

# Issues/Reports





# STATUS OF ELECTRONIC TRIP TICKET REPORTING AND RECOMMENDATIONS TO IMPROVE MONITORING OF LANDINGS OF SPECIES MANAGED UNDER A QUOTA OR CAP

April 30, 2014

## I. SUBJECT

This paper presents an overview and status of trip ticket reporting in North Carolina with a focus on expanding the use of electronic means of reporting (e-reporting) to improve the timeliness of reported landings of species managed under quotas or caps. This paper discusses the pros and cons of mandating e-reporting and weekly reporting. Short and long term implementation plans are proposed for weekly electronic reporting of trip ticket data.

## II. ORIGINATION

During the fall 2013 red drum fishing season the seasonal cap (September through April with a 150,000 lb. cap) was exceeded by over 100,000lb. Total harvest from Sept. 1 until the fishery was closed on Nov. 23 (proclamation FF-61-2013) was 263,072 lb. This overage, along with comments that the Division of Marine Fisheries needs additional tools to manage the cap, led to a request from Marine Fisheries Commissioner Joe Shute for a report on mandating e-reporting by North Carolina licensed fish dealers.

Although much has been discussed about how e-reporting could have prevented this, current statutory authority only requires monthly submissions of trip tickets by licensed dealers. Since approximately half of the 260,866 lb. fall harvest was caught during the month of October, only more timely submissions of catch data could have prevented this overage. This fact necessitates discussion of the frequency of reporting trip ticket data, like a weekly requirement similar to federal dealer reporting requirements.

The commission has debated e-reporting in the past, most notably in 2012 when it adopted a motion to require any dealers reporting over 50,000 lb. of finfish to report electronically. This motion resulted in adoption of new portions of rule 15A NCAC 03I. 0114. Impacted dealers were notified of this new requirement in July 2013.

## III. BACKGROUND

### Red Drum Cap and Landings

The cap for red drum was initially established in 1990 at 300,000lb. and lowered the following year to the current 250,000 lb. The cap was established to address concerns over an anticipated increase in demand for red drum and a possible influx of gill netters resulting from gill net prohibitions and red drum sales bans in other states that were being enacted at the time. The cap is not based on a population assessment and should not be viewed as the amount of harvest allowed in a given year. If an assessment based annual commercial harvest limit were put into place for the commercial red drum fishery in North Carolina, it would be considerably less than 250,000 pounds.

The Atlantic States Marine Fisheries Commission Red Drum Fisheries Management Plan requires all states to maintain their current level of restrictions, i.e. no relaxation of current commercial fisheries management measures. For NC that means a commercial trip limit (the commission and the division director are allowed to adjust the trip limit), a 250,000 lb. cap with a fishing year of Sept. 1 to Aug. 31 each year, paybacks for annual overages deducted from following year, and an 18-27 inch size limit.

One important note is that restrictions on the trip limit for the commercial fishery and the bag limit for the recreational fishery are how the division meets the reductions necessary to prevent overfishing. Since Oct. 1998, various commercial trip limits have been employed to maintain harvest below the 250,000 lb. cap. From

Oct. 1998 to Sept. 2000, the commercial trip limit was set at 100 lb. From Oct. 2000 to early Sept. 2001 the trip limit was set at five fish. In Sept. 2001 (FF-47-2001) a seven fish trip limit was implemented as part of the original fishery management plan which allowed for a sliding trip limit set by the commission and the division director. This established the September through August fishing year. The commission voted in 2010 (FF-43-2010) to increase the seven fish commercial trip limit to ten fish. The current trip limit is ten fish and more than half the catch by weight must be other species which is generally accepted to be the target species.

The cap for red drum has been exceeded six times since it was employed in 1991 (Figure 1). From 1991 to 1998, the commercial cap was exceeded only once with no trip limit in place. During 1999 and 2000 the cap was exceeded in both years under the 100 lb. trip limit. During the 2007/08 red drum season high landings from December through March in the northeast portion of the state were responsible for the cap being exceeded. The trip ticket program, in conjunction with Marine Patrol, conducted a review of the 2007/08 landings and found some suspicious behavior such as 1) multiple daily landings by a single individual were reported in deference to the proclamation, 2) red drum landings by licensed fishermen who had not previously reported red drum landings, 3) use of bluefish as bycatch when division biologists saw little or no bluefish in fish houses, and 4) consistent poundage amounts reported on trip tickets unlike normal size variations seen in schools of red drum.

In the fall of 2013, high landings from the northeast portion of the state were again responsible for the cap being exceeded but this time between Sept. and Nov. (Table 1). Similar to 2007/08, legal size red drum were abundant as a result of a strong year class reaching the slot limit. Enormous schools of red drum were reported and either the temptation to target them was too great or they were too common to avoid. Harvest was so rapid that a data query run on Oct. 21 showed no evidence of a problem but when the data were queried again on Nov. 22, the 150,000 lb. cap for the period of September to April was exceeded by almost 100,000 lb. Suspicious behavior was again seen after a review of the trip ticket reports. In one case a 9 year old female Standard Commercial Fishing License holder reported 14 trips with over 600 lb. of red drum with no target catch reported on the same tickets. There were also approximately 600 trips reported by one dealer with no target bycatch reported. The Marine Patrol is investigating these reports.

