

**FISHERY MANAGEMENT PLAN UPDATE
SCUP NORTH OF CAPE HATTERAS
AUGUST 2020**

STATUS OF THE FISHERY MANAGEMENT PLAN

Fishery Management Plan History

Original FMP Adoption: Incorporated into the Summer Flounder FMP through Amendment 8 in 1996

Amendments:

- Amendment 8 in 1996
- Regulatory Amendment in 1996
- Amendment 10 in 1997
- Amendment 11 in 1998
- Amendment 12 in 1999
 - Framework 1 in 2001
 - Addendum III in 2001
 - Addendum IV in 2001
 - Addendum V in 2002
 - Addendum VII in 2002
 - Framework 3 in 2003
 - Framework 4 in 2003
 - Addendum IX in 2003
 - Addendum X in 2003
- Amendment 13 in 2003
 - Framework 5 in 2004
 - Addendum XI in 2004
 - Addendum XIII in 2004
 - Addendum XVI in 2005
 - Framework 7 in 2007
 - Addendum XIX in 2007
- Amendment 14 in 2007
- Amendment 16 in 2007
 - Addendum XX in 2009
- Amendment 15 in 2011
- Amendment 19 (Recreational Accountability Amendment) in 2013
- Amendment 17 in 2015
- Amendment 18 in 2015
 - Framework 9 in 2016
- Amendment 20 in 2017
 - Addendum XXIX in 2017
 - Framework 10 in 2017
 - Framework 11 in 2018

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Framework 12 in 2018
Framework 13 in 2018
Addendum XXXI in 2018

Revisions:	None
Supplements:	None
Information Updates:	None
Schedule Changes:	None
Benchmark Review:	2015

Because of their presence in, and movement between, state waters (0-3 miles) and federal waters (3-200 miles), the Mid-Atlantic Fishery Management Council (MAFMC) manages scup (*Stenotomus chrysops*) north of Cape Hatteras cooperatively with the Atlantic States Marine Fisheries Commission (ASMFC). The two management entities work in conjunction with the National Marine Fisheries Service (NMFS) as the federal implementation and enforcement entity. The Summer Flounder, Scup and Black Sea Bass Fishery Management Plan (FMP) and amendments use output controls (catch and landings limits) as the primary management tool, with landings divided between the commercial (78 percent) and recreational (22 percent) fisheries. The FMP also includes minimum fish sizes, bag limits, seasons, gear restrictions, permit requirements, and other provisions to prevent overfishing and ensure sustainability of the fisheries. Recreational bag and size limits and seasons are determined on a state-by-state basis using conservation equivalency in state waters and coastwide measures in federal waters. The commercial quota is coastwide during the winter seasons (January-April; October-December) and state specific during the summer season (May-September).

Specific details for each Amendment include:

Amendment 8 - incorporated scup into the Summer Flounder FMP; established scup management measures, including commercial quotas, recreational harvest limits, size limits, gear restrictions, permits, and reporting requirements.

Regulatory Amendment - established seasonal quota periods of the commercial scup fishery.

Amendment 10 - modified commercial minimum mesh requirements; continued commercial vessel moratorium permit; prohibited transfer of summer flounder at sea; established a special permit for the summer flounder party/charter sector.

Amendment 11 - modified certain provisions related to vessel replacement and upgrading, permit history transfer, splitting, and permit renewal regulations.

