

FY 2016 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, 2015 through June 30, 2016, preliminary totals indicate about 229,053 individual recreational fishermen held a saltwater recreational license and this, along with charter and pier license sales, generated **\$2.88 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 2016 Highlights

Artificial Reefs (\$428.1K) – Nine [artificial reef construction](#) projects were completed this fiscal year on 10 permitted reef sites encompassing locations off each coastal county. These projects included the addition of 162 large concrete junction boxes and culvert pipes, a 50-ft steel barge, ten large buoy anchors, a 62-ft concrete hulled boat, and a 52-ft landing craft. Routine monitoring and assessment of reefs were conducted throughout the year, and 3 missing reef buoys were replaced on reef sites. Acoustic radio receivers were mounted on reefs to record tagged fish that visit the reefs. A new edition (5th) of the Guide to South Carolina Artificial Reefs has been published and is being distributed as requested.

Marine Fish (\$803.6K) - 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 1,009 sets of trammel nets, and captured 17,226 fish, with 4,935 fin clip samples being taken for genetic identification. The electrofishing program collected 15,700 specimens (most being release live) along with 938 tissue samples. The longline survey, designed to capture, tag, and release large red drum and sharks, made 325 sets, and captured 2,439 fish representing 25 species. The freezer and the tournament projects collected 352 fish racks representing seven species. Staff tagged 1,734 fish belonging to six species, and 398 recaptures were reported by SCDNR biologists and recreational anglers.

Samples from 77 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 71,768 fish specimens representing 70 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 FY2016, 4,874 interviews were conducted by staff throughout the coastal waters of the state. During the last calendar year, 525 charter boats provided monthly reports and indicated that the ten most commonly taken species were black sea bass, red drum, spotted seatrout, sharpnose shark, Spanish mackerel, vermilion snapper, flounder, bluefish, blacktip shark, and whiting.

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 2016, 1,322,636 red drum, and 315,206 spotted seatrout were released as part of a license-funded project. Specifically, 182,097 red drum fingerlings were released in the ACE Basin, 11,643 large juveniles in Winyah Bay, 558,727 fingerlings and 38,561 large juveniles in Port Royal Sound, 529,851 small juveniles in the Ashley River, 1,757 large juveniles in Murrell's Inlet and 829 large juveniles in Little River. All spotted seatrout were released in 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 2014 and June 2015 indicated that all captured fish had been stocked in the system and most were from the stocking of the larger phase II fish.

In an effort to collect life history data on cobia in the Port Royal and St. Helena Sounds, project staff have developed a cooler program working cooperatively with local charter boat captains to collect fish racks, genetic samples, and catch information. In addition, staff attend all cobia tournaments in the state and work with cooperating anglers to collect life history information such as age, growth, reproductive maturity, habitat, and movement data. Genetic samples of all cobia are collected to evaluate population structure as well as the contribution of stocked fish to the population.

In addition to the collection of life history data, staff made several attempts, from April 2016–June 2016, to collect cobia broodstock from the Broad River for hatchery production of fingerlings for stock enhancement research. For the third consecutive year, catch of cobia in the Broad River and St. Helena Sound was down. Still, four wild cobia were collected by cooperating recreational anglers and SCNDR staff in the Broad River and transported back to the Charleston lab for use as broodstock. Genetic parentage analysis results revealed that these cobia were truly of wild origin and therefore suitable to be used for broodstock. Cobia broodstock were injected with spawning hormones three times in 2016 and produced viable eggs on each occasion.

Oysters (\$303.6K) - Approximately 29,663 bushels of shell were planted on 7 public and state shellfish grounds in Charleston and Georgetown counties during FY2016. This created 9,106 square meters of shellfish habitat. This oyster shell forms critical habitat for settlement of larval oysters. The DNR maintains twenty-nine [shell recycling sites](#), located throughout 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 27,707 bushels of oyster shells that were recycled in FY2016. 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>. Sixteen oyster beds originally planted in 2012 were assessed to determine shell planting effectiveness and reef development success. Six of the sixteen sites were ranked above average with four having average success and six were below average. 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 (\$292.6) – 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 2015, December 2015, March 2016, and April 2016). Additional sampling was conducted in November 2015 to assess the impacts of the October flood. 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 2011. The winter of 2015-16 was relatively mild and resulted in good survival of white shrimp. This preceded near-record abundance of spring spawning white shrimp in May and June 2016. 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 2016 indicated that white shrimp juveniles were higher than the 20-yr average, whereas brown shrimp were about equal to historical catch rates. Blue crab catch rates were improved over recent years, but less than the long-term average. Trap sampling of large blue crabs also indicated that crab abundance was much improved in fall 2015 and spring 2016.

Education, Information, Outreach (\$132K) - Approximately 223,000 public information documents were distributed free of charge to 114 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 75 vessel and 292 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 just over 5,400 students, teachers, and adults with education programs during FY 2016, 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 seven events. Staff participated in two kids fishing tournaments with participation of 288 young anglers. Six 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 10 presentations to fishing clubs and civic groups.

Infrastructure Support For Marine Division (\$550K) – 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 2016 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.