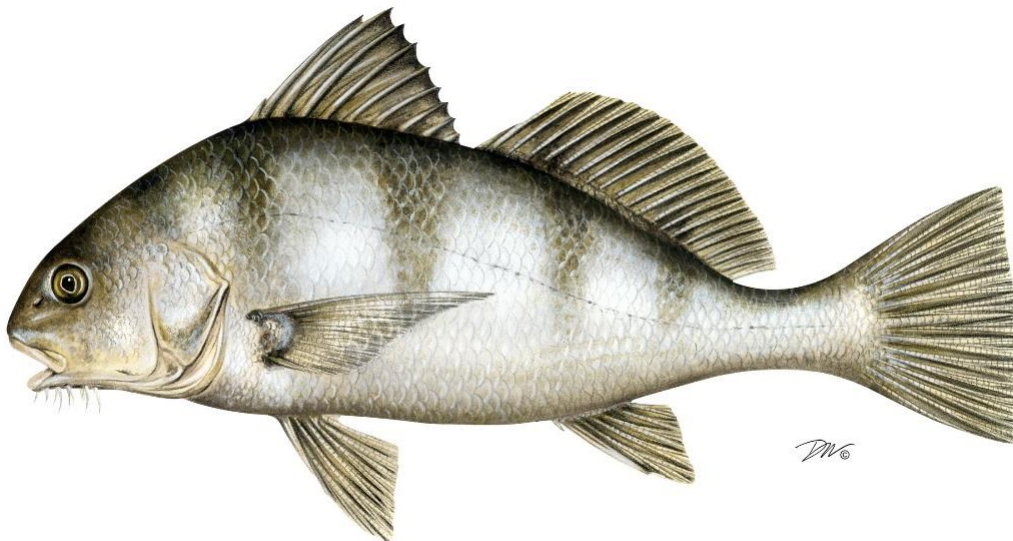


**ATLANTIC STATES MARINE FISHERIES COMMISSION**  
**REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN**

**FOR BLACK DRUM**  
***(Pogonias cromis)***

**2020 FISHING YEAR**



Prepared by the Plan Review Team  
Approved December 2021



*Sustainable and Cooperative Management of Atlantic Coastal Fisheries*

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## I. Status of the Fishery Management Plan

Date of FMP Approval: Original FMP – June 2013

Addendum: Addendum I – May 2018

Management Areas: The entire Atlantic coast distribution of the resource from New Jersey through the east coast of Florida

Active Boards/Committees: Sciaenids Management Board; Black Drum Technical Committee; Stock Assessment Subcommittee Plan Review Team; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted an [interstate Fishery Management Plan \(FMP\) for Black Drum in 2013](#). Prior to the FMP, management was state-specific, from no regulations in North Carolina to various combinations of size limits, possession limits, commercial trip limits, and/or annual commercial quotas from New Jersey to Florida. While the Maryland portion of the Chesapeake Bay was closed to commercial fishing in 1998, it was reopened in 2019 via Addendum 1 which was approved in 2018.

The FMP requires all states with a declared interest in the species to have established a maximum possession limit and minimum size limit of at least 12 inches total length (TL) by January 1, 2014, and to have increased the minimum size limit to at least 14 inches TL by January 1, 2016. The FMP also includes a management framework to adaptively respond to future concerns or changes in the fishery or population.

There are four plan objectives:

- Provide a flexible management system to address future changes in resource abundance, scientific information, and fishing patterns among user groups or area.
- Promote cooperative collection of biological, economic, and sociological data required to effectively monitor and assess the status of the black drum resource and evaluate management efforts.
- Manage the black drum fishery to protect both young individuals and established breeding stock.
- Develop research priorities that will further refine the black drum management program to maximize the biological, social, and economic benefits derived from the black drum population.

The management unit for black drum under the FMP is defined as the range of the species within U.S. waters of the northwest Atlantic Ocean, from the estuaries eastward to the offshore boundaries of the Exclusive Economic Zone (EEZ).