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- Amendment 12 - revised the Summer Flounder, Scup, and Black Sea Bass FMP to comply with the Sustainable Fisheries Act and established a framework adjustment process; established quota set-aside for research for summer flounder, scup and black sea bass; established state-specific conservation equivalency measures; allowed the rollover of the winter scup quota; revised the start date for the scup summer quota period.
- Framework 1 - established quota set-aside for research for summer flounder, scup and black sea bass.
- Addendum III - established recreational fishing specifications for 2001 for summer flounder and scup.
- Addendum IV - provided that upon the recommendation of the relevant monitoring committee and joint consideration with the Mid-Atlantic Fishery Management Council, the ASMFC's Summer Flounder, Scup, and Black Sea Bass Management Board will decide the state regulations rather than forward a recommendation to the National Marine Fisheries Science center; made states responsible for implementing the ASMFC's Summer Flounder, Scup, and Black Sea Bass Management Boards decisions on regulations.
- Addendum V - created state-specific shares of the summer period quota that will remain in place until the ASMFC's Summer Flounder, Scup, and Black Sea Bass Management Board takes direct action to modify them.
- Addendum VII - established recreational fishing specifications for scup for 2002.
- Framework 3 - allowed the rollover of winter scup quota; revised the start date for the summer quota period for the scup fishery.
- Framework 4 - established a system to transfer scup at sea.
- Addendum IX - established recreational specifications for scup in 2003.
- Addendum X - established quota rollover and quota period specifications for the commercial scup fishery.
- Amendment 13 - revised black sea bass commercial quota system; addressed other black sea bass management measures; established multi-year specification setting of quota for summer flounder, scup and black sea bass; established region-specific conservation equivalency measures for summer flounder; built flexibility into process to define and update status determination criteria for each plan species. Amendment 13 also removed the necessity for fishermen who have both a Northeast Region (NER) black sea bass permit and a Southeast Region (SER) snapper/grouper permit to relinquish their permits

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for a six-month period prior to fishing south of Cape Hatteras during the northern closure.

Framework 5 - established multi-year specification setting of quota for summer flounder, scup, and black sea bass.

Addendum XI - proposed that the recreational scup fishery be constrained to the coastwide recreational harvest limit, allow states to customize scup recreational management measures to deal with burden issues associated with the implementation of coastwide measures, minimize the administrative burden when implementing conservation equivalency.

Addendum XIII - modified the Summer Flounder, Scup, and Black Sea Bass FMP so that Total Allowable Landings for summer flounder, scup, and/or black sea bass can be specified for up to three years.

Addendum XVI - established guidelines for delayed implementation of management strategies.

Framework 7 - built flexibility into process to define and update status determination criteria for summer flounder, scup and black sea bass.

Addendum XIX - continued the state-by-state black sea bass commercial management measures, without a sunset clause; broadened the descriptions of stock status determination criteria contained within the Summer Flounder, Scup, and Black Sea Bass FMP to allow greater flexibility in those definitions, while maintaining objective and measurable status determination criteria for identifying when stocks or stock complexes covered by the fishery management plan are overfished.

Amendment 14 - established a rebuilding schedule for scup; scup gear restricted areas made modifiable through framework adjustment process.

Amendment 16 - standardized bycatch reporting methodology.

Addendum XX - set policies to reconcile commercial quota overages to address minor inadvertent quota overages; streamlined the quota transfers process and established clear policies and administrative protocols to guide the allocation of transfers from states with underages to states with overages; allowed for commercial quota transfers to reconcile quota overages after a year's end.

Amendment 15 - established annual catch limits and accountability measures.

Amendment 19 - (Recreational Accountability Amendment) – modified the accountability measures for the MAFMC recreational fisheries.

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- Amendment 17 - implemented standardized bycatch reporting methodology.
- Amendment 18 - eliminated the requirement for vessel owners to submit “did not fish” reports for the months or weeks when their vessel was not fishing; removed some of the restrictions for upgrading vessels listed on federal fishing permits.
- Framework 9 - modified the southern and eastern boundaries of the southern scup gear restricted area (in effect January 1-March 15).
- Amendment 20 - implemented management measures to prevent the development of new, and the expansion of existing, commercial fisheries on certain forage species in the Mid-Atlantic.
- Addendum XXIX - established new start and end dates for the scup commercial quota periods, moved first half of May to Winter I and October to Winter II.
- Framework 10 - implemented a requirement for vessels that hold party/charter permits for Council-managed species to submit vessel trip reports electronically (eVTRs) while on a trip carrying passengers for hire.
- Framework 11 - established a process for setting constant multi-year Acceptable Biological Catch (ABC) limits for Council-managed fisheries, clarified that the Atlantic Bluefish, Tilefish, and Atlantic Mackerel, Squid, and Butterfish FMPs will now automatically incorporate the best available scientific information in calculating ABCs (as all other Mid-Atlantic Council management plans do) rather than requiring a separate management action to adopt them, clarified the process for setting ABCs for each of the four types of ABC control rules.
- Framework 12 - modified the dates of the commercial scup quota periods, moving the month of October from the Summer Period to the Winter II period.
- Framework 13 - modified the accountability measures required for overages not caused by directed landings (i.e., discards) in the summer flounder, scup, and black sea bass fisheries.
- Framework 14 - gives the Mid-Atlantic Council the option to waive the federal recreational black sea bass measures in favor of state measures through conservation equivalency; implements a transit zone for commercial and recreational summer flounder, scup, and black sea bass fisheries in Block Island Sound; and allows for the use of a maximum size limit in the recreational summer flounder and black sea bass fisheries.

