fishing activity observed in the prior year would be similar to that in the upcoming year. Sample sizes (trips and sea days) associated with the precision standard for discard estimates (30% CV) were derived. The sample size analysis was performed by using trips as the sampling unit and then converting the number of trips to sea days by multiplying by the weighted mean VTR trip length, where the weighting factor was the quarterly number of VTR trips that occurred from July 2022 through June 2023. The percentage of trips was derived by dividing the number of trips needed by the number of VTR trips that occurred in the fleet. When total discards could not be estimated because of little or no observer coverage (no data) or when total discards were 0 (no variance), the sample size (number of trips) was determined by using a pilot coverage level set to 2% of the quarterly VTR trips that occurred in a fleet, with a minimum of 3 trips per quarter (12 trips per year) and a maximum of 100 trips per quarter (400 trips per year). The 2% pilot coverage was the same as was used in previous sea day analyses. To avoid assigning more coverage than could be attained, if fewer than 3 VTR trips occurred in a fleet and quarter, then pilot coverage was set to 0. The quarterly trips were then multiplied by the quarterly mean VTR trip length to derive quarterly sea days. The quarterly trips and quarterly sea days were then summed for the annual number of trips and sea days. It is recognized that pilot coverage may still result in too much coverage in cases where little or no observer coverage may actually be needed, when effort changes sharply between years, or when the fleet comprises a low number of trips on an annual basis.

Some fleet/species combinations contribute very little to the total fishing mortality or discard of the species but may require significant resources to characterize the precision of the estimate. For example, a high variance estimate for a rare event within a fleet would require high levels of sampling, even though the total discard in that fleet was unimportant with respect to either the total discard or total fishing mortality of the resource. To address this situation, importance

filters were used to provide a standardized protocol to further refine the number of baseline sea days based on: (a) the importance of the discarded species relative to the total amount of discards by a fleet and (b) the total fishing mortality from discards.

The 2024 baseline sea days were filtered by using a 95% cut-point in the discard filter and a 98% cut-point for the total mortality filter from discards. In other words, estimates of sea day coverage for a given species or species group were retained for those fleets where discards constituted the upper cumulative 95% of the discard mortality and where discards constituted the upper cumulative 98% of the total fishing mortality.

To determine the number of sea days (referred to as the “2024 sea days needed”) and trips needed to achieve a 30% CV on the estimates of discards for each of the 14 species groups within a fleet, the maximum number of sea days for the 14 species groups (i.e., the maximum number of sea days in a row) was used. This approach ensures that all SBRM species groups retained by the filter will have a 30% CV or less. In the event that sea days for each species group within a fleet were filtered out or that the number of sea days needed was fewer than the number of minimum pilot days, the number of sea days for the fleet was based on minimum pilot days to maintain monitoring coverage for that fleet. Minimum pilot coverage (MPC) represents a minimum threshold for the allocation of sea days and is defined as 3 trips per quarter for each quarter where industry activity was 3 trips or greater. The quarterly number of trips is multiplied by the quarterly mean VTR trip length and then summed over quarters to derive the annual minimum pilot days for the fleet. If the fleet was designated as a pilot fleet, then pilot sea days were used. These fleets are indicated with a “P.” The fleets with sufficient data to estimate sample size are referred to as nonpilot fleets.

RESULTS

There were 58 fleets uniquely identified in the data from July 2022 through June 2023 (Tables 2 and 3; Appendix Table 1). There were no new fleets in this year’s analyses, however 4 of the fleets were not present in last year’s analyses but had been included in one or more previous SBRM analyses: NE large mesh twin trawl fleet (Row 16), NE large mesh shrimp trawl (Row 21), NE hagfish pots and traps (Row 49), and MA crab pots and traps (Row 52).

Ten fleets in the 2023 analyses with either no activity or with fewer than 3 trips per quarter in all quarters were excluded from the analyses: MA small mesh Rhule trawl, NE large mesh Rühle trawl, NE small mesh haddock separator trawl, NE beach haul seine, NE other pots and traps, NE eel pots and traps, MA small mesh beam trawl, NE small mesh beam trawl, NE large mesh beam trawl, and NE mussel dredge. The other minor fleets not uniquely identified were aggregated into a single fleet labeled “Other minor fleets.” Because of confidentiality rules, the landings and discards associated with 8 unique fleets were combined into a single aggregated fleet labeled “Confidential fleets” for reporting purposes in Tables 4 and 5: MA large mesh large mesh belly panel trawl (Row 9), MA large mesh scallop trawl (Row 12), NE large mesh twin trawl (Row 16), MA large mesh Rhule trawl (Row 17), NE large mesh shrimp trawl (Row 21), MA floating trap (Row 26), NE hagfish pots and traps (Row 49), and MA small mesh Scottish seine (Row 54). An additional confidential fleet, NE large mesh large mesh belly panel trawl (Row 11), was not aggregated with confidential fleets because this fleet was the only confidential fleet with some OB data; this fleet was aggregated into “Other minor fleets” in Tables 4 and 5. Hence, the fleet row numbers within Tables 2, 3, and 6 are sequential, while the fleet row numbers in Tables 4, 5, and 7 are ordered but with gaps in the row numbers.

There were 3 observed MA midwater trawl trips and 2 observed MA hagfish pot trips. Each fleet had less than 3 VTR trips in any quarter, which is an insufficient number of VTR trips to form a fleet. Consequently, these 5 trips were removed.

Of the 58 fleets examined, 26 fleets had little or no observer data: 5 fleets had sparse observer data across all quarters, while 21 fleets were missing observer data in all quarterly cells. The fleets with no observer coverage include trawl, floating trap, gillnet, purse seine, pot and trap fleets, Scottish seine, and dredge fleets, several of which have little industry activity. No discard estimation was performed for the 21 fleets with no observer coverage, and they were designated as fleets in need of pilot coverage (Tables 2 and 3; Appendix Table 1). The 5 fleets with sparse observer coverage were also designated as fleets in need of pilot coverage for the sample size analysis, however discard estimation was performed with the sparse observer data for these fleets. For the 32 remaining fleets (designated as nonpilot fleets; Rows 1-8, 13, 15, 19, 28-30, 32, 33, 35, 37, 39-41, 43-48, 50, 51, 53, 57, and 58), estimates of discards and their associated variance were derived and used to determine the sample sizes needed for a 30% CV. Of the 32 fleets, there were 14 fleets (Rows 2-4, 13, 15, 19, 30, 35, 37, 44, 46-48, and 51) where the simple imputation was applied (Tables 2 and 3).

Thus, for the discard estimation and precision analysis, 21 fleets had no discard estimation, and 37 fleets had discards estimated; however, discards from 1 of the 37 fleets (Row 11) was not reported because of confidentiality rules. For the sample size analysis, 32 fleets had sample sizes derived from the discard variances, and 26 fleets had sample sizes based upon pilot coverage.

From July 2022 through June 2023, 1,621 trips (5,002 sea days) were observed. When these trips were stratified, some trips were partitioned between strata, resulting in 1,725 trips (5,304 sea days; Tables 2 and 3) in the OB data set.

In terms of number of trips, the percentages of observed trips varied by fleet and calendar quarter. For the 37 fleets with some observer coverage, the annual percentage of observed trips by fleet ranged from 0.1% (NE lobster pot, Row 51; Table 2) to 25.3% (NE large mesh haddock separator trawl, Row 19; Table 2). Over all fleets, the percentage of observed trips was 2.6% (Table 2). The percentage of observer days was 4.3% (Table 3).

In terms of kept weight of all species, the percentage of observer coverage over all fleets was 67.1% (Table 4). For the 32 nonpilot fleets, the percentage of observer coverage ranged from 22% to 94% with an average of 69% (Table 4). Twenty-five of the 32 fleets had a percentage greater than or equal to 52% with an average of 80%. This finding indicates that the majority of kept weight within the fleet was associated with statistical areas and quarters with observer coverage. Additionally, these 25 fleets composed 65% of the total kept weight across all fleets. The kept weight of all species was considered a surrogate for fishing effort; hence, observer coverage occurred spatially and temporally where the majority of fishing effort occurred at the statistical area and quarter year scales. The landings associated with the combined fleet “Other minor fleets” contributed 0.2% of the total landings across all fleets (Table 4); thus, the uniquely identified fleets account for almost all of the total VTR landings.

Annual VTR landings for all fleets and estimated discards (live weight, in pounds) with associated precision (CV and SE) for 49 individual fleets (Rows 1-8, 10, 13-15, 18-20, 22-25, 27-48, 50-53, and 55-58) and 2 combined fleets (“Confidential fleets” and “Other minor fleets” [with landings only]) are summarized for each of the 14 species groups, the individual species that composed those species groups, and the 14 species groups combined (Tables 5A, 5B, and 5C; Figures 1A and 1B). There were 13 nonconfidential pilot fleets (Rows 18, 20, 22-27, 31, 34, 36, 52, 55, and 56) as well as the “Other minor fleets” that have no discard estimation. In Table 5A, the CVs associated with the cells (species group and fleet) that were not used in the sample size analysis (i.e., cells filtered out via the importance filter) are indicated in light shading. Precision of discards of individual species (Table 5B) and 14 species groups combined (Table 5C) was not used in the sample size analysis.

Based upon this analysis, 50,457 mt (111,238,779 lb; live weight) of discards for the 14 species groups occurred from July 2022 through June 2023 (Table 5C). The majority (53%) of the

discards comprises 2 species groups: skates (Rajidae; 41%) and sea scallop (*Placopecten magellanicus*; 12%); the remaining SBRM species groups each accounted for $\leq 10\%$ (Table 5A).

The percentage of discards to total catch varied among the 14 species groups (Figure 1A) and individual species (Figure 1B). One species group (SAL) had 0 discards (this species group is not presented in Figure 1A or Appendix Table 3A); in 1 species group (HERR), discards were less than 1% of total catch; in 4 species groups (SCOQ, TILE, BLUE, and SCAL), percentages of discards ranged between 1% and 10% of total catch; in 4 species groups (GFL, SBM, RCRAB, and FSB), discards ranged between 11% and 25% of total catch; and in 4 species groups (MONK, GFS, DOG, and SKATE), discards were greater than 25% of total catch (Figure 1A). The species groups with the highest percentage of total discards relative to total catch were: skates (68%), spiny dogfish (*Squalus acanthias*; 47%), small mesh groundfish (36%), and monkfish (*Lophius americanus*; 34%). For individual species (Table 5B; Figure 1B), most notable are the high percentages of discards to total catch for ocean pout (*Zoarces americanus*; 100%), windowpane flounder (*Scophthalmus aquosus*; >99%), and Atlantic wolffish (*Anarhichas lupus*; >99%); no possession is allowed for these 3 species. Atlantic halibut (*Hippoglossus hippoglossus*; 63%) have a 1 fish per trip limit. Chub mackerel (*Scomber colias*; 92%), red hake (*Urophycis chuss*; 88%), and butterfish (*Peprilus triacanthus*; 69%) had high percentages of discards to total catch for economic reasons (“No Market”). The NE small mesh otter trawl fleet (Row 7; 18%) and the NE OPEN LIM scallop dredge (Row 43; 17%) had the highest estimated discards of SBRM species (Table 5C).

The reasons for discarding varied among the 14 species groups (Appendix Table 3A) and individual species (Appendix Table 3B). Overall, for the 14 species groups, the majority of discards were attributed to “No Market” (82%), while “Regulation” (size, quota, and other), “Poor Quality,” and “Other” contributed 15%, 2%, and 1%, respectively (Appendix Table 3A).

The percentages of discards to total catch by fleet were also summarized for 32 nonpilot fleets (Figure 2). Discards of 1 or more of the 14 species groups that were filtered out via the importance filter have been aggregated into a species group labeled “Other SBRM.” Discards of species not federally managed have been aggregated into a species group labeled “Non-SBRM.” The percentages of discards to total catch varied by fleet (Figure 2). There were 3 fleets (Rows 35, 44, and 58) where discards were less than 1% of the total catch in the fleet; 7 fleets (Rows 1, 2, 4, 28-30, and 57) where the percentages of discards ranged between 1% and less than 11%; 9 fleets (Rows 3, 32, 33, 37, 39, 43, 45, 47, and 53) where the percentages of discards ranged between 11% and less than 26% of total catch; 10 fleets (Rows 5, 7, 8, 13, 15, 19, 40, 41, 46, and 50) where the percentages of discards ranged between 26% and less than 50% of the total catch; and 3 fleets (Rows 6, 48, and 51) where discards were 50% or greater of the total catch (Figure 2).

The number of species groups discarded within a fleet also varied among fleets. In the majority of fleets (22 of the 32 fleets), “discards” comprised 2 or 3 discarded species groups. For 7 of these fleets (Rows 2, 13, 15, 30, 45, 46, and 57) the “Other SBRM” species group comprised the majority of the discards. This finding indicates that the majority of discards for those 7 fleets were filtered out via the importance filter. There were 11 of these fleets (Rows 1, 3, 4, 35, 40, 41, 44, 47, 48, 50, and 58) for which the “Non-SBRM” species group comprised the majority of the discards. There were 4 of these fleets where 2 of the 3 discarded species groups were “Other SBRM” and “Non-SBRM,” and the third represented the majority or plurality of the discards: Rows 28 (spiny dogfish; 72%), 29 (spiny dogfish; 41%), 32 (spiny dogfish; 48%), and 53 (red deepsea crab [*Chaceon quinquegens*]; >99%; Figure 2). The remaining fleets (10 of the 32 fleets) had between 4 and 9 discarded species groups. The “Other SBRM” species group comprised the plurality of discards in 1 of these fleets (Row 37), the “Non-SBRM” species group comprised the majority or plurality of the discards in 2 fleets (Rows 43 and 51), the skate species group comprised the plurality of the discards in 6 fleets (Rows 5, 6, 8, 19, 33, and 39), and squid (*Doryteuthis [Amerigo] pealeii*, *Illex illecebrosus*)-butterfish-mackerel (*Scomber colias*, *Scomber scombrus*)

comprised the plurality of discards in 1 fleet (Row 7). The dominant “Non-SBRM” species in the MA longline fleet (Row 1) was smooth dogfish (*Mustelus canis*), while striped bass (*Morone saxatilis*) was the dominant “Non-SBRM” species in the MA handline fleet (Row 3), and spinner shark (*Carcharhinus brevipinna*) was the dominant “Non-SBRM” species in the NE handline fleet (Row 4). “Fish, not known” was the dominant “Non-SBRM” species in the NE purse seine fleet and the NE small mesh midwater trawl fleets (Rows 35 and 44, respectively). The dominant “Non-SBRM” species in the scallop dredge fleets were sand dollar (Clypeasteroidea; Rows 40 and 41) and mussels (Mytilidae; Row 43). Whelks (Buccinidae) were the dominant “Non-SBRM” species in the MA and NE conch pot fleets, and NE surfclam/ocean quahog dredge fleets (Rows 47, 48, and 58, respectively) while Jonah crab (*Cancer borealis*) and American lobster (*Homarus americanus*) were the dominant “Non-SBRM” species in the MA and NE lobster pot fleets (Rows 50 and 51, respectively; Figure 2).

The precision of the discard estimates varied by species group and fleet (Table 5A). Of the 14 species groups, 11 species groups (BLUE, FSB, GFL, MONK, RCRAB, SCAL, SKATE, GFS, DOG, SBM, and TILE) had an overall CV that was less than 30%, 2 species groups (HERR and SCOQ) had an overall CV that was greater than 30%, and 1 species group (SAL) had 0 discards and consequently no CV. The discards of 4 species groups (BLUE, HERR, SCOQ, and TILE) were filtered out in all fleets; this finding indicates that the discards of these species groups were a minor component of the total catch of these species (Table 5A; Figure 1A). The species group name abbreviations are given in Table 1B. The precision of the discard estimates for individual species are given in Table 5B; these precision estimates were not used in the sample size analysis.

The number of trips and sea days needed for each species group and fleet, as well as the number of pilot coverage trips and sea days, MPC trips and sea days, and the trips and sea days needed for the fleet (referred to as “2024 Trips Needed” and “2024 Sea Days Needed,” respectively) are summarized in Tables 6A (trips) and 6B (sea days). For the 58 fleets, 3,362 trips and 9,113 sea days are needed.

Twenty-six fleets had insufficient observer information to estimate discards, and the sea days for these fleets were based on pilot coverage. For fleets with the pilot coverage designation, 747 sea days (8% of 9,113 sea days; Table 6B) were needed. There are 16 fleets for which the sea days for all species groups were filtered out via the importance filter, and MPC days were used to maintain some coverage (Rows 1-4, 13, 15, 30, 35, 44-48, 50, 57, 58; Table 6B). For 2 fleets (Rows 40 and 53) the sea days derived from the discard variance were less than the MPC; hence, MPC days were used. The 18 [16+2] fleets with MPC were associated with 518 sea days (6% of 9,113 sea days; Table 6B). The sea days needed for the remaining 14 fleets (7,848 sea days, representing 86% of the total sea days needed) were derived by using the variance of the discard estimate (Tables 6B). Of the 9,113 sea days, 3,525 sea days (39%) were associated with the NE small mesh otter trawl (Row 5) because of high variability of red deepsea crab discards among trips within this fleet.

The sample sizes (in terms of number of sea days, number of trips, and percentage of trips based on the July 2022 through June 2023 VTR trips) needed to achieve a 30% CV of the discard estimate in 16 fleets are given in Table 7. The relationship between sample size and precision, over a range of sample sizes, is shown in Figure 3 for species groups and fleets. Generally, the precision of the species group discard estimate increases (the uncertainty becomes smaller) as sample size increases, with larger increases in precision occurring at small sample sizes tapering to smaller increases at larger sample sizes (Figure 3).

DISCUSSION

A broad stratification was used to support deployment of observers on commercial fishing trips among various fleets by using attributes known prior to the trip departure. As discussed in previous discard estimation analyses (Wigley et al. 2007, 2011), species-specific stock assessment discard estimation may differ from this report because of the differences in stratification and data used (calendar year versus 12-month [July through June] time period; area fished versus region [port of departure]; gear groupings; discard mortality assumptions; and VTR landings versus dealer landings). Region, based on port of departure, was used for the deployment of observers. Although “area fished” may provide a better stratification for discard estimation, we expect that when uncertainty in the estimates is taken into account, the estimates would be in the same order of magnitude. The discard estimates presented here are not definitive estimates but rather are indicative of where discarding occurred among the commercial fleets for the 14 federally managed species groups.

No survival ratios were applied to the discard estimates; we do not account for potential survival of organisms returned to the water. When comparing discard estimates from this study with those from stock assessments, it is useful to note that survival ratios are applied in stock assessments for Georges Bank and Gulf of Maine stocks of Atlantic cod (*Gadus morhua*), Atlantic sea scallop, skates, spiny dogfish, fluke (*Paralichthys dentatus*), southern New England/Mid-Atlantic and Gulf of Maine stocks of winter flounder (*Pseudopleuronectes americanus*), southern New England/Mid-Atlantic yellowtail flounder (*Limanda ferruginea*), and Atlantic wolffish.

These analyses used effort and landings data from the VTR. The VTR was used instead of dealer (CFDBS) data because the VTR collects more detailed effort information (days fished, trip length, gear, and mesh), which is required to define trips, sea days, and fleets. Since VTR landings are a captain’s hail weight estimate and dealer reported landings are generally more complete, the estimates of discards (expanded from VTR landings) may be underestimated. The magnitude of the underestimation will vary by fleet and year.

Discard estimates appropriately reflect the underlying data used (e.g., the VTR data used to raise the discard ratios to total discards and the observed trips used to derive the discard ratios were from the same VTR-based sampling frame). It is inappropriate to extrapolate beyond the sampling frame used unless it can be shown that the trips with no VTR reporting requirements have the same landings and discard characteristics as the trips with VTR reporting requirements.

These analyses use final data and are predicated upon accurately reported and audited data. After they were completed, some of the VTR data used were found to be incorrect, including the data elements used for the fleet stratification. While it is possible to remove the “erroneous” fleets and the associated sea days, the misaligned trips cannot be realigned without database corrections and completely rerunning the analyses. A rerun with corrected data may result in a change in the number of fleets and the number of sea days needed, but it is not expected to create major changes in the sea days needed. Examples of such fleets include the other trawl (Rows 22-25) or other dredge fleets (Rows 55 and 56). These tend to be general gear categories and are not primary gears supported by the observer program for which there are specific data collection logs and protocols. The majority of these trips are likely products of errors in gear reporting on the VTR and instead represent effort from trawl or dredge fleets with specifically defined gears. The identification of other “erroneous” fleets may occur. The number of fleets to be monitored and the number of sea days needed may be reduced in the sea day allocation process because of the removal of “erroneous” fleets or fleets with observer program limitations (e.g., detection, deployment, or database limitations).

The analysis of spatial and temporal observer coverage used live weight. As a result, fleets using scallop dredge and clam dredge targeting species with shells have higher kept weight percentage than other fleets because of the use of “live” weight rather than “landed meat” weight.

However, the use of live weight does not distort the observed percentage (spatial or temporal pattern) within a fleet. It is important to remember that percent observer coverage is an indicator of where observed kept weight (or trips) occurred relative to unobserved kept weight (or trips). The percentage observed should not be confused with the precision of the discard estimate, which is the metric used to describe discard variability and to determine the sample size needed for monitoring purposes. It is recognized that the fleets with minimum pilot coverage may lower the overall percentage of kept weight observed. Given the number of observed trips required for a fleet with MPC designation (3 trips per quarter), it may not be possible to cover all the statistical areas fished within a calendar quarter. In the future, an evaluation of the implications of MPC on the overall percentage of kept weight observed would be useful.

No electronic monitoring (EM) data were included in the analyses. From July 2022 to June 2023, 2 EM programs operated within the Northeast Multispecies fishery. The audit model EM program was operational and available as an alternative to ASM monitoring requirements, while the maximized retention EM (MREM) program continued to operate under an EFP until January 9, 2023, upon which it became an operational EM program as part of the implementation of Amendment 23¹⁸. After the MREM program became operational, an additional EFP providing area and mesh exemptions for vessels fishing in the redfish Exemption Program was granted to a subset of MREM vessels. The audit model EM program only collects discard information on Northeast Multispecies FMP species (not all species), and the MREM program requires vessels to retain all (kept and discard) allocated Northeast Multispecies FMP species. Commercial fishing trips that elected to use audit model EM as a replacement for ASM were still subject to NEFOP observer coverage, while trips participating in MREM utilizing an EFP were not eligible for NEFOP observer coverage because of the gear and area exemptions granted under the EFPs; no operational MREM trips were covered by NEFOP observers. In addition to these EM programs, there was also an EM EFP in conjunction with the industry-funded monitoring (IFM) program in the Atlantic herring fishery from July 2022 until the program was suspended on April 1, 2023, due to a lack of federal funding¹⁹; these trips were still subject to NEFOP coverage. Discards from EM trips were characterized by using NEFOP data only. The SBRM analyses do not create specific, separate fleets for EFPs beyond the standard SBRM fleet stratifications of geographic region, gear type, mesh, access area, and trip category because EFPs are typically temporary, non-standard, and confined to a small segment of a fleet and/or fishery. The 2024 SBRM analyses, as well as past analyses, treated EFP trips the same as standard trips. Additionally, the small number of operational MREM trips not utilizing an EFP were not stratified into separate fleets. While this may result in a small amount of additional uncertainty in discard estimation for fleets containing MREM trips (Rows 7, 8, and 19), the overall impact on sea day estimation is expected to be low given the small percentage (1.4%) of MREM trips within these fleets. Future SBRM analyses will utilize data from the regional [Catch Accounting and Monitoring System](#), a system that is focused on improved fisheries dependent data integration and catch estimation.

The number of sea days needed (3,525) increased significantly for the MA small mesh otter trawl fleet (Row 5) in SBRM 2024 compared to the number of sea days needed in SBRM 2023 (1,388) due to high variability of red deepsea crab discards in this fleet. Red deepsea crab discards previously drove coverage needs in this fleet and the NE large mesh otter trawl fleet in SBRM 2018, and were associated with trips fishing in deeper water (Wigley and Tholke 2018).

Fish may be discarded for economic reasons (e.g., “No Market” or “Poor Quality”) or for regulatory reasons (size, quota, or other). When considering mechanisms to reduce discards, it may be useful to know why discarding is occurring. Observers classify the discards by fish disposition

¹⁸ See [Greater Atlantic Regional Fisheries Office Amendment 23 website for more information](#).

¹⁹ For further information, see NMFS November 2, 2022, bulletin: [Atlantic Herring Industry-Funded Monitoring Program Suspended Beginning in April 2023](#)

based upon the NEFOP sampling protocol (NEFSC 2021a, 2021b) in which the observer asks the captain/crew why species are being discarded. Thus, these data should be considered a form of self-reported data, and as such, these data are difficult to verify and should be interpreted cautiously. Furthermore, it is important to note that large discard percentages may be associated with a small quantity of discards, and that for many species, the discards are associated with fleets that have been filtered out by the importance filter.

These analyses do not address the coverage needed for individual sectors or multiple stock components of a species. The analytical basis for the allocation of future sea day coverage is a specified level of precision defined in the SBRM Omnibus Amendment (i.e., 30% CV) and an expectation that the pattern of fishing activity observed in the prior year will be similar to that in the upcoming year.

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TABLES AND FIGURES

Table 1A. Fleet stratification abbreviations

Abbreviation	Definition
NE	New England ports (RI and northward)
MA	Mid-Atlantic ports (CT and southward)
Sm	Small mesh (less than 5.50 in)
Lg	Large mesh (from 5.50 to 7.99 in for gillnet; 5.50 in and greater for trawl)
Xlg	Extra large mesh (8.00 in and greater for gillnet)
AA	Access area
OPEN	Nonaccess area
GEN	General category
LIM	Limited access category

Table 1B. List of the 14 fish and invertebrate species groups (in bold), with species group abbreviations in parentheses and scientific names in italics. The species that compose these groups correspond to the 13 federal fishery management plans implemented in the waters off the northeastern United States.

Species/Group	Scientific Name
ATLANTIC HERRING (HERR)	<i>Clupea harengus</i>
ATLANTIC SALMON (SAL)	<i>Salmo salar</i>
BLUEFISH (BLUE)	<i>Pomatomus saltatrix</i>
FLUKE - SCUP - BLACK SEA BASS (FSB)	
Black sea bass	<i>Centropristis striata</i>
Fluke	<i>Paralichthys dentatus</i>
Scup	<i>Stenotomus chrysops</i>
LARGE MESH GROUND FISH (GFL)	
Acadian redfish	<i>Sebastes fasciatus</i>
American plaice	<i>Hippoglossoides platessoides</i>
Atlantic cod	<i>Gadus morhua</i>
Atlantic halibut	<i>Hippoglossus hippoglossus</i>
Atlantic wolffish	<i>Anarhichas lupus</i>
Haddock	<i>Melanogrammus aeglefinus</i>
Ocean pout	<i>Zoarces americanus</i>
Pollock	<i>Pollachius virens</i>
White hake	<i>Urophycis tenuis</i>
Windowpane flounder	<i>Scophthalmus aquosus</i>
Winter flounder	<i>Pseudopleuronectes americanus</i>
Witch flounder	<i>Glyptocephalus cynoglossus</i>
Yellowtail flounder	<i>Limanda ferruginea</i>
MONKFISH (MONK)	<i>Lophius americanus</i>
RED DEEPEA CRAB (RCRAB)	<i>Chaceon quinquegens</i>
SEA SCALLOP (SCAL)	<i>Placopecten magellanicus</i>
SKATE COMPLEX²⁰ (SKATE)	Rajidae
Barndoor skate	<i>Dipturus laevis</i>
Clearnose skate	<i>Raja eglanteria</i>
Little skate	<i>Leucoraja erinacea</i>
Rosette skate	<i>Leucoraja garmani</i>
Smooth skate	<i>Malacoraja senta</i>
Thorny skate	<i>Amblyraja radiata</i>
Winter skate	<i>Leucoraja ocellata</i>
SMALL MESH GROUND FISH (GFS)	
Offshore hake	<i>Merluccius albidus</i>
Red hake	<i>Urophycis chuss</i>
Silver hake	<i>Merluccius bilinearis</i>
SPINY DOGFISH (DOG)	<i>Squalus acanthias</i>
SQUID²¹ - BUTTERFISH - MACKEREL (SBM)	
Atlantic chub mackerel	<i>Scomber colias</i>
Atlantic mackerel	<i>Scomber scombrus</i>
Butterfish	<i>Peprilus triacanthus</i>
Longfin inshore squid	<i>Doryteuthis (Amerigo) pealeii</i>
Northern shortfin squid	<i>Illex illecebrosus</i>
SURFLAM - OCEAN QUAHOG²² (SCOQ)	
Surfclam	<i>Spisula solidissima</i>
Ocean quahog	<i>Arctica islandica</i>
TILEFISH²³ (TILE)	
Blueline tilefish	<i>Caulolatilus microps</i>
Golden tilefish	<i>Lopholatilus chamaeleonticeps</i>

²⁰ Skate complex is composed of 7 species as well as skate, unknown, and little/winter mixed skate. Individual species are not summarized separately.

²¹ Squid, unclassified is included in this species group. Longfin inshore squid and northern shortfin squid are also known as Loligo squid and Illex squid, respectively.

²² Surfclams and ocean quahogs compose the species group and are not reported separately.

²³ Tilefish, unclassified is included in this species group.

Table 2. Number of observed (OB) and Vessel Trip Report (VTR) trips, by fleet and calendar quarter (Q) based on July 2022 through June 2023 data. See Table 1A for fleet stratification abbreviations; "P" indicates fleets with "pilot" designation.

FLEET					OB					VTR						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
1	Longline, Bottom	OPEN	all	MA	all	3	3	3	3	12	134	30	36	89	289	
2	Longline, Bottom	OPEN	all	NE	all	11	3	.	4	18	189	40	18	90	337	
3	Hand Line	OPEN	all	MA	all	4	4	2	3	13	810	731	96	607	2,244	
4	Hand Line	OPEN	all	NE	all	17	3	.	4	24	1,117	376	5	381	1,879	
5	Otter Trawl	OPEN	all	MA	sm	105	58	36	128	327	566	605	338	646	2,155	
6	Otter Trawl	OPEN	all	MA	lg	39	27	13	25	104	1,035	585	393	656	2,669	
7	Otter Trawl	OPEN	all	NE	sm	49	59	27	43	178	749	697	320	785	2,551	
8	Otter Trawl	OPEN	all	NE	lg	55	31	57	36	179	1,452	838	836	1,100	4,226	
9	Otter Trawl, LgMesh Belly Panel	OPEN	all	MA	lg	.	.	.	.	.	12	1	.	.	13	P
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	2	1	1	1	5	43	45	3	7	98	P
11	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	lg	.	.	1	.	1	1	7	2	.	10	P
12	Otter Trawl, Scallop	OPEN	GEN	MA	lg	.	.	.	.	.	13	6	2	16	37	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	3	2	1	10	16	19	29	9	48	105	
14	Otter Trawl, Twin	OPEN	all	MA	lg	2	.	1	.	3	19	6	8	6	39	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	.	3	1	.	4	5	14	11	.	30	
16	Otter Trawl, Twin	OPEN	all	NE	lg	.	.	.	.	.	5	.	.	.	5	P
17	Otter Trawl, Ruhle	OPEN	all	MA	lg	.	.	.	.	.	.	.	.	3	3	P
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	.	.	.	.	.	11	9	4	2	26	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3	1	5	10	19	22	12	8	33	75	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	.	.	.	.	.	75	73	22	1	171	P
21	Otter Trawl, Shrimp	OPEN	all	NE	lg	.	.	.	.	.	.	.	.	21	21	P
22	Otter Trawl, Other	OPEN	all	MA	sm	.	.	.	.	.	35	37	33	80	185	P
23	Otter Trawl, Other	OPEN	all	MA	lg	.	.	.	.	.	46	46	51	70	213	P
24	Otter Trawl, Other	OPEN	all	NE	sm	.	.	.	.	.	64	46	16	66	192	P
25	Otter Trawl, Other	OPEN	all	NE	lg	.	.	.	.	.	79	23	18	64	184	P
26	Floating Trap	OPEN	all	MA	all	.	.	.	.	.	17	10	.	2	29	P
27	Floating Trap	OPEN	all	NE	all	.	.	.	.	.	135	80	23	75	313	P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	3	5	5	3	16	210	353	597	188	1,348	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	3	58	28	26	115	65	598	401	523	1,587	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	.	21	24	3	48	2	102	124	206	434	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	.	.	.	.	.	10	2	3	1	16	P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	15	7	4	4	30	651	277	67	219	1,214	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	41	25	21	15	102	871	234	232	585	1,922	
34	Purse Seine	OPEN	all	MA	all	.	.	.	.	.	85	75	.	2	162	P

FLEET					OB					VTR						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
35	Purse Seine	OPEN	all	NE	all	5	.	.	2	7	495	3	1	64	563	
36	Dredge, Scallop	AA	GEN	MA	all	.	.	.	.	.	.	2	5	2	9	P
37	Dredge, Scallop	AA	GEN	NE	all	26	22	.	47	95	344	228	324	2,118	3,014	
38	Dredge, Scallop	AA	LIM	MA	all	1	1	.	1	3	34	5	3	47	89	P
39	Dredge, Scallop	AA	LIM	NE	all	16	10	13	44	83	176	108	90	445	819	
40	Dredge, Scallop	OPEN	GEN	MA	all	34	9	3	4	50	457	198	147	264	1,066	
41	Dredge, Scallop	OPEN	GEN	NE	all	17	6	8	9	40	253	466	1,127	545	2,391	
42	Dredge, Scallop	OPEN	LIM	MA	all	2	.	1	1	4	40	15	12	20	87	P
43	Dredge, Scallop	OPEN	LIM	NE	all	30	12	32	20	94	272	79	235	312	898	
44	Trawl, Midwater	all	all	NE	sm	.	6	1	4	11	3	6	19	28	56	
45	Pots and Traps, Fish	OPEN	all	MA	all	5	4	3	3	15	288	227	47	443	1,005	
46	Pots and Traps, Fish	OPEN	all	NE	all	5	3	.	3	11	733	171	1	154	1,059	
47	Pots and Traps, Conch	OPEN	all	MA	all	2	4	.	3	9	157	313	25	139	634	
48	Pots and Traps, Conch	OPEN	all	NE	all	2	4	.	4	10	242	405	5	318	970	
49	Pots and Traps, Hagfish	OPEN	all	NE	all	.	.	.	.	.	4	1	1	3	9	P
50	Pots and Traps, Lobster	OPEN	all	MA	all	6	5	3	5	19	461	222	97	254	1,034	
51	Pots and Traps, Lobster	OPEN	all	NE	all	9	5	.	4	18	10,913	6,851	2,080	4,910	24,754	
52	Pots and Traps, Crab	OPEN	all	MA	all	.	.	.	.	.	29	.	.	1	30	P
53	Pots and Traps, Crab	OPEN	all	NE	all	3	3	3	4	13	15	23	37	21	96	
54	Scottish Seine	OPEN	all	MA	sm	.	.	.	.	.	.	4	.	2	6	P
55	Dredge, Other	OPEN	all	MA	all	.	.	.	.	.	9	97	96	23	225	P
56	Dredge, Other	OPEN	all	NE	all	.	.	.	.	.	19	32	27	21	99	P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	5	3	3	4	15	492	339	345	348	1,524	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	5	3	3	3	14	325	247	274	373	1,219	
Total						528	411	303	483	1,725	24,308	16,029	8,674	17,427	66,438	

Table 3. Number of observed (OB) and Vessel Trip Report (VTR) sea days, by fleet and calendar quarter (Q) based on July 2022 through June 2023 data. See Table 1A for fleet stratification abbreviations; "P" indicates fleets with "pilot" designation.

