

FY 2017 Saltwater Recreational Fishing License Report

Introduction

Since its inception in July 1992, the South Carolina Recreational Fisheries License Program has provided significant benefits to the state. Allocated funds continue to support programs, activities, and marine resource management and enforcement functions. Revenues for this program come from sales of saltwater annual, temporary, three-year, charterboat, and pier licenses. In January 2014, annual and three year licenses became valid for one full year or three full years from the date of purchase.

From July 1, 2016 through June 30, 2017, preliminary totals indicate about 230,497 individual recreational fishermen held a saltwater recreational license and this, along with charter and pier license sales, generated \$2.57 million in total revenue, the vast majority of which by law must be used to benefit saltwater recreational fisheries. The following are highlights of Marine Resources Division activities, projects, and programs that received support from the Saltwater Recreational Fisheries License Program over this past fiscal year.

FY 2017 Highlights

Artificial Reefs (\$408.0K) – Nine [artificial reef construction](#) projects were completed this fiscal year on 11 permitted reef sites encompassing locations off each coastal county. These projects included the addition of 79 large concrete junction boxes, culverts and basins, a 110-ft deck barge, a 42-ft tugboat barge, 36 concrete coated steel trees, 3 steel corrals, 12 steel pyramids, and 200 tons of concrete rubble. Routine monitoring and assessment of reefs were conducted throughout the year, and 18 missing reef buoys were replaced on reef sites. Acoustic radio receivers were mounted on reefs to record tagged fish that visit the reefs. Personnel made 42 SCUBA dives to conduct video surveys, document colonization on reef structures and service acoustic receivers.

Marine Fish (\$799.0 K) - SCDNR efforts to maintain high quality fishing opportunities include scientific surveys that [monitor inshore fish populations](#), and angler-related programs that collect biological information on recreationally caught fish. The inshore surveys use several types of fishing gear (trammel nets, electrofishing, and long-lines) so that different habitats and life stages can be monitored (juveniles through adults). Most fish are released alive after being identified, counted, and measured, and some species are tagged so their movements can be followed. A small number of fish are kept so that samples can be taken for assessing their age and reproductive condition. SCDNR fisheries biologists also visit fishing tournaments and manage drop-off freezers, where participating anglers can donate fish carcasses for scientific study. Over the last year SCDNR Inshore fisheries biologists made 953 sets of trammel nets, and captured 15,507 fish, with 4,924 fin clip samples being taken for genetic identification. The electrofishing program collected 14,617 specimens (most being release live) along with 1,542 tissue samples. The longline survey, designed to capture, tag, and release large red drum and sharks, made 356 sets, and captured 2,452 fish representing 28 species. Staff captured and released a total of 989 large red drum. The freezer and the tournament projects collected 119 fish racks representing

seven species. Staff tagged 1,892 fish belonging to six species, and 449 recaptures were reported by SCDNR biologists and recreational anglers, and 84 percent were released alive.

Samples from 81 trawl samples were taken to evaluate annual abundance of species and size classes of fish that are not typically collected by other means. This sampling yielded 113,891 fish specimens representing 62 species. The six most numerous species were star drum, Atlantic croaker, spot, bay anchovy, blackcheek tongue fish, and weakfish.

Saltwater recreational fishing license revenue also helps SCDNR collect information from recreational fishermen through personal field surveys and the charter boat logbook program. Fishermen are interviewed at public boat landings while the charter boat logbook program collects catch and effort data from vessels carrying fishermen on a for-hire basis. These data help determine the components of the stock that are being targeted by recreational anglers as well as recreational fishing effort and behavior. During FY2017, 5,061 interviews were made with fishermen. The top species targeted by fishermen was red drum. During the last calendar year, 544 charter boats provided monthly reports and indicated that the ten most commonly taken species were black sea bass, red drum, spotted seatrout, Spanish mackerel, black drum, vermilion snapper, sharpnose shark, flounder, whiting and bluefish. The five most landed species were Spanish mackerel, black sea bass, vermilion snapper, shrimp, and spotted seatrout.

SCDNR's [finfish stocking research program](#) is also funded in part by saltwater fishing license revenues. Adult wild fish maintained in the lab are conditioned to spawn, fertilized eggs are collected and the larvae are then carefully maintained in ponds. All 'families' produced at the Waddell Mariculture Center have a unique genotype or "genetic fingerprint" so that they can later be distinguished from wild fish. When the fish held in ponds grow to the desired length, they are harvested and transported to stocking sites along the coast. During FY 2017, 789,024 red drum, and 106,071 spotted seatrout fingerlings were released as part of a license-funded project. Specifically, 595,985 small red drum juveniles were released into Winyah Bay, 111,663 small juveniles into Colleton River, 70,663 small juveniles into the North Edisto River, 2,339 medium juveniles into May River, 4,417 medium juveniles into North Edisto River, 1432 medium juveniles into Ashley River and 1,267 medium juveniles at James Island county park, All spotted seatrout were released into Charleston Harbor as part of a long-term study.

The SCDNR stocked striped bass in the Ashley River from 2006–2014 as part of a project designed to restore the extirpated population of striped bass in this system. In past years, stocking efforts had been implemented using both freshwater and brackish water hatcheries and both small 1-2 inch phase I juveniles stocked in the spring as well as 6-8 inch phase II juveniles stocked in the fall. However, no striped bass were stocked in 2015 as it was decided to allow the population a chance to establish without stocking. Samples collected in July 2015 and June 2016 indicated that all captured fish had been stocked in the system and most were from the stocking of the larger fish.