Specific details for each Amendment under development include:

Summer Flounder, Scup, and Black Sea Bass Commercial/Recreational Allocation Amendment is underway. This amendment is considering potential modifications to the allocations of catch

or landings between the commercial and recreational sectors for summer flounder, scup, and black sea bass. As of June 2020, the ASMFC and MAFMC has reviewed public comment from the scoping period and is in the process of developing a range of draft alternatives to be included for consideration in the amendment. Any action resulting from the Amendment is scheduled for late 2021 or early 2022.

To ensure compliance with interstate requirements, North Carolina also manages this species under the North Carolina Fishery Management Plan for Interjurisdictional Fisheries (IJ FMP). The goal of the IJ FMP is to adopt fishery management plans, consistent with N.C. law, approved by the MAFMC, South Atlantic Fishery Management Council, or the ASMFC by reference and implement corresponding fishery regulations in North Carolina to provide compliance or compatibility with approved fishery management plans and amendments, now and in the future. These plans were established under the Magnuson-Stevens Fishery Conservation and Management Act (federal council plans) and the Atlantic Coastal Fisheries Cooperative Management Act (ASMFC plans) with the goal, like the Fisheries Reform Act of 1997, to “ensure long-term viability” of these fisheries (NCDMF 2015).

Management Unit

U.S. waters in the western Atlantic Ocean from Cape Hatteras northward to the U.S.-Canadian border.

Goal and Objectives

The objectives of the Summer Flounder, Scup, and Black Sea Bass FMP are to:

1. Reduce fishing mortality in the summer flounder, scup and black sea bass fisheries to assure that overfishing does not occur;
2. Reduce fishing mortality on immature summer flounder, scup and black sea bass to increase spawning stock biomass;
3. Improve the yield from these fisheries;
4. Promote compatible management regulations between state and federal jurisdictions;
5. Promote uniform and effective enforcement of regulations;
6. Minimize regulations to achieve the management objectives stated above.

The 2011 Omnibus Amendment contains Amendment 15 to the Summer Flounder, Scup and Black Sea Bass FMP. The amendment is intended to formalize the process of addressing scientific and management uncertainty when setting catch limits for the upcoming fishing year(s) and to establish a comprehensive system of accountability for catch (including both landings and discards) relative to those limits, for each of the managed resources subject to this requirement. Specifically: (1) Establish allowable biological catch control rules, (2) Establish a MAFMC risk

policy, which is one variable needed for the allowable biological catch control rules, (3) Establish annual catch limits, (4) Establish a system of comprehensive accountability, that addresses all components of the catch, (5) Describe the process by which the performance of the annual catch limit and comprehensive accountability system will be reviewed, (6) Describe the process to modify the above objectives (1-5) in the future.

STATUS OF THE STOCK

Life History

Scup are a migratory, schooling species found primarily along the Atlantic coast from Cape Cod, Massachusetts to Cape Hatteras North Carolina. However, a smaller southern stock is believed to occur in North Carolina south of Cape Hatteras. Scup, north of Cape Hatteras, typically reach sexual maturity at age 2 to 3 or when they reach 7 inches fork length. Spawning for the northern stock typically occurs in estuaries and coastal waters during the months of May to August. They move offshore during the fall and winter. Extensive seasonal migration related to spawning is common for scup (north of Cape Hatteras). Scup have a maximum age of 14 years. Scup are bottom (benthic) feeders and prey on small crustaceans, mollusks, squid, sand dollars and fish (Steimle et al. 1999).