In 2018, [Addendum I](#) allowed Maryland to reopen their commercial fishery in the Chesapeake Bay, starting in the 2019 fishing year (ASMFC 2018). Prior to this addendum, a commercial moratorium

was in place for these waters due to the FMP's requirement that states maintain measures in place at the time of the FMP's approval.

## II. Status of the Stocks

In the 2015 Black Drum Benchmark Stock Assessment (ASMFC 2015), the Stock Assessment Subcommittee (SAS) selected the Depletion-Based Stock Reduction Analysis (DB-SRA; Dick and McCall 2011) as the preferred method for estimating catch reference points. The SAS considered the Depletion-Corrected Average Catch (DCAC; McCall 2009) analysis, but ultimately rejected this method. DCAC did not incorporate removals into a population dynamics process, and uncertainty existed over how changes in the exploitation rate time series may impact the sustainable yield relative to the current stock condition.

Based on the DB-SRA results, black drum life history, indices of abundance, and history of exploitation, the black drum stock is not overfished and not experiencing overfishing (ASMFC 2015). Median biomass exhibited slow and steady decline from 135.2 million pounds in 1900 to 90.78 million pounds in 2012, though the median biomass estimate in 2012 is still well above the necessary level to produce maximum sustainable yield ( $B_{MSY}$ ; 47.26 million pounds) (Figure 1). The median maximum sustainable yield (MSY) estimate is 2.12 million pounds and provides an annual catch target that can be used to sustainably manage the fishery. The median overfishing limit (OFL) estimate is 4.12 million pounds and provides a catch threshold that indicates overfishing when exceeded. The OFL is the maximum exploitation rate at the current biomass that does not lead to overfishing.

**NOTE: In 2018, the Marine Recreational Information Program transitioned from estimating effort using the Coastal Household Telephone Survey (CHTS) to the mail-based Fishing Effort Survey (FES). The 2015 stock assessment used CHTS data to estimate recreational harvest. However, as black drum is not managed by a quota and to accommodate the transition, recreational harvest estimates based on the FES data or calibration are shown in this report. Due to differing estimation methodologies, these harvest data should not be compared to reference points from the 2015 stock assessment. Harvest estimates based on either effort survey can be compared at: <https://www.st.nmfs.noaa.gov/st1/recreational/queries/>.**

## III. Status of the Fishery

Total black drum landings from New Jersey through the east coast of Florida are estimated at 5.7 million pounds in 2020, a 25% increase from total harvest in 2019 (Tables 2 and 3, Figure 2). The 2020 harvest is just below the previous ten-year (2010-2019) average. The commercial and recreational fisheries harvested 3% and 97% of the 2020 total, respectively.

Commercial landings of black drum in 2020 span from Rhode Island through Florida. Although landings from outside the management unit (i.e., north of New Jersey) were less than 1% of the coastwide total, anecdotal reports may indicate that landings may be increasing outside of the management unit due to reports of spring spawning aggregations further up the coast than usual.

Coastwide commercial landings show no particular temporal trends, ranging from approximately 82,000 to 556,000 pounds annually since 1981 (Figure 2). Black drum commercial landings in 2020 were 187,449 pounds, a 27% decrease from those of 2019. North Carolina led commercial harvest with 55% of the landings, followed by Virginia with 28% (Table 2).

Recreational harvest of black drum peaked by weight in 2008 at 10.7 million pounds (Table 3) and by numbers of fish in 2003 at 2.9 million (Table 4). Overall, landings have trended between 3.3 and 10.7 million pounds, and numbers of fish have fluctuated between 890 thousand and 2.9 million fish (Figures 3 and 4).

The 2020 recreational harvest (1.3 million fish or 5.5 million pounds) represents a 19% decrease in numbers and a 25% increase in pounds from 2019. Florida anglers landed the largest share of the coastwide recreational harvest in numbers (54%), followed by North Carolina (17%). Since the beginning of the time series (1981), recreational anglers have released increasing percentages of black drum, with percentages of fish released usually exceeding 70% in each of the past five years. In 2020, 67% (2.6 million fish) of the recreational catch was released (Figure 3, Table 5). It is worth noting that release rates increased substantially after 2013, when the Fishery Management Plan (FMP) established minimum sizes in every state and required that undersized drum be released for the first time. Recent high release rates can be attributed to these measures, as well as encouragement of catch and release practices.