When fish are abundant in the northeast portion of the state, commercial gill net fishermen commonly land their catch at the large dealers in and around Wanchese and Avon in Dare County (Table 2). Most of these dealers submit their trip tickets electronically to division because they are federally permitted and use our trip ticket software. Figure 2 shows the percentage of red drum reported by e-dealers from 2004 to 2013. There are approximately 150 dealers reporting red drum landings in any given year. The graph shows that time periods when the highest percentage of red drum is reported electronically appear to coincide with the years when the cap was exceeded. Although not tested statistically, there does appear to be a correlation between high landings of red drum and the percentage of the landings reported via e-reports.

### History of Electronic Trip Ticket Reporting in North Carolina

Interest in electronic reporting of trip ticket data came up shortly after the 1994 implementation of the trip ticket program. Until around 2004, only about four dealers were e-reporting using various DOS-based software programs approved by the division. In 2004, the division received a grant from the Atlantic Coastal Cooperative Statistics Program to develop a Windows based software package. Development of this application for North Carolina coincided with the National Marine Fisheries Service (NMFS), Northeast Regional Office, requirement for weekly e-reporting by all of their federally permitted dealers. The program being developed for the division was redesigned to meet all the federal reporting requirements as well as those of the state of North Carolina. Division staff took responsibility for all of the testing, installing and training associated with this software which aided greatly in enhancing the number of dealers e-reporting their trip ticket data.

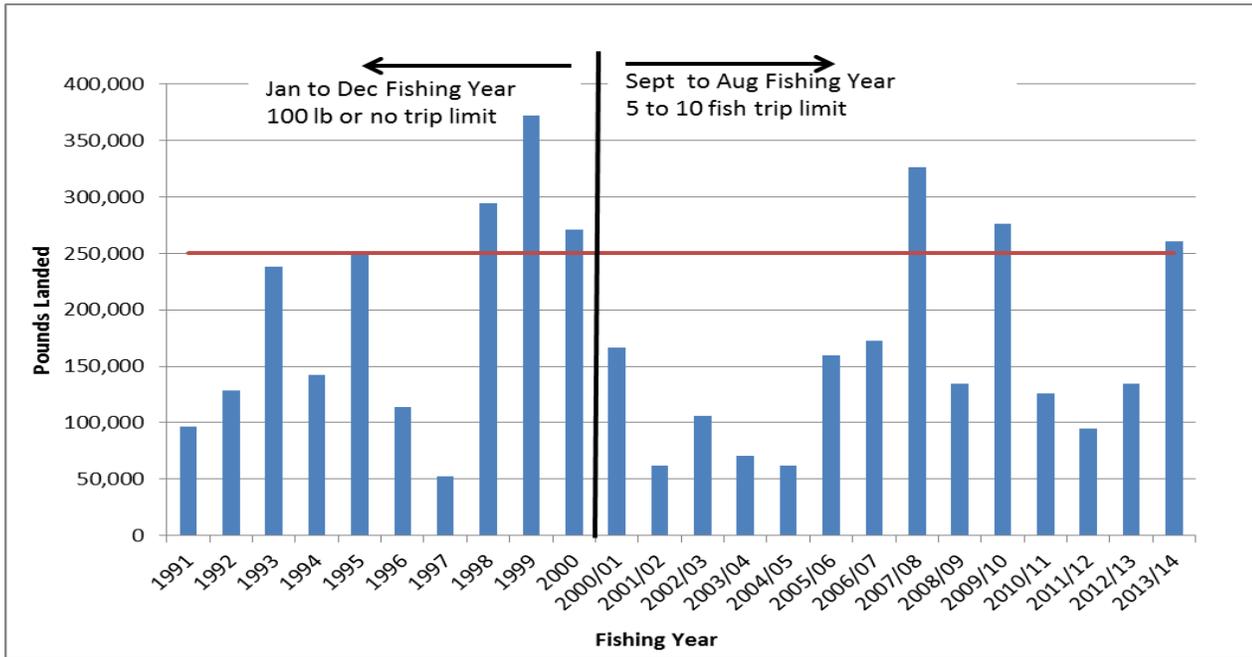


Figure 1. Red drum landings by fishing year and the 250,000 lb. cap.

Table 1. Red drum landings by month for the 2012/13 and 2013/14 fishing years, including 3 year average landings. 2013 data are preliminary.