Stock Status

The 2019 scup operational stock assessment included data through 2018 and indicated that the stock was not overfished and overfishing was not occurring in 2018.

Stock Assessment

The 2018 scup operational stock assessment estimated fishing mortality and stock sizes using a statistical catch at age model calculated by using the Age Structured Assessment Program. This indicated that the fishing mortality rate was below the threshold reference point and the spawning stock biomass was above the target reference point, so the stock was not overfished and overfishing was not occurring. Spawning stock biomass was estimated to be 2 times biomass reference points.

STATUS OF THE FISHERY

Current Regulations

Commercial: 9-inch fork length minimum size limit in Atlantic Ocean and internal coastal waters. Daily trip limits for the different harvest periods (Winter I, Summer, Winter II) are set by proclamation. Winter I and Winter II trip limits follow the coastwide measures, while the summer trip limit is designed to prevent exceeding North Carolina's summer quota allocation (see most recent North Carolina Division of Marine Fisheries (NCDMF) proclamation).

Recreational: 8-inch fork length minimum size, 50-fish creel limit in state Atlantic Ocean and internal coastal waters north of Cape Hatteras; 9-inch fork length minimum size, 50-fish creel limit in federal Atlantic Ocean waters north of Cape Hatteras. Season is year-round.

Commercial Landings

All scup landings are reported through the North Carolina Trip Ticket Program. Most scup landings from north of Cape Hatteras were from trawls (Figure 1). Annual landings were variable from 1994 through 2019 with very low landings during 2012 to 2013 (Table 1, Figure 2). Low landings in 2012 to 2013 were partly due to the closure of Oregon Inlet to large vessels (such as trawlers) and the consequent landing of most of North Carolina's scup in Virginia and other states. During 2014 through 2019, winter trawl vessels returned to North Carolina to land catches rather than landing in Virginia and other states.

Recreational Landings

Recreational estimates across all years have been updated and are now based on the Marine Recreational Information Program (MRIP) new Fishing Effort Survey-based calibrated estimates. For more information on MRIP see <https://www.fisheries.noaa.gov/topic/recreational-fishing-data>. All scup harvest is reported through the National Oceanic and Atmospheric Administration (NOAA) Marine Recreational Information Program. Recreational harvest of scup north of Cape Hatteras only occurred in 1994, 2000, 2011, 2012 and 2015 (Table 1, Figure 2).

MONITORING PROGRAM DATA

Fishery-Dependent Monitoring

Two NCDMF sampling programs collect biological data on commercial and recreational fisheries that catch scup north of Cape Hatteras. Program 433 (Winter Trawl Fishery) is the primary program that collects harvest length data. Other commercial sampling programs focusing on fisheries that do not target scup rarely collect biological data. NCDMF sampling of the recreational fishery through the NOAA marine recreational information program collects harvest length data. There were no clear trends in commercial length data during 1994 through 2019. Annual mean lengths were fairly consistent for the time-series and 2019 was typical. The number measured increased in 2019 (Table 2). Recreational harvest length data were only collected in 2011, 2012 and 2015 for scup north of Cape Hatteras. Only two fish in 1994, two fish in 2000, and one fish in 2015 were measured. Very few scup are encountered in this fishery (Table 3).

Age data have not been collected by NCDMF for scup north of Cape Hatteras because the stock assessment has not requested it.

Fishery-Independent Monitoring

NCDMF currently does not have independent sampling programs in Atlantic Ocean and internal coastal waters north of Cape Hatteras.

MANAGEMENT STRATEGY

Scup stock assessments are completed by the NMFS Northeast Fisheries Science Center (NEFSC). Results from the 2019 stock assessment update are used to guide management. Data are analyzed from the previous year based on decisions made for the benchmark assessment. Projections based on stock assessments are used to set the coastwide quota level each year. Amendments to the FMP are undertaken as issues arise that require action.