#### **IV. Status of Assessment Advice**

Current stock status information comes from the 2015 benchmark stock assessment (ASMFC 2015) completed by the ASMFC Black Drum Stock Assessment Subcommittee and Technical Committee, peer reviewed by an independent panel of experts, and approved by the South Atlantic State-Federal Fisheries Management Board for use in management decisions.

The stock assessment could be improved by applying a more complex, data-rich assessment method such as a statistical catch-at-age model. Data limitations that need to be addressed to successfully make this transition are biological sampling (length and age) of recreational and commercial fisheries and a fishery-independent survey to track abundance and age structure of the mature stock. Additionally, information about commercial discards and movement of fish along coast and between water depths would improve the assessment.

A benchmark stock assessment is currently underway using the recalibrated MRIP data. This benchmark assessment will provide updated reference points and is set to be completed in late 2022.

#### **V. Status of Research and Monitoring**

There are no monitoring or research programs required annually of the states except for the submission of a compliance report. The following fishery-dependent (other than catch and effort data) and fishery-independent monitoring programs were reported in the 2020 reports. Delaware,

Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and NMFS have fishery-dependent monitoring for black drum. States that encounter fish through fishery-independent monitoring include New Jersey, Delaware, Maryland, North Carolina, South Carolina, Georgia, and Florida.

## **VI. Status of Management Measures and Issues**

### *Fishery Management Plan*

The Black Drum FMP required all states with a declared interest in the species to have established a maximum possession limit and minimum size limit of at least 12 inches by January 1, 2014, and to have increased the minimum size limit to no less than 14 inches by January 1, 2016.

### *De Minimis*

The black drum FMP allows states to request *de minimis* status if, for the preceding three years for which data are available, their average combined commercial and recreational landings (by weight) constitute less than 1% of the average coastwide commercial and recreational landings for the same three-year period. A state that qualifies for *de minimis* will qualify for exemption in both their commercial and recreational fisheries.

### *De Minimis Requests*

No state requested *de minimis* status through the annual reporting process.

### *Recent Changes to State Management*

None in 2020

## **VII. Implementation of FMP Compliance Requirements for 2019**

The PRT found no inconsistencies between state compliance reports and requirements of the Fishery Management Plan.

## **VIII. Recommendations of the Plan Review Team**

Research recommendations can be found in the [2015 Benchmark Stock Assessment and Peer Review Report](#), and updated recommendations will be available once the 2022 benchmark assessment is complete.

### Management and Regulatory Recommendations

Begin or continue biological sampling to collect age and size composition from both recreational and commercial fisheries as well as fecundity data. Data gaps include size and age of discards, catch and release mortality, age and size-specific fecundity, spawning frequency, and spawning behaviors by region.

Continue and expand current tagging programs to obtain mortality and growth information and movement at size data, and consider conducting a high reward tagging program to obtain improved return rate estimates. Tagging studies that utilize implanted radio tracking tags compatible with coastal tracking arrays along the Atlantic coast in order to track movement and migration of adults and juveniles would also help fill the data needs.

## **IX. References**

ASMFC. 2013. Interstate Fishery Management Plan for Black Drum. Arlington, VA.

ASMFC. 2015. Black Drum Stock Assessment for Peer Review. Atlantic States Marine Fisheries Commission, Stock Assessment Report. 352 p.

ASMFC. 2018. Addendum I to the Black Drum Interstate Fishery Management Plan. Arlington, VA.