FLEET					OB					VTR							
Row	Gear	Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
1	Longline,	Bottom	OPEN	all	MA	all	21	23	26	22	92	370	241	199	346	1,156	
2	Longline,	Bottom	OPEN	all	NE	all	11	3	.	4	18	193	40	23	101	357	
3	Hand Line		OPEN	all	MA	all	4	12	2	3	21	899	761	118	632	2,410	
4	Hand Line		OPEN	all	NE	all	29	3	.	4	36	1,226	386	7	430	2,049	
5	Otter Trawl		OPEN	all	MA	sm	209	175	191	213	788	1,262	1,404	1,464	1,232	5,362	
6	Otter Trawl		OPEN	all	MA	lg	83	110	71	92	356	2,172	1,459	1,770	1,763	7,164	
7	Otter Trawl		OPEN	all	NE	sm	182	164	117	116	579	2,608	1,902	1,208	1,943	7,661	
8	Otter Trawl		OPEN	all	NE	lg	83	74	224	129	510	3,193	2,426	3,027	3,209	11,855	
9	Otter Trawl, LgMesh Belly Panel		OPEN	all	MA	lg	.	.	.	.	.	12	1	.	.	13	P
10	Otter Trawl, LgMesh Belly Panel		OPEN	all	NE	sm	6	3	4	3	16	127	134	17	26	304	P
11	Otter Trawl, LgMesh Belly Panel		OPEN	all	NE	lg	.	.	4	.	4	3	24	13	.	40	P
12	Otter Trawl, Scallop		OPEN	GEN	MA	lg	.	.	.	.	.	19	9	3	21	52	P
13	Otter Trawl, Twin		OPEN	all	MA	sm	3	2	8	10	23	34	66	54	49	203	
14	Otter Trawl, Twin		OPEN	all	MA	lg	2	.	2	.	4	25	8	39	9	81	P
15	Otter Trawl, Twin		OPEN	all	NE	sm	.	23	9	.	32	33	99	92	.	224	
16	Otter Trawl, Twin		OPEN	all	NE	lg	.	.	.	.	.	5	.	.	.	5	P
17	Otter Trawl, Ruhle		OPEN	all	MA	lg	.	.	.	.	.	.	.	.	16	16	P
18	Otter Trawl, Ruhle		OPEN	all	NE	sm	.	.	.	.	.	61	46	15	3	125	P
19	Otter Trawl, Haddock Separator		OPEN	all	NE	lg	24	7	30	67	128	154	99	60	249	562	
20	Otter Trawl, Shrimp		OPEN	all	MA	sm	.	.	.	.	.	211	257	131	17	616	P
21	Otter Trawl, Shrimp		OPEN	all	NE	lg	.	.	.	.	.	.	.	.	23	23	P
22	Otter Trawl, Other		OPEN	all	MA	sm	.	.	.	.	.	62	164	168	105	499	P
23	Otter Trawl, Other		OPEN	all	MA	lg	.	.	.	.	.	156	227	257	113	753	P
24	Otter Trawl, Other		OPEN	all	NE	sm	.	.	.	.	.	117	84	78	195	474	P
25	Otter Trawl, Other		OPEN	all	NE	lg	.	.	.	.	.	109	59	52	84	304	P
26	Floating Trap		OPEN	all	MA	all	.	.	.	.	.	17	10	.	2	29	P
27	Floating Trap		OPEN	all	NE	all	.	.	.	.	.	135	80	23	75	313	P
28	Gillnet, Sink, Anchor, Drift		OPEN	all	MA	sm	4	5	5	4	18	271	357	601	223	1,452	
29	Gillnet, Sink, Anchor, Drift		OPEN	all	MA	lg	4	58	28	26	116	77	605	401	528	1,611	
30	Gillnet, Sink, Anchor, Drift		OPEN	all	MA	xl	.	22	31	4	57	4	108	147	220	479	
31	Gillnet, Sink, Anchor, Drift		OPEN	all	NE	sm	.	.	.	.	.	10	2	6	3	21	P
32	Gillnet, Sink, Anchor, Drift		OPEN	all	NE	lg	17	8	5	10	40	828	424	186	344	1,782	
33	Gillnet, Sink, Anchor, Drift		OPEN	all	NE	xl	44	31	48	27	150	992	309	538	928	2,767	
34	Purse Seine		OPEN	all	MA	all	.	.	.	.	.	87	75	.	2	164	P

FLEET					OB					VTR						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Q3	Q4	Q1	Q2	TOTAL	Q3	Q4	Q1	Q2	TOTAL	Pilot
35	Purse Seine	OPEN	all	NE	all	10	.	.	2	12	534	8	1	66	609	
36	Dredge, Scallop	AA	GEN	MA	all	.	.	.	.	.	.	2	5	4	11	P
37	Dredge, Scallop	AA	GEN	NE	all	60	57	.	89	206	763	450	357	2,986	4,556	
38	Dredge, Scallop	AA	LIM	MA	all	10	16	.	8	34	355	44	35	379	813	P
39	Dredge, Scallop	AA	LIM	NE	all	140	86	106	298	630	1,462	844	677	3,026	6,009	
40	Dredge, Scallop	OPEN	GEN	MA	all	68	22	8	10	108	963	450	355	561	2,329	
41	Dredge, Scallop	OPEN	GEN	NE	all	33	10	15	19	77	486	590	1,515	835	3,426	
42	Dredge, Scallop	OPEN	LIM	MA	all	11	.	10	15	36	363	111	109	207	790	P
43	Dredge, Scallop	OPEN	LIM	NE	all	309	132	236	197	874	2,869	734	1,835	3,210	8,648	
44	Trawl, Midwater	all	all	NE	sm	.	24	4	15	43	23	29	85	140	277	
45	Pots and Traps, Fish	OPEN	all	MA	all	5	5	3	3	16	306	239	51	452	1,048	
46	Pots and Traps, Fish	OPEN	all	NE	all	5	3	.	3	11	784	206	1	154	1,145	
47	Pots and Traps, Conch	OPEN	all	MA	all	2	4	.	3	9	157	318	25	145	645	
48	Pots and Traps, Conch	OPEN	all	NE	all	2	4	.	4	10	244	411	5	318	978	
49	Pots and Traps, Hagfish	OPEN	all	NE	all	.	.	.	.	.	68	17	17	48	150	P
50	Pots and Traps, Lobster	OPEN	all	MA	all	6	5	9	6	26	558	319	174	353	1,404	
51	Pots and Traps, Lobster	OPEN	all	NE	all	9	5	.	4	18	13,178	8,816	3,736	6,419	32,149	
52	Pots and Traps, Crab	OPEN	all	MA	all	.	.	.	.	.	31	.	.	1	32	P
53	Pots and Traps, Crab	OPEN	all	NE	all	35	30	20	33	118	134	160	242	166	702	
54	Scottish Seine	OPEN	all	MA	sm	.	.	.	.	.	.	6	.	2	8	P
55	Dredge, Other	OPEN	all	MA	all	.	.	.	.	.	33	112	99	46	290	P
56	Dredge, Other	OPEN	all	NE	all	.	.	.	.	.	19	33	28	26	106	P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	12	10	9	14	45	929	716	745	811	3,200	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	16	11	7	9	43	517	413	482	711	2,123	
Total						1,459	1,147	1,232	1,466	5,304	40,248	26,894	21,276	33,957	122,374	*

Table 4. Vessel Trip Report kept weight of all species (live mt), percentage of kept weight of all species across all fleets, kept weight of all species with observer (OB) coverage from statistical areas and quarters with at least 1 observed trip and at least 3 observed trips in the fleet and quarter, and percentage of kept weight of all species with observer coverage, by fleet based on July 2022 through June 2023 data. See Table 1A for fleet stratification abbreviations.

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Kept Weight (mt)	Percentage of Kept Weight	Kept Weight with OB coverage (mt)	Percentage of Kept Weight with OB coverage
1	Longline, Bottom	OPEN	all	MA	all	714	0.2	589	82.5
2	Longline, Bottom	OPEN	all	NE	all	630	0.2	582	92.4
3	Hand Line	OPEN	all	MA	all	177	<0.1	51	28.9
4	Hand Line	OPEN	all	NE	all	683	0.2	156	22.8
5	Otter Trawl	OPEN	all	MA	sm	10,729	2.6	9,901	92.3
6	Otter Trawl	OPEN	all	MA	lg	6,130	1.5	5,288	86.3
7	Otter Trawl	OPEN	all	NE	sm	17,667	4.3	15,251	86.3
8	Otter Trawl	OPEN	all	NE	lg	20,948	5.1	18,961	90.5
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	1,387	0.3	0	0.0
13	Otter Trawl, Twin	OPEN	all	MA	sm	395	0.1	99	25.2
14	Otter Trawl, Twin	OPEN	all	MA	lg	52	<0.1	0	0.0
15	Otter Trawl, Twin	OPEN	all	NE	sm	771	0.2	283	36.7
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	441	0.1	0	0.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	727	0.2	602	82.8
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	364	0.1	0	0.0
22	Otter Trawl, Other	OPEN	all	MA	sm	799	0.2	0	0.0
23	Otter Trawl, Other	OPEN	all	MA	lg	715	0.2	0	0.0
24	Otter Trawl, Other	OPEN	all	NE	sm	775	0.2	0	0.0
25	Otter Trawl, Other	OPEN	all	NE	lg	172	<0.1	0	0.0
27	Floating Trap	OPEN	all	NE	all	92	<0.1	0	0.0
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	1,876	0.5	1,616	86.1
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	2,750	0.7	2,232	81.2
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	791	0.2	489	61.8
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	45	<0.1	0	0.0
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	2,008	0.5	1,729	86.1
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	5,815	1.4	5,468	94.0
34	Purse Seine	OPEN	all	MA	all	16,931	4.2	0	0.0
35	Purse Seine	OPEN	all	NE	all	3,058	0.8	2,318	75.8
36	Dredge, Scallop	AA	GEN	MA	all	7	<0.1	0	0.0
37	Dredge, Scallop	AA	GEN	NE	all	4,182	1.0	3,416	81.7
38	Dredge, Scallop	AA	LIM	MA	all	3,814	0.9	0	0.0
39	Dredge, Scallop	AA	LIM	NE	all	35,052	8.6	28,761	82.1
40	Dredge, Scallop	OPEN	GEN	MA	all	2,338	0.6	2,056	87.9
41	Dredge, Scallop	OPEN	GEN	NE	all	3,131	0.8	2,306	73.6
42	Dredge, Scallop	OPEN	LIM	MA	all	3,595	0.9	0	0.0
43	Dredge, Scallop	OPEN	LIM	NE	all	56,757	13.9	51,887	91.4
44	Trawl, Midwater	all	all	NE	sm	8,962	2.2	4,671	52.1
45	Pots and Traps, Fish	OPEN	all	MA	all	450	0.1	172	38.2
46	Pots and Traps, Fish	OPEN	all	NE	all	272	0.1	221	81.5
47	Pots and Traps, Conch	OPEN	all	MA	all	423	0.1	269	63.6
48	Pots and Traps, Conch	OPEN	all	NE	all	478	0.1	342	71.6

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Kept Weight (mt)	Percentage of Kept Weight	Kept Weight with OB coverage (mt)	Percentage of Kept Weight with OB coverage
50	Pots and Traps, Lobster	OPEN	all	MA	all	643	0.2	355	55.2
51	Pots and Traps, Lobster	OPEN	all	NE	all	19,799	4.9	4,383	22.1
52	Pots and Traps, Crab	OPEN	all	MA	all	7	<0.1	0	0.0
53	Pots and Traps, Crab	OPEN	all	NE	all	3,200	0.8	2,309	72.2
55	Dredge, Other	OPEN	all	MA	all	141	<0.1	0	0.0
56	Dredge, Other	OPEN	all	NE	all	360	0.1	0	0.0
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	90,067	22.1	44,285	49.2
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	74,334	18.2	62,277	83.8
	Confidential fleets					789	0.2	0	0.0
	Other minor fleets					946	0.2	0	0.0
					Total	407,383	100.0	273,323	67.1

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error (SE) of the estimated discards (live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equal 0. See Table 1A for fleet stratification abbreviations; "P" indicates fleets with "pilot" designation.

Species Group: ATLANTIC HERRING (*Clupea harengus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	80	80	0			
5	Otter Trawl	OPEN	all	MA	sm	3,040	2,927	113	0.595	67	
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	1,267,013	1,258,301	8,712	0.854	7,439	
8	Otter Trawl	OPEN	all	NE	lg	4,959	345	4,614	0.372	1,716	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	16,290	16,290	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	584	584	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	70	70	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	24	0	24	0.787	19	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	500	500				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	2,014,340	2,014,325	15	0.324	5	

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P
37	Dredge, Scallop	AA	GEN	NE	all	23	0	23	1.192	27	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	50	0	50	1.633	82	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	3	0	3	0.989	3	
44	Trawl, Midwater	all	all	NE	sm	13,263,925	13,262,944	981	0.439	431	
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					791,800	791,800				
					TOTAL	17,362,701	17,348,166	14,535	0.526	7,647	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: ATLANTIC SALMON (*Salmo salar*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	0	0	0			
8	Otter Trawl	OPEN	all	NE	lg	0	0	0			
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	0	0	0			
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	0	0	0			

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: BLUEFISH (*Pomatomus saltatrix*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	41	41	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	27,267	27,267	0			
4	Hand Line	OPEN	all	NE	all	19,212	19,212	0			
5	Otter Trawl	OPEN	all	MA	sm	50,987	46,624	4,363	0.454	1,980	
6	Otter Trawl	OPEN	all	MA	lg	28,049	26,049	2,000	0.539	1,078	
7	Otter Trawl	OPEN	all	NE	sm	25,368	15,753	9,615	0.360	3,465	
8	Otter Trawl	OPEN	all	NE	lg	12,108	11,929	179	1.556	279	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	120	120	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	1,057	781	276	0.488	135	
14	Otter Trawl, Twin	OPEN	all	MA	lg	100	100	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	1,438	60	1,378	0.639	881	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	10	10				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	35	35				P
22	Otter Trawl, Other	OPEN	all	MA	sm	13,230	13,230				P
23	Otter Trawl, Other	OPEN	all	MA	lg	3,370	3,370				P
24	Otter Trawl, Other	OPEN	all	NE	sm	118	118				P
25	Otter Trawl, Other	OPEN	all	NE	lg	293	293				P
27	Floating Trap	OPEN	all	NE	all	3	3				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	213,888	213,766	122	0.832	101	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	91,915	88,459	3,456	0.975	3,368	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	2,784	2,724	60	1.113	67	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	10	10				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	69,378	69,215	163	1.045	170	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	5,664	5,195	469	0.791	371	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	0	0	0			
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	828	828	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	217	217	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	516	516	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	379	379	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
Confidential fleets						128	128				
Other minor fleets						468	468				
TOTAL						568,980	546,900	22,080	0.246	5,430	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: FLUKE (*Paralichthys dentatus*) - SCUP (*Stenotomus chrysops*) - BLACK SEA BASS (*Centropristis striata*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	3	3	0			
2	Longline, Bottom	OPEN	all	NE	all	298	0	298	0.452	135	
3	Hand Line	OPEN	all	MA	all	213,068	168,466	44,602	0.623	27,769	
4	Hand Line	OPEN	all	NE	all	53,225	52,615	610	7.140	4,357	
5	Otter Trawl	OPEN	all	MA	sm	7,769,348	6,051,952	1,717,396	0.181	310,197	
6	Otter Trawl	OPEN	all	MA	lg	10,840,013	9,969,742	870,271	0.194	168,845	
7	Otter Trawl	OPEN	all	NE	sm	6,864,537	2,787,907	4,076,630	0.199	813,216	
8	Otter Trawl	OPEN	all	NE	lg	2,978,688	2,508,000	470,688	0.307	144,353	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	85,050	68,195	16,855	0.425	7,164	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	183,028	37,804	145,224	0.511	74,186	
14	Otter Trawl, Twin	OPEN	all	MA	lg	103,212	101,321	1,891	0.128	242	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	3,911	2,237	1,674	0.618	1,035	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	7,266	7,266				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	11,654	11,650	4	0.971	4	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	74,841	74,841				P
22	Otter Trawl, Other	OPEN	all	MA	sm	591,553	591,553				P
23	Otter Trawl, Other	OPEN	all	MA	lg	1,086,212	1,086,212				P
24	Otter Trawl, Other	OPEN	all	NE	sm	70,646	70,646				P
25	Otter Trawl, Other	OPEN	all	NE	lg	100,703	100,703				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	17,881	17,881	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	14,269	13,605	664	0.222	147	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	5,860	4,924	936	1.101	1,030	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	110	110				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	33,984	32,014	1,970	0.575	1,133	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	36,161	22,164	13,997	0.217	3,036	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	9,873	30	9,843	0.306	3,015	
38	Dredge, Scallop	AA	LIM	MA	all	4,413	50	4,363	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	134,415	4	134,411	0.280	37,674	
40	Dredge, Scallop	OPEN	GEN	MA	all	84,751	23,754	60,997	0.347	21,193	
41	Dredge, Scallop	OPEN	GEN	NE	all	11,158	0	11,158	0.789	8,809	
42	Dredge, Scallop	OPEN	LIM	MA	all	6,613	2,395	4,218	0.499	2,106	P
43	Dredge, Scallop	OPEN	LIM	NE	all	254,716	80	254,636	0.388	98,676	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	772,724	605,870	166,854	0.176	29,314	
46	Pots and Traps, Fish	OPEN	all	NE	all	749,999	550,008	199,991	0.450	90,037	
47	Pots and Traps, Conch	OPEN	all	MA	all	851	800	51	0.859	44	
48	Pots and Traps, Conch	OPEN	all	NE	all	9,156	2,323	6,833	0.515	3,518	
50	Pots and Traps, Lobster	OPEN	all	MA	all	175,489	156,135	19,354	1.053	20,383	
51	Pots and Traps, Lobster	OPEN	all	NE	all	64,236	45,204	19,032	0.716	13,631	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	3	0	3	1.011	3	
55	Dredge, Other	OPEN	all	MA	all	60	60				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	26,023	0	26,023	0.488	12,705	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	1,717	111	1,606	0.937	1,506	
	Confidential fleets					18,846	18,846				
	Other minor fleets					218,379	218,379				
					TOTAL	33,688,944	25,405,860	8,283,084	0.110	913,612	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: LARGE MESH GROUND FISH

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	68,265	55,610	12,655	6.535	82,698	
3	Hand Line	OPEN	all	MA	all	5,362	5,362	0			
4	Hand Line	OPEN	all	NE	all	18,763	16,670	2,093	0.385	805	
5	Otter Trawl	OPEN	all	MA	sm	111,680	30	111,650	0.256	28,601	
6	Otter Trawl	OPEN	all	MA	lg	160,478	41,592	118,886	0.237	28,140	
7	Otter Trawl	OPEN	all	NE	sm	1,740,346	1,547,784	192,562	0.207	39,935	
8	Otter Trawl	OPEN	all	NE	lg	27,764,060	25,433,848	2,330,212	0.328	763,389	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	36,031	0	36,031	0.403	14,503	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	6,972	15	6,957	0.592	4,117	
14	Otter Trawl, Twin	OPEN	all	MA	lg	106	0	106	1.280	136	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	1,527,559	1,441,151	86,408	0.491	42,419	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	57	57				P
23	Otter Trawl, Other	OPEN	all	MA	lg	1,135	1,135				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	145,196	145,196				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	3	3	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	674	3	671	0.225	151	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	5	0	5	0.724	4	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	959,535	875,031	84,504	0.515	43,501	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	80,801	51,261	29,540	0.295	8,704	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	18,146	166	17,980	0.168	3,028	
38	Dredge, Scallop	AA	LIM	MA	all	3,915	3	3,912	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	159,247	158	159,089	0.154	24,439	
40	Dredge, Scallop	OPEN	GEN	MA	all	1,627	31	1,596	0.306	489	
41	Dredge, Scallop	OPEN	GEN	NE	all	64,485	3	64,482	0.281	18,132	
42	Dredge, Scallop	OPEN	LIM	MA	all	6,775	0	6,775	0.499	3,383	P
43	Dredge, Scallop	OPEN	LIM	NE	all	467,389	225	467,164	0.132	61,443	
44	Trawl, Midwater	all	all	NE	sm	108	105	3	0.444	1	
45	Pots and Traps, Fish	OPEN	all	MA	all	267	267	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	158	98	60	0.741	44	
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	9,749	17	9,732	1.720	16,744	
51	Pots and Traps, Lobster	OPEN	all	NE	all	314,525	1,216	313,309	0.431	135,048	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	187	0	187	0.951	178	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	69	0	69	1.684	116	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	766	0	766	1.029	788	
	Confidential fleets					4,546	4,546				
	Other minor fleets					15,665	15,665				
					TOTAL	33,694,652	29,637,248	4,057,404	0.194	787,428	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: MONKFISH (*Lophius americanus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	526	21	505	0.698	353	
2	Longline, Bottom	OPEN	all	NE	all	27	27	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	5	5	0			
5	Otter Trawl	OPEN	all	MA	sm	149,509	39,085	110,424	0.298	32,852	
6	Otter Trawl	OPEN	all	MA	lg	465,610	159,607	306,003	0.499	152,602	
7	Otter Trawl	OPEN	all	NE	sm	222,541	101,741	120,800	0.331	39,963	
8	Otter Trawl	OPEN	all	NE	lg	9,546,646	8,650,173	896,472	0.149	133,708	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	1,152	900	252	1.063	268	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	397	296	101	0.418	42	
14	Otter Trawl, Twin	OPEN	all	MA	lg	4,754	847	3,907	0.128	500	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	1,585	631	954	0.517	494	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	238	238				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	97,241	92,635	4,606	0.448	2,062	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	752	752				P
23	Otter Trawl, Other	OPEN	all	MA	lg	7,604	7,604				P
24	Otter Trawl, Other	OPEN	all	NE	sm	2,102	2,102				P
25	Otter Trawl, Other	OPEN	all	NE	lg	33,335	33,335				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	48	48	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	446	78	368	0.544	200	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	535,130	529,517	5,613	0.479	2,688	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	11,415	11,415				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	461,788	458,848	2,939	0.481	1,413	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	3,341,879	3,212,382	129,497	0.230	29,834	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	370,862	14,923	355,939	0.113	40,309	
38	Dredge, Scallop	AA	LIM	MA	all	69,477	8,663	60,815	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	1,605,271	21,527	1,583,744	0.116	183,346	
40	Dredge, Scallop	OPEN	GEN	MA	all	85,971	11,329	74,642	0.200	14,914	
41	Dredge, Scallop	OPEN	GEN	NE	all	126,617	5,402	121,216	0.305	37,030	
42	Dredge, Scallop	OPEN	LIM	MA	all	97,738	3,088	94,650	0.434	41,103	P
43	Dredge, Scallop	OPEN	LIM	NE	all	3,080,944	20,703	3,060,240	0.134	409,901	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	10	10	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	199	55	144	2.632	380	
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	22	0	22	0.637	14	
55	Dredge, Other	OPEN	all	MA	all	2,348	2,348				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	43,659	12,564	31,095	0.350	10,891	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	93,905	0	93,905	0.498	46,721	
	Confidential fleets					1,501	1,501				
	Other minor fleets					2,598	2,598				
					TOTAL	20,465,851	13,406,996	7,058,855	0.071	503,577	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: RED DEEPSEA CRAB (*Chaceon quinquegens*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	728	550	178	0.596	106	
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	216,409	110	216,299	0.808	174,804	
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	27	0	27	0.737	20	
8	Otter Trawl	OPEN	all	NE	lg	12,935	0	12,935	0.735	9,505	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	5	0	5	0.945	4	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	42	0	42	1.026	43	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	120	0	120	0.983	118	
41	Dredge, Scallop	OPEN	GEN	NE	all	50	0	50	1.637	82	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	681	0	681	0.676	461	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	2,101	0	2,101	0.297	624	
51	Pots and Traps, Lobster	OPEN	all	NE	all	10,585	10,585	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	5,833,479	4,631,081	1,202,398	0.201	241,175	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					260	260				
					TOTAL	6,077,424	4,642,586	1,434,838	0.208	298,015	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SEA SCALLOP (*Placopecten magellanicus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	77,292	32,720	44,571	0.562	25,033	
6	Otter Trawl	OPEN	all	MA	lg	191,328	88,249	103,079	0.434	44,759	
7	Otter Trawl	OPEN	all	NE	sm	187,573	17,518	170,055	0.580	98,708	
8	Otter Trawl	OPEN	all	NE	lg	135,428	31,064	104,364	0.496	51,759	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	14,115	0	14,115	0.425	5,999	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	25	25	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	377	0	377	0.697	263	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	333	333				P
23	Otter Trawl, Other	OPEN	all	MA	lg	292	292				P
24	Otter Trawl, Other	OPEN	all	NE	sm	1,666	1,666				P
25	Otter Trawl, Other	OPEN	all	NE	lg	8,880	8,880				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	335	0	335	1.100	368	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	6	0	6	0.669	4	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	970	0	970	0.767	744	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	1,125	1,125	0			
36	Dredge, Scallop	AA	GEN	MA	all	14,578	14,578				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	10,059,229	9,204,377	854,852	0.204	174,075	
38	Dredge, Scallop	AA	LIM	MA	all	8,401,202	8,400,580	622	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	80,823,799	77,254,269	3,569,530	0.191	683,345	
40	Dredge, Scallop	OPEN	GEN	MA	all	5,377,855	5,103,262	274,593	0.276	75,690	
41	Dredge, Scallop	OPEN	GEN	NE	all	7,251,255	6,668,805	582,450	0.608	354,203	
42	Dredge, Scallop	OPEN	LIM	MA	all	7,941,133	7,919,348	21,786	0.499	10,878	P
43	Dredge, Scallop	OPEN	LIM	NE	all	132,259,053	125,106,141	7,152,911	0.286	2,045,906	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	5,498	5,498	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	87,548	87,548				P
56	Dredge, Other	OPEN	all	NE	all	106,799	106,799				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	302,203	192,181	110,022	0.734	80,749	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	72,748	68,206	4,542	0.463	2,104	
	Confidential fleets					83,633	83,633				
	Other minor fleets					133	133				
					TOTAL	253,406,408	240,397,230	13,009,179	0.169	2,199,071	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SKATE COMPLEX (*Rajidae*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	10,514	0	10,514	0.722	7,588	
2	Longline, Bottom	OPEN	all	NE	all	36,644	945	35,698	0.694	24,770	
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	763	0	763	6.348	4,842	
5	Otter Trawl	OPEN	all	MA	sm	5,363,408	364,918	4,998,490	0.197	983,312	
6	Otter Trawl	OPEN	all	MA	lg	11,348,219	2,434,827	8,913,393	0.189	1,682,254	
7	Otter Trawl	OPEN	all	NE	sm	4,058,608	195,227	3,863,380	0.270	1,044,750	
8	Otter Trawl	OPEN	all	NE	lg	15,376,815	7,349,952	8,026,863	0.152	1,219,515	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	54,346	13,858	40,488	0.642	26,012	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	109,351	10,595	98,756	0.529	52,215	
14	Otter Trawl, Twin	OPEN	all	MA	lg	326,252	9,897	316,354	0.066	20,915	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	932	0	932	0.586	546	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	1,498	1,498				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	415,650	27,171	388,478	0.241	93,431	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	42,090	42,090				P
23	Otter Trawl, Other	OPEN	all	MA	lg	397,545	397,545				P
24	Otter Trawl, Other	OPEN	all	NE	sm	4,711	4,711				P
25	Otter Trawl, Other	OPEN	all	NE	lg	33,451	33,451				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	5,222	1,969	3,253	0.566	1,842	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	84,756	22,493	62,264	0.152	9,448	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	1,268,404	1,136,223	132,182	0.416	55,027	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	45,510	45,510				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	410,934	277,911	133,023	0.389	51,751	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	10,613,688	9,258,116	1,355,572	0.357	483,969	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	473,380	0	473,380	0.121	57,430	
38	Dredge, Scallop	AA	LIM	MA	all	265,836	0	265,836	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	7,341,503	0	7,341,503	0.159	1,170,799	
40	Dredge, Scallop	OPEN	GEN	MA	all	746,290	130	746,160	0.136	101,723	
41	Dredge, Scallop	OPEN	GEN	NE	all	387,967	0	387,967	0.349	135,416	
42	Dredge, Scallop	OPEN	LIM	MA	all	241,142	0	241,142	0.794	191,395	P
43	Dredge, Scallop	OPEN	LIM	NE	all	7,826,202	0	7,826,202	0.137	1,074,215	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	90	90	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	3,500	3,500				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	177,531	0	177,531	0.287	50,949	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	141,243	0	141,243	0.451	63,635	
	Confidential fleets					21,373	21,373				
	Other minor fleets					31,925	31,925				
					TOTAL	67,667,293	21,685,925	45,981,368	0.066	3,037,903	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SMALL MESH GROUND FISH

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	350	286	64	1.336	85	
2	Longline, Bottom	OPEN	all	NE	all	127	65	62	5.995	370	
3	Hand Line	OPEN	all	MA	all	696	696	0			
4	Hand Line	OPEN	all	NE	all	137	137	0			
5	Otter Trawl	OPEN	all	MA	sm	1,609,369	1,487,596	121,773	0.318	38,779	
6	Otter Trawl	OPEN	all	MA	lg	105,908	57,295	48,613	0.596	28,951	
7	Otter Trawl	OPEN	all	NE	sm	7,222,876	4,281,660	2,941,216	0.428	1,257,658	
8	Otter Trawl	OPEN	all	NE	lg	1,689,931	537,030	1,152,901	0.182	210,168	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	3,065,200	2,847,815	217,385	0.111	24,164	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	2,187	1,977	210	0.442	93	
14	Otter Trawl, Twin	OPEN	all	MA	lg	285	285	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	15,291	2,805	12,486	0.262	3,266	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	3,520	3,520				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	37,546	5,737	31,809	0.418	13,287	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	25,258	25,258				P
23	Otter Trawl, Other	OPEN	all	MA	lg	1,743	1,743				P
24	Otter Trawl, Other	OPEN	all	NE	sm	328,666	328,666				P
25	Otter Trawl, Other	OPEN	all	NE	lg	329	329				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	172	172	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	9	9	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	29,247	23,801	5,446	0.394	2,144	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	3,818	2,424	1,394	0.484	674	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	22,601	0	22,601	0.133	2,997	
38	Dredge, Scallop	AA	LIM	MA	all	12,097	0	12,097	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	159,359	70	159,289	0.168	26,791	
40	Dredge, Scallop	OPEN	GEN	MA	all	1,584	0	1,584	0.506	801	
41	Dredge, Scallop	OPEN	GEN	NE	all	6,598	0	6,598	0.417	2,751	
42	Dredge, Scallop	OPEN	LIM	MA	all	34	18	16	2.378	37	P
43	Dredge, Scallop	OPEN	LIM	NE	all	344,802	55	344,747	0.164	56,509	
44	Trawl, Midwater	all	all	NE	sm	1,826	1,825	1	0.420	< 1	
45	Pots and Traps, Fish	OPEN	all	MA	all	602	602	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	5	5	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	16,418	8,983	7,435	1.595	11,861	
51	Pots and Traps, Lobster	OPEN	all	NE	all	395,395	2,144	393,251	0.727	286,087	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	7	0	7	0.958	7	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	318	0	318	0.680	216	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	958	0	958	0.959	919	
	Confidential fleets					211	211				
	Other minor fleets					114,796	114,796				
					TOTAL	15,220,274	9,738,015	5,482,259	0.239	1,309,545	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SPINY DOGFISH (*Squalus acanthias*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	133,710	97,226	36,484	1.078	39,337	
2	Longline, Bottom	OPEN	all	NE	all	1,356,474	1,328,777	27,697	0.403	11,167	
3	Hand Line	OPEN	all	MA	all	312	63	249	0.471	118	
4	Hand Line	OPEN	all	NE	all	16,679	15,340	1,339	2.655	3,555	
5	Otter Trawl	OPEN	all	MA	sm	3,057,697	28,038	3,029,659	0.189	572,981	
6	Otter Trawl	OPEN	all	MA	lg	2,803,474	88,965	2,714,509	0.401	1,089,126	
7	Otter Trawl	OPEN	all	NE	sm	1,377,784	775	1,377,009	0.298	410,079	
8	Otter Trawl	OPEN	all	NE	lg	2,910,358	81,562	2,828,796	0.279	788,281	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	56,074	445	55,629	0.384	21,379	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	63,922	1,045	62,877	0.685	43,048	
14	Otter Trawl, Twin	OPEN	all	MA	lg	4,368	260	4,108	0.128	526	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	16,376	0	16,376	0.638	10,441	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	104,640	0	104,640	0.311	32,495	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	37,475	37,475				P
23	Otter Trawl, Other	OPEN	all	MA	lg	24,250	24,250				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	360	360				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	3,182,675	3,005,718	176,957	0.976	172,796	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	5,272,823	5,136,818	136,005	0.166	22,641	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	59,888	55,893	3,995	0.441	1,763	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	8,124	8,124				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	3,245,516	2,603,376	642,140	0.542	348,108	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	327,544	253,916	73,628	0.225	16,532	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	3,878	0	3,878	0.266	1,032	
38	Dredge, Scallop	AA	LIM	MA	all	8,095	0	8,095	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	15,275	0	15,275	0.222	3,384	
40	Dredge, Scallop	OPEN	GEN	MA	all	1,443	0	1,443	0.631	911	
41	Dredge, Scallop	OPEN	GEN	NE	all	2,821	0	2,821	0.813	2,294	
42	Dredge, Scallop	OPEN	LIM	MA	all	1,173	0	1,173	0.499	586	P
43	Dredge, Scallop	OPEN	LIM	NE	all	92,363	0	92,363	0.402	37,146	
44	Trawl, Midwater	all	all	NE	sm	5,019	3,300	1,719	0.426	732	
45	Pots and Traps, Fish	OPEN	all	MA	all	34	0	34	3.340	115	
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	1,015	1,015	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	3,149	0	3,149	0.846	2,663	
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	39,033	0	39,033	0.530	20,683	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	40,458	0	40,458	1.068	43,219	
	Confidential fleets					0	0				
	Other minor fleets					1,100	1,100				
					TOTAL	24,275,382	12,773,841	11,501,541	0.136	1,569,950	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SQUID (*Doryteuthis [Amerigo] pealeii*, *Illex illecebrosus*) - BUTTERFISH (*Peprilus triacanthus*) - MACKEREL (*Scomber colias*, *Scomber scombrus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	1,004	1,004	0			
4	Hand Line	OPEN	all	NE	all	1,273,561	1,260,927	12,634	0.397	5,014	
5	Otter Trawl	OPEN	all	MA	sm	15,653,455	13,335,315	2,318,140	0.320	741,635	
6	Otter Trawl	OPEN	all	MA	lg	490,604	392,703	97,901	0.622	60,878	
7	Otter Trawl	OPEN	all	NE	sm	35,975,466	28,499,129	7,476,337	0.207	1,545,643	
8	Otter Trawl	OPEN	all	NE	lg	671,660	544,095	127,565	0.557	71,023	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	172,133	108,770	63,363	0.336	21,259	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	1,067,282	768,477	298,805	0.416	124,226	
14	Otter Trawl, Twin	OPEN	all	MA	lg	2,270	2,270	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	2,310,450	1,689,865	620,585	0.293	182,033	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	955,015	955,015				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	303	80	223	0.838	187	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	1,197	1,197				P
22	Otter Trawl, Other	OPEN	all	MA	sm	1,040,095	1,040,095				P
23	Otter Trawl, Other	OPEN	all	MA	lg	35,713	35,713				P
24	Otter Trawl, Other	OPEN	all	NE	sm	1,289,714	1,289,714				P
25	Otter Trawl, Other	OPEN	all	NE	lg	1,275	1,275				P
27	Floating Trap	OPEN	all	NE	all	11	11				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	8,336	8,104	232	1.283	297	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	350	140	210	0.688	145	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	2	2	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	4,243	2,698	1,545	0.573	885	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	1,427	273	1,154	0.683	788	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	47	40	7	0.664	5	
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	69	0	69	0.417	29	
38	Dredge, Scallop	AA	LIM	MA	all	77	0	77	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	1,485	0	1,485	0.362	537	
40	Dredge, Scallop	OPEN	GEN	MA	all	985	18	967	0.294	284	
41	Dredge, Scallop	OPEN	GEN	NE	all	830	0	830	0.536	445	
42	Dredge, Scallop	OPEN	LIM	MA	all	669	20	649	1.320	856	P
43	Dredge, Scallop	OPEN	LIM	NE	all	4,101	7	4,094	0.193	792	
44	Trawl, Midwater	all	all	NE	sm	6,486,941	6,486,533	408	2.515	1,027	
45	Pots and Traps, Fish	OPEN	all	MA	all	225	27	198	0.722	143	
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	1	0	1	1.323	2	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					169	169				
	Other minor fleets					398,941	398,941				
					TOTAL	67,850,106	56,822,627	11,027,479	0.157	1,731,137	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: SURFCLAM (*Spisula solidissima*) - OCEAN QUAHOG (*Arctica islandica*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	1,094	0	1,094	0.483	529	
6	Otter Trawl	OPEN	all	MA	lg	10,309	0	10,309	0.485	5,002	
7	Otter Trawl	OPEN	all	NE	sm	1,354	0	1,354	0.707	958	
8	Otter Trawl	OPEN	all	NE	lg	3,809	10	3,799	0.689	2,618	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	65	0	65	1.134	74	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	16	0	16	0.917	15	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	840	0	840	0.564	474	
38	Dredge, Scallop	AA	LIM	MA	all	40	0	40	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	88,215	0	88,215	0.279	24,633	
40	Dredge, Scallop	OPEN	GEN	MA	all	8,223	0	8,223	0.348	2,860	
41	Dredge, Scallop	OPEN	GEN	NE	all	209,790	209,125	665	0.562	374	
42	Dredge, Scallop	OPEN	LIM	MA	all	825	0	825	2.378	1,963	P
43	Dredge, Scallop	OPEN	LIM	NE	all	120,155	0	120,155	0.387	46,510	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	2,793	0	2,793	1.003	2,802	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	158,064	158,064				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	201,400,232	198,321,737	3,078,495	0.655	2,014,898	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	163,766,630	163,757,487	9,143	1.044	9,541	
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	365,772,455	362,446,424	3,326,031	0.606	2,015,622	

Table 5A. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 14 fish and invertebrate species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. Light shading indicates that the variance of the discard estimate was not used in the annual sample size analysis. Blank CV indicates either no discards or discards equals 0. "P" indicates fleets with "pilot" designation.