RESEARCH NEEDS

Updated research needs from the 2015 60th Stock Assessment Workshop are provided below. The research needs listed below start with the most recent. Text in parentheses indicates known progress made to address needs.

- A standardized fishery dependent catch per unit effort for tows targeting scup, from either Northeast Fisheries Observer Program observer samples or the commercial study fleet, might be considered as an additional index of abundance to complement survey indices in future benchmark assessments (progress unknown at this time).
- Explore additional sources of length and age data from fisheries and surveys in the early parts of the time series to provide additional context for model results (progress unknown at this time).
- Explore experiments to estimate the catchability of scup in NEFSC and other research trawl surveys (side-by-side, camera, gear mensuration, acoustics, etc.) (progress unknown at this time).
- Refine and update the Manderson et al. availability analysis when/if a new ocean model is available (need additional support). Explore alternative niche model parameterizations including laboratory experiments on thermal preference and tolerance (progress unknown at this time).
- Explore study fleet data in general for information that could provide additional context and/or input for the assessment (progress unknown at this time).
- A scientifically designed survey to sample larger and older scup would likely prove useful in improving knowledge of the relative abundance of these large fish (progress unknown at this time).
- Improve estimates of discards and discard mortality for commercial and recreational fisheries (some progress has been made).
- Evaluate indices of stock abundance from new surveys (some progress has been made).
- Quantify the pattern of predation on scup (some progress has been made).
- Conduct biological studies to investigate maturity schedules and factors affecting annual availability of scup to research surveys (some progress has been made),
- Explore the utility of incorporating ecological relationships, predation, and oceanic events that influence scup population size on the continental shelf and its availability to resource surveys into the stock assessment mode (some progress has been made).
- Evaluate alternate forms of survey selectivity in the assessment to inform indices of abundance at higher ages (some progress has been made).

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- Evaluation of indicators of potential changes in stock status that could provide signs to managers of potential reductions of stock productivity in the future would be helpful (some progress has been made).
- A management strategy for evaluation of alternative approaches to setting quotas would be helpful (progress unknown at this time).
- Current research trawl surveys are likely adequate to index the abundance of scup at ages 0 to 2. However, the implementation of new standardized research surveys that focus on accurately indexing the abundance of older scup (ages 3 and older) would likely improve the accuracy of the stock assessment (some progress has been made).
- Continuation of at least the current levels of at-sea and port sampling of the commercial and recreational fisheries in which scup are landed and discarded is critical to adequately characterize the quantity, length and age composition of the fishery catches (progress has been made and research is ongoing).
- Quantification of the biases in sampling of the catch and discards, including non-compliance, would help confirm the weightings used in the model. Additional studies would be required to address this issue (progress unknown at this time).
- The commercial discard mortality rate was assumed to be 100 percent in this assessment. Experimental work to better characterize the discard mortality rate of scup captured by different commercial gear types should be conducted to more accurately quantify the magnitude of scup discard mortality (progress unknown at this time).

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TABLES

Table 1. Scup (north of Cape Hatteras) recreational harvest and number released (NOAA Marine Recreational Information Program) and commercial harvest (North Carolina Trip Ticket Program) for 1994-2019. All weights are in pounds. Note: * represents confidential data.

Year	Recreational		Landed	Commercial Weight (lb)	Total Weight (lb)
	Numbers Landed	# Released			
1994	827	1,231	365	56,394	56,759
1995	0	0	0	11,264	11,264
1996	0	1,267	0	57,477	57,477
1997	0	0	0	302	302
1998	0	0	0	14,528	14,528
1999	0	0	0	0	0
2000	165	0	169	0	169
2001	0	0	0	0	0
2002	0	0	0	*	*
2003	0	0	0	142,996	142,996
2004	0	0	0	523,554	523,554
2005	0	0	0	351,609	351,609
2006	0	0	0	139,420	139,420
2007	0	0	0	66,856	66,856
2008	0	0	0	205,703	205,703
2009	0	0	0	244,020	244,020
2010	0	0	0	102,745	102,745
2011	181	0	200	308,883	309,083
2012	521	0	516	3,903	4,419
2013	0	0	0	28,394	28,394
2014	0	0	0	160,399	160,399
2015	3,446	0	380	229,664	230,044
2016	0	0	0	111,901	111,901
2017	0	0	0	199,711	199,711
2018	0	0	0	78,944	78,944
2019	0	0	0	216,632	216,632
Average	198	100	65	125,999	126,062

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Table 2. Scup (north of Cape Hatteras) length (fork length, inches) data from commercial fish house samples, 1994-2019.