Six wild cobia were collected by cooperating recreational anglers and SCNDR staff in the Broad River and were used as brood stock. They produced viable eggs which were hatched and

stocked into ponds at the Waddell Mariculture Center. DNR produced 8,924 cobia fingerlings that were released into the Broad River system in July 2017. Using genetic fingerprinting techniques, staff continued to examine the number of previously stocked fish that contributed to recent recreational catch.

Oysters (\$328.4 K) - Approximately 23,256 bushels of shell were planted on 7 public and state shellfish grounds in Charleston and Georgetown counties during FY2017. This created 8,447 square meters of shellfish habitat along approximately 1.5 miles of shoreline. This oyster shell forms critical habitat for settlement of larval oysters. The DNR maintains thirty-two [shell recycling sites](#), located in eleven counties in the coastal zone and some inland counties. These locations continue to serve as collection points for donated shell, allowing the public to participate in oyster reef restoration and enhancement in recreational harvesting areas. Staff collected 29,712 bushels of oyster shells that were recycled in FY2017. SCDNR biologists continued to update shellfish ground maps using aerial imagery collected over recent years combined with on-the-ground assessments. Imagery is available online at <http://www.dnr.sc.gov/GIS/descoysterbed.html>. Eleven oyster beds originally planted in 2013 were assessed to determine shell planting effectiveness and reef development success. Nine of the eleven sites (82%) were ranked above average with two having average success. Nine beds planted in 2015 were sampled to determine juvenile recruitment rates. Eight of the nine had excellent recruitment with one having average recruitment.

Hard copy maps are available to the public free of charge by writing: Recreational Shellfish Maps, Shellfish Management Program, SCDNR, P.O. Box 12559, Charleston, SC 29442-2559 or by calling (843) 953-9854, and pdf versions of the maps are available at the SCDNR Web site for [state shellfish grounds](#) or [public shellfish grounds](#).

Shrimp and Crabs (\$192.6 K) – Staff assessed shrimp and blue crab populations throughout the state with a 20-ft trawl net towed for 15 minutes on a monthly basis in Charleston Harbor and at 20 locations from Charleston to Calibogue Sound during four cruises (August 2016, December 2016, March 2017, and April 2017). Routine sampling is timed to provide information on the status of crustacean populations at important times in their life cycle and is important for the proper management of the resources. Catch-per-unit-effort (CPUE) for white shrimp was consistently higher throughout the year compared to the previous 10-year average with fall CPUE being the highest since 2010. The fall 2015 recreational harvest of shrimp was also the highest since 2010. The winter of 2016-17 was very mild and resulted in good survival of overwintering white shrimp. This preceded high abundance of spring spawning white shrimp in May and June 2017, being only less than that of 2016 going back to 2005. Staff also sampled with a ten-foot trawl (5-min tows) in designated tidal creeks for juvenile shrimp and crabs. Sampling in spring and summer 2017 indicated that white shrimp juveniles were below the 2005-2016 average was higher than the 20-yr average, whereas brown shrimp were about equal to the two previous years but below the long-term average. Blue crab catch rates were improved over recent years, but less than the long-term average but similar to most years since 2010. Trap

sampling of large blue crabs also indicated that crab abundance was continued to improve with the average catch being above the long-term average and comparable to that of 2015. Numbers of juvenile crabs collected in spring 2017 was the best since 2000.

Education, Information, Outreach (\$132 K) - Approximately 194,400 public information documents were distributed free of charge to 113 vendors, including rules and regulations books, tide tables, fish rulers and fish identification posters. The saltwater license website (saltwaterfishing.sc.gov) continues to provide the public with updated information on rules and regulations, saltwater fishing related news, and informational material on fish identification, fish measuring, and best angling practices. The [public recreational tagging program](#) has been successfully utilized as an outreach tool for communicating with recreational anglers and promoting resource stewardship. The [Carolina Coastal Discovery \(CCD\) Marine Education Program](#) provided 76 vessel and 238 land-based education programs operating out of the Marine Resources Center in Charleston, the McKenzie Field Station in the Ashepoo-Combahee-Edisto (ACE) Basin, and in Georgetown and Horry Counties. Reaching 5,337 students, teachers, and adults with education programs during FY 2017, the CCD Program's education initiatives included marine animal dissections, salt marsh ecology, marine invertebrate taxonomy, barrier island studies, beach walks, bird and estuarine species identifications, and water quality monitoring. CCD Program information and application forms are now available online at www.dnr.sc.gov/ccd/ . The mobile touch tank was utilized at three events. Staff participated in two kids fishing tournaments with participation of 200 young anglers. In anticipation of holding youth fishing tournaments at Colonial Lake in downtown Charleston, and the lake at James Island County Park, 2800 and 1000 red drum were stocked in each lake respectively (Fig.3). These tournaments will be held during the fall 2017 and spring 2018. Five youth/family fishing clinics were conducted to teach beginning anglers basic fishing knots, saltwater rigs, fish identification, casting, and proper fish handling and release techniques. Staff also conducted a variety of other outreach and education activities including 5 presentations to fishing clubs and civic groups.

Infrastructure Support For Marine Division (\$630 K) – Funds were allocated to provide general infrastructure support for the marine recreational fisheries programs. These funds help support maintenance and operation of support facilities at the Marine Resources Center in Charleston, the McKenzie Field Station at Bennett's Point and the Waddell Mariculture Center in Bluffton. These funds also help purchase or maintain laboratory equipment, fish holding tanks and ponds, sampling boats and vehicles. The [FY 2017 Saltwater Recreational Fishing License Report](#) above is provided in Adobe® Acrobat® (PDF) format. Adobe® Reader® is required to open these files and is available as a [free download](#) from the Adobe® Web site.