Species Group: TILEFISH

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	1,341,309	1,340,865	444	1.047	464	
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	24,066	24,066	0			
4	Hand Line	OPEN	all	NE	all	1,470	1,470	0			
5	Otter Trawl	OPEN	all	MA	sm	8,432	5,416	3,016	0.450	1,357	
6	Otter Trawl	OPEN	all	MA	lg	12,881	3,345	9,536	0.630	6,011	
7	Otter Trawl	OPEN	all	NE	sm	36,886	13,996	22,890	0.401	9,175	
8	Otter Trawl	OPEN	all	NE	lg	984	713	271	0.733	199	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	582	582	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	1,765	1,209	556	0.554	308	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	130	130				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	194	194				P
23	Otter Trawl, Other	OPEN	all	MA	lg	525	525				P
24	Otter Trawl, Other	OPEN	all	NE	sm	547	547				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	3	3				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	4,737	1,327	3,410	0.572	1,951	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	4	0	4	0.970	3	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	1,178	1,178	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	1,340	1,340	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					4,103	4,103				
					TOTAL	1,441,136	1,401,009	40,127	0.280	11,239	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error (SE) of the estimated discards (live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: BLACK SEA BASS (*Centropristis striata*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	3	3	0			
2	Longline, Bottom	OPEN	all	NE	all	82	0	82	1.031	85	
3	Hand Line	OPEN	all	MA	all	156,638	127,457	29,181	0.732	21,350	
4	Hand Line	OPEN	all	NE	all	47,627	47,062	565	7.697	4,345	
5	Otter Trawl	OPEN	all	MA	sm	1,414,564	1,175,732	238,832	0.179	42,853	
6	Otter Trawl	OPEN	all	MA	lg	537,636	435,568	102,068	0.392	40,052	
7	Otter Trawl	OPEN	all	NE	sm	642,034	131,779	510,255	0.434	221,401	
8	Otter Trawl	OPEN	all	NE	lg	97,512	71,488	26,024	0.374	9,726	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	2,754	0	2,754	0.425	1,170	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	9,476	3,370	6,106	0.637	3,890	
14	Otter Trawl, Twin	OPEN	all	MA	lg	2,759	2,045	714	0.128	91	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	552	47	505	0.639	323	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	136	136				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	4	0	4	0.971	4	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	115	115				P
22	Otter Trawl, Other	OPEN	all	MA	sm	99,248	99,248				P
23	Otter Trawl, Other	OPEN	all	MA	lg	29,831	29,831				P
24	Otter Trawl, Other	OPEN	all	NE	sm	5,064	5,064				P
25	Otter Trawl, Other	OPEN	all	NE	lg	1,496	1,496				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	420	420	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	616	616	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	2,762	2,743	19	0.778	15	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	4,156	3,733	423	0.762	322	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	81	45	36	1.113	40	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	19	0	19	0.703	13	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	376	0	376	0.940	353	
40	Dredge, Scallop	OPEN	GEN	MA	all	4,236	1,085	3,151	0.900	2,837	
41	Dredge, Scallop	OPEN	GEN	NE	all	677	0	677	1.006	681	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	1,299	0	1,299	0.680	884	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	752,927	587,643	165,284	0.187	30,987	
46	Pots and Traps, Fish	OPEN	all	NE	all	507,739	347,200	160,539	0.507	81,459	
47	Pots and Traps, Conch	OPEN	all	MA	all	851	800	51	0.859	44	
48	Pots and Traps, Conch	OPEN	all	NE	all	8,825	2,195	6,630	0.498	3,298	
50	Pots and Traps, Lobster	OPEN	all	MA	all	166,385	151,684	14,701	1.001	14,719	
51	Pots and Traps, Lobster	OPEN	all	NE	all	52,989	33,957	19,032	0.716	13,631	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	3	0	3	1.011	3	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	2,005	0	2,005	0.375	752	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					575	575				
	Other minor fleets					3,010	3,010				
					TOTAL	4,557,482	3,266,147	1,291,335	0.191	247,112	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: FLUKE (*Paralichthys dentatus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	216	0	216	0.513	111	
3	Hand Line	OPEN	all	MA	all	28,623	17,660	10,963	1.333	14,619	
4	Hand Line	OPEN	all	NE	all	3,551	3,551	0			
5	Otter Trawl	OPEN	all	MA	sm	1,114,546	924,948	189,598	0.190	35,974	
6	Otter Trawl	OPEN	all	MA	lg	7,886,578	7,587,219	299,359	0.334	99,888	
7	Otter Trawl	OPEN	all	NE	sm	1,373,188	989,426	383,762	0.251	96,431	
8	Otter Trawl	OPEN	all	NE	lg	1,646,241	1,527,238	119,003	0.570	67,781	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	1,000	1,000	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	24,032	15,140	8,892	0.599	5,323	
14	Otter Trawl, Twin	OPEN	all	MA	lg	89,355	88,283	1,072	0.128	137	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	2,566	1,410	1,156	0.609	704	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	585	585				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	11,650	11,650	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	74,426	74,426				P
22	Otter Trawl, Other	OPEN	all	MA	sm	23,554	23,554				P
23	Otter Trawl, Other	OPEN	all	MA	lg	779,171	779,171				P
24	Otter Trawl, Other	OPEN	all	NE	sm	22,778	22,778				P
25	Otter Trawl, Other	OPEN	all	NE	lg	72,708	72,708				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	44	44	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	1,667	1,069	598	0.229	137	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	2,039	1,123	916	1.124	1,030	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	110	110				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	4,156	2,971	1,185	0.542	642	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	36,072	22,111	13,961	0.217	3,036	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	9,854	30	9,824	0.307	3,015	
38	Dredge, Scallop	AA	LIM	MA	all	4,413	50	4,363	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	133,998	4	133,994	0.280	37,553	
40	Dredge, Scallop	OPEN	GEN	MA	all	65,584	8,557	57,027	0.366	20,899	
41	Dredge, Scallop	OPEN	GEN	NE	all	9,650	0	9,650	0.760	7,337	
42	Dredge, Scallop	OPEN	LIM	MA	all	6,613	2,395	4,218	0.499	2,106	P
43	Dredge, Scallop	OPEN	LIM	NE	all	253,344	80	253,264	0.389	98,461	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	2,623	1,269	1,354	3.175	4,298	
46	Pots and Traps, Fish	OPEN	all	NE	all	330	330	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	597	517	80	2.592	208	
51	Pots and Traps, Lobster	OPEN	all	NE	all	15	15	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	60	60				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	24,018	0	24,018	0.500	12,019	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	1,606	0	1,606	0.937	1,506	
	Confidential fleets					13,547	13,547				
	Other minor fleets					52,410	52,410				
					TOTAL	13,777,518	12,247,439	1,530,079	0.126	192,853	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: SCUP (*Stenotomus chrysops*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	27,807	23,349	4,458	0.886	3,951	
4	Hand Line	OPEN	all	NE	all	2,048	2,002	46	7.698	352	
5	Otter Trawl	OPEN	all	MA	sm	5,240,238	3,951,272	1,288,966	0.200	257,277	
6	Otter Trawl	OPEN	all	MA	lg	2,415,798	1,946,955	468,843	0.246	115,317	
7	Otter Trawl	OPEN	all	NE	sm	4,849,315	1,666,702	3,182,613	0.221	703,325	
8	Otter Trawl	OPEN	all	NE	lg	1,234,935	909,274	325,661	0.353	114,875	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	81,296	67,195	14,101	0.425	5,994	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	149,520	19,294	130,226	0.523	68,092	
14	Otter Trawl, Twin	OPEN	all	MA	lg	11,098	10,993	105	0.128	13	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	792	780	12	0.639	8	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	6,545	6,545				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	300	300				P
22	Otter Trawl, Other	OPEN	all	MA	sm	468,751	468,751				P
23	Otter Trawl, Other	OPEN	all	MA	lg	277,210	277,210				P
24	Otter Trawl, Other	OPEN	all	NE	sm	42,804	42,804				P
25	Otter Trawl, Other	OPEN	all	NE	lg	26,499	26,499				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	17,417	17,417	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	11,986	11,920	66	0.818	54	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	1,058	1,058	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	25,672	25,310	362	0.836	303	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	8	8	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	42	0	42	0.976	41	
40	Dredge, Scallop	OPEN	GEN	MA	all	14,930	14,112	818	1.054	862	
41	Dredge, Scallop	OPEN	GEN	NE	all	831	0	831	1.312	1,091	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	72	0	72	0.583	42	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	17,175	16,958	217	1.003	218	
46	Pots and Traps, Fish	OPEN	all	NE	all	241,930	202,478	39,452	0.513	20,227	
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	331	128	203	1.461	297	
50	Pots and Traps, Lobster	OPEN	all	MA	all	8,507	3,934	4,573	1.818	8,316	
51	Pots and Traps, Lobster	OPEN	all	NE	all	11,232	11,232	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	111	111	0			
Confidential fleets						4,724	4,724				
Other minor fleets						162,959	162,959				
TOTAL						15,353,943	9,892,274	5,461,669	0.141	769,753	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: ACADIAN REDFISH (*Sebastes fasciatus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	168	168	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	480	480	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	141	141	0			
7	Otter Trawl	OPEN	all	NE	sm	1,019,166	1,018,648	518	1.004	520	
8	Otter Trawl	OPEN	all	NE	lg	4,868,443	4,839,940	28,503	0.405	11,534	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	54,039	53,727	312	0.444	138	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	158	158				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	4,898	4,725	173	0.527	91	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	11	11	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	45	0	45	0.560	25	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	3	0	3	1.622	5	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	9	0	9	0.984	9	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	11,835	0	11,835	1.260	14,907	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					3,200	3,200				
					TOTAL	5,962,596	5,921,198	41,398	0.455	18,856	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: AMERICAN PLAICE (*Hippoglossoides platessoides*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	14,418	14,418	0			
7	Otter Trawl	OPEN	all	NE	sm	3,915	3,476	439	0.721	317	
8	Otter Trawl	OPEN	all	NE	lg	1,890,764	1,779,526	111,238	0.608	67,673	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	20,612	19,705	907	0.863	783	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	35	35				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	26,200	26,200				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	5,155	4,361	794	0.563	447	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	20	20	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	720	0	720	0.472	340	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	3,224	0	3,224	0.378	1,218	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	4,551	0	4,551	0.824	3,749	
42	Dredge, Scallop	OPEN	LIM	MA	all	778	0	778	0.499	389	P
43	Dredge, Scallop	OPEN	LIM	NE	all	40,321	5	40,316	0.614	24,774	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	195	195	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					15	15				
	Other minor fleets					71	71				
					TOTAL	2,010,995	1,848,027	162,968	0.443	72,181	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: ATLANTIC COD (*Gadus morhua*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	6,250	5,983	267	7.204	1,925	
3	Hand Line	OPEN	all	MA	all	5,295	5,295	0			
4	Hand Line	OPEN	all	NE	all	6,765	4,672	2,093	0.385	805	
5	Otter Trawl	OPEN	all	MA	sm	70	0	70	0.729	51	
6	Otter Trawl	OPEN	all	MA	lg	2,453	2,398	55	0.874	48	
7	Otter Trawl	OPEN	all	NE	sm	6,054	5,434	620	0.472	293	
8	Otter Trawl	OPEN	all	NE	lg	573,381	561,361	12,020	0.232	2,792	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	9,667	0	9,667	0.425	4,109	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	25	0	25	1.008	26	
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	28,127	26,687	1,440	0.349	503	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	7,377	7,377				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	86,307	83,141	3,166	0.533	1,688	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	10,307	8,185	2,122	0.361	765	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	152	0	152	0.446	68	
38	Dredge, Scallop	AA	LIM	MA	all	3	3	0			P
39	Dredge, Scallop	AA	LIM	NE	all	1,627	0	1,627	0.358	583	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	576	0	576	0.894	515	
42	Dredge, Scallop	OPEN	LIM	MA	all	780	0	780	0.499	389	P
43	Dredge, Scallop	OPEN	LIM	NE	all	25,466	0	25,466	0.385	9,794	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	69	69	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	96	96	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	3,346	17	3,329	1.781	5,930	
51	Pots and Traps, Lobster	OPEN	all	NE	all	185,347	997	184,350	0.630	116,086	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					298	298				
					TOTAL	959,838	712,013	247,825	0.471	116,793	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: ATLANTIC HALIBUT (*Hippoglossus hippoglossus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	17,396	5,309	12,087	6.838	82,659	
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	2,349	2,349	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	49	49	0			
7	Otter Trawl	OPEN	all	NE	sm	1,442	978	464	0.730	339	
8	Otter Trawl	OPEN	all	NE	lg	36,551	19,300	17,251	0.213	3,679	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,822	1,566	2,256	0.611	1,378	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	225	225				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	7,569	2,010	5,559	0.583	3,243	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	27,764	4,585	23,179	0.331	7,683	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	65	0	65	1.192	78	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	997	146	851	0.651	554	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	500	0	500	0.647	324	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	202	202	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	98,932	36,719	62,213	1.337	83,175	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: ATLANTIC WOLFFISH (*Anarhichas lupus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	0	0	0			
6	Otter Trawl	OPEN	all	MA	lg	0	0	0			
7	Otter Trawl	OPEN	all	NE	sm	0	0	0			
8	Otter Trawl	OPEN	all	NE	lg	44,980	12	44,968	0.505	22,702	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,629	0	3,629	0.466	1,690	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	787	12	775	0.817	633	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	0	0	0			
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	49,395	24	49,371	0.461	22,774	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: HADDOCK (*Melanogrammus aeglefinus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	43,701	43,495	206	7.204	1,481	
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	1,223	1,223	0			
5	Otter Trawl	OPEN	all	MA	sm	7	0	7	0.792	5	
6	Otter Trawl	OPEN	all	MA	lg	4,863	4,863	0			
7	Otter Trawl	OPEN	all	NE	sm	108,187	104,258	3,929	0.487	1,915	
8	Otter Trawl	OPEN	all	NE	lg	9,185,694	7,587,983	1,597,711	0.477	761,624	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	552	0	552	0.598	330	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	1,261,973	1,187,375	74,598	0.572	42,654	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	72,883	72,883				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	31,826	30,298	1,528	0.684	1,046	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	1,492	773	719	0.566	407	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	28	0	28	0.721	20	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	27	0	27	1.009	27	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	9	0	9	1.172	11	
42	Dredge, Scallop	OPEN	LIM	MA	all	26	0	26	0.499	13	P
43	Dredge, Scallop	OPEN	LIM	NE	all	9,255	0	9,255	0.368	3,406	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
Confidential fleets						4,450	4,450				
Other minor fleets						6,803	6,803				
TOTAL						10,732,999	9,044,404	1,688,595	0.452	762,829	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: OCEAN POUT (*Zoarces americanus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	94	0	94	0.955	90	
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	2,390	0	2,390	0.844	2,017	
6	Otter Trawl	OPEN	all	MA	lg	665	0	665	0.688	458	
7	Otter Trawl	OPEN	all	NE	sm	3,004	0	3,004	0.543	1,631	
8	Otter Trawl	OPEN	all	NE	lg	109,067	0	109,067	0.320	34,933	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	97	0	97	1.013	98	
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	1,807	0	1,807	0.280	506	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	410	0	410	0.304	125	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	332	0	332	0.637	211	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	45	0	45	1.222	55	
42	Dredge, Scallop	OPEN	LIM	MA	all	61	0	61	0.499	31	P
43	Dredge, Scallop	OPEN	LIM	NE	all	9,401	0	9,401	0.229	2,153	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	6,404	0	6,404	2.480	15,884	
51	Pots and Traps, Lobster	OPEN	all	NE	all	18,599	0	18,599	1.794	33,364	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	746	0	746	1.060	791	
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	153,122	0	153,122	0.333	50,973	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: POLLOCK (*Pollachius virens*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	647	647	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	7,731	7,731	0			
5	Otter Trawl	OPEN	all	MA	sm	44	0	44	1.019	44	
6	Otter Trawl	OPEN	all	MA	lg	672	672	0			
7	Otter Trawl	OPEN	all	NE	sm	380,294	361,042	19,252	0.748	14,404	
8	Otter Trawl	OPEN	all	NE	lg	5,261,564	5,197,674	63,890	0.460	29,383	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	88,951	88,174	777	0.484	376	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	3,116	3,116				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	549,596	484,044	65,552	0.558	36,597	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	31,243	29,096	2,147	0.476	1,021	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	13	0	13	1.189	16	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	31	0	31	0.962	29	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	3	3	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	2,445	0	2,445	0.942	2,302	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					70	70				
	Other minor fleets					745	745				
					TOTAL	6,327,164	6,173,014	154,150	0.319	49,160	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: WHITE HAKE (*Urophycis tenuis*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	8	8	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	200	200	0			
5	Otter Trawl	OPEN	all	MA	sm	1,365	30	1,335	0.683	912	
6	Otter Trawl	OPEN	all	MA	lg	7,018	1,597	5,421	1.647	8,931	
7	Otter Trawl	OPEN	all	NE	sm	44,227	44,161	66	0.733	48	
8	Otter Trawl	OPEN	all	NE	lg	2,694,088	2,657,007	37,081	1.001	37,136	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	282	15	267	1.027	275	
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	47,444	47,242	202	0.918	186	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	57	57				P
23	Otter Trawl, Other	OPEN	all	MA	lg	120	120				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	19,412	19,412				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	250,675	245,667	5,008	0.539	2,698	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	8,926	8,442	484	0.548	265	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	331	0	331	0.392	130	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	400	0	400	0.610	244	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	6	0	6	1.619	10	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	691	0	691	0.394	272	
44	Trawl, Midwater	all	all	NE	sm	100	100	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	83,791	0	83,791	0.954	79,912	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	186	0	186	0.958	178	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					4,335	4,335				
					TOTAL	3,163,663	3,028,393	135,270	0.655	88,619	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: WINDOWPANE FLOUNDER (*Scophthalmus aquosus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	42,991	0	42,991	0.262	11,247	
6	Otter Trawl	OPEN	all	MA	lg	93,963	0	93,963	0.272	25,588	
7	Otter Trawl	OPEN	all	NE	sm	36,451	0	36,451	0.225	8,218	
8	Otter Trawl	OPEN	all	NE	lg	121,782	55	121,727	0.201	24,482	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	528	0	528	0.425	225	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	1,908	0	1,908	0.492	939	
14	Otter Trawl, Twin	OPEN	all	MA	lg	106	0	106	1.280	136	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	56	0	56	0.894	50	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	35	35				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	626	0	626	0.212	133	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	5	0	5	0.724	4	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	2,350	1	2,349	0.483	1,134	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	11	0	11	1.107	13	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	6,018	0	6,018	0.286	1,721	
38	Dredge, Scallop	AA	LIM	MA	all	3,807	0	3,807	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	91,764	0	91,764	0.185	16,942	
40	Dredge, Scallop	OPEN	GEN	MA	all	1,191	0	1,191	0.277	330	
41	Dredge, Scallop	OPEN	GEN	NE	all	20,330	0	20,330	0.363	7,389	
42	Dredge, Scallop	OPEN	LIM	MA	all	1,075	0	1,075	0.499	537	P
43	Dredge, Scallop	OPEN	LIM	NE	all	86,079	0	86,079	0.233	20,021	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	69	0	69	1.684	116	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	20	0	20	1.068	21	
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	511,167	91	511,076	0.092	46,864	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: WINTER FLOUNDER (*Pseudopleuronectes americanus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	67	67	0			
4	Hand Line	OPEN	all	NE	all	15	15	0			
5	Otter Trawl	OPEN	all	MA	sm	31,869	0	31,869	0.323	10,296	
6	Otter Trawl	OPEN	all	MA	lg	15,969	5,164	10,805	0.262	2,833	
7	Otter Trawl	OPEN	all	NE	sm	121,351	679	120,672	0.247	29,796	
8	Otter Trawl	OPEN	all	NE	lg	628,486	584,439	44,047	0.210	9,240	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	404	0	404	0.868	350	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	4,659	0	4,659	0.656	3,056	
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,246	3,246	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	945	945				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	220	220				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	3	3	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	48	3	45	0.568	25	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	5,937	5,718	219	0.593	130	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	187	94	93	1.063	99	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	8,869	166	8,703	0.256	2,231	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	6,529	6	6,523	0.300	1,958	
40	Dredge, Scallop	OPEN	GEN	MA	all	435	31	404	0.989	400	
41	Dredge, Scallop	OPEN	GEN	NE	all	19,022	3	19,019	0.505	9,607	
42	Dredge, Scallop	OPEN	LIM	MA	all	3,714	0	3,714	0.499	1,855	P
43	Dredge, Scallop	OPEN	LIM	NE	all	233,321	0	233,321	0.180	41,992	
44	Trawl, Midwater	all	all	NE	sm	3	0	3	0.444	1	
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	62	2	60	0.741	44	
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	12,306	17	12,289	1.070	13,144	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					3	3				
	Other minor fleets					0	0				
					TOTAL	1,097,671	600,821	496,850	0.113	56,013	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: WITCH FLOUNDER (*Glyptocephalus cynoglossus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	32,902	0	32,902	0.624	20,517	
6	Otter Trawl	OPEN	all	MA	lg	20,049	12,122	7,927	1.065	8,440	
7	Otter Trawl	OPEN	all	NE	sm	13,589	7,059	6,530	0.475	3,104	
8	Otter Trawl	OPEN	all	NE	lg	1,747,534	1,679,775	67,759	0.753	51,024	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	13,731	13,318	413	0.841	348	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	14,153	14,153				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	2,264	2,176	88	0.609	54	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	7	7	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	856	0	856	0.469	402	
38	Dredge, Scallop	AA	LIM	MA	all	105	0	105	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	7,384	6	7,378	0.188	1,390	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	2,268	0	2,268	1.081	2,452	
42	Dredge, Scallop	OPEN	LIM	MA	all	283	0	283	0.499	141	P
43	Dredge, Scallop	OPEN	LIM	NE	all	50,090	220	49,870	0.271	13,499	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	1	0	1	1.323	2	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					8	8				
	Other minor fleets					213	213				
					TOTAL	1,905,438	1,729,057	176,381	0.325	57,408	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: YELLOWTAIL FLOUNDER (*Limanda ferruginea*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	42	0	42	0.589	25	
6	Otter Trawl	OPEN	all	MA	lg	218	168	50	0.852	42	
7	Otter Trawl	OPEN	all	NE	sm	2,667	2,049	618	0.897	554	
8	Otter Trawl	OPEN	all	NE	lg	601,726	526,776	74,950	0.287	21,532	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	24,880	0	24,880	0.425	10,575	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0			
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	122	111	11	0.971	11	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	1,452	1,452				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	12,957	12,890	67	1.503	101	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	46	36	10	0.918	9	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	640	0	640	0.307	196	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	46,963	0	46,963	0.231	10,863	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	17,675	0	17,675	0.293	5,184	
42	Dredge, Scallop	OPEN	LIM	MA	all	57	0	57	0.499	28	P
43	Dredge, Scallop	OPEN	LIM	NE	all	12,224	0	12,224	0.204	2,497	
44	Trawl, Midwater	all	all	NE	sm	5	5	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	721,674	543,487	178,187	0.151	26,961	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: OFFSHORE HAKE (*Merluccius albidus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	28	28	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	59,794	58,698	1,096	0.819	898	
6	Otter Trawl	OPEN	all	MA	lg	1,163	1,163	0			
7	Otter Trawl	OPEN	all	NE	sm	8,596	1,242	7,354	0.525	3,859	
8	Otter Trawl	OPEN	all	NE	lg	6,118	6,118	0			
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	100	100	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	602	0	602	1.009	607	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	85	85				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	40	40				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	9	9	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	1,005	1,005	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	52	0	52	0.776	41	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	52	0	52	0.517	27	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	7	0	7	0.958	7	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	77,652	68,488	9,164	0.437	4,009	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: RED HAKE (*Urophycis chuss*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	64	0	64	1.336	85	
2	Longline, Bottom	OPEN	all	NE	all	75	65	10	0.955	10	
3	Hand Line	OPEN	all	MA	all	696	696	0			
4	Hand Line	OPEN	all	NE	all	10	10	0			
5	Otter Trawl	OPEN	all	MA	sm	97,032	45,672	51,360	0.538	27,657	
6	Otter Trawl	OPEN	all	MA	lg	20,618	14,936	5,682	1.293	7,348	
7	Otter Trawl	OPEN	all	NE	sm	1,191,704	198,974	992,730	0.352	349,841	
8	Otter Trawl	OPEN	all	NE	lg	497,182	36,780	460,402	0.299	137,736	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	139,242	17,515	121,727	0.381	46,339	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	441	441	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	70	70	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	4	0	4	1.153	5	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	40	40				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	7,735	862	6,873	0.397	2,730	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	836	836				P
23	Otter Trawl, Other	OPEN	all	MA	lg	315	315				P
24	Otter Trawl, Other	OPEN	all	NE	sm	2,129	2,129				P
25	Otter Trawl, Other	OPEN	all	NE	lg	40	40				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	1,029	408	621	0.552	343	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	21,127	0	21,127	0.134	2,823	
38	Dredge, Scallop	AA	LIM	MA	all	7,888	0	7,888	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	144,434	0	144,434	0.165	23,767	
40	Dredge, Scallop	OPEN	GEN	MA	all	992	0	992	0.591	586	
41	Dredge, Scallop	OPEN	GEN	NE	all	4,773	0	4,773	0.545	2,599	
42	Dredge, Scallop	OPEN	LIM	MA	all	16	0	16	2.378	37	P
43	Dredge, Scallop	OPEN	LIM	NE	all	292,892	20	292,872	0.191	55,867	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	602	602	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	5	5	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	15,983	8,548	7,435	1.595	11,861	
51	Pots and Traps, Lobster	OPEN	all	NE	all	395,395	2,144	393,251	0.727	286,087	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	127	0	127	0.680	86	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	958	0	958	0.959	919	
	Confidential fleets					0	0				
	Other minor fleets					134	134				
					TOTAL	2,844,588	331,242	2,513,346	0.191	479,606	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: SILVER HAKE (*Merluccius bilinearis*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	258	258	0			
2	Longline, Bottom	OPEN	all	NE	all	51	0	51	7.204	370	
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	127	127	0			
5	Otter Trawl	OPEN	all	MA	sm	1,452,543	1,383,226	69,317	0.282	19,533	
6	Otter Trawl	OPEN	all	MA	lg	84,127	41,196	42,931	0.538	23,099	
7	Otter Trawl	OPEN	all	NE	sm	6,022,576	4,081,444	1,941,132	0.568	1,101,927	
8	Otter Trawl	OPEN	all	NE	lg	1,186,631	494,132	692,499	0.127	87,661	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	2,925,958	2,830,300	95,658	0.241	23,059	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	1,646	1,436	210	0.442	93	
14	Otter Trawl, Twin	OPEN	all	MA	lg	215	215	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	14,684	2,805	11,879	0.264	3,142	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	3,480	3,480				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	29,811	4,875	24,936	0.440	10,978	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	24,337	24,337				P
23	Otter Trawl, Other	OPEN	all	MA	lg	1,428	1,428				P
24	Otter Trawl, Other	OPEN	all	NE	sm	326,537	326,537				P
25	Otter Trawl, Other	OPEN	all	NE	lg	249	249				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	172	172	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	27,213	22,388	4,825	0.399	1,925	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	3,818	2,424	1,394	0.484	674	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	1,422	0	1,422	0.279	397	
38	Dredge, Scallop	AA	LIM	MA	all	4,209	0	4,209	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	14,925	70	14,855	0.287	4,263	
40	Dredge, Scallop	OPEN	GEN	MA	all	592	0	592	0.495	293	
41	Dredge, Scallop	OPEN	GEN	NE	all	1,825	0	1,825	0.399	729	
42	Dredge, Scallop	OPEN	LIM	MA	all	18	18	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	51,857	35	51,822	0.187	9,690	
44	Trawl, Midwater	all	all	NE	sm	1,826	1,825	1	0.420	< 1	
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	435	435	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	191	0	191	0.680	130	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					211	211				
	Other minor fleets					114,662	114,662				
					TOTAL	12,298,034	9,338,285	2,959,749	0.374	1,106,175	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: ATLANTIC CHUB MACKEREL (*Scomber colias*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	561	561	0			
4	Hand Line	OPEN	all	NE	all	60	60	0			
5	Otter Trawl	OPEN	all	MA	sm	87,478	1,558	85,920	0.920	79,087	
6	Otter Trawl	OPEN	all	MA	lg	71	71	0			
7	Otter Trawl	OPEN	all	NE	sm	35,076	6,875	28,201	0.858	24,190	
8	Otter Trawl	OPEN	all	NE	lg	0	0	0			
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	42	0	42	1.754	74	
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	9	0	9	1.153	10	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	5	5				P
23	Otter Trawl, Other	OPEN	all	MA	lg	210	210				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	206	206	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	41	11	30	1.055	32	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	2	2	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	243	150	93	1.045	97	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	200	200	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	0	0	0			
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					0	0				
					TOTAL	124,204	9,909	114,295	0.724	82,703	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: ATLANTIC MACKEREL (*Scomber scombrus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	296	296	0			
4	Hand Line	OPEN	all	NE	all	1,272,520	1,259,886	12,634	0.397	5,014	
5	Otter Trawl	OPEN	all	MA	sm	52,950	31,595	21,355	0.444	9,478	
6	Otter Trawl	OPEN	all	MA	lg	979	951	28	0.662	19	
7	Otter Trawl	OPEN	all	NE	sm	1,357,681	1,238,845	118,836	0.536	63,641	
8	Otter Trawl	OPEN	all	NE	lg	106,410	11,500	94,910	0.739	70,096	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	34,839	34,008	831	0.398	330	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	2,355	515	1,840	0.951	1,751	
14	Otter Trawl, Twin	OPEN	all	MA	lg	10	10	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	72,462	0	72,462	0.639	46,318	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	6,400	6,400				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	9	0	9	0.945	9	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	408	408				P
23	Otter Trawl, Other	OPEN	all	MA	lg	17	17				P
24	Otter Trawl, Other	OPEN	all	NE	sm	69,498	69,498				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	11	11				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	272	40	232	1.283	297	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	276	96	180	0.782	141	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	3,913	2,490	1,423	0.605	860	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	1,185	73	1,112	0.710	790	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	47	40	7	0.664	5	
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	16	0	16	1.326	22	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	76	0	76	0.639	49	
44	Trawl, Midwater	all	all	NE	sm	6,343,541	6,343,133	408	2.517	1,027	
45	Pots and Traps, Fish	OPEN	all	MA	all	1	1	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					100,370	100,370				
					TOTAL	9,426,543	9,100,183	326,360	0.325	105,970	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: BUTTERFISH (*Peprilus triacanthus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	7	7	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	1,844,206	269,112	1,575,094	0.410	645,880	
6	Otter Trawl	OPEN	all	MA	lg	78,086	35,428	42,658	0.641	27,328	
7	Otter Trawl	OPEN	all	NE	sm	9,467,617	2,941,355	6,526,262	0.218	1,424,024	
8	Otter Trawl	OPEN	all	NE	lg	73,038	56,374	16,664	0.340	5,665	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	96,636	42,409	54,227	0.348	18,872	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	315,059	25,778	289,281	0.413	119,330	
14	Otter Trawl, Twin	OPEN	all	MA	lg	640	640	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	200,974	3,615	197,359	0.582	114,859	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	177,340	177,340				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	7	0	7	0.737	5	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	545	545				P
22	Otter Trawl, Other	OPEN	all	MA	sm	12,055	12,055				P
23	Otter Trawl, Other	OPEN	all	MA	lg	3,083	3,083				P
24	Otter Trawl, Other	OPEN	all	NE	sm	328,794	328,794				P
25	Otter Trawl, Other	OPEN	all	NE	lg	230	230				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	7,858	7,858	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	13	13	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	67	38	29	0.668	20	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	3	0	3	0.719	2	
38	Dredge, Scallop	AA	LIM	MA	all	24	0	24	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	21	0	21	0.394	8	
40	Dredge, Scallop	OPEN	GEN	MA	all	5	0	5	1.127	5	
41	Dredge, Scallop	OPEN	GEN	NE	all	62	0	62	1.252	77	
42	Dredge, Scallop	OPEN	LIM	MA	all	39	0	39	0.975	38	P
43	Dredge, Scallop	OPEN	LIM	NE	all	576	0	576	0.361	208	
44	Trawl, Midwater	all	all	NE	sm	850	850	< 1	0.420	< 1	
45	Pots and Traps, Fish	OPEN	all	MA	all	26	26	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
Confidential fleets						35	35				
Other minor fleets						10,361	10,361				
TOTAL						12,618,259	3,915,946	8,702,313	0.181	1,572,760	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: LONGFIN INSHORE SQUID (*Doryteuthis [Amerigo] pealeii*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	140	140	0			
4	Hand Line	OPEN	all	NE	all	981	981	0			
5	Otter Trawl	OPEN	all	MA	sm	7,710,624	7,501,140	209,484	0.314	65,703	
6	Otter Trawl	OPEN	all	MA	lg	409,601	354,402	55,199	0.665	36,722	
7	Otter Trawl	OPEN	all	NE	sm	19,471,369	19,035,557	435,812	0.291	126,617	
8	Otter Trawl	OPEN	all	NE	lg	482,249	475,264	6,985	0.378	2,637	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	33,831	32,353	1,478	0.050	74	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	749,824	742,184	7,640	0.920	7,030	
14	Otter Trawl, Twin	OPEN	all	MA	lg	1,620	1,620	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	1,737,734	1,686,250	51,484	0.967	49,779	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	224,275	224,275				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	249	80	169	1.146	193	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	652	652				P
22	Otter Trawl, Other	OPEN	all	MA	sm	1,027,627	1,027,627				P
23	Otter Trawl, Other	OPEN	all	MA	lg	32,403	32,403				P
24	Otter Trawl, Other	OPEN	all	NE	sm	807,297	807,297				P
25	Otter Trawl, Other	OPEN	all	NE	lg	1,045	1,045				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	20	20	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	20	20	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	42	0	42	0.851	36	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	21	0	21	0.868	19	
38	Dredge, Scallop	AA	LIM	MA	all	53	0	53	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	700	0	700	0.278	195	
40	Dredge, Scallop	OPEN	GEN	MA	all	936	18	918	0.302	277	
41	Dredge, Scallop	OPEN	GEN	NE	all	597	0	597	0.574	342	
42	Dredge, Scallop	OPEN	LIM	MA	all	629	20	609	1.378	840	P
43	Dredge, Scallop	OPEN	LIM	NE	all	3,061	7	3,054	0.216	659	
44	Trawl, Midwater	all	all	NE	sm	2,550	2,550	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	198	0	198	0.722	143	
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
Confidential fleets						134	134				
Other minor fleets						64,210	64,210				
TOTAL						32,764,691	31,990,249	774,442	0.201	155,670	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: NORTHERN SHORTFIN SQUID (*Illex illecebrosus*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	0	0	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	0	0	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	5,957,860	5,531,910	425,950	0.387	164,966	
6	Otter Trawl	OPEN	all	MA	lg	1,862	1,851	11	0.571	6	
7	Otter Trawl	OPEN	all	NE	sm	5,642,670	5,276,497	366,173	0.361	132,360	
8	Otter Trawl	OPEN	all	NE	lg	9,952	957	8,995	1.091	9,813	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	6,827	0	6,827	0.401	2,737	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	1	0	1	0.869	1	
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	299,271	0	299,271	0.172	51,431	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	547,000	547,000				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	37	0	37	0.358	13	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	0	0				P
23	Otter Trawl, Other	OPEN	all	MA	lg	0	0				P
24	Otter Trawl, Other	OPEN	all	NE	sm	84,125	84,125				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	45	0	45	0.508	23	
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	764	0	764	0.608	465	
40	Dredge, Scallop	OPEN	GEN	MA	all	44	0	44	0.896	39	
41	Dredge, Scallop	OPEN	GEN	NE	all	155	0	155	0.634	98	
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	373	0	373	0.554	207	
44	Trawl, Midwater	all	all	NE	sm	140,000	140,000	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	1	0	1	1.323	2	
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					224,000	224,000				
					TOTAL	12,914,988	11,806,340	1,108,648	0.197	217,904	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: BLUELINE TILEFISH (*Caulolatilus microps*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	56,118	56,118	0			
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	20,923	20,923	0			
4	Hand Line	OPEN	all	NE	all	0	0	0			
5	Otter Trawl	OPEN	all	MA	sm	2,248	930	1,318	0.522	688	
6	Otter Trawl	OPEN	all	MA	lg	1,416	1,271	145	0.575	83	
7	Otter Trawl	OPEN	all	NE	sm	7,326	2,484	4,842	0.330	1,599	
8	Otter Trawl	OPEN	all	NE	lg	8	8	0			
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	431	431	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	1,553	1,164	389	0.562	218	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	0	0				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	69	69				P
23	Otter Trawl, Other	OPEN	all	MA	lg	30	30				P
24	Otter Trawl, Other	OPEN	all	NE	sm	0	0				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	0	0				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	0	0	0			
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	0	0	0			
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	504	504	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	463	463	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					2,443	2,443				
					TOTAL	93,531	86,838	6,693	0.262	1,756	