Dick, E.J. and MacCall, A.D. 2011. Depletion-Based Stock Reduction Analysis: A catch-based method for determining sustainable yields for data-poor fish stocks. *Fisheries Research*, 110: 331-341

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X. Figures

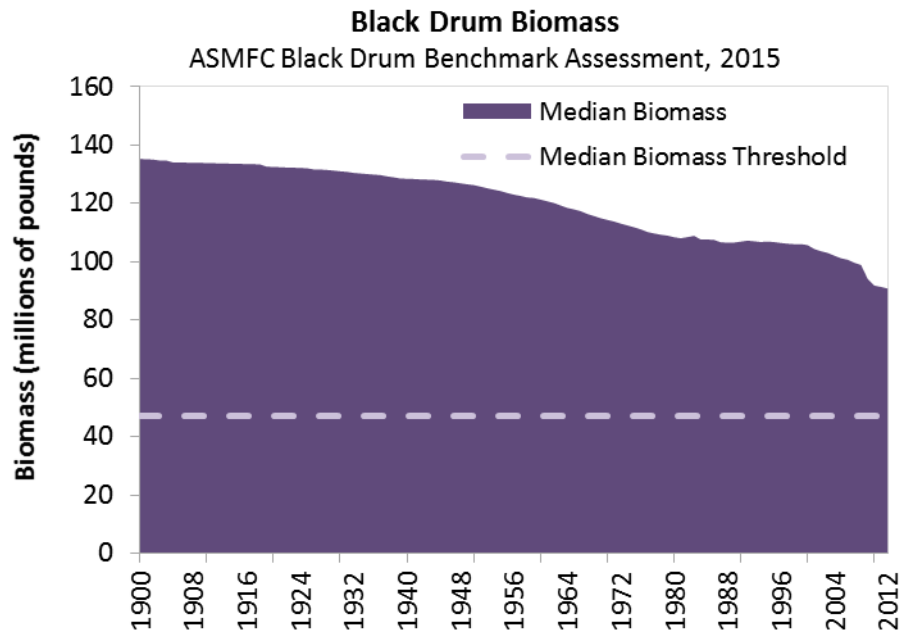
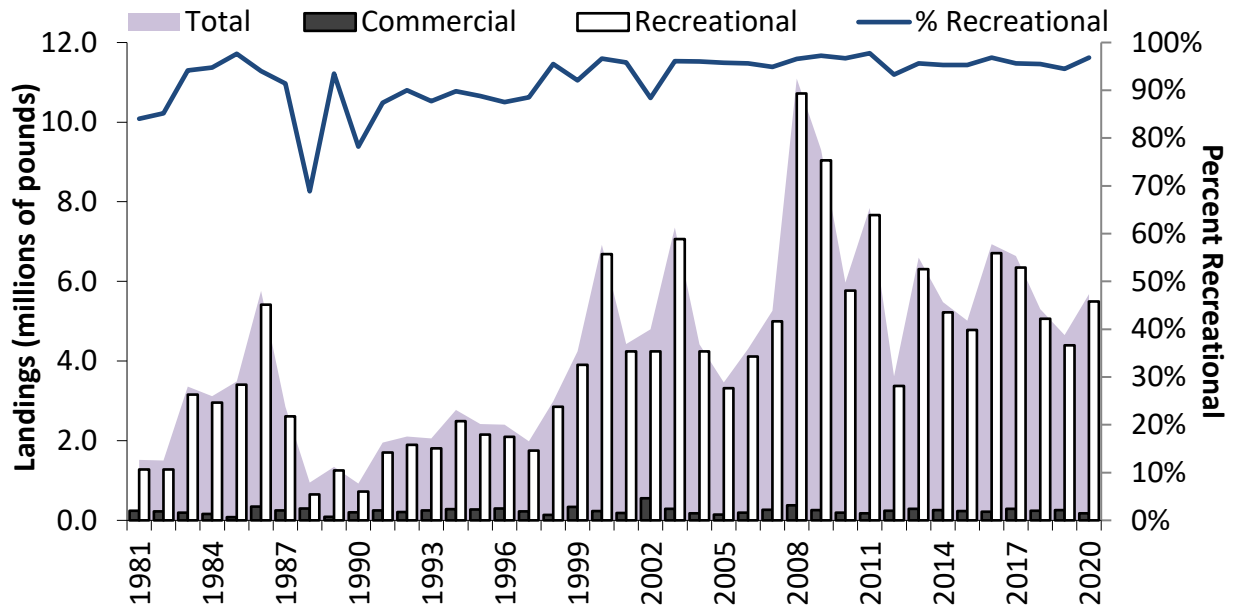
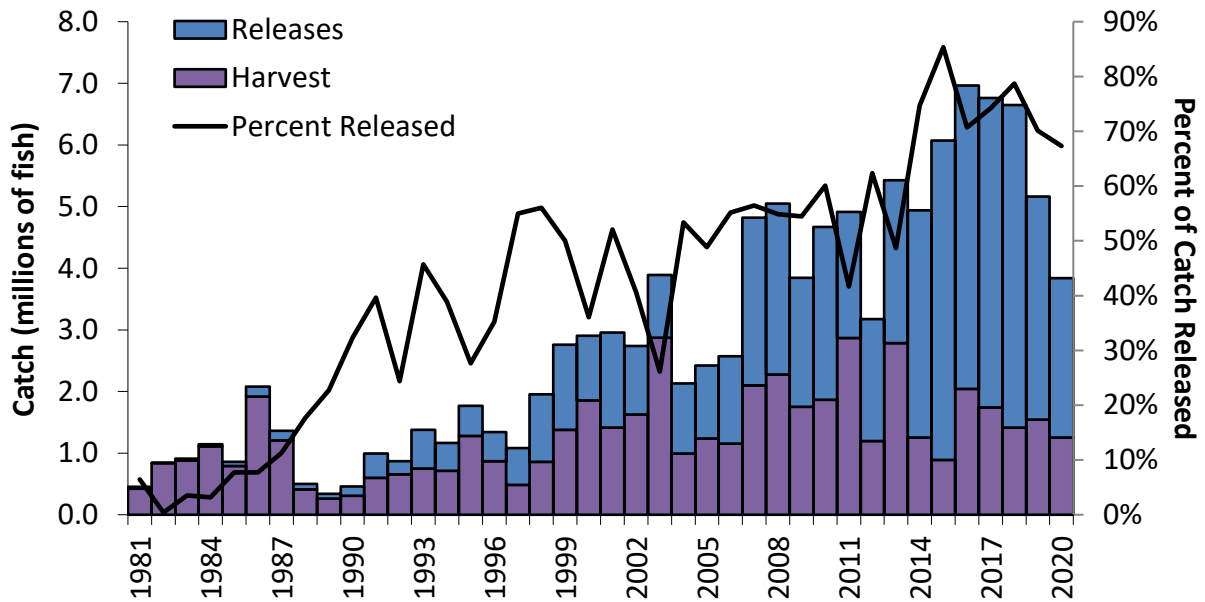