Year	Mean Fork Length (in)	Minimum Fork Length (in)	Maximum Fork Length (in)	Total Number Measured
1994	9	4	15	3,342
1995	9	7	12	169
1996	10	8	14	76
1997	5	4	16	176
1998	9	7	13	66
1999	0	0	0	0
2000	0	0	0	0
2001	0	0	0	0
2002	10	9	13	393
2003	11	4	16	1,210
2004	10	6	16	2,584
2005	11	4	15	1,817
2006	11	6	15	1,568
2007	11	7	16	1,659
2008	11	7	16	3,493
2009	11	6	16	1,740
2010	11	8	15	1,450
2011	11	8	16	1,076
2012	13	11	16	7
2013	10	8	15	261
2014	11	8	17	2,725
2015	11	5	17	2,998
2016	11	6	15	1,175
2017	11	8	16	2,879
2018	11	7	17	1,940
2019	11	6	17	3,037

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Table 3. Scup (north of Cape Hatteras) length (fork length, inches) data from NOAA Marine Recreational Information Program recreational samples, 1994-2019.

Year	Mean Fork Length (in)	Minimum Fork Length (in)	Maximum Fork Length (in)	Total Number Measured
1994	7	7	9	2
1995	0	0	0	0
1996	0	0	0	0
1997	0	0	0	0
1998	0	0	0	0
1999	0	0	0	0
2000	11	11	11	2
2001	0	0	0	0
2002	0	0	0	0
2003	0	0	0	0
2004	0	0	0	0
2005	0	0	0	0
2006	0	0	0	0
2007	0	0	0	0
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0
2012	0	0	0	0
2013	0	0	0	0
2014	0	0	0	0
2015	4	4	4	1
2016	0	0	0	0
2017	0	0	0	0
2018	0	0	0	0
2019	0	0	0	0