Table 5B. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error of the estimated discards (SE; live lb) for 26 individual species that compose the 14 species groups, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CVs were not used in the annual sample size analysis. Blank CV indicates either no discards estimated or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: GOLDEN TILEFISH (*Lopholatilus chamaeleonticeps*)

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	1,284,891	1,284,447	444	1.047	464	
2	Longline, Bottom	OPEN	all	NE	all	0	0	0			
3	Hand Line	OPEN	all	MA	all	2,988	2,988	0			
4	Hand Line	OPEN	all	NE	all	1,470	1,470	0			
5	Otter Trawl	OPEN	all	MA	sm	4,559	2,861	1,698	0.671	1,139	
6	Otter Trawl	OPEN	all	MA	lg	10,800	1,409	9,391	0.639	6,002	
7	Otter Trawl	OPEN	all	NE	sm	26,757	8,708	18,049	0.477	8,602	
8	Otter Trawl	OPEN	all	NE	lg	794	523	271	0.733	199	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	0	0	0			P
13	Otter Trawl, Twin	OPEN	all	MA	sm	51	51	0			
14	Otter Trawl, Twin	OPEN	all	MA	lg	0	0	0			P
15	Otter Trawl, Twin	OPEN	all	NE	sm	212	45	167	0.637	107	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	120	120				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0			
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	0	0				P
22	Otter Trawl, Other	OPEN	all	MA	sm	17	17				P
23	Otter Trawl, Other	OPEN	all	MA	lg	145	145				P
24	Otter Trawl, Other	OPEN	all	NE	sm	147	147				P
25	Otter Trawl, Other	OPEN	all	NE	lg	0	0				P
27	Floating Trap	OPEN	all	NE	all	0	0				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0			
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0			
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0			
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	3	3				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0			
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	4,416	1,006	3,410	0.572	1,951	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	0	0	0			
36	Dredge, Scallop	AA	GEN	MA	all	0	0				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0			
38	Dredge, Scallop	AA	LIM	MA	all	0	0	0			P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0			
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0			
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0			
42	Dredge, Scallop	OPEN	LIM	MA	all	0	0	0			P
43	Dredge, Scallop	OPEN	LIM	NE	all	4	0	4	0.970	3	
44	Trawl, Midwater	all	all	NE	sm	0	0	0			
45	Pots and Traps, Fish	OPEN	all	MA	all	379	379	0			
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0			
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0			
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0			
50	Pots and Traps, Lobster	OPEN	all	MA	all	877	877	0			
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0			
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0			
55	Dredge, Other	OPEN	all	MA	all	0	0				P
56	Dredge, Other	OPEN	all	NE	all	0	0				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0			
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0			
	Confidential fleets					0	0				
	Other minor fleets					1,660	1,660				
					TOTAL	1,340,290	1,306,856	33,434	0.321	10,742	

Table 5C. Total catch (live lb), Vessel Trip Report landings (kept; live lb), estimated discards (live lb), associated coefficient of variation (CV), and standard error (SE) of the estimated discards (live lb) for 14 Standardized Bycatch Reporting Methodology (SBRM) species groups combined, by fleet, based on July 2022 through June 2023 data. Dark shading indicates fleets not considered or with no observed trips in the annual analysis. These CV were not used in the annual sample size analysis. Blank CV indicates either no discards or discards equal 0. See Table 1A for fleet stratification abbreviations; “P” indicates fleets with “pilot” designation.

Species: 14 SBRM SPECIES GROUPS COMBINED

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
1	Longline, Bottom	OPEN	all	MA	all	1,487,181	1,438,992	48,189	0.831	40,066	
2	Longline, Bottom	OPEN	all	NE	all	1,461,834	1,385,424	76,410	1.139	87,048	
3	Hand Line	OPEN	all	MA	all	271,776	226,924	44,852	0.619	27,770	
4	Hand Line	OPEN	all	NE	all	1,383,895	1,366,456	17,439	0.516	8,992	
5	Otter Trawl	OPEN	all	MA	sm	34,071,721	21,394,731	12,676,990	0.111	1,405,719	
6	Otter Trawl	OPEN	all	MA	lg	26,456,874	13,262,373	13,194,501	0.153	2,018,755	
7	Otter Trawl	OPEN	all	NE	sm	58,980,380	38,719,791	20,260,589	0.120	2,429,978	
8	Otter Trawl	OPEN	all	NE	lg	61,108,380	45,148,721	15,959,659	0.105	1,667,956	
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	3,500,511	3,056,393	444,118	0.112	49,672	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	1,435,361	822,156	613,205	0.261	159,788	
14	Otter Trawl, Twin	OPEN	all	MA	lg	441,442	115,075	326,367	0.064	20,929	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	2,351,747	1,696,807	654,940	0.278	182,369	
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	967,677	967,677				P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	2,194,998	1,578,424	616,573	0.176	108,469	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	76,073	76,073				P
22	Otter Trawl, Other	OPEN	all	MA	sm	1,751,038	1,751,038				P
23	Otter Trawl, Other	OPEN	all	MA	lg	1,558,389	1,558,389				P
24	Otter Trawl, Other	OPEN	all	NE	sm	1,698,670	1,698,670				P
25	Otter Trawl, Other	OPEN	all	NE	lg	323,822	323,822				P
27	Floating Trap	OPEN	all	NE	all	14	14				P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	3,428,225	3,247,661	180,563	0.957	172,806	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	5,465,234	5,261,596	203,638	0.122	24,765	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	1,872,483	1,729,292	143,191	0.385	55,132	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	65,172	65,172				P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	5,214,672	4,342,894	871,778	0.407	354,624	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	14,416,704	12,807,058	1,609,646	0.301	485,263	
34	Purse Seine	OPEN	all	MA	all	0	0				P
35	Purse Seine	OPEN	all	NE	all	2,015,512	2,015,490	22	0.304	7	
36	Dredge, Scallop	AA	GEN	MA	all	14,578	14,578				P

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Total	Kept	Discarded	CV	SE	Pilot
37	Dredge, Scallop	AA	GEN	NE	all	10,958,902	9,219,495	1,739,407	0.108	187,760	
38	Dredge, Scallop	AA	LIM	MA	all	8,765,150	8,409,296	355,854	0.000	0	P
39	Dredge, Scallop	AA	LIM	NE	all	90,328,570	77,276,028	13,052,542	0.105	1,369,196	
40	Dredge, Scallop	OPEN	GEN	MA	all	6,308,849	5,138,524	1,170,325	0.111	129,453	
41	Dredge, Scallop	OPEN	GEN	NE	all	8,061,623	6,883,335	1,178,288	0.324	381,559	
42	Dredge, Scallop	OPEN	LIM	MA	all	8,296,101	7,924,868	371,233	0.528	196,114	P
43	Dredge, Scallop	OPEN	LIM	NE	all	144,450,411	125,127,212	19,323,199	0.122	2,351,156	
44	Trawl, Midwater	all	all	NE	sm	19,757,818	19,754,707	3,111	0.428	1,332	
45	Pots and Traps, Fish	OPEN	all	MA	all	775,949	608,862	167,087	0.175	29,314	
46	Pots and Traps, Fish	OPEN	all	NE	all	750,384	550,333	200,051	0.450	90,037	
47	Pots and Traps, Conch	OPEN	all	MA	all	1,871	1,820	51	0.859	44	
48	Pots and Traps, Conch	OPEN	all	NE	all	9,156	2,323	6,833	0.515	3,518	
50	Pots and Traps, Lobster	OPEN	all	MA	all	208,962	167,046	41,916	0.693	29,054	
51	Pots and Traps, Lobster	OPEN	all	NE	all	793,411	65,026	728,385	0.435	316,666	
52	Pots and Traps, Crab	OPEN	all	MA	all	0	0				P
53	Pots and Traps, Crab	OPEN	all	NE	all	5,833,700	4,631,081	1,202,619	0.201	241,175	
55	Dredge, Other	OPEN	all	MA	all	93,456	93,456				P
56	Dredge, Other	OPEN	all	NE	all	264,863	264,863				P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	201,989,068	198,526,482	3,462,586	0.583	2,017,335	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	164,118,426	163,825,804	292,621	0.309	90,550	
	Confidential fleets					130,407	130,407				
	Other minor fleets					1,580,169	1,580,169				
					TOTAL	907,491,607	796,252,827	111,238,779	0.047	5,205,894	

Table 6A. The number of trips needed to achieve a 30% coefficient of variation of the discard estimate for each of the 14 fish and invertebrate species groups, the number of pilot trips, the number of minimum pilot trips, and the maximum number of trips needed for each fleet (2024 Trips Needed) for fish and invertebrate species groups based on July 2022 through June 2023 data. Bold red font indicates basis for fleet trips. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations; “P” indicates fleets with “pilot” designation.

Row	Fleet Gear Type	Access Area	Trip	Region	Mesh Group	BLUE	HERR	SAL	RCRAB	SCAL	SBM	MONK	GFL	GFS	SKATE	DOG	FSB	SCOQ	TILE	Pilot Trips	Min Pilot Trips	2024 Trips Needed	Pilot		
1	Longline, Bottom	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12		
2	Longline, Bottom	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	12	12	
3	Hand Line	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	12	12	
4	Hand Line	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	12	12	
5	Otter Trawl	OPEN	all	MA	sm	0	0	0	1,417	0	366	322	0	0	154	141	130	0	0	0	0	43	12	1,417	
6	Otter Trawl	OPEN	all	MA	lg	0	0	0	0	0	0	271	0	0	42	181	44	0	0	0	0	53	12	271	
7	Otter Trawl	OPEN	all	NE	sm	0	0	0	0	0	88	214	88	342	147	176	82	0	0	0	0	51	12	342	
8	Otter Trawl	OPEN	all	NE	lg	0	0	0	0	0	0	46	212	68	47	155	187	0	0	0	0	85	12	212	
9	Otter Trawl, LgMesh Belly Panel	OPEN	all	MA	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
11	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
12	Otter Trawl, Scallop	OPEN	GEN	MA	lg	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	
14	Otter Trawl, Twin	OPEN	all	MA	lg	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	9	
16	Otter Trawl, Twin	OPEN	all	NE	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
17	Otter Trawl, Ruhle	OPEN	all	MA	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0	0	0	0	0	0	0	12	20	0	0	0	0	0	12	12	20	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	P
21	Otter Trawl, Shrimp	OPEN	all	NE	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
22	Otter Trawl, Other	OPEN	all	MA	sm	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
23	Otter Trawl, Other	OPEN	all	MA	lg	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
24	Otter Trawl, Other	OPEN	all	NE	sm	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
25	Otter Trawl, Other	OPEN	all	NE	lg	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
26	Floating Trap	OPEN	all	MA	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	P
27	Floating Trap	OPEN	all	NE	all	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0	0	0	0	0	0	0	0	157	0	0	0	0	0	27	12	157	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	33	12	38	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	9	9	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0	0	0	0	0	0	0	0	93	0	0	0	0	0	26	12	93	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	0	0	0	0	0	0	62	0	0	143	0	0	0	0	0	0	38	12	143	
34	Purse Seine	OPEN	all	MA	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	P
35	Purse Seine	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	9	9	
36	Dredge, Scallop	AA	GEN	MA	all	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0	0	0	0	16	0	0	18	0	0	0	0	0	0	60	12	18	
38	Dredge, Scallop	AA	LIM	MA	all	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0	0	36	0	13	0	28	25	0	0	0	0	0	0	18	12	36	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	21	12	12	
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0	0	0	0	41	0	0	0	0	0	0	0	0	0	48	12	41	
42	Dredge, Scallop	OPEN	LIM	MA	all	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
43	Dredge, Scallop	OPEN	LIM	NE	all	0	0	0	0	86	0	20	20	30	21	0	0	0	0	0	0	19	12	86	
44	Trawl, Midwater	all	all	NE	sm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12	12	
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	12	12	
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	9	9	
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	12	12	

Row	Fleet Gear Type	Access Area	Trip	Region	Mesh Group	BLUE	HERR	SAL	RCRAB	SCAL	SBM	MONK	GFL	GFS	SKATE	DOG	FSB	SCOQ	TILE	Pilot Trips	Min Pilot Trips	2024 Trips Needed	Pilot	
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	12	12	
49	Pots and Traps, Hagfish	OPEN	all	NE	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	P
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	12	12	
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0	0	0	0	0	26	77	0	0	0	0	0	0	340	12	77	
52	Pots and Traps, Crab	OPEN	all	MA	all	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	12	12	12	
54	Scottish Seine	OPEN	all	MA	sm	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
55	Dredge, Other	OPEN	all	MA	all	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
56	Dredge, Other	OPEN	all	NE	all	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	12	12	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	12	12	
					Totals	207	207	207	1,630	329	661	1,212	553	752	827	1,168	650	207	207	1,423	579	3,362		

Table 6B. The number of sea days needed to achieve a 30% coefficient of variation of the discard estimate for each of the 14 fish and invertebrate species groups, the number of pilot sea days, the number of minimum pilot sea days, and the maximum number of sea days needed for each fleet (2024 Sea Days Needed) for fish and invertebrate species groups based on July 2022 through June 2023 data. Bold red font indicates basis for fleet sea days. See Table 1A for fleet stratification and Table 1B for species group abbreviations; “P” indicates fleets with “pilot” designation.

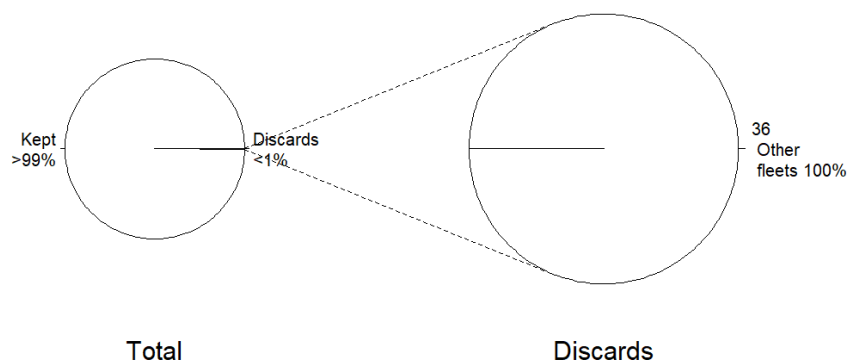
Row	Fleet Gear Type	Access Area	Trip	Region	Mesh Group	BLUE	HERR	SAL	RCRAB	SCAL	SBM	MONK	GFL	GFS	SKATE	DOG	FSB	SCOQ	TILE	Pilot Days	Min Pilot Days	2024 Sea Days Needed	Pilot	
1	Longline, Bottom	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	61	61	
2	Longline, Bottom	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	13	13	
3	Hand Line	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	13	13	
4	Hand Line	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	14	14	
5	Otter Trawl	OPEN	all	MA	sm	0	0	0	3,525	0	911	802	0	0	382	352	323	0	0	0	107	32	3,525	
6	Otter Trawl	OPEN	all	MA	lg	0	0	0	0	0	0	728	0	0	113	486	119	0	0	0	143	35	728	
7	Otter Trawl	OPEN	all	NE	sm	0	0	0	0	264	641	265	1,026	0	441	527	245	0	0	0	153	37	1,026	
8	Otter Trawl	OPEN	all	NE	lg	0	0	0	0	0	0	129	595	190	133	435	524	0	0	0	237	35	595	
9	Otter Trawl, LgMesh Belly Panel	OPEN	all	MA	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
10	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	sm	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	P
11	Otter Trawl, LgMesh Belly Panel	OPEN	all	NE	lg	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	P
12	Otter Trawl, Scallop	OPEN	GEN	MA	lg	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	P
13	Otter Trawl, Twin	OPEN	all	MA	sm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	33	33	
14	Otter Trawl, Twin	OPEN	all	MA	lg	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	P
15	Otter Trawl, Twin	OPEN	all	NE	sm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	66	66	
16	Otter Trawl, Twin	OPEN	all	NE	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
17	Otter Trawl, Ruhle	OPEN	all	MA	lg	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	P
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43	P
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	0	0	0	0	0	0	0	0	0	91	148	0	0	0	0	91	91	148	
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	P
21	Otter Trawl, Shrimp	OPEN	all	NE	lg	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
22	Otter Trawl, Other	OPEN	all	MA	sm	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	P
23	Otter Trawl, Other	OPEN	all	MA	lg	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	P
24	Otter Trawl, Other	OPEN	all	NE	sm	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	P
25	Otter Trawl, Other	OPEN	all	NE	lg	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	P
26	Floating Trap	OPEN	all	MA	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	P
27	Floating Trap	OPEN	all	NE	all	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	P
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	0	0	0	0	0	0	0	0	0	0	169	0	0	0	0	29	13	169	
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	34	13	38	
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	10	10	
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	P
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	0	0	0	0	0	0	0	0	0	0	137	0	0	0	0	40	21	137	
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	0	0	0	0	0	0	89	0	0	205	0	0	0	0	0	55	19	205	
34	Purse Seine	OPEN	all	MA	all	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	P
35	Purse Seine	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	14	14	
36	Dredge, Scallop	AA	GEN	MA	all	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
37	Dredge, Scallop	AA	GEN	NE	all	0	0	0	0	0	0	24	0	0	27	0	0	0	0	0	91	20	27	
38	Dredge, Scallop	AA	LIM	MA	all	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	P
39	Dredge, Scallop	AA	LIM	NE	all	0	0	0	0	263	0	99	0	205	186	0	0	0	0	0	136	91	263	
40	Dredge, Scallop	OPEN	GEN	MA	all	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	47	27	27	
41	Dredge, Scallop	OPEN	GEN	NE	all	0	0	0	0	0	0	59	0	0	0	0	0	0	0	0	69	18	59	
42	Dredge, Scallop	OPEN	LIM	MA	all	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	P
43	Dredge, Scallop	OPEN	LIM	NE	all	0	0	0	0	828	0	193	189	285	205	0	0	0	0	0	186	114	828	
44	Trawl, Midwater	all	all	NE	sm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	66	66	
45	Pots and Traps, Fish	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	13	13	
46	Pots and Traps, Fish	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	10	10	
47	Pots and Traps, Conch	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	12	12	
48	Pots and Traps, Conch	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	12	12	

Row	Fleet Gear Type	Access Area	Trip	Region	Mesh Group	BLUE	HERR	SAL	RCRAB	SCAL	SBM	MONK	GFL	GFS	SKATE	DOG	FSB	SCOQ	TILE	Pilot Days	Min Pilot Days	2024 Sea Days Needed	Pilot	
49	Pots and Traps, Hagfish	OPEN	all	NE	all	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	P
50	Pots and Traps, Lobster	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	17	17	
51	Pots and Traps, Lobster	OPEN	all	NE	all	0	0	0	0	0	0	0	34	100	0	0	0	0	0	0	453	17	100	
52	Pots and Traps, Crab	OPEN	all	MA	all	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	P
53	Pots and Traps, Crab	OPEN	all	NE	all	0	0	0	46	0	0	0	0	0	0	0	0	0	0	0	91	91	91	
54	Scottish Seine	OPEN	all	MA	sm	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	P
55	Dredge, Other	OPEN	all	MA	all	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	P
56	Dredge, Other	OPEN	all	NE	all	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	P
57	Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	25	25	
58	Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	21	21	
					Totals	747	747	747	4,318	1,838	1,922	3,511	1,830	2,553	2,553	3,039	1,958	747	747	3,297	1,821	9,113		

Table 7. Number of sea days, trips, and percentage of trips (based upon previous industry activity) needed to achieve a 30% coefficient of variation of the discard estimate, by fleet and species group, based on July 2022 through June 2023 data. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. MPC = Minimum Pilot Coverage.

Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Species Group	Sea Days	Trips	% of Trips
5	Otter Trawl	OPEN	all	MA	sm	RCRAB	3,525	1,417	66
						SBM	911	366	17
						MONK	802	322	15
						SKATE	382	154	7
						DOG	352	141	7
6	Otter Trawl	OPEN	all	MA	lg	MONK	728	271	10
						DOG	486	181	7
						FSB	119	44	2
						SKATE	113	42	2
						7	Otter Trawl	OPEN	all	NE	sm	GFS	1,026	342	13
MONK	641	214	8						
DOG	527	176	7						
SKATE	441	147	6						
GFL	265	88	4						
SBM	264	88	4						
FSB	245	82	3						
8	Otter Trawl	OPEN	all	NE	lg	GFL	595	212	5
						FSB	524	187	4
						DOG	435	155	4
						GFS	190	68	2
						SKATE	133	47	1
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	DOG	148	20	26
						SKATE	91	12	16
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	DOG	169	157	12
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	DOG	38	38	2
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	DOG	137	93	8
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	SKATE	205	143	7
						MONK	89	62	3
37	Dredge, Scallop	AA	GEN	NE	all	SKATE	27	18	1
						MONK	24	16	1
39	Dredge, Scallop	AA	LIM	NE	all	SCAL	263	36	4
						GFS	205	28	3
						SKATE	186	25	3
						MONK	99	13	2
40	Dredge, Scallop	OPEN	GEN	MA	all	MPC	27	12	1
						SKATE	23	11	1
41	Dredge, Scallop	OPEN	GEN	NE	all	MONK	59	41	2
43	Dredge, Scallop	OPEN	LIM	NE	all	SCAL	828	86	10
						GFS	285	30	3
						SKATE	205	21	2
						MONK	193	20	2
51	Pots and Traps, Lobster	OPEN	all	NE	all	GFS	100	77	<1
						GFL	34	26	<1
53	Pots and Traps, Crab	OPEN	all	NE	all	MPC	91	12	13
						RCRAB	46	6	7

SPECIES: ATLANTIC HERRING



SPECIES: BLUEFISH

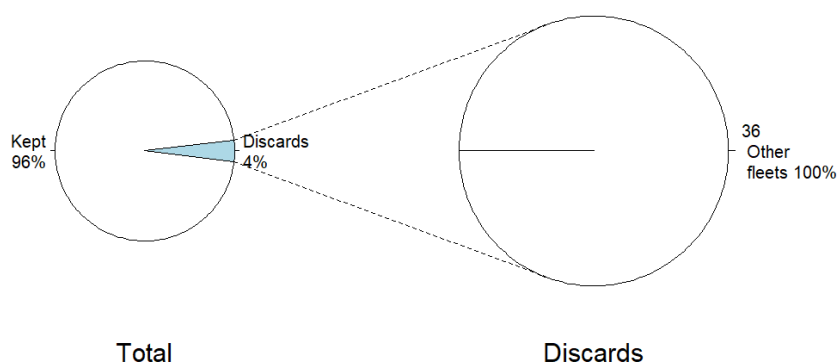
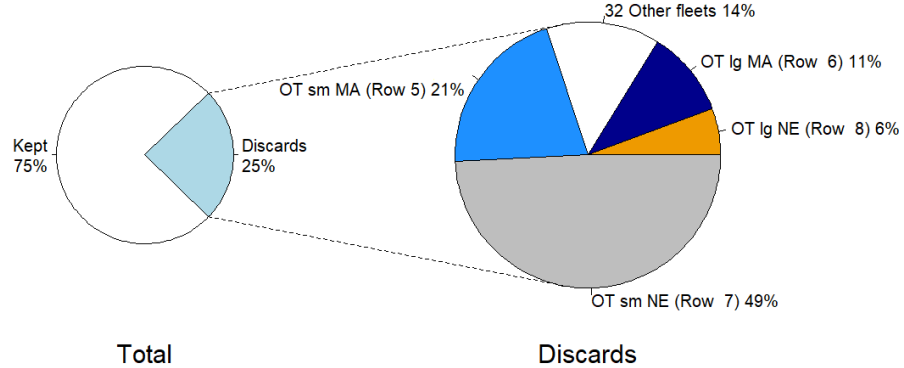


Figure 1A. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: ATLANTIC HERRING (*Clupea harengus*)

Bottom: BLUEFISH (*Pomatomus saltatrix*)

SPECIES: FLUKE - SCUP - BLACK SEA BASS



SPECIES: LARGE MESH GROUND FISH

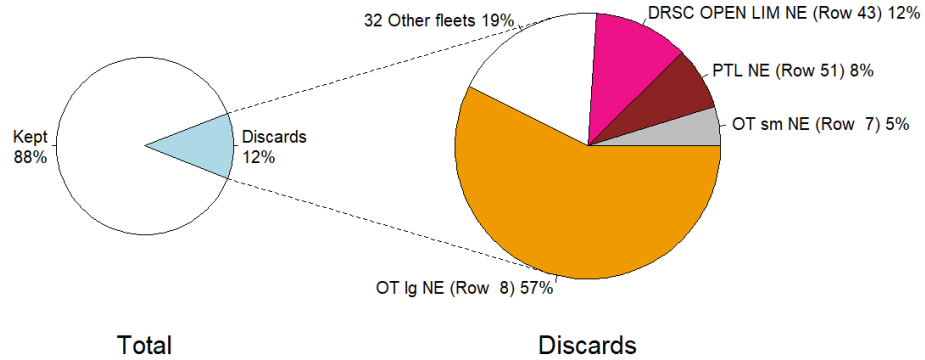
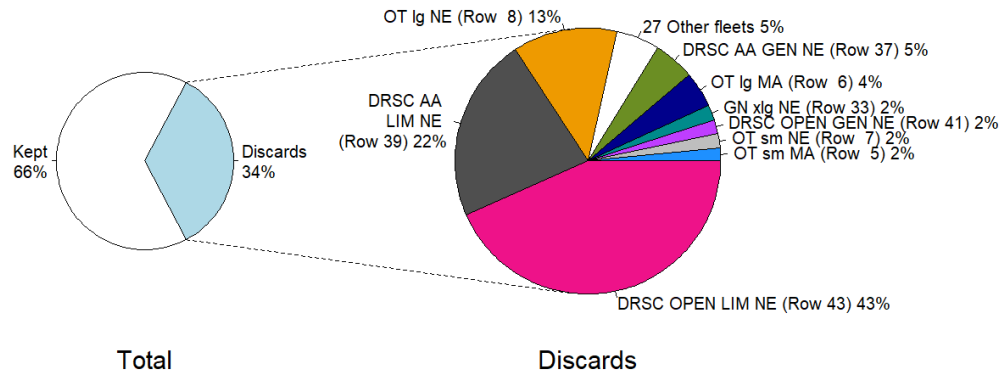


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: FLUKE (*Paralichthys dentatus*) - SCUP (*Stenotomus chrysops*) - BLACK SEA BASS (*Centropristis striata*)

Bottom: LARGE MESH GROUND FISH

SPECIES: MONKFISH



SPECIES: RED DEEPSEA CRAB

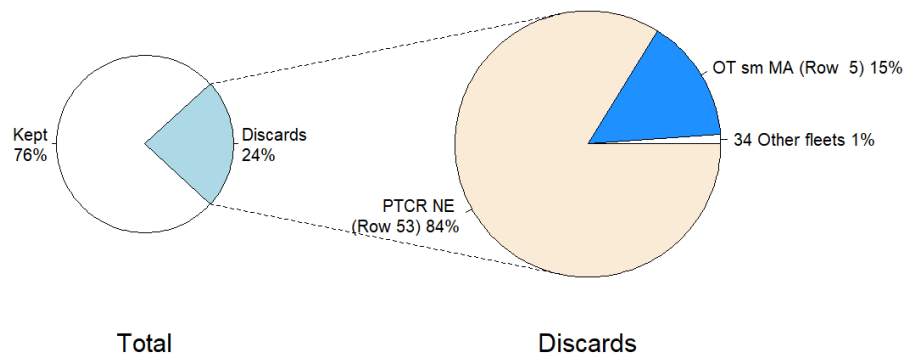
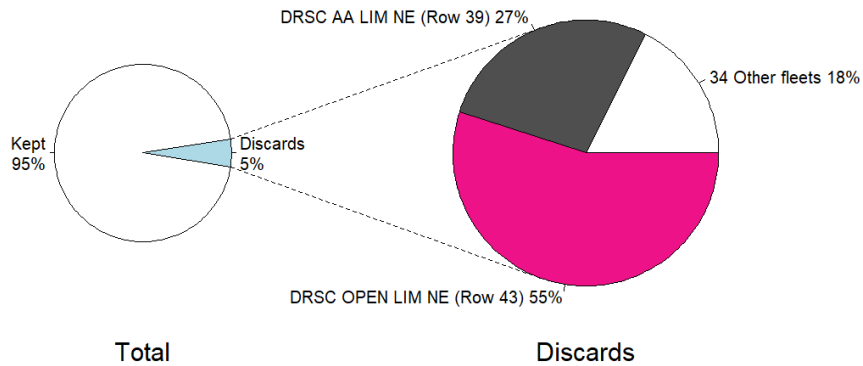


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: MONKFISH (*Lophius americanus*)

Bottom: RED DEEPSEA CRAB (*Chaceon quinquegens*)

SPECIES: SEA SCALLOP



SPECIES: SKATE COMPLEX

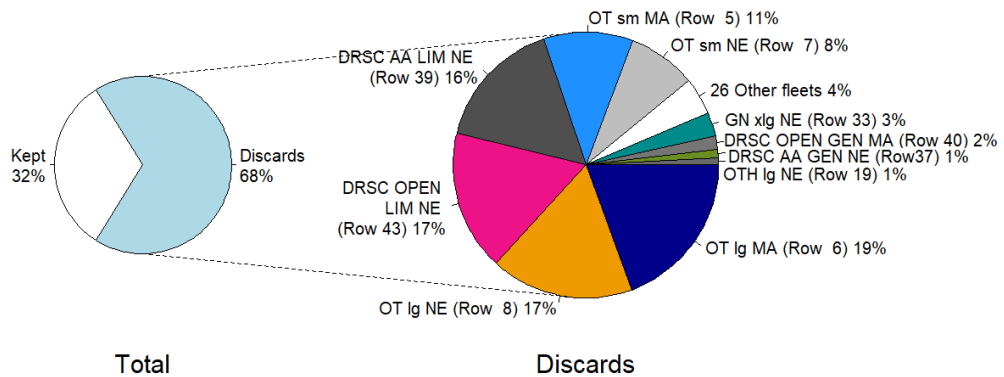
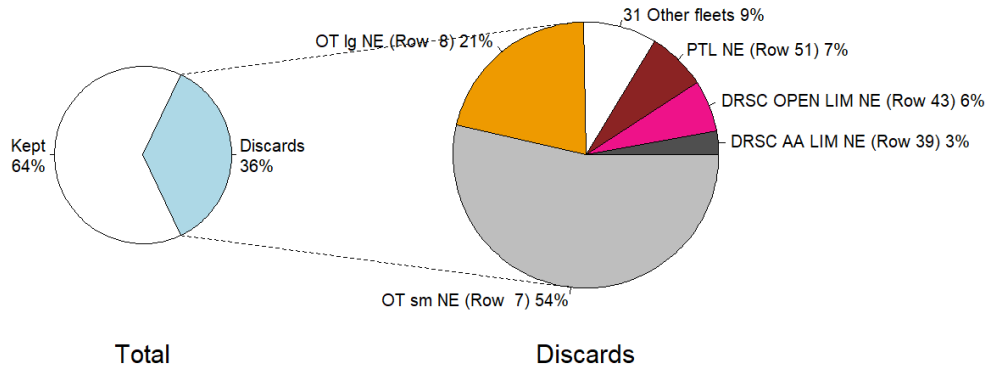


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: SEA SCALLOP (*Placopecten magellanicus*)

Bottom: SKATE COMPLEX (*Rajidae*)

SPECIES: SMALL MESH GROUNDFISH



SPECIES: SPINY DOGFISH

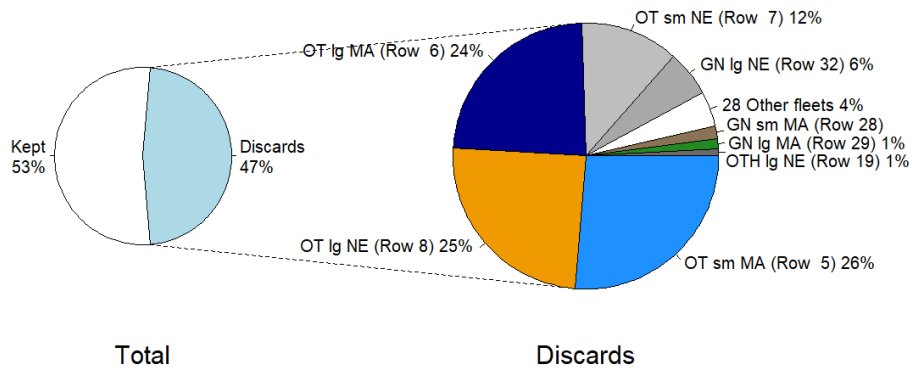
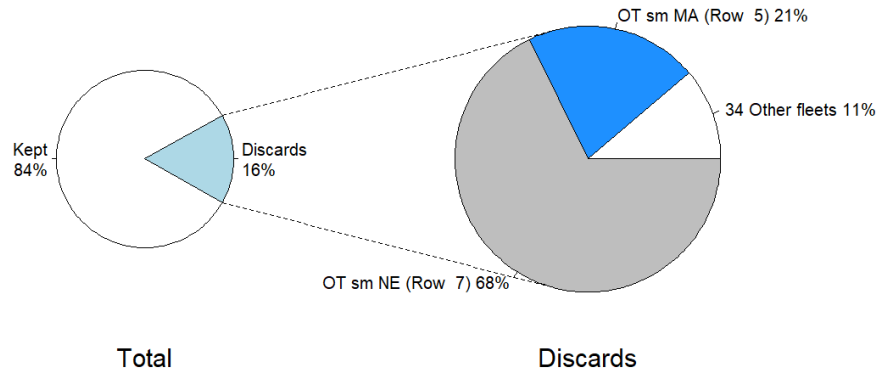