Figure 1. DB-SRA estimates of Median biomass and threshold 1900-2012 (Source: ASMFC 2015).





**Figure 2. Commercial and recreational landings (pounds) of black drum.** See Tables 2 and 3 for values and data sources.



**Figure 3. Recreational catch (harvest and alive releases) of black drum (numbers) and the proportion of catch that is released.** See Tables 4 and 5 for values and data sources.

**XI. Tables**

**Table 1. Black drum regulations for 2020.** The states of New Jersey through Florida are required to meet the requirements in the FMP. All size limits are total length.

State	Recreational		Commercial			Notes
	Size limit	Bag limit	Size limit	Trip Limit	Annual Quota	
ME - NY	-	-	-	-	-	
NJ	16" min	3/person/day	16" min	10,000 lbs	65,000 lbs	
DE	16" min	3/person/day	16" min	10,000 lbs	65,000 lbs	
MD	16" min	1/person/day 6/vessel	16" min (ATL) 28" min (Bay)	10/vessel/day (Bay)	1,500 lbs (ATL)	
PRFC	16" min	1/person/day	16" min	1 fish possession		
VA	16" min	1/person/day	16" min	1/person/day*	120,000 lbs	*without Black Drum Harvesting and Selling Permit
NC	14" min - 25" max; 1 fish > 25" may be retained	10/person/day	14" min - 25" max; 1 fish > 25" may be retained	500 lbs/trip		
SC	14" min - 27" max	5/person/day	14" min - 27" max	5/person/day		Commercial fishery primarily bycatch
GA	14" min	15/person/day	14" min	15/person/day		
FL	14" min - 24" max; 1 fish >24" may be retained	5/person/day	14" min - 24" max	500 lbs/day		