FIGURES

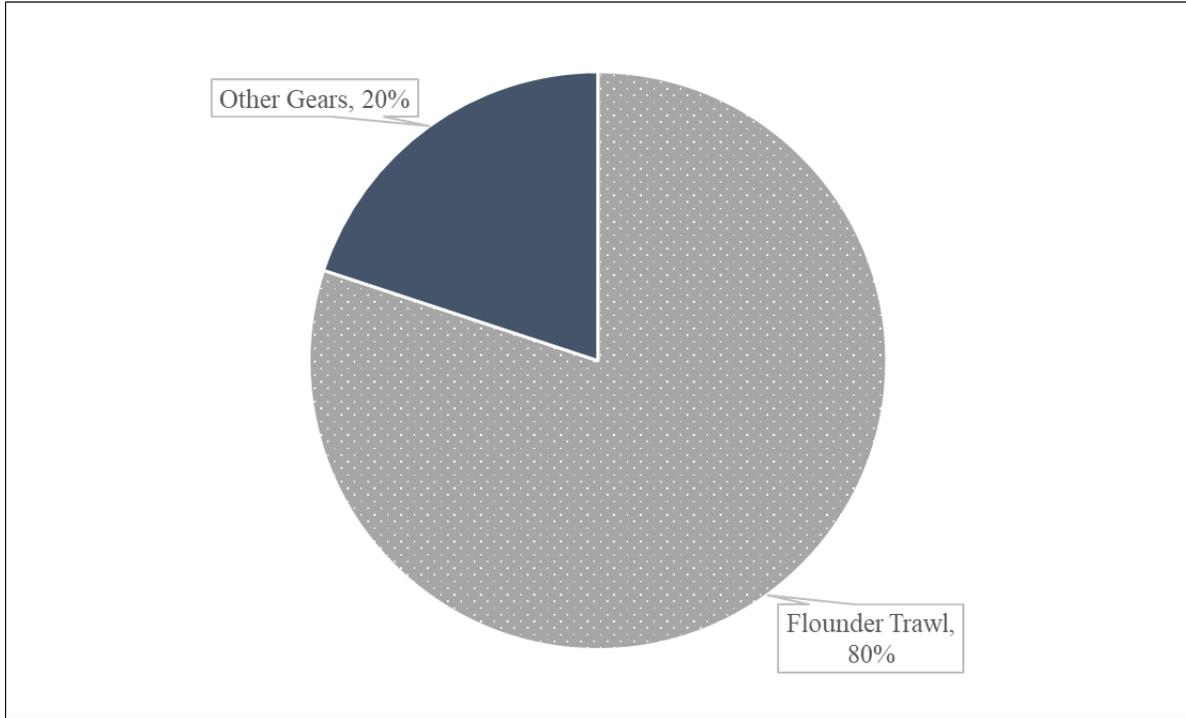


Figure 1. Commercial harvest of scup (north of Cape Hatteras) in North Carolina by gear type in 2019.

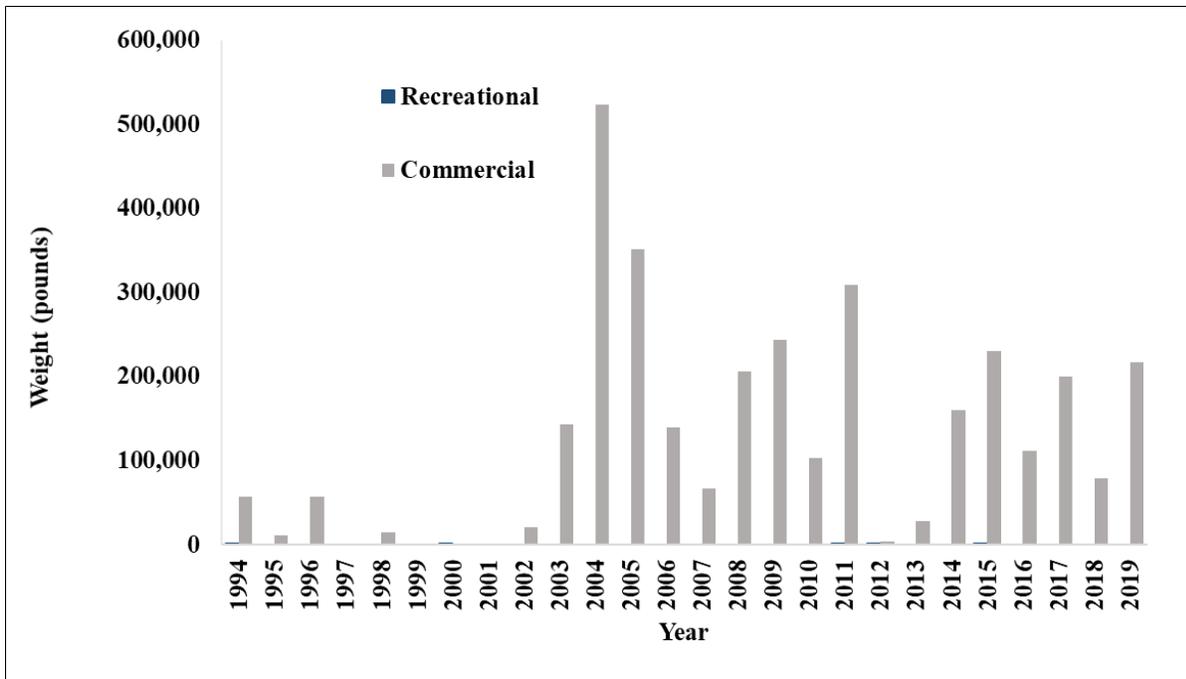


Figure 2. Annual commercial and recreational landings in pounds for scup (north of Cape Hatteras) in North Carolina from 1994-2019.