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: SMALL MESH GROUND FISH

Bottom: SPINY DOGFISH (*Squalus acanthias*)

SPECIES: SQUID - BUTTERFISH - MACKEREL



SPECIES: SURFCLAM - OCEAN QUAHOG

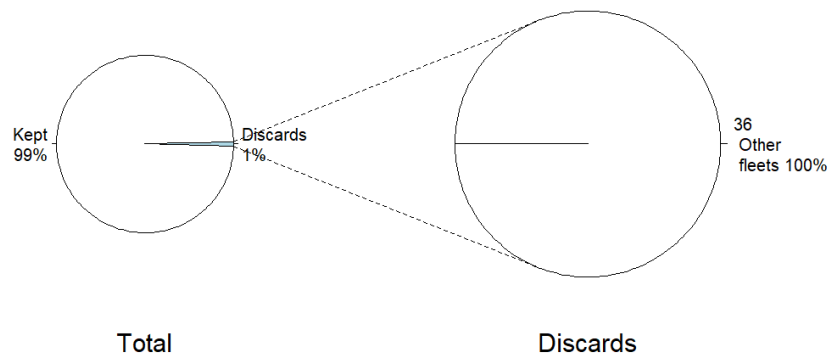


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: SQUID (*Doryteuthis* [*Amerigo*] *pealeii*, *Illex illecebrosus*) - BUTTERFISH (*Peprilus triacanthus*) - MACKEREL (*Scomber colias*, *Scomber scombrus*)

Bottom: SURFCLAM (*Spisula solidissima*) - OCEAN QUAHOG (*Arctica islandica*)

SPECIES: TILEFISH

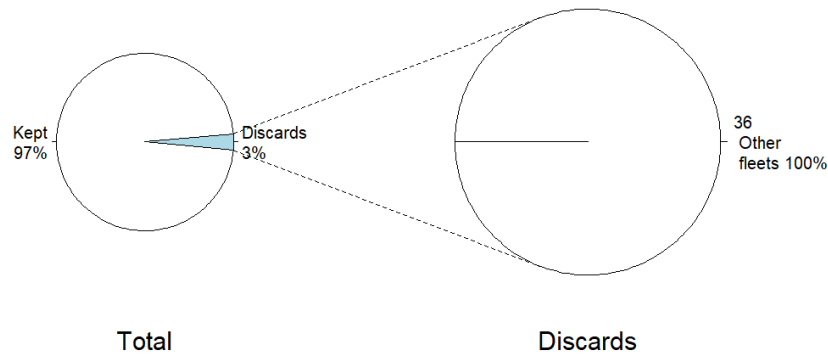
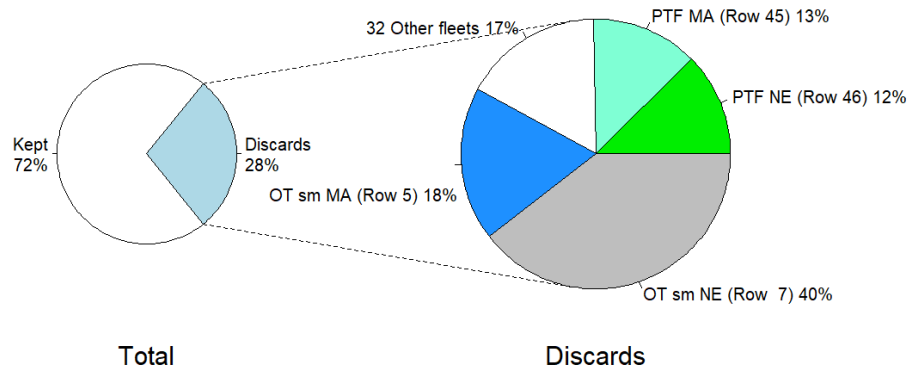


Figure 1A, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for each of the 14 species groups (except Atlantic salmon [*Salmo salar*]), based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations. Pictured: TILEFISH

SPECIES: BLACK SEA BASS



SPECIES: FLUKE

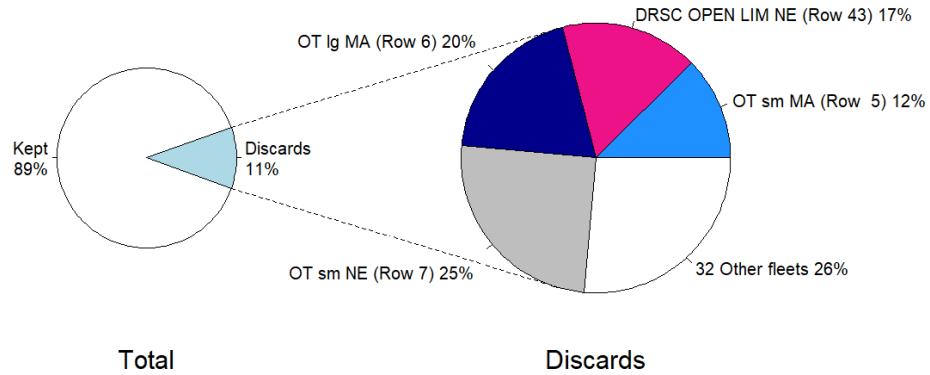
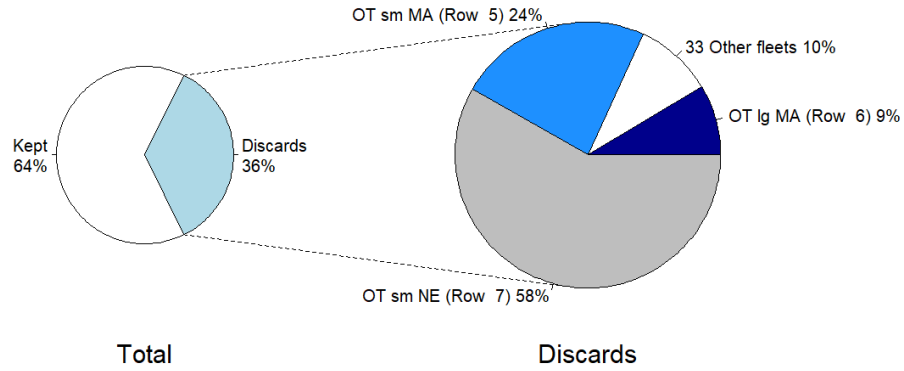


Figure 1B. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: BLACK SEA BASS (*Centropristis striata*)

Bottom: FLUKE (*Paralichthys dentatus*)

SPECIES: SCUP



SPECIES: ACADIAN REDFISH

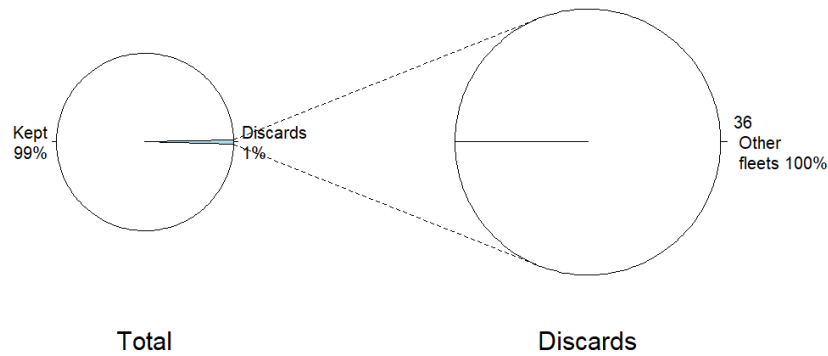
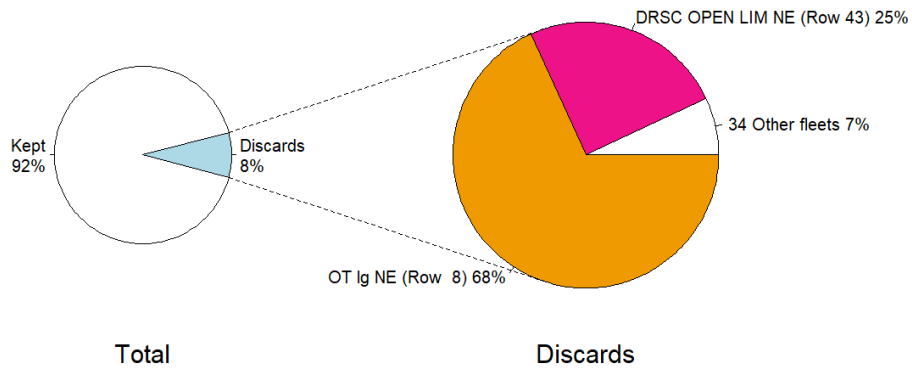


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: SCUP (*Stenotomus chrysops*)

Bottom: ACADIAN REDFISH (*Sebastes fasciatus*)

SPECIES: AMERICAN PLAICE



SPECIES: ATLANTIC COD

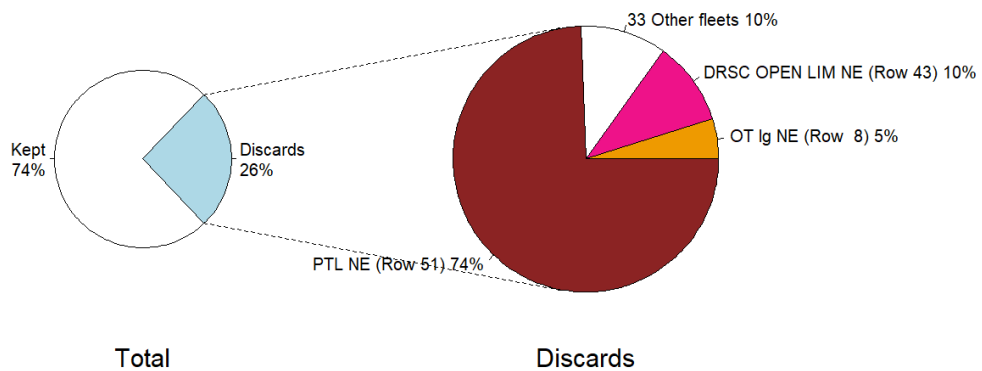
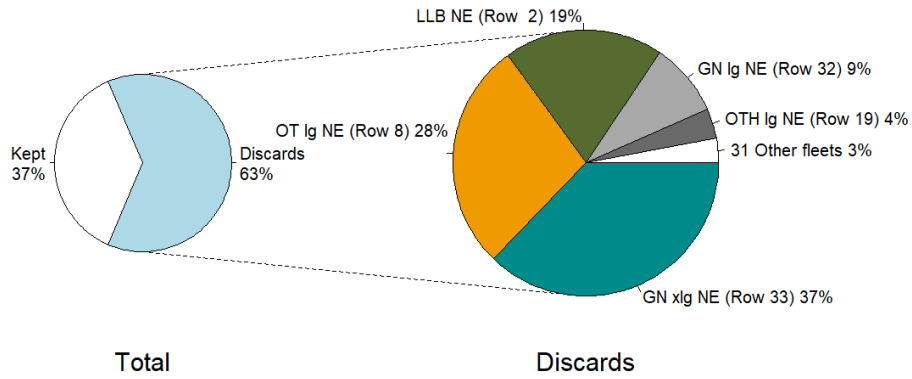


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: AMERICAN PLAICE (*Hippoglossoides platessoides*)

Bottom: ATLANTIC COD (*Gadus morhua*)

SPECIES: ATLANTIC HALIBUT



SPECIES: ATLANTIC WOLFFISH

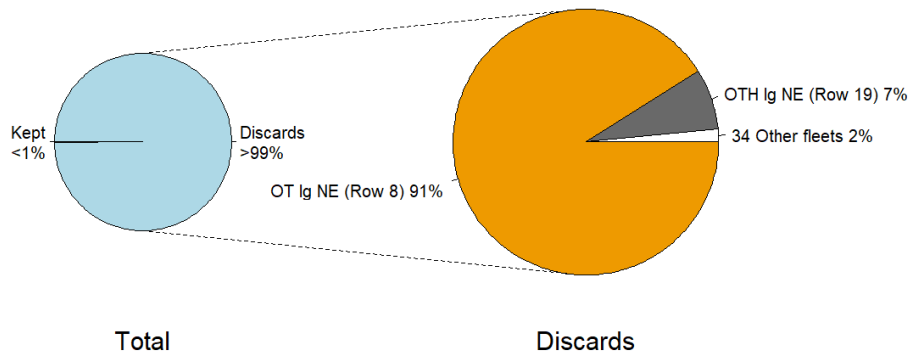
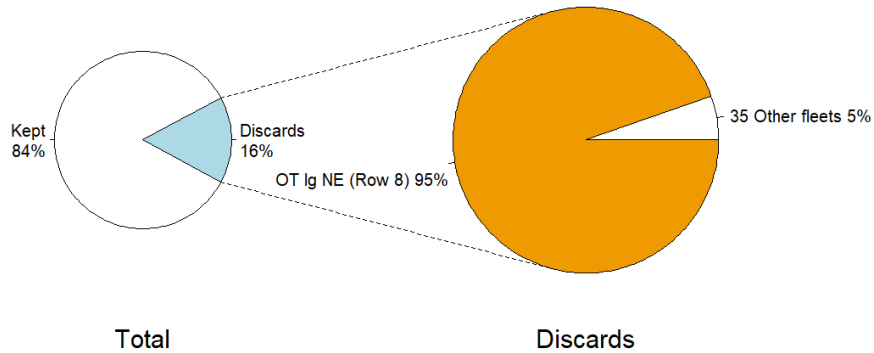


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: ATLANTIC HALIBUT (*Hippoglossus hippoglossus*)

Bottom: ATLANTIC WOLFFISH (*Anarhichas lupus*)

SPECIES: HADDOCK



SPECIES: OCEAN POUT

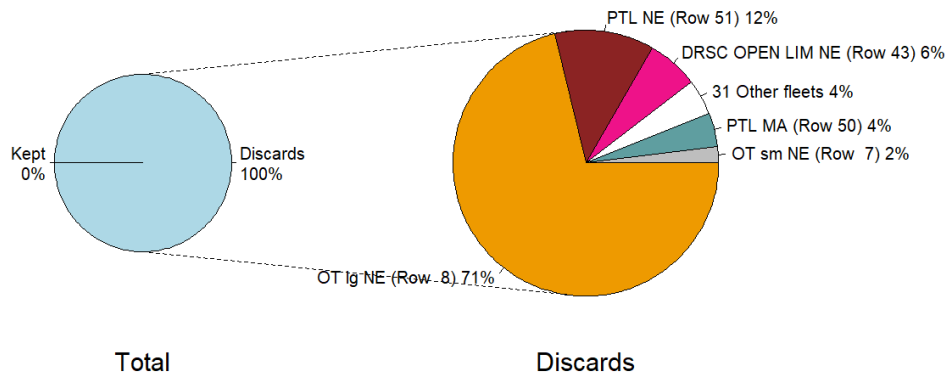
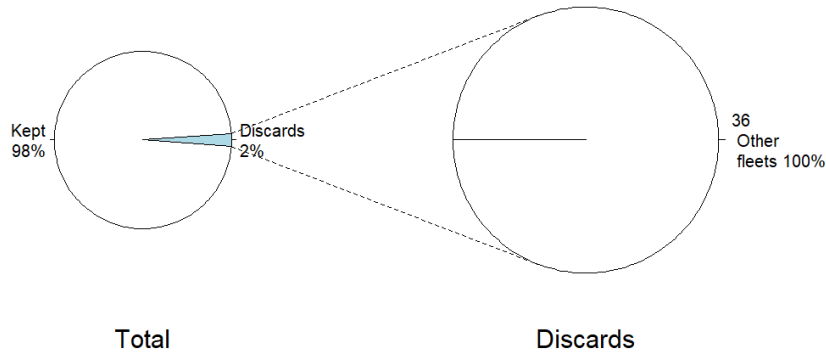


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: HADDOCK (*Melanogrammus aeglefinus*)

Bottom: OCEAN POUT (*Zoarces americanus*)

SPECIES: POLLOCK



SPECIES: WHITE HAKE

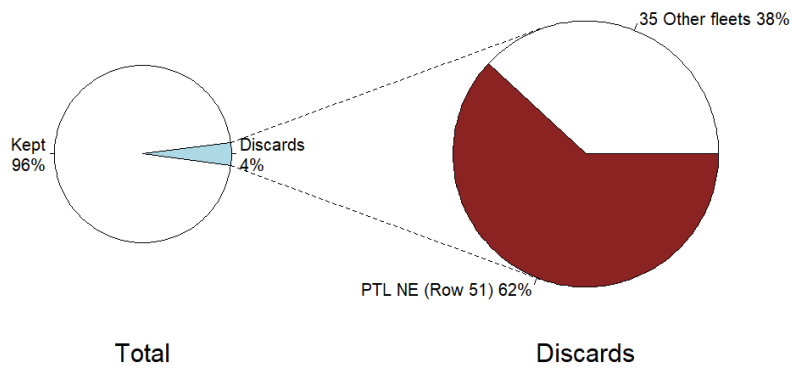
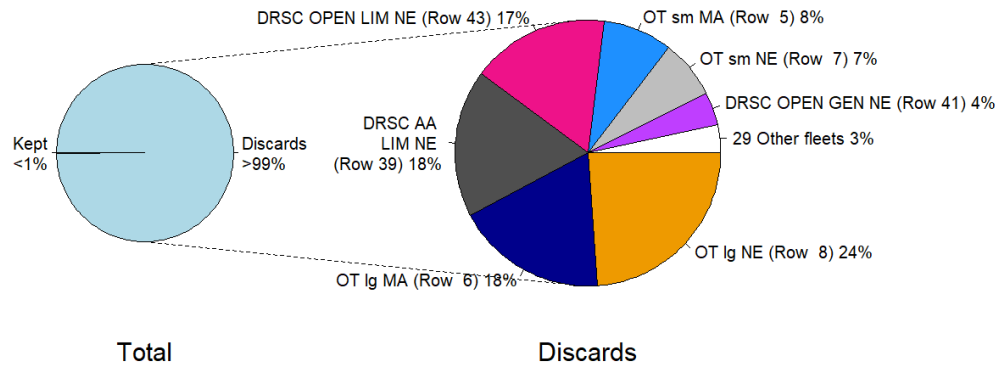


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: POLLOCK (*Pollachius virens*)

Bottom: WHITE HAKE (*Urophycis tenuis*)

SPECIES: WINDOWPANE FLOUNDER



SPECIES: WINTER FLOUNDER

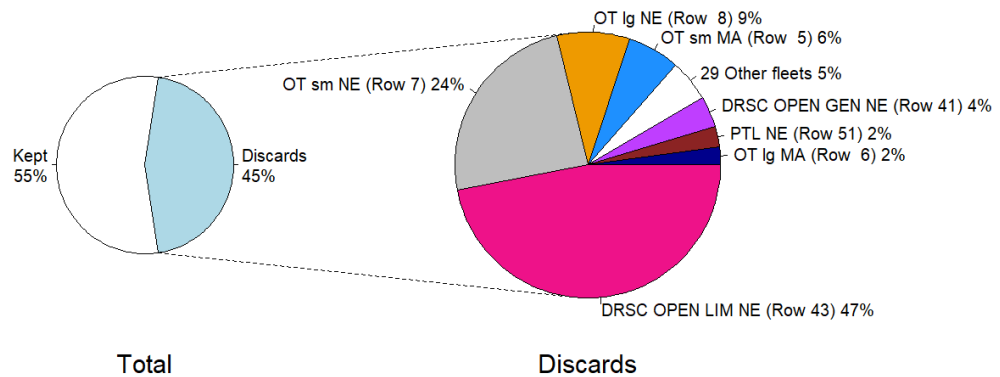
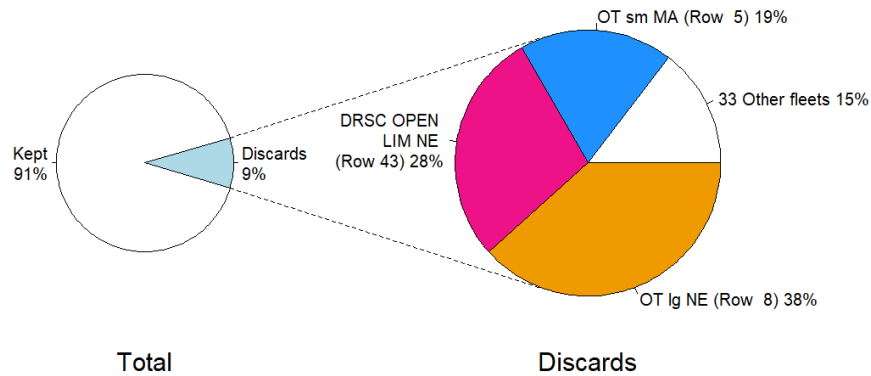


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: WINDOWPANE FLOUNDER (*Scophthalmus aquosus*)

Bottom: WINTER FLOUNDER (*Pseudopleuronectes americanus*)

SPECIES: WITCH FLOUNDER



SPECIES: YELLOWTAIL FLOUNDER

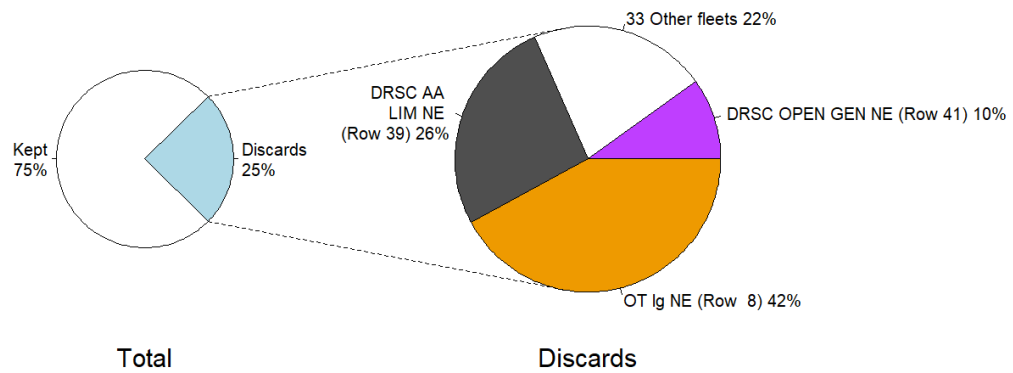
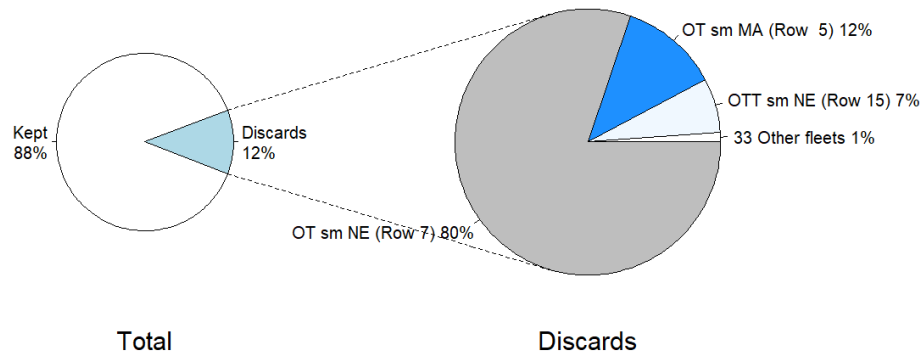


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: WITCH FLOUNDER (*Glyptocephalus cynoglossus*)

Bottom: YELLOWTAIL FLOUNDER (*Limanda ferruginea*)

SPECIES: OFFSHORE HAKE



SPECIES: RED HAKE

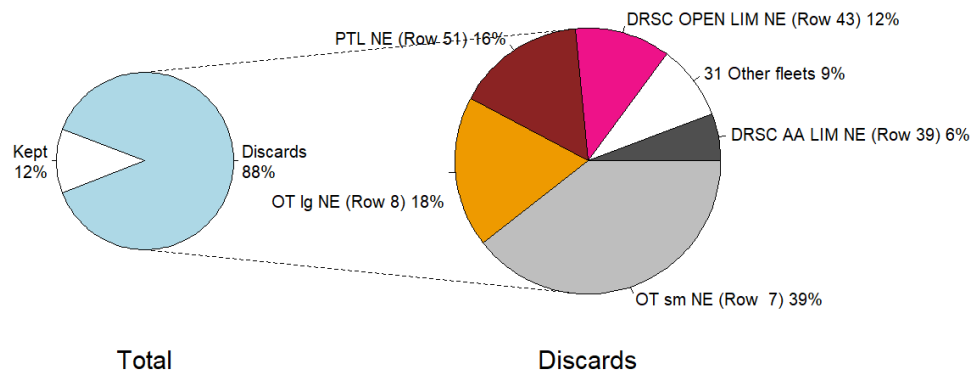
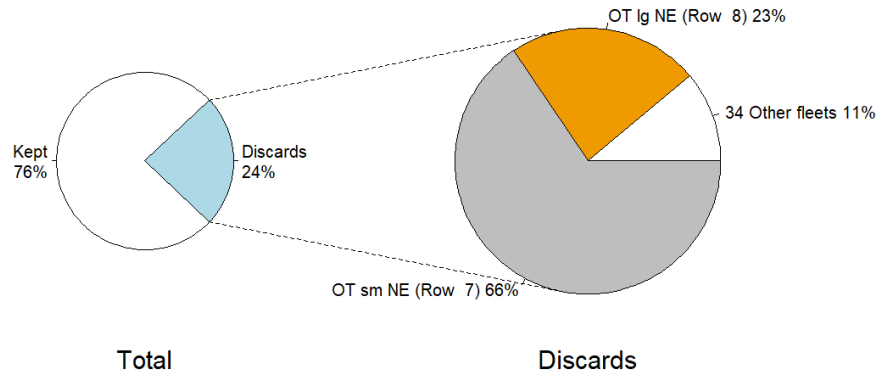


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: OFFSHORE HAKE (*Merluccius albidus*)

Bottom: RED HAKE (*Urophycis chuss*)

SPECIES: SILVER HAKE



SPECIES: ATLANTIC CHUB MACKEREL

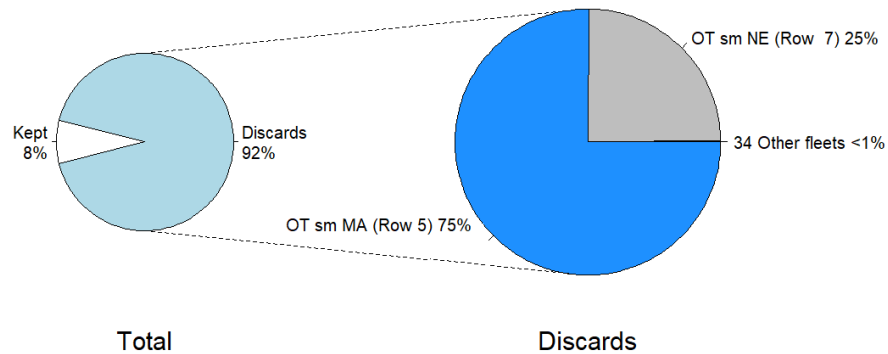
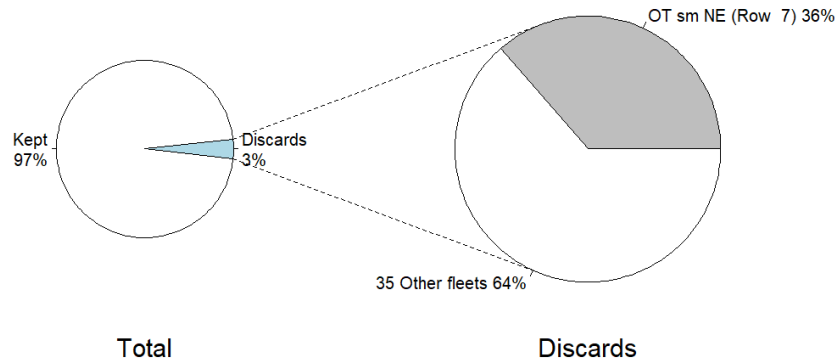


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: SILVER HAKE (*Merluccius bilinearis*)

Bottom: ATLANTIC CHUB MACKEREL (*Scomber colias*)

SPECIES: ATLANTIC MACKEREL



SPECIES: BUTTERFISH

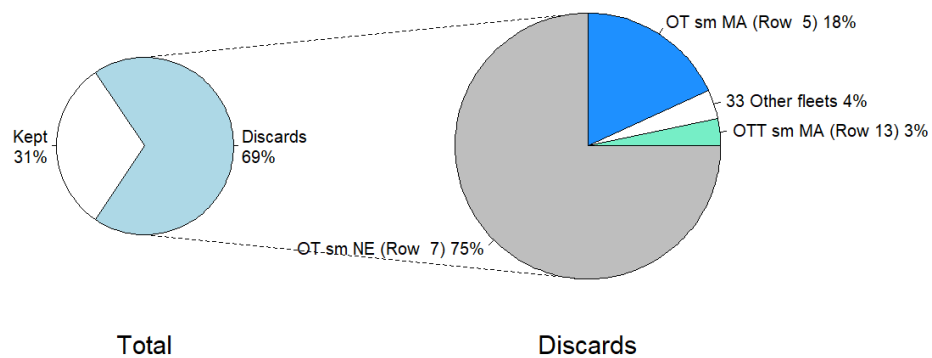
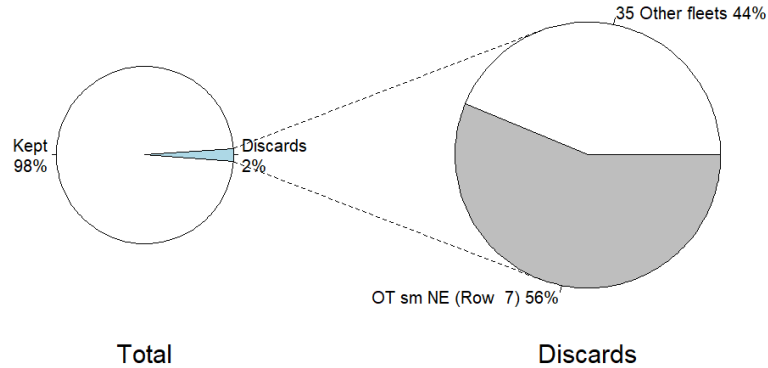


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: ATLANTIC MACKEREL (*Scomber scombrus*)

Bottom: BUTTERFISH (*Peprilus triacanthus*)

SPECIES: LONGFIN INSHORE SQUID



SPECIES: NORTHERN SHORTFIN SQUID

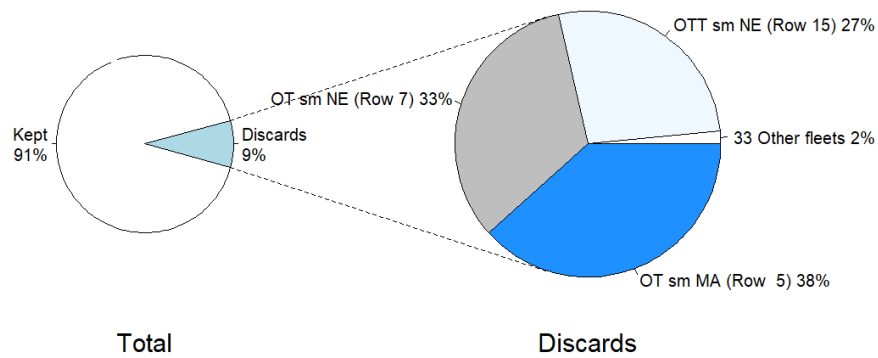
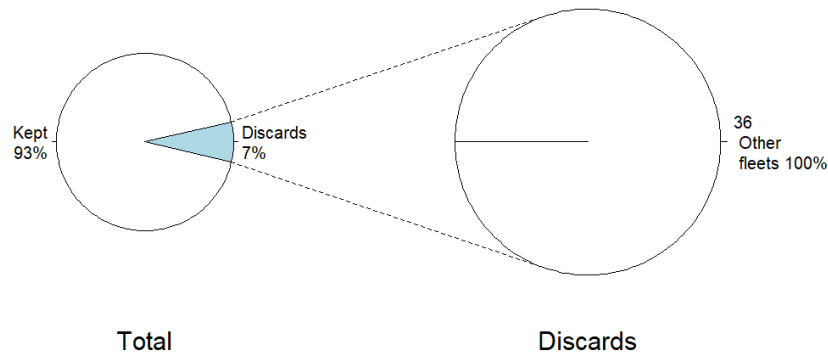


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: LONGFIN INSHORE SQUID (*Doryteuthis [Amerigo] pealeii*)

Bottom: NORTHERN SHORTFIN SQUID (*Illex illecebrosus*)

SPECIES: BLUELINE TILEFISH



SPECIES: GOLDEN TILEFISH

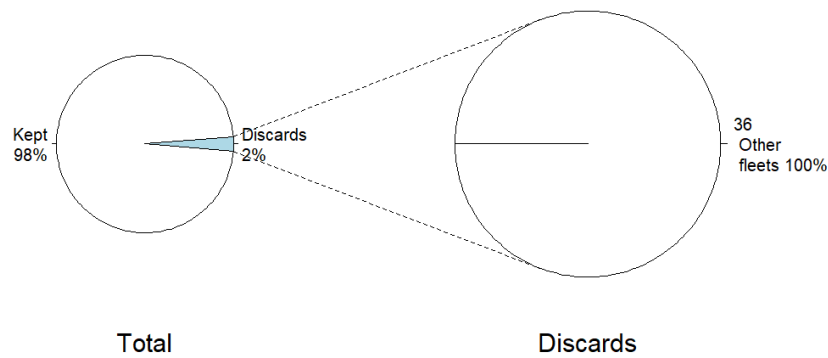
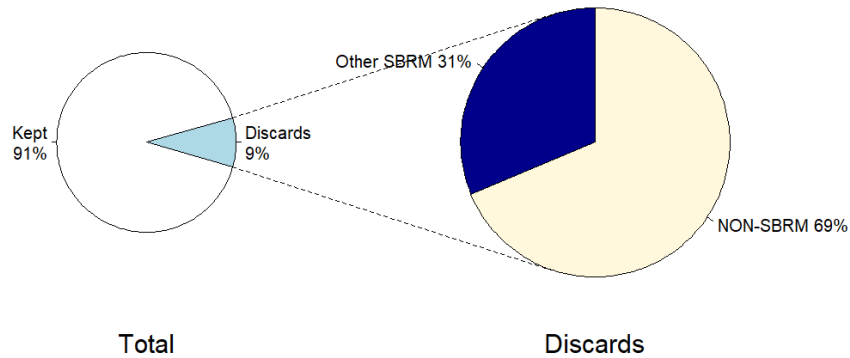


Figure 1B, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by fleet (Discards, right pie) for the 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Appendix Table 4 for fleet abbreviations.

Top: BLUELINE TILEFISH (*Gaulolatilus microps*)

Bottom: GOLDEN TILEFISH (*Lopholatilus chamaeleonticeps*)

FLEET: Longline, Bottom OPEN all MA all (Row 1)



FLEET: Longline, Bottom OPEN all NE all (Row 2)

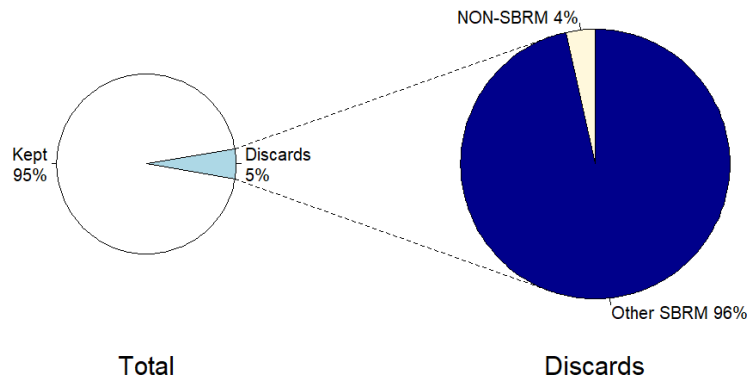
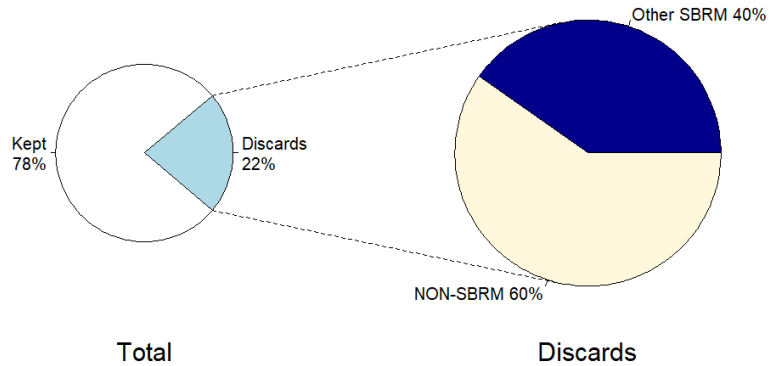


Figure 2. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM." Non-SBRM species have been grouped and labeled "Non-SBRM."