**Table 2. Commercial landings (pounds) of black drum by state, 2011-2020.** (Totals include coastwide landings outside of the management area, NJ-FL. Sources: 2021 state compliance reports for 2020 fishing year; for years prior to 2020, personal communication with ACCSP, Arlington, VA)

<b>Year</b>	<b>NJ</b>	<b>DE</b>	<b>MD</b>	<b>PRFC</b>	<b>VA</b>
<b>2011</b>	3,130	C	C	C	44,620
<b>2012</b>	19,017	10,943	571	C	104,234
<b>2013</b>	16,251	24,640	2,145	C	87,235
<b>2014</b>	9,270	C	C	C	88,402
<b>2015</b>	6,478	39,282	C	C	87,011
<b>2016</b>	2,210	49,109	C	C	49,832
<b>2017</b>	21,248	699	423	C	42,695
<b>2018</b>	C	32,375	734	C	76,337
<b>2019</b>	C	6,030	8,025	C	129,556
<b>2020</b>	C	C	4,767	C	50,318
	<b>NC</b>	<b>SC</b>	<b>GA</b>	<b>FL</b>	<b>Total</b>
<b>2011</b>	56,083	C	C	22,295	175,848
<b>2012</b>	94,352	C	C	14,302	243,527
<b>2013</b>	127,170	C	C	28,460	286,413
<b>2014</b>	51,217	C	C	91,587	259,650
<b>2015</b>	51,073	C	C	50,477	234,727
<b>2016</b>	90,715	C	C	26,978	219,350
<b>2017</b>	182,882	C	C	41,280	289,431
<b>2018</b>	109,757	C	C	19,465	239,124
<b>2019</b>	80,036	C	C	21,954	256,051
<b>2020</b>	98,118	C	C	26,895	180,208

C: Confidential landings

**Table 3. Recreational harvest (pounds) of black drum by state and coastwide average weight, 2011-2020.** (Sources: 2021 state compliance reports for 2020 fishing year; for years prior to 2020, personal communication with NOAA Fisheries, Fisheries Statistics Division)

<b>Year</b>	<b>NJ</b>	<b>DE</b>	<b>MD</b>	<b>VA</b>	<b>NC</b>
<b>2011</b>	373,639	38,043	0	1,243,692	823,423
<b>2012</b>	37,076	2,844	0	36,195	879,401
<b>2013</b>	94,636	15,668	0	112,139	2,709,269
<b>2014</b>	11,476	22,070	18,684	97,043	230,834
<b>2015</b>	443,907	16,992	16,575	25,216	780,876
<b>2016</b>	159,589	2,180	8,924	77,672	1,322,547
<b>2017</b>	406,068	22,998	3,001	81,275	856,081
<b>2018</b>	814,965	179,071	53,599	29,120	428,273
<b>2019</b>	172,735	8,117	59,912	101,535	404,452
<b>2020</b>	535,249	90,950	53,825	251,724	612,932
<b>% Imputed data in 2020</b>	99%	89%	0%	20%	17%
	<b>SC</b>	<b>GA</b>	<b>FL</b>		<b>Total</b>
<b>2011</b>	89,482	56,361	5,043,573		7,668,213
<b>2012</b>	321,734	211,618	1,885,164		3,374,032
<b>2013</b>	413,455	149,094	2,813,673		6,307,934
<b>2014</b>	238,616	249,118	4,353,686		5,221,527
<b>2015</b>	82,484	88,698	3,325,410		4,780,158
<b>2016</b>	623,449	226,558	4,292,398		6,713,317
<b>2017</b>	681,976	187,698	4,105,686		6,344,783
<b>2018</b>	652,179	392,380	2,511,235		5,060,822
<b>2019</b>	899,976	557,714	2,191,274		4,395,715
<b>2020</b>	493,001	298,894	3,163,767		5,500,342
<b>% Imputed data in 2020</b>	13%	33%	12%		