**FLEET: Hand Line OPEN all MA all
(Row 3)**



**FLEET: Hand Line OPEN all NE all
(Row 4)**

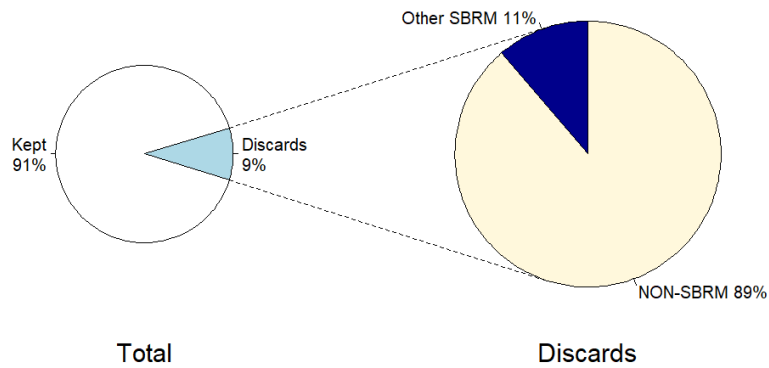
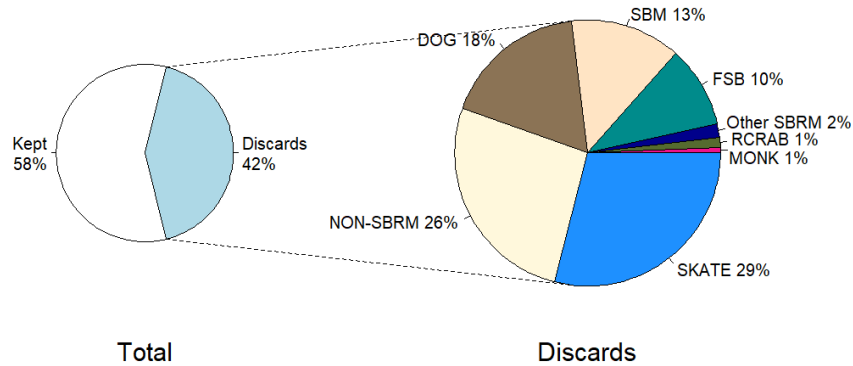


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

**FLEET: Otter Trawl OPEN all MA sm
(Row 5)**



**FLEET: Otter Trawl OPEN all MA lg
(Row 6)**

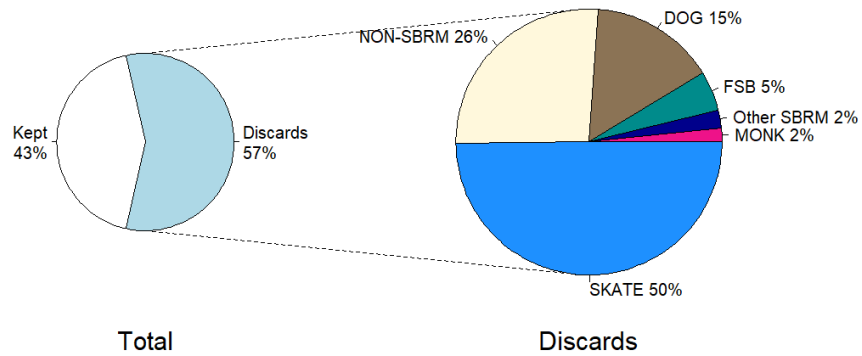
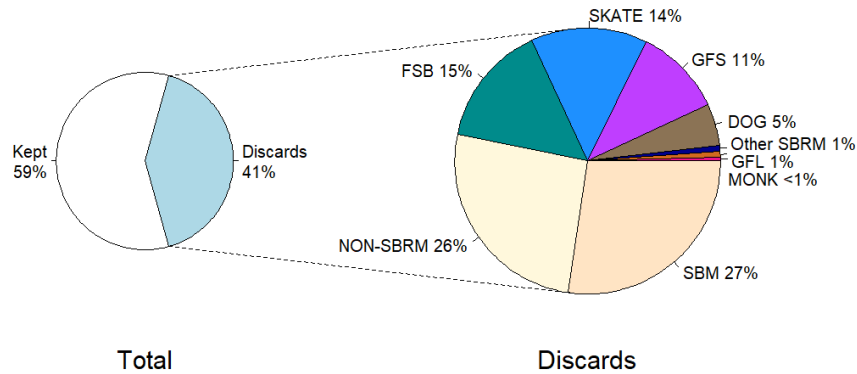


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Otter Trawl OPEN all NE sm (Row 7)



FLEET: Otter Trawl OPEN all NE lg (Row 8)

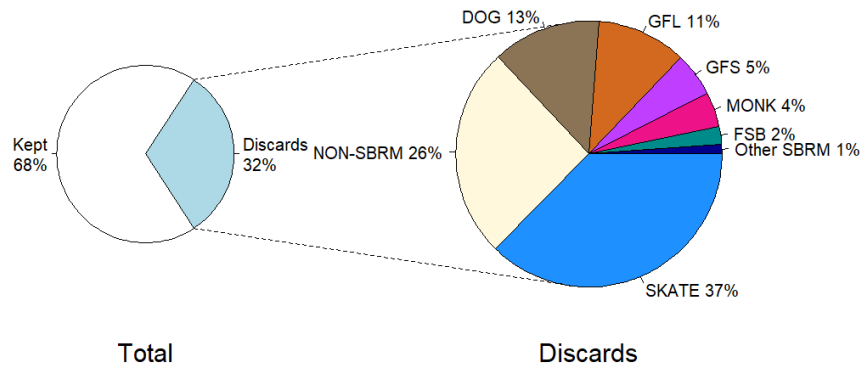
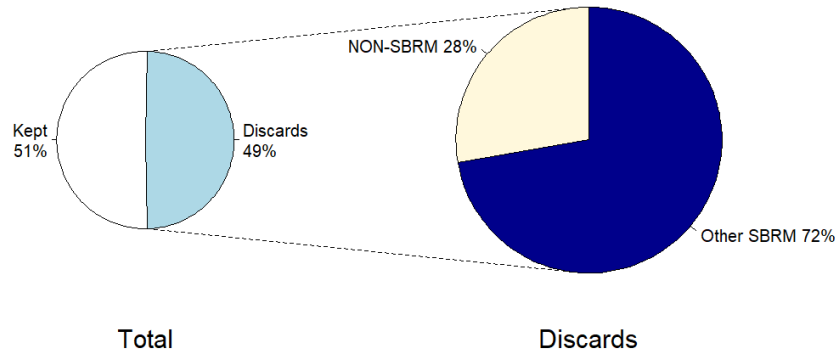


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

**FLEET: Otter Trawl, Twin OPEN all MA sm
(Row 13)**



**FLEET: Otter Trawl, Twin OPEN all NE sm
(Row 15)**

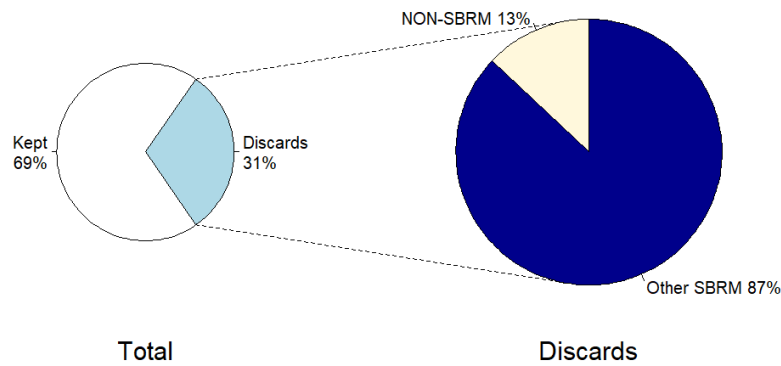
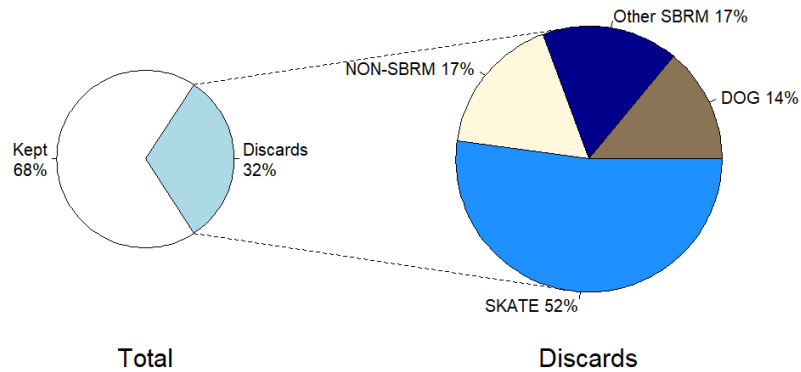


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Otter Trawl, Haddock Separator OPEN all NE lg (Row 19)



FLEET: Gillnet OPEN all MA sm (Row 28)

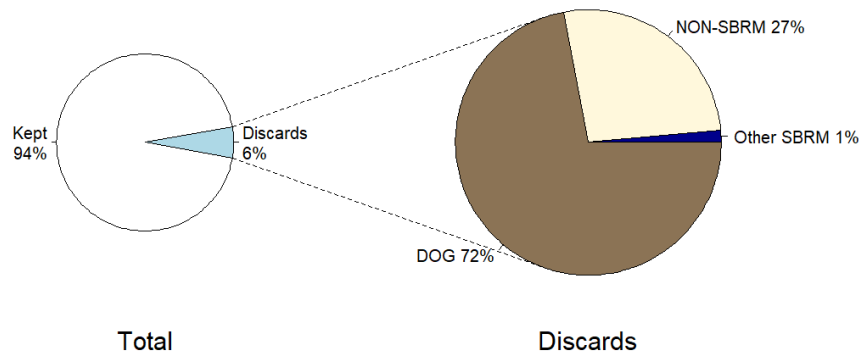
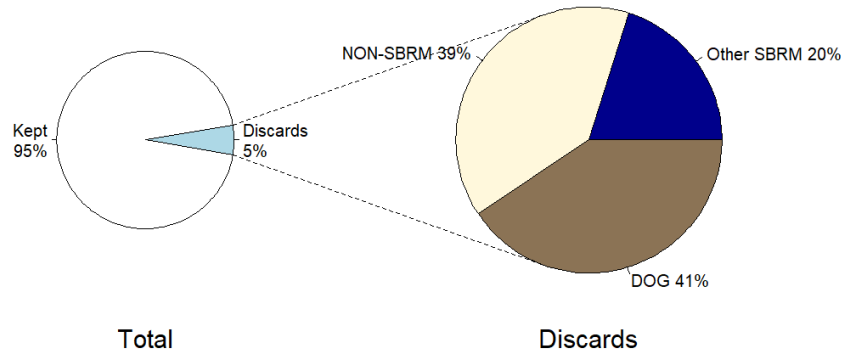


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Gillnet OPEN all MA Ig (Row 29)



FLEET: Gillnet OPEN all MA xlg (Row 30)

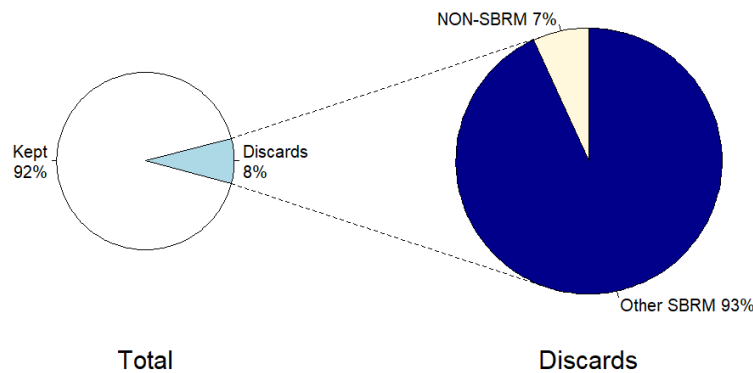
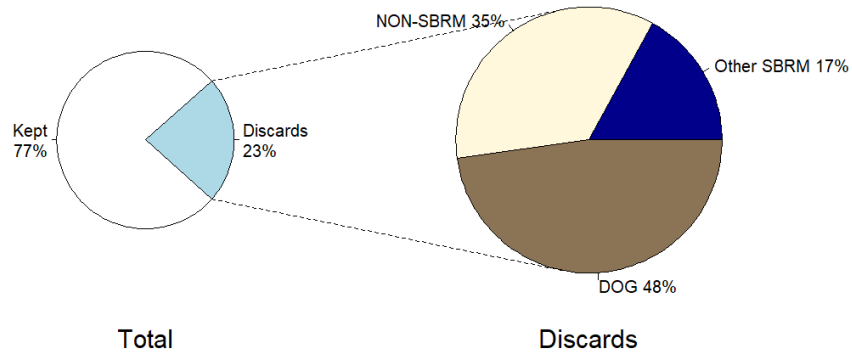


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Gillnet OPEN all NE lg (Row 32)



FLEET: Gillnet OPEN all NE xlg (Row 33)

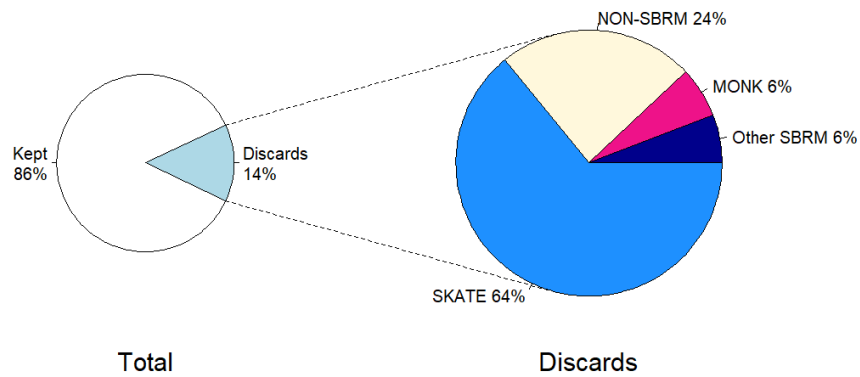
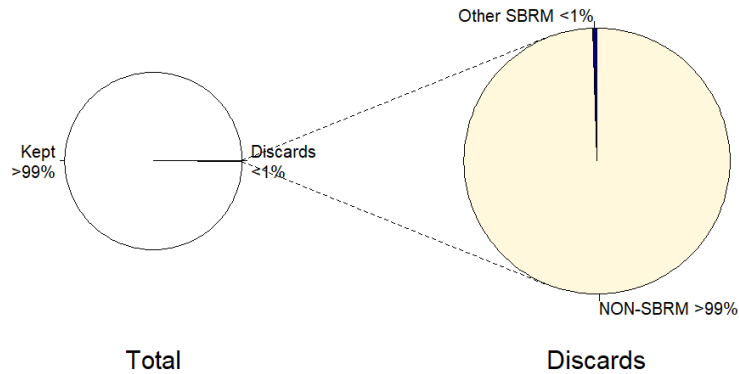


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Purse Seine OPEN all NE all (Row 35)



FLEET: Dredge, Scallop AA GEN NE all (Row 37)

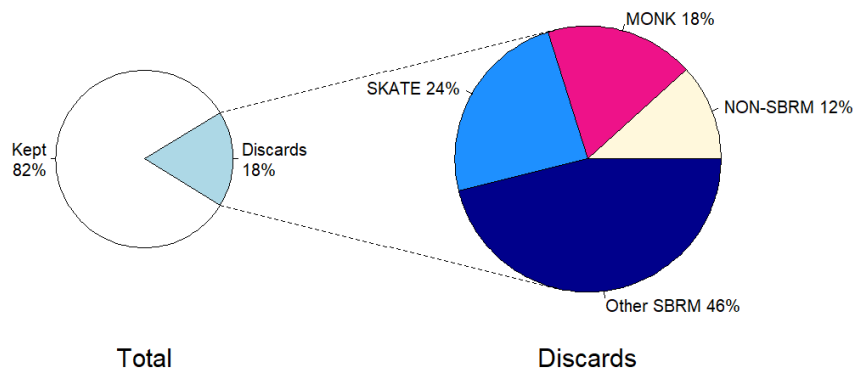
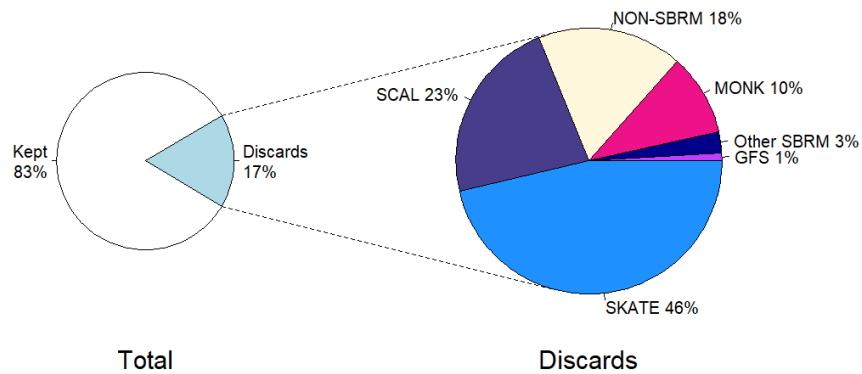


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Dredge, Scallop AA LIM NE all (Row 39)



FLEET: Dredge, Scallop OPEN GEN MA all (Row 40)

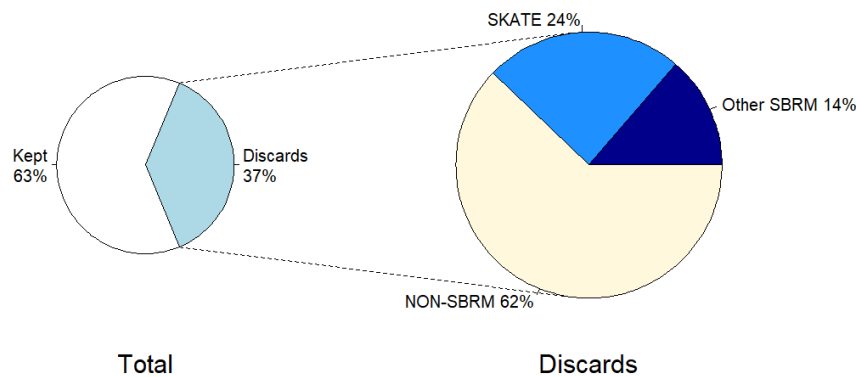
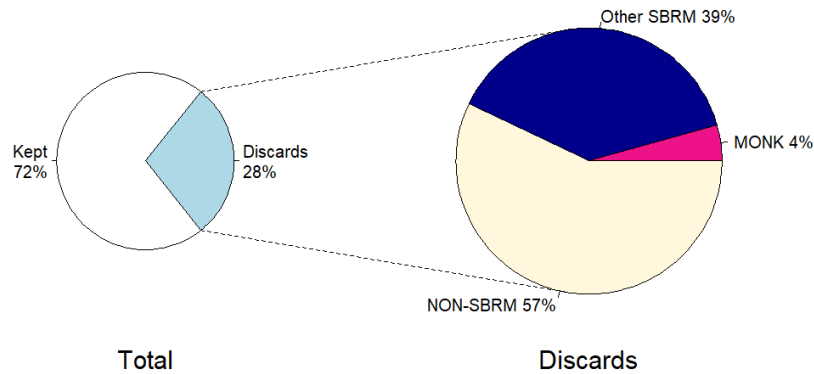


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Dredge, Scallop OPEN GEN NE all (Row 41)



FLEET: Dredge, Scallop OPEN LIM NE all (Row 43)

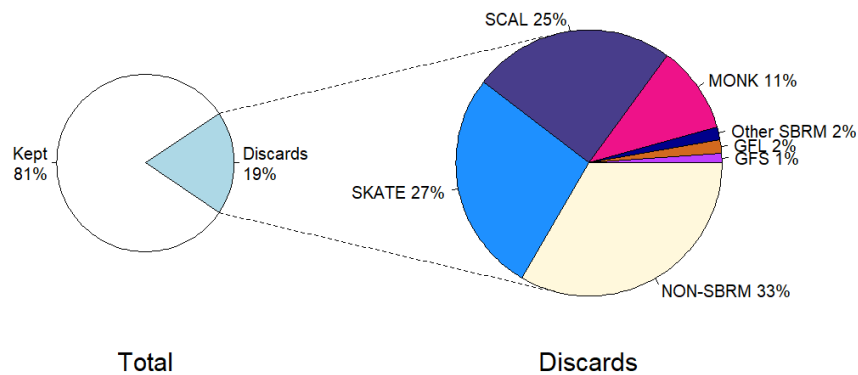
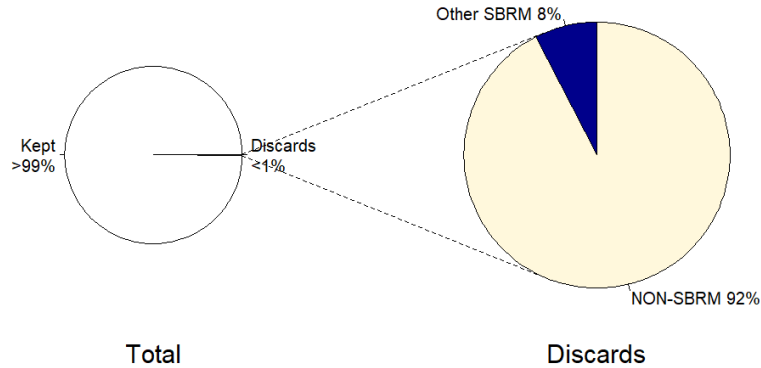


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

**FLEET: Trawl, Midwater all all NE sm
(Row 44)**



**FLEET: Pots and Traps, Fish
OPEN all MA all (Row 45)**

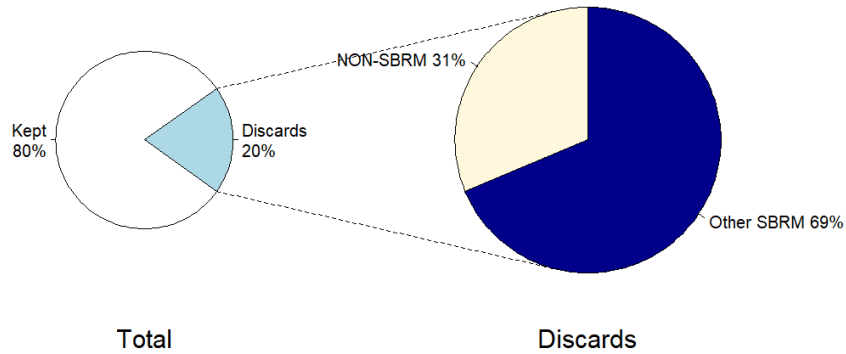
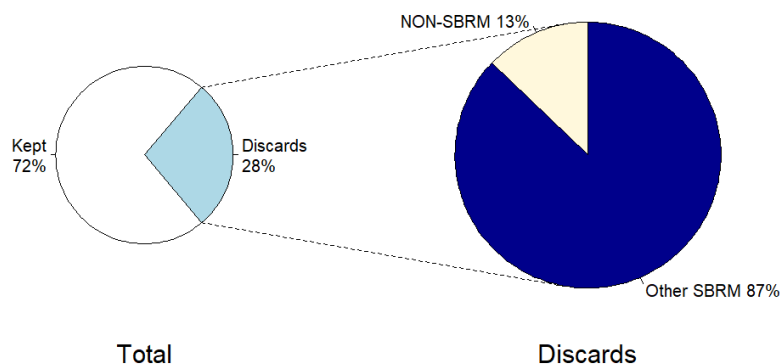


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Pots and Traps, Fish OPEN all NE all (Row 46)



FLEET: Pots and Traps, Conch OPEN all MA all (Row 47)

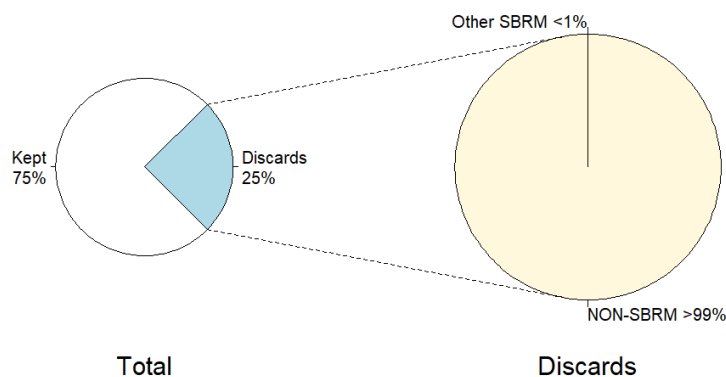
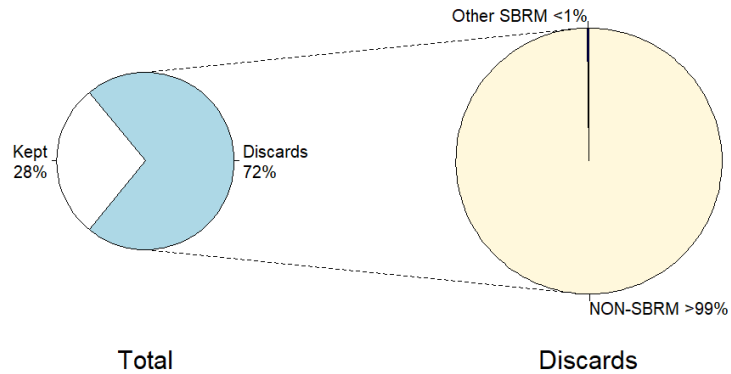


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Pots and Traps, Conch OPEN all NE all (Row 48)



FLEET: Pots and Traps, Lobster OPEN all MA all (Row 50)

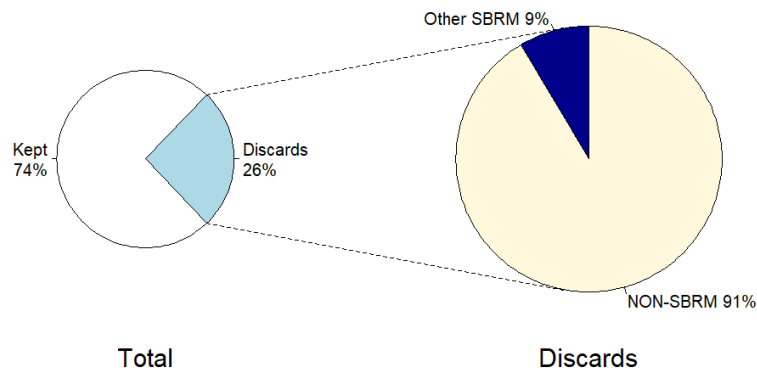
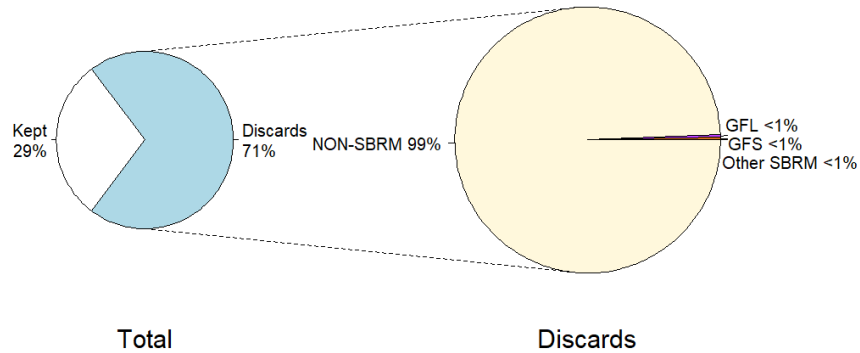


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

FLEET: Pots and Traps, Lobster OPEN all NE all (Row 51)



FLEET: Pots and Traps, Crab OPEN all NE all (Row 53)

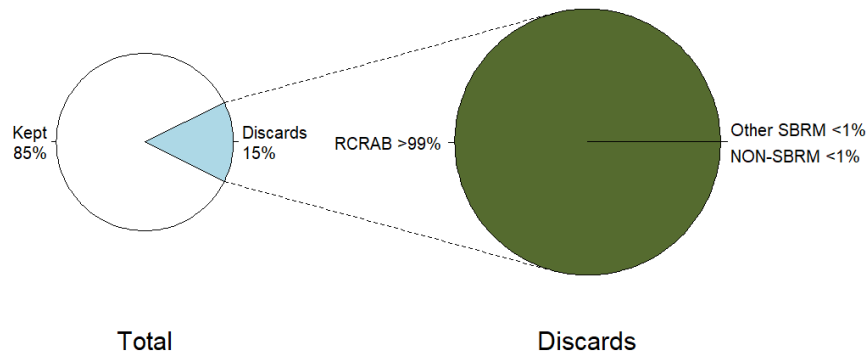
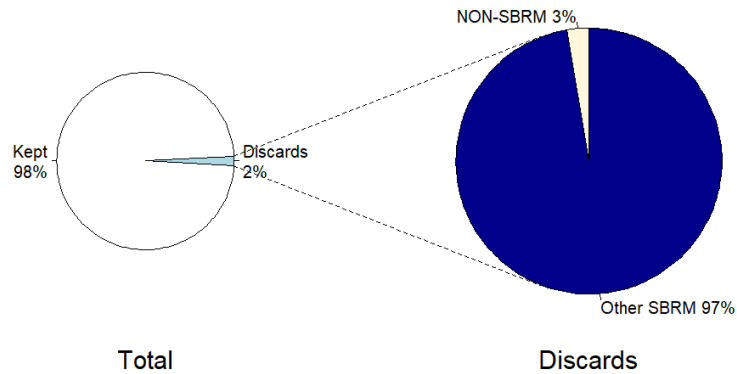


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

**FLEET: Dredge, Ocean Quahog/Surf Clam
OPEN all MA all (Row 57)**



**FLEET: Ocean Quahog/Surf Clam Dredge
OPEN all NE all (Row 58)**

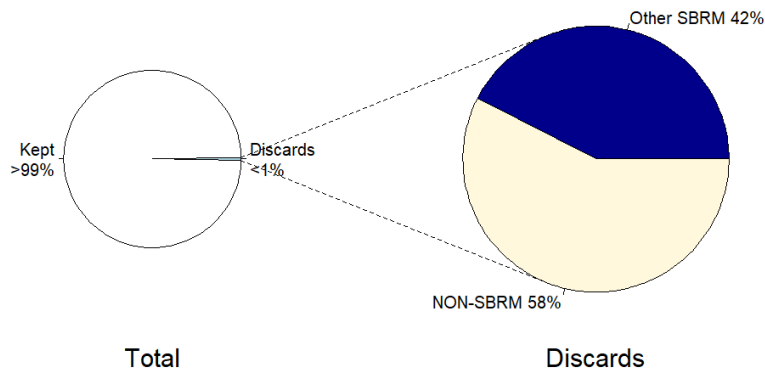


Figure 2, continued. Percentage of Vessel Trip Report landings (kept) and estimated discards (Total, left pie) and the percentage of estimated discards by species groups (Discards, right pie) for 32 nonpilot fleets, based on July 2022 through June 2023 data. Because percentages have been rounded, they may not always sum to 100%. See Table 1A for fleet stratification abbreviations and Table 1B for species group abbreviations. Standardized Bycatch Reporting Methodology (SBRM) species groups that were filtered out through the importance filter have been aggregated and labeled "Other SBRM" non-SBRM species have been grouped and labeled "Non-SBRM."

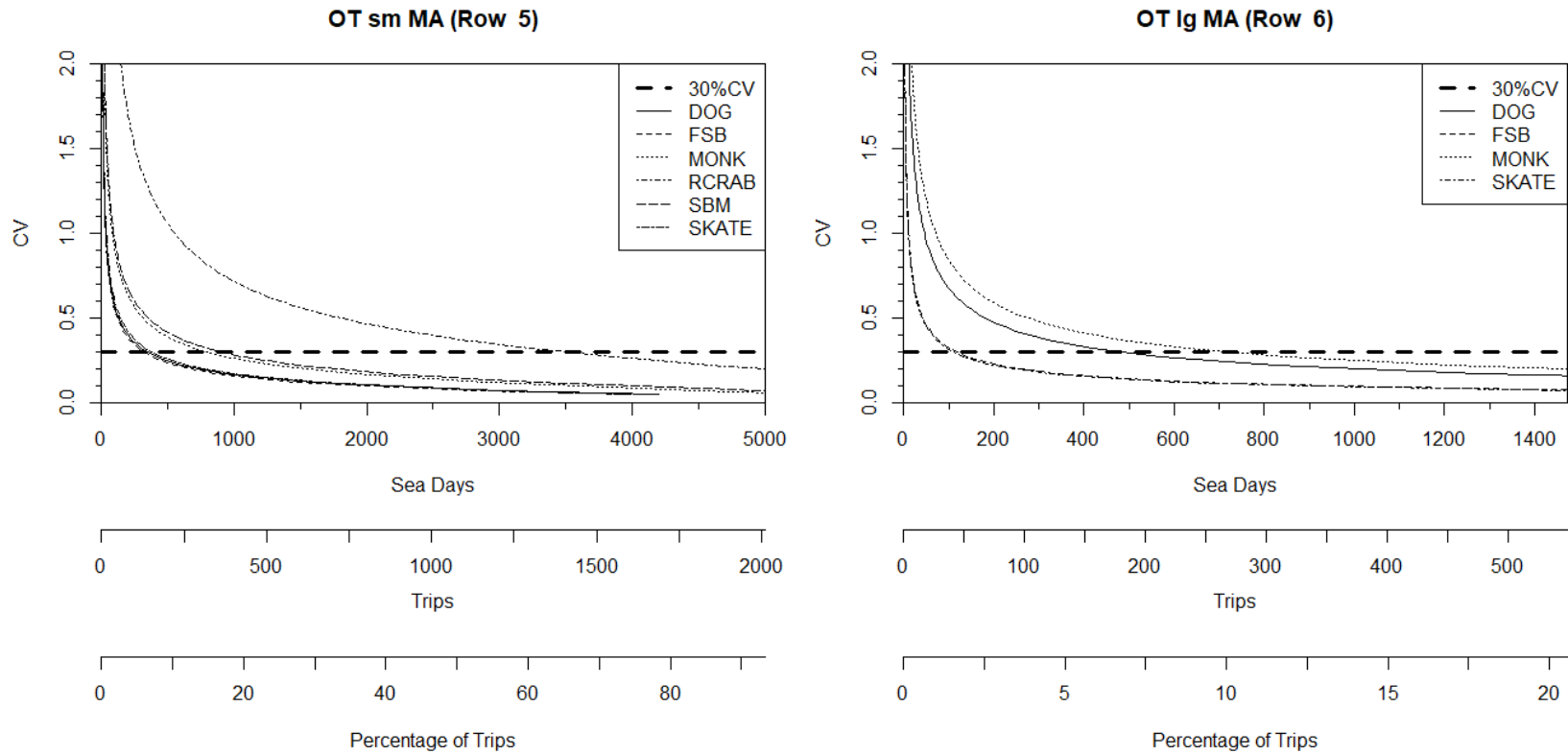


Figure 3. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

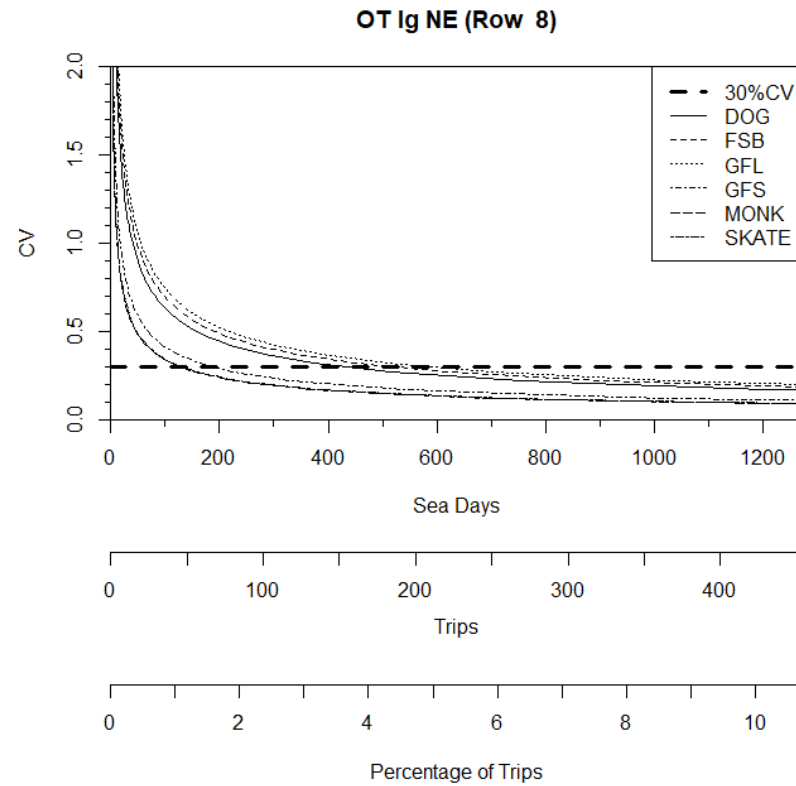
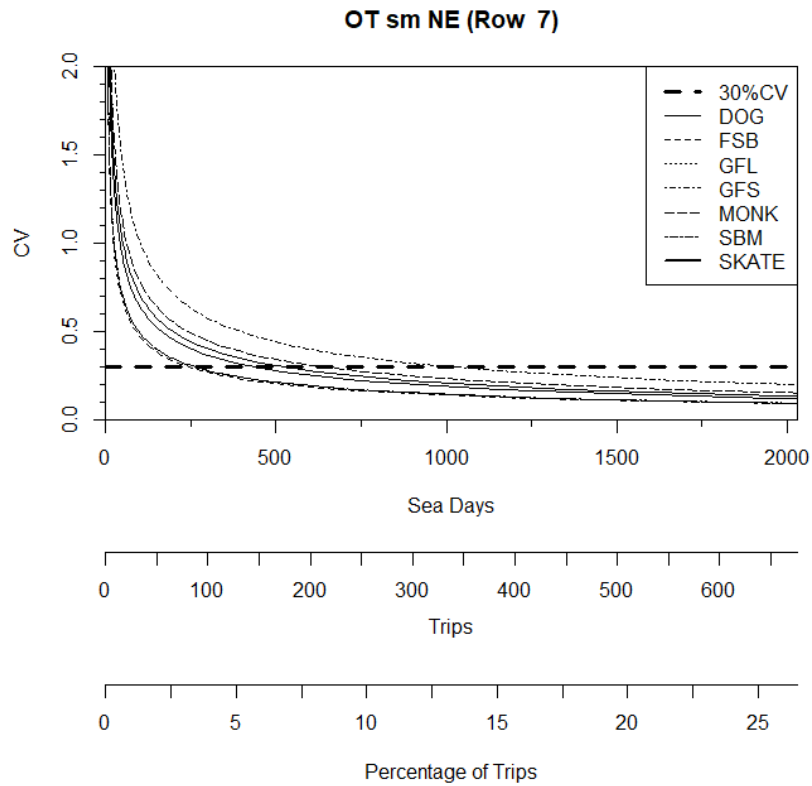


Figure 3, continued. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

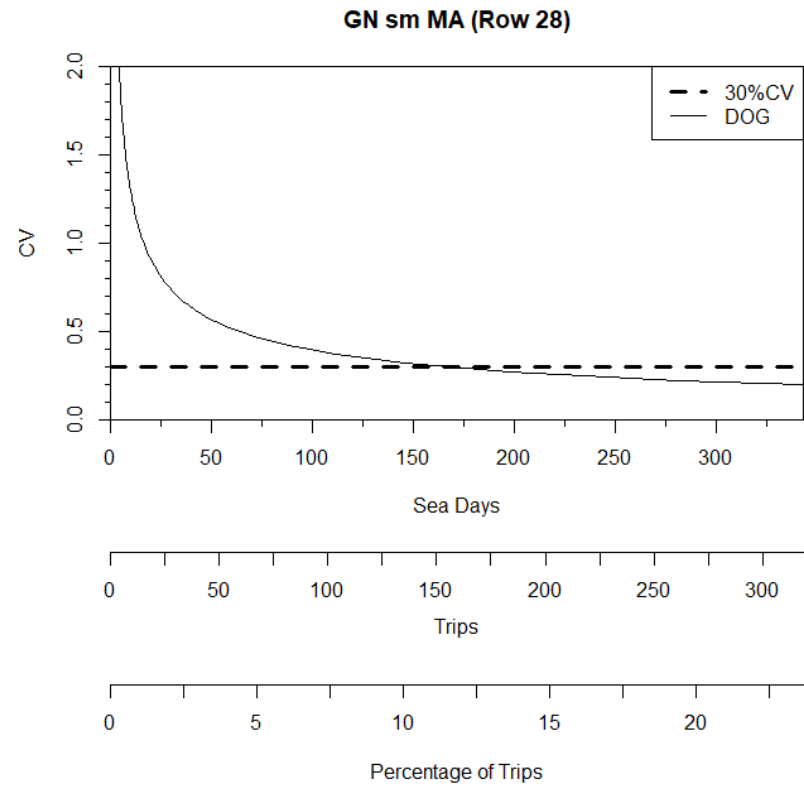
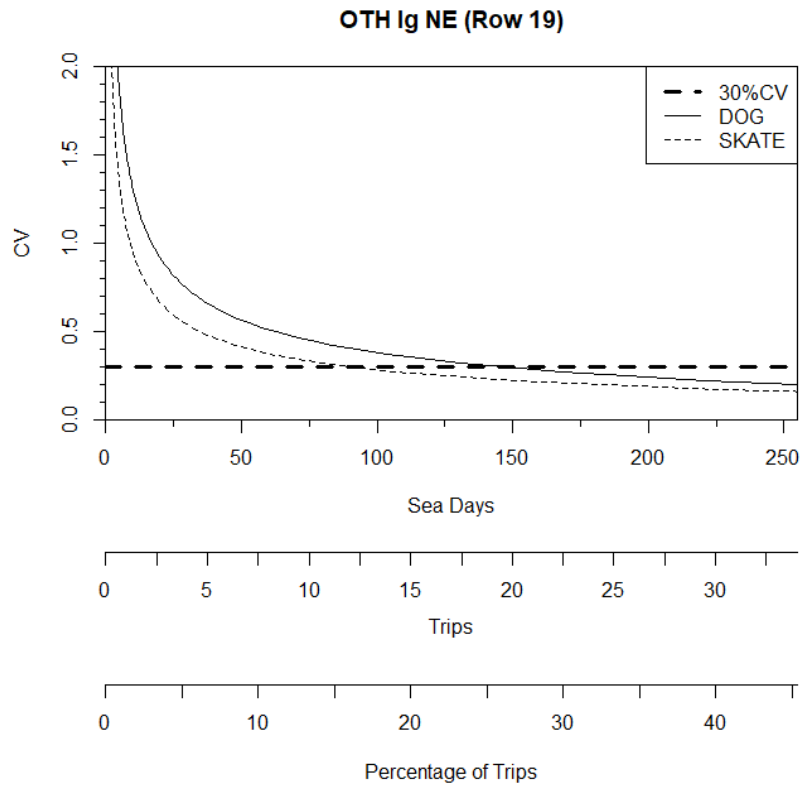


Figure 3, continued. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

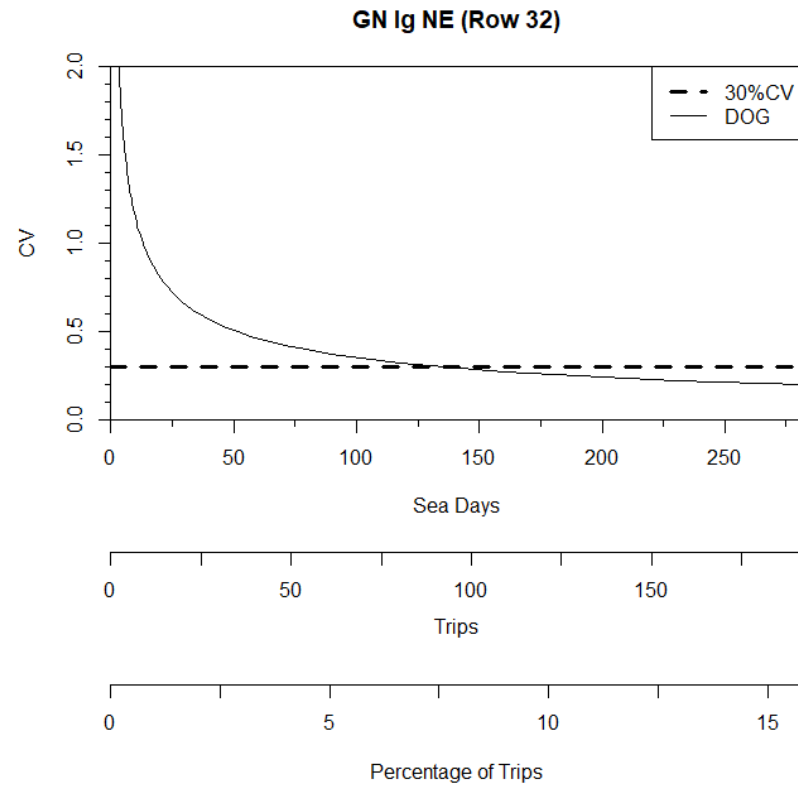
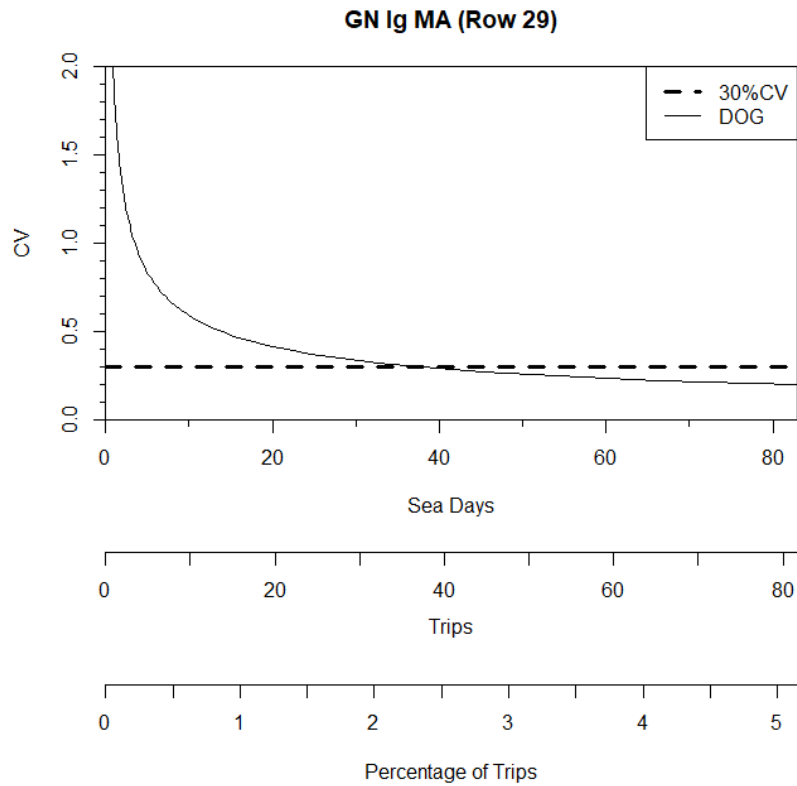


Figure 3, continued. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

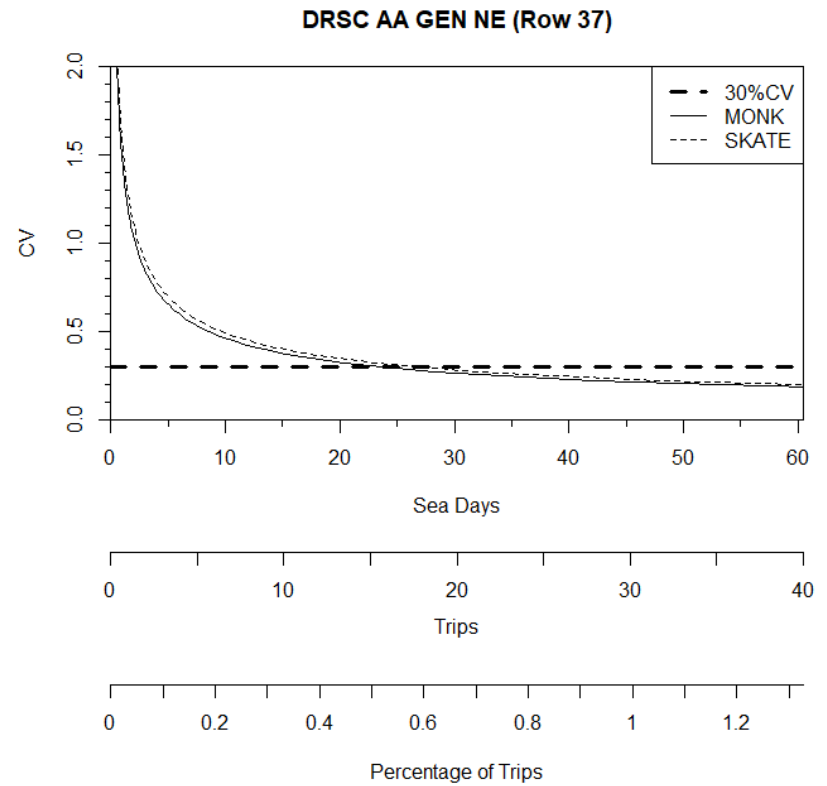
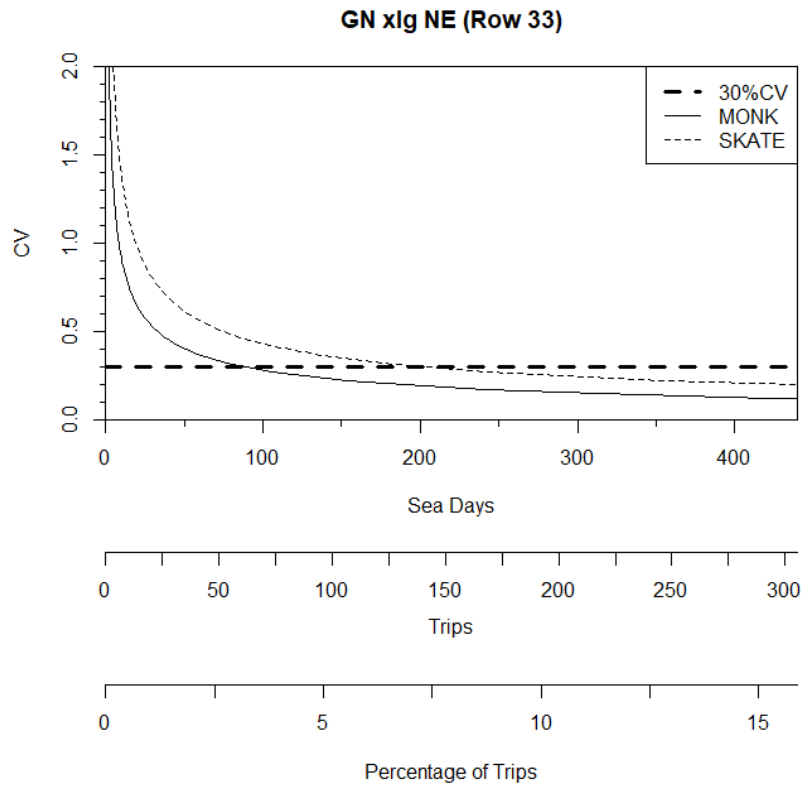


Figure 3, continued. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

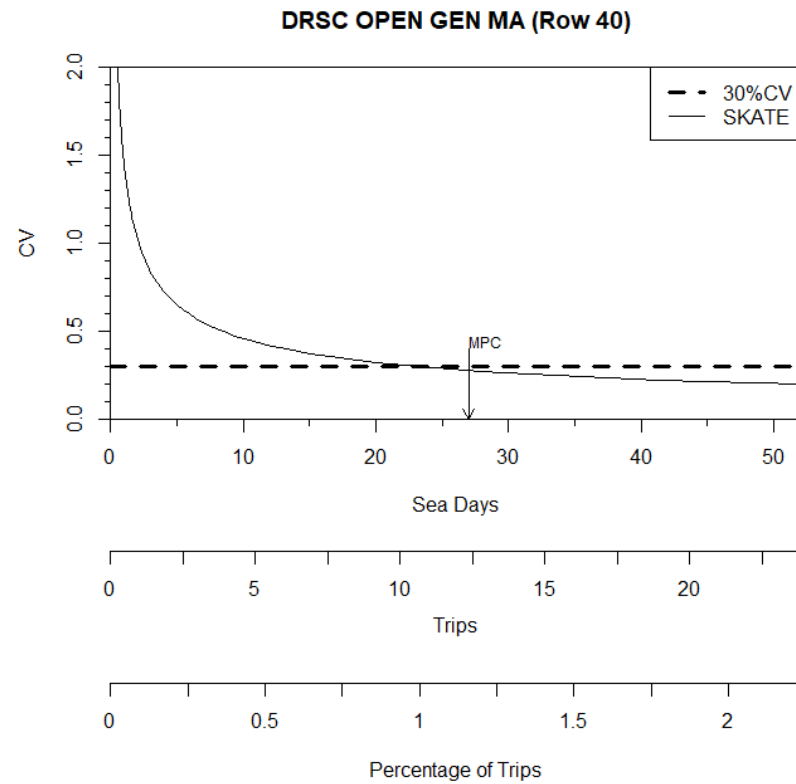
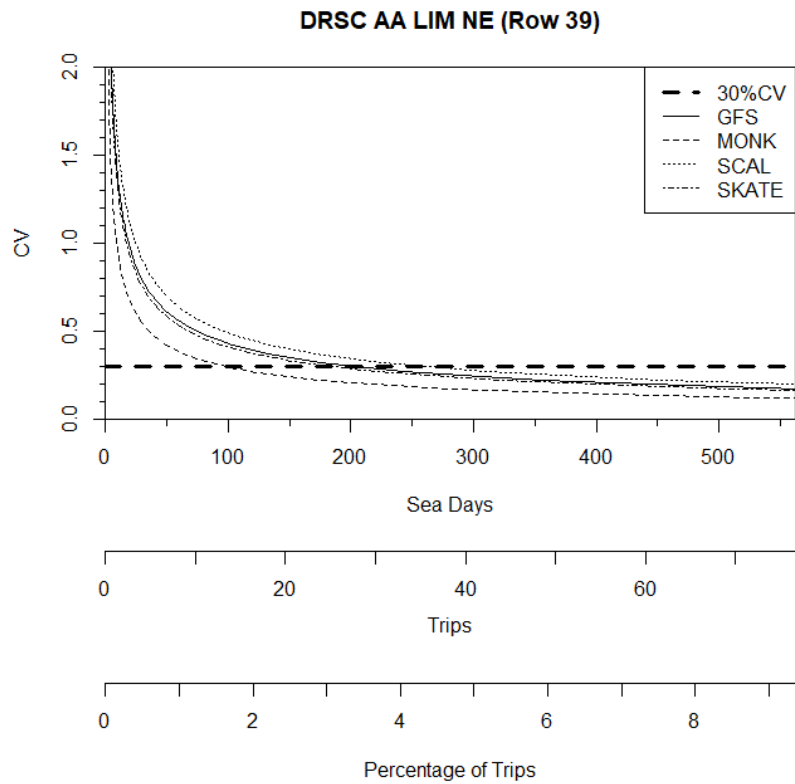


Figure 3, continued. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

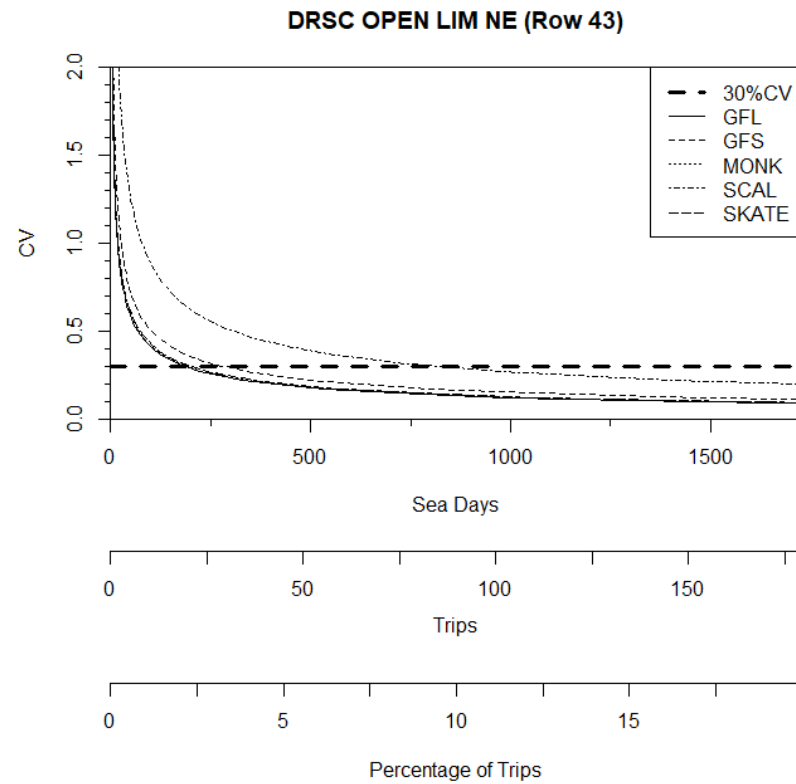
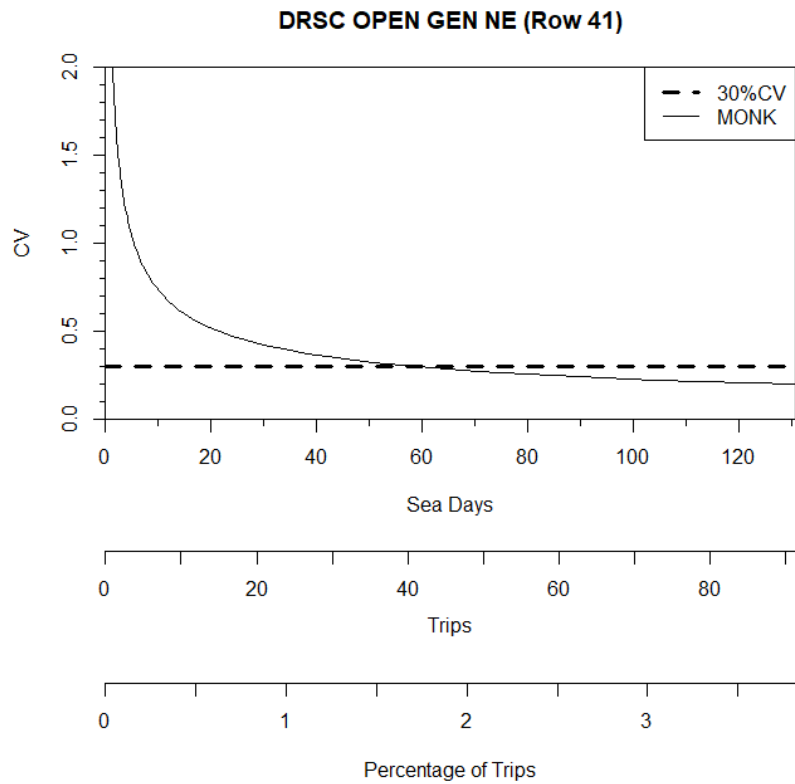


Figure 3, continued. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

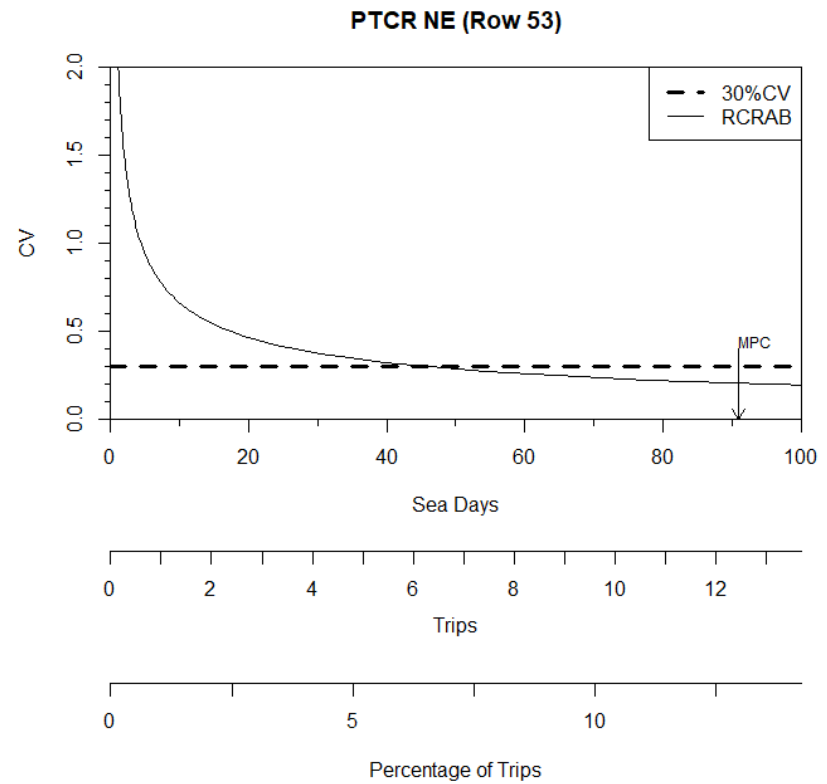
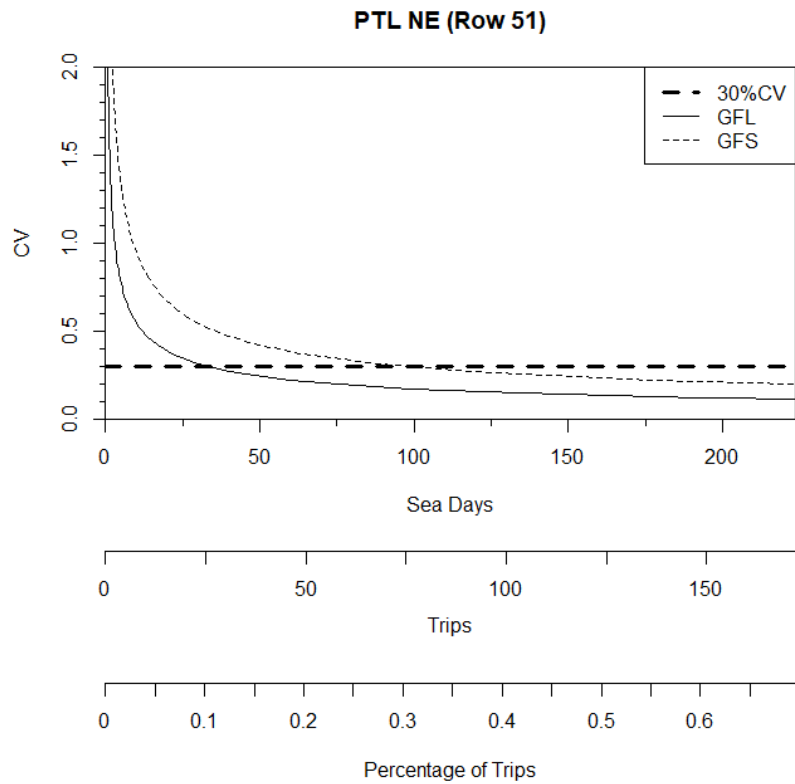


Figure 3, continued. Results from the 2024 sample size analysis conducted for selected fleets, based on July 2022 through June 2023 data. The curves represent the relationship between the coefficient of variance (CV) and the sample size (sea days, trips, and percent of trips) for each of the species groups that was not filtered out. The dash line is the 30% CV. Minimum pilot coverage (MPC) is indicated with an arrow when MPC is greater than the variance-based sample size. For species group and fleet abbreviations, see Table 1B and Appendix Table 4, respectively.

APPENDIX. EQUATIONS USED IN DISCARD ESTIMATION AND SAMPLE SIZE ANALYSES

Total discarded pounds for species j in fleet h (i.e., gear type, access area, trip category, region, and mesh group stratum combination) is defined as:

$$(1) \quad \hat{D}_{j,h} = \sum_{q=1}^Q K_{q,h} r_{c,j,h}$$

where

$$(2) \quad r_{c,j,h} = \frac{\sum_{q=1}^Q N_{q,h} \sum_{i=1}^{n_{q,h}} \frac{d_{j,i,q,h}}{n_{q,h}}}{\sum_{q=1}^Q N_{q,h} \sum_{i=1}^{n_{q,h}} \frac{k_{i,q,h}}{n_{q,h}}}$$

where $\hat{D}_{j,h}$ is total discarded pounds for species j in fleet h ; $K_{q,h}$ is vessel trip report (VTR) total kept pounds of all species in quarter q and fleet h ; $r_{c,j,h}$ is the combined ratio of species j in fleet h ; $d_{j,i,q,h}$ is discards of species j from trip i in quarter q and fleet h ; $k_{i,q,h}$ is kept pounds of all species on trip i in quarter q and fleet h ; $N_{q,h}$ is the number of VTR trips in quarter q and fleet h ; $n_{q,h}$ is the number of observed trips in quarter q and fleet h . A fleet is defined by a gear type, access area, trip category, region, and mesh group combination. In Eq. 2 q denotes calendar quarters.

Variance of $\hat{D}_{j,h}$ for species j in fleet h is defined as:

$$(3) \quad V(\hat{D}_{j,h}) = \sum_{q=1}^Q K_{q,h}^2 \left(\frac{N_{q,h} - n_{q,h}}{n_{q,h} N_{q,h}} \right) \frac{1}{\left(\frac{\sum_{i=1}^{n_{q,h}} k_{i,q,h}}{n_{q,h}} \right)^2} \left[\frac{\sum_{i=1}^{n_{q,h}} \left(d_{j,i,q,h}^2 + (r_{c,j,h})^2 k_{i,q,h}^2 - 2r_{c,j,h} d_{j,i,q,h} k_{i,q,h} \right)}{n_{q,h} - 1} \right]$$

where $\hat{D}_{j,h}$ is total discarded pounds for species j in fleet h ; $K_{q,h}$ is VTR total kept pounds of all species in quarter q and fleet h ; $r_{c,j,h}$ is the combined ratio of species j in fleet h ; $d_{j,i,q,h}$ is discards of species j from trip i in quarter q and fleet h ; $k_{i,q,h}$ is kept pounds of all species on trip i in quarter q and fleet h ; $N_{q,h}$ is the number of VTR trips in quarter q and fleet h ; $n_{q,h}$ is the number of observed trips in quarter q and fleet h .

Standard Error of the discard estimate for species j in fleet h is defined as:

$$(4) \quad SE(\hat{D}_{j,h}) = \sqrt{V(\hat{D}_{j,h})}$$

Coefficient of variation (CV) of $\hat{D}_{j,h}$ for species j in fleet h is defined as:

$$(5) \quad CV(\hat{D}_{j,h}) = \frac{\sqrt{V(\hat{D}_{j,h})}}{\hat{D}_{j,h}}$$

Total discarded pounds of species j over all fleets, h , from 1 to H fleets, is defined as:

$$(6) \quad \hat{D}_{T,j} = \sum_{h=1}^H \hat{D}_{j,h}$$

Variance of $\hat{D}_{T,j}$ for species j over all fleets is defined as:

$$(7) \quad V(\hat{D}_{T,j}) = \sum_{h=1}^H V(\hat{D}_{j,h}) + \sum_{h=1}^H \sum_{k \neq h}^H Cov(\hat{D}_{j,h}, \hat{D}_{j,k})$$

where the covariance term equals 0 (fleets are independent; nonoverlapping strata).

CV of $\hat{D}_{T,j}$ for species j over all fleets is defined as:

$$(8) \quad CV(\hat{D}_{T,j}) = \frac{\sqrt{V(\hat{D}_{T,j})}}{\hat{D}_{T,j}}$$

The number of sea days and trips needed to achieve a 30% CV is derived based on the variance of the total discards for species j in fleet h by using the combined ratio method and the d/k discard ratio (Eq. 3).

From Eq. 3, let

$$(9) \quad \hat{S}_{j,q,h}^2 = \left[\frac{\sum_{i=1}^{n_{q,h}} \left(d_{j,i,q,h}^2 + (r_{c,j,h})^2 k_{i,q,h}^2 - 2r_{c,j,h} d_{j,i,q,h} k_{i,q,h} \right)}{n_{q,h} - 1} \right] \quad \text{and}$$

$$(10) \quad \delta_{q,h} = \frac{n_{q,h}}{\sum_{q=1}^Q n_{q,h}}$$

where $\delta_{q,h}$ is the fraction of the trips in quarter q in fleet h ; $r_{c,j,h}$ is the combined annual ratio of species j in fleet h ; $d_{j,i,q,h}$ is discards of species j from trip i in quarter q in fleet h ; $k_{i,q,h}$ is kept pounds of all species on trip i in quarter q in fleet h ; and $n_{q,h}$ is the number of observed trips in quarter q in fleet h . The $r_{c,j,h}$ in Eq. 9 is defined in Eq. 2 where the summation is over quarters within a given fleet defined by gear, region, access area, trip type, and so forth.

The number of trips necessary to achieve a 30% CV based on the variance of the composite annual total discards for species group j in fleet h is defined as:

$$(11) \quad \hat{T}D_{30j,h} = \frac{\sum_{q=1}^Q \left(\frac{K_{q,h}^2}{\bar{k}_{q,h}^2} \hat{S}_{j,q,h}^2 \frac{1}{\delta_{q,h}} \right)}{(0.09) \hat{D}_{j,h}^2 + \frac{\sum_{q=1}^Q \frac{K_{q,h}^2}{\bar{k}_{q,h}^2} \hat{S}_{j,q,h}^2}{N_h}}$$

where $0.09 = 0.30^2$, the square of the 30% CV, the given precision level.

The number of sea days necessary to achieve a 30% CV based on the variance of the composite annual total discards for species group j in fleet h is defined as:

$$(12) \quad \hat{S}D_{30j,h} = \hat{T}D_{30j,h} * \overline{DA}_h$$

where \overline{DA}_h is the weighted average trip length of VTR trips in fleet h (weighted by the number of VTR trips in each quarter).

When total discards could not be estimated because of little or no observer coverage (no data) or when total discards are 0 (no variance), sample size was determined by pilot coverage, where 2% of the quarterly VTR trips for a fleet were multiplied by the quarterly mean VTR trip length.

$$(13) \quad \hat{S}_{30,j,h,q} = \hat{T}_{h,q} * \overline{DA}_{h,q}$$

where $\hat{T}_{h,q}$ is 2% of the VTR trips in fleet h and quarter q , and $3 \leq \hat{T}_{h,q} \leq 100$ trips; $\overline{DA}_{h,q}$ is the average trip length of VTR trips in fleet h and quarter q . If there were fewer than 3 VTR trips in fleet h and quarter q , then pilot coverage was set to 0 for that fleet and quarter. The quarterly trips and sea days were then summed for annual number of trips and sea days.

The achieved precision resulting from the number of funded sea days can be derived by converting funded sea days into funded trips. The number of funded trips, $\hat{T}F_h$ for fleet h is defined as:

$$(14) \quad \hat{T}F_h = \hat{S}F_h / \overline{DA}_h$$

where $\hat{S}F_h$ is the number of funded sea days in fleet h , and \overline{DA}_h is the weighted average trip length of VTR trips in fleet h (weighted by the number of VTR trips in each quarter).