**Table 4. Recreational harvest (numbers) of black drum by state, 2011-2020.** (Sources: 2021 state compliance reports for 2020 fishing year; for years prior to 2020, personal communication with NOAA Fisheries, Fisheries Statistics Division)

<b>Year</b>	<b>NJ</b>	<b>DE</b>	<b>MD</b>	<b>VA</b>	<b>NC</b>
<b>2011</b>	22,882	1,196	0	126,964	1,259,216
<b>2012</b>	1,368	110	0	7,555	556,482
<b>2013</b>	11,083	1,851	0	6,170	1,511,995
<b>2014</b>	482	1,052	1,690	10,676	109,307
<b>2015</b>	10,793	462	1,091	1,600	276,126
<b>2016</b>	6,008	138	250	5,807	459,078
<b>2017</b>	18,435	1,214	828	16,700	355,544
<b>2018</b>	40,153	9,211	1,262	3,721	134,624
<b>2019</b>	7,506	931	4,897	6,600	156,401
<b>2020</b>	27,594	5,207	14,092	17,000	213,320
	<b>SC</b>	<b>GA</b>	<b>FL</b>		<b>Total</b>
<b>2011</b>	29,909	25,803	1,401,636		2,867,606
<b>2012</b>	91,318	42,826	496,537		1,196,196
<b>2013</b>	143,662	64,533	1,044,490		2,783,784
<b>2014</b>	96,967	47,807	983,582		1,251,563
<b>2015</b>	37,186	48,229	514,606		890,093
<b>2016</b>	256,158	96,351	1,217,913		2,041,703
<b>2017</b>	241,832	64,240	1,044,752		1,743,545
<b>2018</b>	185,648	114,263	925,794		1,414,676
<b>2019</b>	344,933	265,364	755,638		1,542,270
<b>2020</b>	198,239	100,973	678,484		1,254,909

**Table 5. Recreational alive releases (numbers) of black drum by state, 2011-2020.** (Sources: 2021 state compliance reports for 2020 fishing year; for years prior to 2020, personal communication with NOAA Fisheries, Fisheries Statistics Division)

<b>Year</b>	<b>NJ</b>	<b>DE</b>	<b>MD</b>	<b>VA</b>	<b>NC</b>
<b>2011</b>	4,799	4	9,595	319,622	711,755
<b>2012</b>	17,092	1,653	89,193	22,236	397,155
<b>2013</b>	0	57,091	15,868	52,417	497,334
<b>2014</b>	37,364	11,243	0	269,648	1,964,749
<b>2015</b>	545,613	17,109	25,115	164,322	1,791,758
<b>2016</b>	9,399	361	114	46,494	2,530,596
<b>2017</b>	111,739	3,689	2,809	137,987	2,336,352
<b>2018</b>	51,148	15,249	27,849	169,204	1,450,855
<b>2019</b>	1,953	29,878	6,346	151,074	756,749
<b>2020</b>	10,474	8,301	1,997	142,394	704,357
	<b>SC</b>	<b>GA</b>	<b>FL</b>		<b>Total</b>
<b>2011</b>	66,748	20,355	913,567		2,046,445
<b>2012</b>	153,799	52,722	1,246,585		1,980,435
<b>2013</b>	330,528	35,034	1,654,129		2,642,401
<b>2014</b>	335,600	21,581	1,047,833		3,688,018
<b>2015</b>	1,483,956	55,773	1,096,185		5,179,831
<b>2016</b>	1,268,667	54,266	1,012,670		4,922,567
<b>2017</b>	692,616	85,365	1,648,030		5,018,587
<b>2018</b>	1,087,536	167,974	2,265,550		5,235,365
<b>2019</b>	998,869	339,599	1,333,745		3,618,213
<b>2020</b>	678,836	239,371	797,425		2,583,155