The achieved CV of \hat{D}_j is based on the variance of the composite annual total discards for species group j in fleet h and the number of funded trips in fleet h and rewriting Eq. 11.

From Eq. 11, let

$$(15) \quad CV(\hat{D}_{j,h}) = \sqrt{\frac{\sum_{q=1}^Q \left(\frac{K_{q,h}^2}{\bar{k}_{q,h}^2} \hat{S}_{j,q,h}^2 \frac{1}{\delta_{q,h}} \right) - \hat{TF}_h \left[\frac{\sum_{q=1}^Q \left(\frac{K_{q,h}^2}{\bar{k}_{q,h}^2} \hat{S}_{j,q,h}^2 \right)}{N_h} \right]}{\hat{TF}_h * \hat{D}_{j,h}^2}}$$

Appendix Table 1. The number of fleets used in 2024 analyses and reported in the tables of this report.

<p>58 fleets uniquely identified in Tables 2 & 3</p> <ul style="list-style-type: none">21 fleets with no observer coverage<ul style="list-style-type: none">discard estimation not conductedpilot fleet designation for sample size analysis8 confidential fleets (Rows 9,12,16,17,21,26,49,54)<ul style="list-style-type: none">aggregated into "Confidential fleets" in Tables 4 & 513 nonconfidential fleets5 fleets with sparse observer coverage<ul style="list-style-type: none">discard estimation conductedpilot fleet designation for sample size analysis1 confidential fleet (Row 11)<ul style="list-style-type: none">aggregated into "Other Minor Fleets" in Tables 4 & 5<i>(This is the only confidential fleet with some observer data, therefore this fleet cannot be aggregated into "Confidential fleets")</i>4 nonconfidential fleets32 fleets with sufficient observer coverage<ul style="list-style-type: none">discard estimation conductedvariance of discard used for sample size analysisnonpilot fleets0 confidential fleets<ul style="list-style-type: none">aggregated into "Confidential Fleets" in Tables 4 & 532 nonconfidential fleets
<p>Other minor fleets<ul style="list-style-type: none">not uniquely identifiedaggregated into "Other minor fleets" in Tables 4 & 5</p>

Appendix Table 2. Discard reason categories used in Appendix Tables 3A and 3B and the associated discard fish dispositions. Fish disposition descriptions taken directly from the Observer Database System.

Discard Reason Category	FISH DISPOSITION Code	FISH DISPOSITION Description
No Market	001	NO MARKET, REASON NOT SPECIFIED
	002	NO MARKET, TOO SMALL
	003	NO MARKET, TOO LARGE
	005	NO MARKET, WONT KEEP UNTIL TRIP END
	006	NO MARKET, BUT RETAINED BY VESSEL FOR ALTERNATE PROGRAM
	007	NO MARKET, BUT RETAINED FOR OBSERVER FOR SCIENTIFIC PURPOSES
	008	NO MARKET, BROUGHT ONBOARD ONLY FOR THE PURPOSE OF OBSERVER SAMPLING
Regulation (Size)	012	REGULATIONS PROHIBIT RETENTION, TOO SMALL
	013	REGULATIONS PROHIBIT RETENTION, TOO LARGE
Regulation (Quota)	004	NO MARKET, QUOTA FILLED
	014	REGULATIONS PROHIBIT RETENTION, QUOTA FILLED
	015	REGULATIONS PROHIBIT RETENTION, NO QUOTA IN AREA
	025	REGULATIONS PROHIBIT ANY RETENTION
Regulation (Other)	009	DISCARDED, FEMALE
	011	REGULATIONS PROHIBIT RETENTION, REASON NOT SPECIFIED
	022	REGULATIONS PROHIBIT RETENTION, V-NOTCHED
	023	REGULATIONS PROHIBIT RETENTION, SOFT-SHELL
	024	REGULATIONS PROHIBIT RETENTION, WITH EGGS
Poor Quality	030	POOR QUALITY, GREY MEAT/PARASITES OBSERVED
	031	POOR QUALITY, REASON NOT SPECIFIED
	032	POOR QUALITY, SANDFLEA DAMAGE
	033	POOR QUALITY, SEAL DAMAGE
	034	POOR QUALITY, SHARK DAMAGE
	035	POOR QUALITY, CETACEAN DAMAGE
	036	POOR QUALITY, HAGFISH DAMAGE
	037	POOR QUALITY, SHELL DISEASE
	038	POOR QUALITY, GEAR DAMAGE
Other	000	DISCARDED, UNKNOWN REASON
	040	NOT BROUGHT ON BOARD, OPERATIONAL DISCARDS
	041	NOT BROUGHT ON BOARD, REASON NOT SPECIFIED
	042	NOT BROUGHT ON BOARD, GEAR DAMAGE PREVENTED CAPTURE

Discard Reason Category	FISH DISPOSITION Code	FISH DISPOSITION Description
	043	NOT BROUGHT ON BOARD, FELL OUT/OFF OF GEAR
	044	NOT BROUGHT ON BOARD, CONSIDERED TO HAVE NO MARKET VALUE
	045	NOT BROUGHT ON BOARD, SAFETY REASON
	046	NOT BROUGHT ON BOARD, MECHANICAL FAILURE
	047	NOT BROUGHT ON BOARD, SPINY DOG CLOGGING PUMP
	048	NOT BROUGHT ON BOARD, VESSEL CAPACITY FILLED
	049	NOT BROUGHT ON BOARD, NOT ENOUGH FISH TO PUMP ABOARD
	052	INCIDENTAL TAKE (MAMMAL, SEA TURTLE, SEA BIRD)
	053	DEBRIS
	054	EMPTY SHELLS
	062	UPGRADED
	063	RETAINING ONLY CERTAIN SIZE BETTER PRICE TRIP QUOTA IN EFFECT
	064	RETAINING ONLY CERTAIN SIZE FOR BEST PRICE DUE TO PRICE DIFFERENCE
	070	NOT BROUGHT ON BOARD, QUALITY OF FISH
	071	NOT BROUGHT ON BOARD, CLOGGED PUMP OTHER
	099	DISCARDED, OTHER

Note: Fish disposition codes “039” = POOR QUALITY, PREVIOUSLY DISCARDED and “090” = DISCARDED BY OBSERVER, INTENDED KEPT CATCH have been excluded from this report.

Appendix Table 3A. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2022 through June 2023 data. See Table 1A for fleet stratification abbreviations.

Species Group: ATLANTIC HERRING (*Clupea harengus*)

Fleet					Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region		Mesh Group	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality		Other
36 Other fleets filtered out					14,535	91.5	0.0	0.3	0.0	0.0	8.2	100.0
Total					14,535	91.5	0.0	0.3	0.0	0.0	8.2	100.0

Species Group: ATLANTIC SALMON (*Salmo salar*) – No Discards

Species Group: BLUEFISH (*Pomatomus saltatrix*)

Fleet					Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region		Mesh Group	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality		Other
36 Other fleets filtered out					22,080	62.5	1.5	19.2	0.0	10.9	6.0	100.0
Total					22,080	62.5	1.5	19.2	0.0	10.9	6.0	100.0

Species Group: FLUKE (*Paralichthys dentatus*) - SCUP (*Stenotomus chrysops*) - BLACK SEA BASS (*Centropristis striata*)

Fleet					Discarded	Percentage by Discard Reason Category						Total	
Row	Gear Type	Access Area	Trip Category	Region		Mesh Group	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality		Other
5	Otter Trawl	OPEN	all	MA	sm	1,717,396	39.9	52.4	6.7	0.0	0.2	0.9	100.0
6	Otter Trawl	OPEN	all	MA	lg	870,271	46.8	40.5	8.7	0.0	2.7	1.3	100.0
7	Otter Trawl	OPEN	all	NE	sm	4,076,630	40.2	43.5	13.1	0.0	0.1	3.1	100.0
8	Otter Trawl	OPEN	all	NE	lg	470,688	48.8	38.4	11.7	0.0	0.2	1.0	100.0
32 Other fleets filtered out					1,148,098	39.7	46.6	11.0	0.0	1.2	1.5	100.0	
Total					8,283,084	41.3	45.1	10.9	0.0	0.5	2.1	100.0	

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2022 through June 2023 data.

Species Group: LARGE MESH GROUND FISH

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	192,562	9.3	19.5	69.9	1.1	0.0	0.3	100.0
8	Otter Trawl	OPEN	all	NE	lg	2,330,212	6.0	85.6	7.9	0.0	0.4	0.1	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	467,164	79.5	0.0	20.5	0.0	0.0	0.0	100.0
51	Pots and Traps, Lobster	OPEN	all	NE	all	313,309	68.5	0.7	20.4	8.6	0.0	1.8	100.0
32 Other fleets filtered out						754,157	34.9	22.2	37.5	0.3	3.6	1.6	100.0
Total						4,057,404	24.8	54.3	18.7	0.8	0.9	0.5	100.0

Species Group: MONKFISH (*Lophius americanus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	110,424	44.8	38.4	16.8	0.0	0.0	0.0	100.0
6	Otter Trawl	OPEN	all	MA	lg	306,003	52.0	16.7	30.3	0.0	0.0	1.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	120,800	14.2	48.6	20.7	0.0	0.0	16.5	100.0
8	Otter Trawl	OPEN	all	NE	lg	896,472	13.7	86.3	0.0	0.0	0.0	0.0	100.0
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xl	129,497	1.7	1.3	0.0	0.0	96.9	0.1	100.0
37	Dredge, Scallop	AA	GEN	NE	all	355,939	95.4	2.6	1.5	0.0	0.4	0.1	100.0
39	Dredge, Scallop	AA	LIM	NE	all	1,583,744	97.2	0.0	2.8	0.0	0.0	0.0	100.0
41	Dredge, Scallop	OPEN	GEN	NE	all	121,216	86.9	10.6	2.5	0.0	0.0	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	3,060,240	97.4	0.0	2.6	0.0	0.0	0.0	100.0
27 Other fleets filtered out						374,519	86.2	8.8	3.3	0.0	1.6	0.1	100.0
Total						7,058,855	79.9	13.9	4.0	0.0	1.9	0.3	100.0

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2022 through June 2023 data.

Species Group: RED DEEPSEA CRAB (*Chaceon quinquegens*)

Fleet						Discarded	Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	216,299	100.0	0.0	0.0	0.0	0.0	0.0	100.0
53	Pots and Traps, Crab	OPEN	all	NE	all	1,202,398	34.1	1.8	5.9	58.2	0.0	0.0	100.0
34 Other fleets filtered out						16,141	99.7	0.0	0.3	0.0	0.0	0.0	100.0
Total						1,434,838	44.8	1.5	4.9	48.8	0.0	0.0	100.0

Species Group: SEA SCALLOP (*Placopecten magellanicus*)

Fleet						Discarded	Percentage by Discard Reason Category						
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
39	Dredge, Scallop	AA	LIM	NE	all	3,569,530	88.9	0.0	6.1	0.0	1.7	3.2	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	7,152,911	92.3	0.0	0.0	0.0	7.4	0.2	100.0
34 Other fleets filtered out						2,286,738	55.9	0.4	26.9	0.3	6.0	10.5	100.0
Total						13,009,179	85.0	0.1	6.4	0.0	5.6	2.9	100.0

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2022 through June 2023 data.

Species Group: SKATE COMPLEX (*Rajidae*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	4,998,490	91.7	0.0	8.3	0.0	0.0	0.0	100.0
6	Otter Trawl	OPEN	all	MA	lg	8,913,393	92.5	0.7	4.1	0.0	0.0	2.7	100.0
7	Otter Trawl	OPEN	all	NE	sm	3,863,380	76.0	0.0	23.9	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	8,026,863	88.4	0.2	9.8	0.0	0.0	1.6	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	388,478	98.2	0.0	0.3	0.0	0.0	1.5	100.0
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	1,355,572	14.5	0.2	36.5	0.1	45.7	3.0	100.0
37	Dredge, Scallop	AA	GEN	NE	all	473,380	88.3	0.0	11.7	0.0	0.0	0.0	100.0
39	Dredge, Scallop	AA	LIM	NE	all	7,341,503	99.1	0.0	0.9	0.0	0.0	0.0	100.0
40	Dredge, Scallop	OPEN	GEN	MA	all	746,160	96.3	0.0	3.6	0.0	0.0	0.1	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	7,826,202	100.0	0.0	0.0	0.0	0.0	0.0	100.0
26 Other fleets filtered out						2,047,946	86.4	0.0	3.5	0.0	1.3	8.7	100.0
Total						45,981,368	90.1	0.2	7.0	0.0	1.4	1.3	100.0

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2022 through June 2023 data.

Species Group: SMALL MESH GROUND FISH

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
7	Otter Trawl	OPEN	all	NE	sm	2,941,216	50.9	2.5	44.5	0.0	1.3	0.9	100.0
8	Otter Trawl	OPEN	all	NE	lg	1,152,901	94.0	1.7	0.0	2.0	2.3	0.0	100.0
39	Dredge, Scallop	AA	LIM	NE	all	159,289	98.4	0.0	1.6	0.0	0.0	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	344,747	98.3	0.0	1.7	0.1	0.0	0.0	100.0
51	Pots and Traps, Lobster	OPEN	all	NE	all	393,251	100.0	0.0	0.0	0.0	0.0	0.0	100.0
31 Other fleets filtered out						490,856	92.7	0.8	1.0	0.0	5.4	0.0	100.0
Total						5,482,259	71.6	1.7	24.1	0.4	1.7	0.5	100.0

Species Group: SPINY DOGFISH (*Squalus acanthias*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
5	Otter Trawl	OPEN	all	MA	sm	3,029,659	100.0	0.0	0.0	0.0	0.0	0.0	100.0
6	Otter Trawl	OPEN	all	MA	lg	2,714,509	99.7	0.0	0.0	0.2	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	1,377,009	91.0	0.0	9.0	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	2,828,796	100.0	0.0	0.0	0.0	0.0	0.0	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	104,640	100.0	0.0	0.0	0.0	0.0	0.0	100.0
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	176,957	98.3	0.0	0.0	0.0	1.7	0.0	100.0
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	136,005	31.6	0.0	8.9	0.0	51.9	7.6	100.0
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	642,140	99.6	0.0	0.0	0.0	0.4	0.0	100.0
28 Other fleets filtered out						491,824	91.5	0.0	0.1	0.0	3.2	5.3	100.0
Total						11,501,541	97.6	0.0	1.2	0.0	0.8	0.3	100.0

Appendix Table 3A, continued. Estimated discards (live lb) and percentage by discard reason category for 14 species groups, based on July 2022 through June 2023 data.

Species Group: SQUID (*Doryteuthis [Amerigo] pealeii, Illex illecebrosus*) - BUTTERFISH (*Peprilus triacanthus*) - MACKEREL (*Scomber colias, Scomber scombrus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	2,318,140	81.8	6.5	8.2	0.0	0.5	3.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	7,476,337	93.7	5.3	0.1	0.0	0.5	0.5	100.0
34 Other fleets filtered out						1,233,001	96.9	0.5	1.2	0.0	0.3	1.1	100.0
Total						11,027,479	91.6	5.0	1.9	0.0	0.4	1.1	100.0

Species Group: SURFCLAM (*Spisula solidissima*) - OCEAN QUAHOG (*Arctica islandica*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
36 Other fleets filtered out						3,326,031	89.7	0.0	9.5	0.7	0.0	0.0	100.0
Total						3,326,031	89.7	0.0	9.5	0.7	0.0	0.0	100.0

Species Group: TILEFISH

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
36 Other fleets filtered out						40,127	62.6	9.5	3.5	15.2	9.2	0.0	100.0
Total						40,127	62.6	9.5	3.5	15.2	9.2	0.0	100.0

Appendix Table 3B. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data. See Table 1A for fleet stratification abbreviations.

Species: BLACK SEA BASS (*Centropristis striata*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
5	Otter Trawl	OPEN	all	MA	sm	238,832	5.7	69.8	22.7	0.0	0.1	1.7	100.0
7	Otter Trawl	OPEN	all	NE	sm	510,255	28.9	38.3	28.7	0.0	0.0	4.1	100.0
45	Pots and Traps, Fish	OPEN	all	MA	all	165,284	0.0	97.2	0.0	0.0	2.8	0.0	100.0
46	Pots and Traps, Fish	OPEN	all	NE	all	160,539	0.0	88.8	5.5	0.0	0.0	5.8	100.0
32 Other fleets filtered out						216,425	12.9	45.9	31.5	0.1	0.1	9.4	100.0
Total						1,291,335	14.6	59.2	21.5	0.0	0.4	4.2	100.0

Species: FLUKE (*Paralichthys dentatus*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
5	Otter Trawl	OPEN	all	MA	sm	189,598	9.7	76.3	12.6	0.0	0.5	0.9	100.0
6	Otter Trawl	OPEN	all	MA	lg	299,359	0.6	79.5	12.2	0.0	7.7	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	383,762	13.8	36.3	47.9	0.0	0.3	1.8	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	253,264	86.3	0.0	13.7	0.0	0.0	0.0	100.0
32 Other fleets filtered out						404,096	49.4	22.9	25.4	0.0	2.1	0.3	100.0
Total						1,530,079	32.1	40.2	24.9	0.0	2.2	0.6	100.0

Species: SCUP (*Stenotomus chrysops*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
5	Otter Trawl	OPEN	all	MA	sm	1,288,966	51.0	45.4	2.7	0.0	0.2	0.8	100.0
6	Otter Trawl	OPEN	all	MA	lg	468,843	73.3	24.2	1.7	0.0	0.8	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	3,182,613	45.4	45.2	6.2	0.0	0.1	3.1	100.0
33 Other fleets filtered out						521,247	50.2	47.7	0.9	0.0	0.4	0.8	100.0
Total						5,461,669	49.6	43.7	4.5	0.0	0.2	2.1	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: ACADIAN REDFISH (*Sebastes fasciatus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
36 Other fleets filtered out						41,398	23.6	61.1	0.0	0.0	0.3	15.1	100.0
Total						41,398	23.6	61.1	0.0	0.0	0.3	15.1	100.0

Species: AMERICAN PLAICE (*Hippoglossoides platessoides*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	111,238	0.0	99.5	0.0	0.0	0.3	0.2	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	40,316	97.7	0.0	2.3	0.0	0.0	0.0	100.0
34 Other fleets filtered out						11,413	51.1	17.2	31.6	0.0	0.1	0.0	100.0
Total						162,968	27.7	69.1	2.8	0.0	0.2	0.1	100.0

Species: ATLANTIC COD (*Gadus morhua*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	12,020	0.0	99.3	0.7	0.0	0.0	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	25,466	59.4	0.0	40.6	0.0	0.0	0.0	100.0
51	Pots and Traps, Lobster	OPEN	all	NE	all	184,350	50.8	0.0	34.7	14.6	0.0	0.0	100.0
33 Other fleets filtered out						25,990	16.8	11.6	53.9	0.3	17.1	0.3	100.0
Total						247,825	45.6	6.0	35.6	10.9	1.8	0.0	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: ATLANTIC HALIBUT (*Hippoglossus hippoglossus*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
2	Longline, Bottom	OPEN	all	NE	all	12,087	0.0	35.5	0.0	0.0	0.0	64.5	100.0
8	Otter Trawl	OPEN	all	NE	lg	17,251	0.0	83.3	14.7	0.0	0.0	2.1	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	2,256	0.0	63.9	36.1	0.0	0.0	0.0	100.0
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	5,559	0.0	100.0	0.0	0.0	0.0	0.0	100.0
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlg	23,179	0.0	73.2	9.9	0.0	9.2	7.8	100.0
31 Other fleets filtered out						1,881	39.9	24.7	35.5	0.0	0.0	0.0	100.0
Total						62,213	1.2	69.3	10.1	0.0	3.4	16.0	100.0

Species: ATLANTIC WOLFFISH (*Anarhichas lupus*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
8	Otter Trawl	OPEN	all	NE	lg	44,968	21.1	0.0	78.9	0.0	0.0	0.0	100.0
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	3,629	1.2	0.0	98.8	0.0	0.0	0.0	100.0
34 Other fleets filtered out						775	0.0	0.0	100.0	0.0	0.0	0.0	100.0
Total						49,371	19.3	0.0	80.7	0.0	0.0	0.0	100.0

Species: HADDOCK (*Melanogrammus aeglefinus*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
8	Otter Trawl	OPEN	all	NE	lg	1,597,711	0.0	99.7	0.0	0.0	0.3	0.0	100.0
35 Other fleets filtered out						90,884	6.2	86.2	5.5	0.0	2.1	0.0	100.0
Total						1,688,595	0.3	99.0	0.3	0.0	0.3	0.0	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: OCEAN POUT (*Zoarces americanus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	3,004	42.0	0.0	58.0	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	109,067	87.7	0.0	12.3	0.0	0.0	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	9,401	94.5	0.0	5.3	0.0	0.2	0.0	100.0
50	Pots and Traps, Lobster	OPEN	all	MA	all	6,404	2.9	0.0	97.1	0.0	0.0	0.0	100.0
51	Pots and Traps, Lobster	OPEN	all	NE	all	18,599	100.0	0.0	0.0	0.0	0.0	0.0	100.0
31 Other fleets filtered out						6,648	46.9	0.0	53.1	0.0	0.0	0.0	100.0
Total						153,122	83.4	0.0	16.6	0.0	0.0	0.0	100.0

Species: POLLOCK (*Pollachius virens*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
36 Other fleets filtered out						154,150	0.0	89.9	0.0	0.0	8.9	1.1	100.0
Total						154,150	0.0	89.9	0.0	0.0	8.9	1.1	100.0

Species: WHITE HAKE (*Urophycis tenuis*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
51	Pots and Traps, Lobster	OPEN	all	NE	all	83,791	100.0	0.0	0.0	0.0	0.0	0.0	100.0
35 Other fleets filtered out						51,479	75.6	5.2	0.2	0.1	15.8	3.0	100.0
Total						135,270	90.7	2.0	0.1	0.1	6.0	1.2	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: WINDOWPANE FLOUNDER (*Scophthalmus aquosus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	42,991	38.7	0.0	61.3	0.0	0.0	0.0	100.0
6	Otter Trawl	OPEN	all	MA	lg	93,963	21.5	0.0	78.5	0.0	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	36,451	24.2	0.0	75.8	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	121,727	7.7	0.0	91.9	0.4	0.0	0.0	100.0
39	Dredge, Scallop	AA	LIM	NE	all	91,764	71.0	0.0	29.0	0.0	0.0	0.0	100.0
41	Dredge, Scallop	OPEN	GEN	NE	all	20,330	53.4	0.0	46.6	0.0	0.0	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	86,079	58.6	0.0	41.4	0.0	0.0	0.0	100.0
29 Other fleets filtered out						17,771	55.2	0.0	44.6	0.0	0.0	0.2	100.0
Total						511,076	37.4	0.0	62.5	0.1	0.0	0.0	100.0

Species: WINTER FLOUNDER (*Pseudopleuronectes americanus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	31,869	66.1	0.8	32.5	0.0	0.0	0.6	100.0
6	Otter Trawl	OPEN	all	MA	lg	10,805	19.9	34.0	46.1	0.0	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	120,672	3.1	7.6	87.5	1.7	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	44,047	4.1	60.3	35.6	0.0	0.0	0.0	100.0
41	Dredge, Scallop	OPEN	GEN	NE	all	19,019	74.6	0.0	25.4	0.0	0.0	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	233,321	87.8	0.0	12.2	0.0	0.0	0.0	100.0
51	Pots and Traps, Lobster	OPEN	all	NE	all	12,289	100.0	0.0	0.0	0.0	0.0	0.0	100.0
29 Other fleets filtered out						24,827	65.1	0.4	33.8	0.3	0.4	0.0	100.0
Total						496,850	55.6	8.0	35.9	0.4	0.0	0.0	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: WITCH FLOUNDER (*Glyptocephalus cynoglossus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	32,902	92.3	1.9	5.9	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	67,759	0.0	99.9	0.0	0.0	0.1	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	49,870	85.3	0.0	14.7	0.0	0.0	0.0	100.0
33 Other fleets filtered out						25,849	78.9	7.8	13.1	0.0	0.0	0.2	100.0
Total						176,381	52.9	39.9	7.2	0.0	0.0	0.0	100.0

Species: YELLOWTAIL FLOUNDER (*Limanda ferruginea*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
8	Otter Trawl	OPEN	all	NE	lg	74,950	0.1	99.6	0.1	0.0	0.1	0.0	100.0
39	Dredge, Scallop	AA	LIM	NE	all	46,963	52.1	0.0	44.3	3.6	0.0	0.0	100.0
41	Dredge, Scallop	OPEN	GEN	NE	all	17,675	25.7	0.0	74.3	0.0	0.0	0.0	100.0
33 Other fleets filtered out						38,598	20.8	0.2	79.0	0.0	0.0	0.0	100.0
Total						178,187	20.9	41.9	36.2	0.9	0.1	0.0	100.0

Species: OFFSHORE HAKE (*Merluccius albidus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	1,096	100.0	0.0	0.0	0.0	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	7,354	100.0	0.0	0.0	0.0	0.0	0.0	100.0
15	Otter Trawl, Twin	OPEN	all	NE	sm	602	100.0	0.0	0.0	0.0	0.0	0.0	100.0
33 Other fleets filtered out						111	100.0	0.0	0.0	0.0	0.0	0.0	100.0
Total						9,164	100.0	0.0	0.0	0.0	0.0	0.0	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: RED HAKE (*Urophycis chuss*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
7	Otter Trawl	OPEN	all	NE	sm	992,730	72.2	2.1	25.7	0.0	0.0	0.0	100.0
8	Otter Trawl	OPEN	all	NE	lg	460,402	94.3	0.0	0.0	5.6	0.1	0.0	100.0
39	Dredge, Scallop	AA	LIM	NE	all	144,434	98.3	0.0	1.7	0.0	0.0	0.0	100.0
43	Dredge, Scallop	OPEN	LIM	NE	all	292,872	98.1	0.0	1.9	0.1	0.0	0.0	100.0
51	Pots and Traps, Lobster	OPEN	all	NE	all	393,251	100.0	0.0	0.0	0.0	0.0	0.0	100.0
31 Other fleets filtered out						229,657	98.1	0.1	1.7	0.0	0.1	0.0	100.0
Total						2,513,346	87.5	0.9	10.6	1.0	0.0	0.0	100.0

Species: SILVER HAKE (*Merluccius bilinearis*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
7	Otter Trawl	OPEN	all	NE	sm	1,941,132	39.5	2.7	54.5	0.0	1.9	1.4	100.0
8	Otter Trawl	OPEN	all	NE	lg	692,499	93.8	2.6	0.0	0.0	3.6	0.0	100.0
34 Other fleets filtered out						326,118	91.5	1.2	0.4	0.0	6.8	0.0	100.0
Total						2,959,749	58.0	2.5	35.8	0.0	2.9	0.9	100.0

Species: ATLANTIC CHUB MACKEREL (*Scomber colias*)

Fleet						Discarded	Percentage by Discard Reason Category						Total
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group		No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	
5	Otter Trawl	OPEN	all	MA	sm	85,920	100.0	0.0	0.0	0.0	0.0	0.0	100.0
7	Otter Trawl	OPEN	all	NE	sm	28,201	100.0	0.0	0.0	0.0	0.0	0.0	100.0
34 Other fleets filtered out						174	46.6	0.0	0.0	0.0	53.4	0.0	100.0
Total						114,295	99.9	0.0	0.0	0.0	0.1	0.0	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: ATLANTIC MACKEREL (*Scomber scombrus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	118,836	99.3	0.0	0.0	0.0	0.0	0.6	100.0
35 Other fleets filtered out						207,524	93.3	0.0	0.0	0.0	0.6	6.1	100.0
Total						326,360	95.5	0.0	0.0	0.0	0.4	4.1	100.0

Species: BUTTERFISH (*Peprilus triacanthus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	1,575,094	81.3	6.1	8.4	0.0	0.0	4.1	100.0
7	Otter Trawl	OPEN	all	NE	sm	6,526,262	93.7	5.9	0.0	0.0	0.0	0.4	100.0
13	Otter Trawl, Twin	OPEN	all	MA	sm	289,281	99.1	0.9	0.0	0.0	0.0	0.0	100.0
33 Other fleets filtered out						311,675	98.7	0.7	0.6	0.0	0.0	0.0	100.0
Total						8,702,313	91.8	5.6	1.6	0.0	0.0	1.0	100.0

Species: LONGFIN INSHORE SQUID (*Doryteuthis [Amerigo] pealeii*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
7	Otter Trawl	OPEN	all	NE	sm	435,812	91.5	1.9	0.0	0.0	6.6	0.0	100.0
35 Other fleets filtered out						338,631	77.8	14.5	3.8	0.0	3.5	0.3	100.0
Total						774,442	85.5	7.4	1.7	0.0	5.3	0.2	100.0

Appendix Table 3B, continued. Estimated discards (live lb) and percentage by discard reason category for 26 individual species that compose the 14 species groups, based on July 2022 through June 2023 data.

Species: NORTHERN SHORTFIN SQUID (*Illex illecebrosus*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
5	Otter Trawl	OPEN	all	MA	sm	425,950	84.7	0.0	14.8	0.0	0.1	0.4	100.0
7	Otter Trawl	OPEN	all	NE	sm	366,173	94.9	0.0	0.7	0.0	1.4	3.0	100.0
15	Otter Trawl, Twin	OPEN	all	NE	sm	299,271	100.0	0.0	0.0	0.0	0.0	0.0	100.0
33 Other fleets filtered out						17,255	98.0	0.0	2.0	0.0	0.0	0.0	100.0
Total						1,108,648	92.4	0.0	6.0	0.0	0.5	1.1	100.0

Species: BLUELINE TILEFISH (*Caulolatilus microps*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
36 Other fleets filtered out						6,693	82.0	16.8	1.2	0.0	0.0	0.0	100.0
Total						6,693	82.0	16.8	1.2	0.0	0.0	0.0	100.0

Species: GOLDEN TILEFISH (*Lopholatilus chamaeleonticeps*)

Fleet						Percentage by Discard Reason Category							
Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Discarded	No Market	Regulation (Size)	Regulation (Quota)	Regulation (Other)	Poor Quality	Other	Total
36 Other fleets filtered out						33,434	58.7	8.1	4.0	18.2	11.0	0.0	100.0
Total						33,434	58.7	8.1	4.0	18.2	11.0	0.0	100.0

Appendix Table 4. Fleet abbreviations used in Figures 1A, 1B, 2, and 3. Fleets that were filtered out through the importance filter and fleets designated as in need of pilot coverage have been aggregated into "Other fleets."

Row	Fleet Row Gear Type	Access Area	Trip Category	Region	Mesh Group	Fleet Abbreviation
1	Longline, Bottom	OPEN	all	MA	all	LLB MA (Row 1)
2	Longline, Bottom	OPEN	all	NE	all	LLB NE (Row 2)
3	Hand Line	OPEN	all	MA	all	HL MA (Row 3)
4	Hand Line	OPEN	all	NE	all	HL NE (Row 4)
5	Otter Trawl	OPEN	all	MA	sm	OT sm MA (Row 5)
6	Otter Trawl	OPEN	all	MA	lg	OT lg MA (Row 6)
7	Otter Trawl	OPEN	all	NE	sm	OT sm NE (Row 7)
8	Otter Trawl	OPEN	all	NE	lg	OT lg NE (Row 8)
9	Otter Trawl, LqMesh Belly Panel	OPEN	all	MA	lg	OTLMB lg MA (Row 9)
10	Otter Trawl, LqMesh Belly Panel	OPEN	all	NE	sm	OTLMB sm NE (Row 10)
11	Otter Trawl, LqMesh Belly Panel	OPEN	all	NE	lg	OTLMB lg NE (Row 11)
12	Otter Trawl, Scallop	OPEN	GEN	MA	lg	OTSC OPEN GEN lg MA (Row 12)
13	Otter Trawl, Twin	OPEN	all	MA	sm	OTT sm MA (Row 13)
14	Otter Trawl, Twin	OPEN	all	MA	lg	OTT lg MA (Row 14)
15	Otter Trawl, Twin	OPEN	all	NE	sm	OTT sm NE (Row 15)
16	Otter Trawl, Twin	OPEN	all	NE	lg	OTT lg NE (Row 16)
17	Otter Trawl, Ruhle	OPEN	all	MA	lg	OTR lg MA (Row 17)
18	Otter Trawl, Ruhle	OPEN	all	NE	sm	OTR sm NE (Row 18)
19	Otter Trawl, Haddock Separator	OPEN	all	NE	lg	OTH lg NE (Row 19)
20	Otter Trawl, Shrimp	OPEN	all	MA	sm	OTSH sm MA (Row 20)
21	Otter Trawl, Shrimp	OPEN	all	NE	lg	OTTH lg NE (Row 21)
22	Otter Trawl, Other	OPEN	all	MA	sm	OTO sm MA (Row 22)
23	Otter Trawl, Other	OPEN	all	MA	lg	OTO lg MA (Row 23)
24	Otter Trawl, Other	OPEN	all	NE	sm	OTO sm NE (Row 24)
25	Otter Trawl, Other	OPEN	all	NE	lg	OTO lg NE (Row 25)
26	Floating Trap	OPEN	all	MA	all	FT MA (Row 26)
27	Floating Trap	OPEN	all	NE	all	FT NE (Row 27)
28	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	sm	GN sm MA (Row 28)
29	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	lg	GN lg MA (Row 29)
30	Gillnet, Sink, Anchor, Drift	OPEN	all	MA	xlq	GN xlq MA (Row 30)
31	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	sm	GN sm NE (Row 31)
32	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	lg	GN lg NE (Row 32)
33	Gillnet, Sink, Anchor, Drift	OPEN	all	NE	xlq	GN xlq NE (Row 33)
34	Purse Seine	OPEN	all	MA	all	PS MA (Row 34)
35	Purse Seine	OPEN	all	NE	all	PS NE (Row 35)
36	Dredge, Scallop	AA	GEN	MA	all	DRSC AA GEN MA (Row 36)
37	Dredge, Scallop	AA	GEN	NE	all	DRSC AA GEN NE (Row 37)
38	Dredge, Scallop	AA	LIM	MA	all	DRSC AA LIM MA (Row 38)
39	Dredge, Scallop	AA	LIM	NE	all	DRSC AA LIM NE (Row 39)
40	Dredge, Scallop	OPEN	GEN	MA	all	DRSC OPEN GEN MA (Row 40)
41	Dredge, Scallop	OPEN	GEN	NE	all	DRSC OPEN GEN NE (Row 41)
42	Dredge, Scallop	OPEN	LIM	MA	all	DRSC OPEN LIM MA (Row 42)

Row	Fleet Row	Gear Type	Access Area	Trip Category	Region	Mesh Group	Fleet Abbreviation
43		Dredge, Scallop	OPEN	LIM	NE	all	DRSC OPEN LIM NE (Row 43)
44		Trawl, Midwater	all	all	NE	sm	TMW all sm NE (Row 44)
45		Pots and Traps, Fish	OPEN	all	MA	all	PTF MA (Row 45)
46		Pots and Traps, Fish	OPEN	all	NE	all	PTF NE (Row 46)
47		Pots and Traps, Conch	OPEN	all	MA	all	PTC MA (Row 47)
48		Pots and Traps, Conch	OPEN	all	NE	all	PTC NE (Row 48)
49		Pots and Traps, Haqfish	OPEN	all	NE	all	PTH NE (Row 49)
50		Pots and Traps, Lobster	OPEN	all	MA	all	PTL MA (Row 50)
51		Pots and Traps, Lobster	OPEN	all	NE	all	PTL NE (Row 51)
52		Pots and Traps, Crab	OPEN	all	MA	all	PTCR MA (Row 52)
53		Pots and Traps, Crab	OPEN	all	NE	all	PTCR NE (Row 53)
54		Scottish Seine	OPEN	all	MA	sm	SS sm MA (Row 54)
55		Dredge, Other	OPEN	all	MA	all	DRO MA (Row 55)
56		Dredge, Other	OPEN	all	NE	all	DRO NE (Row 56)
57		Dredge, Ocean Quahog/Surfclam	OPEN	all	MA	all	DRC MA (Row 57)
58		Dredge, Ocean Quahog/Surfclam	OPEN	all	NE	all	DRC NE (Row 58)
		Other fleets filtered out					Other fleets

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