Year	Month	Species	Pounds	2009-2011 Average	2010-2012 Average
2012	9	Red Drum	6,367	28,991	18,433
2012	10	Red Drum	7,101	43,644	23,046
2012	11	Red Drum	7,826	14,318	11,012
2012	12	Red Drum	3,806	3,428	2,530
2013	1	Red Drum	3,129	5,885	6,194
2013	2	Red Drum	4,984	3,448	3,901
2013	3	Red Drum	4,030	5,699	6,311
2013	4	Red Drum	6,876	7,848	9,479
2013	5	Red Drum	8,710	13,730	11,549
2013	6	Red Drum	13,310	12,681	11,173
2013	7	Red Drum	26,154	13,777	10,099
2013	8	Red Drum	42,081	21,252	16,381
<b>Fishing Year (Sept 1, 2012 - Aug 31, 2013) Landings</b>			<b>134,372</b>		
Year	Month	Species	Pounds	2009-2011 Average	2010-2012 Average
2013	9	Red Drum	65,273	28,991	18,433
2013	10	Red Drum	135,745	43,644	23,046
2013	11	Red Drum	62,054	14,318	11,012
<b>Fishing Year (Sept 1, 2013 - Aug 31, 2014) Landings</b>			<b>263,072</b>		

Table 2. Red drum landings by county in September, October and November. 2013.

COUNTY	POUNDS	DEALERS	TRIPS
BEAUFORT	9,873	9	442
BERTIE	***	1	6
BRUNSWICK	584	7	24
CAMDEN	***	1	74
CARTERET	55,499	24	1,796
CHOWAN	***	2	61
COLUMBUS	***	1	1
CRAVEN	5,544	4	188
CURRITUCK	11,143	5	486
DARE	120,700	15	3,545
HYDE	18,325	9	522
JOHNSTON	***	1	3
NEW HANOVER	1,232	15	87
ONSLow	4,445	12	210
PAMLICO	11,048	8	560
PASQUOTANK	***	2	539
PENDER	3,579	11	159
PERQUIMANS	***	2	267
PITT	***	1	7
TYRRELL	***	1	64
WILSON	***	1	11

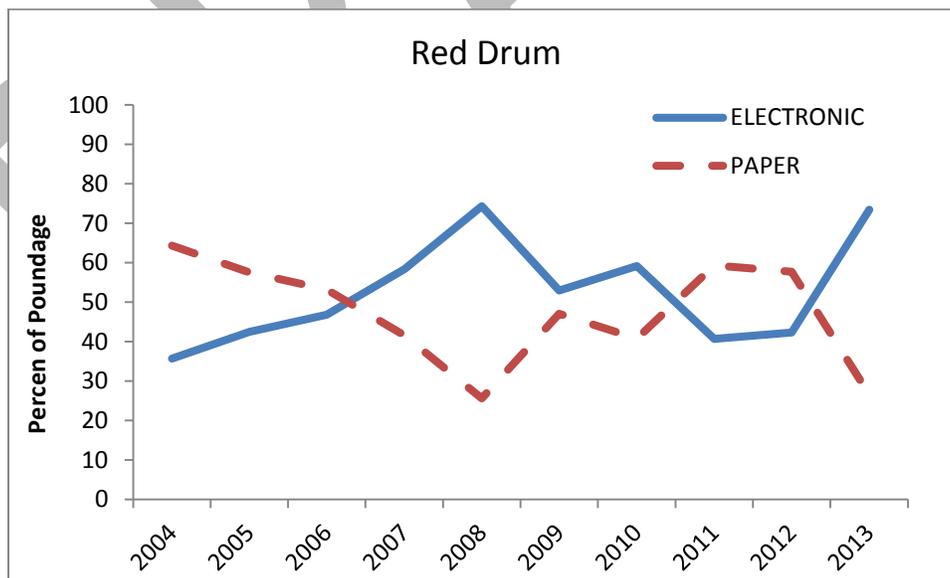


Figure 2. Percentage of red drum landings reported via electronic submissions from 2004-2013.

In 2012, the commission adopted rule 15A NCAC 03I. 0114 requiring all dealers reporting over 50,000 lb. of finfish to report electronically. In 2013, the NMFS Highly Migratory Species (HMS) division adopted a rule requiring weekly e-reporting by all HMS permitted dealers. Also in 2013, the NMFS Southeast Regional office

began discussing a rule requiring weekly e-reporting by all of their permitted snapper-grouper dealers which will be implemented in 2014. These four initiatives served to increase the number of dealers in North Carolina reporting electronically to the current level of approximately 130 out of a total of approximately 700 dealers.

The various NMFS e-reporting initiatives have all required that dealers report weekly. There are allowances for submitting ex-vessel prices approximately two weeks after submittal. This was found to be necessary since dealers often do not know what to pay for the product until the product has sold.

### Quota Monitoring Program

The division has a quota monitoring program in place that monitors daily landings of dealers who are issued special permits to purchase any of the quota-monitored species such as summer flounder, black sea bass, striped bass, spiny dogfish and river herring. Permitted dealers are required to report daily during the various seasons for these species, which happen to all occur during the late fall and winter of each year. At this time, a maximum of 90 permitted dealers are monitored daily. This program is staffed by one biologist and one part time assistant who focus on this program from November through March.

Appendix 1 lists all quota monitored species landed in North Carolina, along with the governing body, method of monitoring, frequency of reporting and whether or not a permit is required. There are three distinct offices within the NMFS with the responsibility for the monitoring of the majority of the species with quotas. The division monitors three of these species via the quota monitoring program which have a specific North Carolina allocation program (summer flounder, black sea bass north of Cape Hatteras and spiny dogfish). The program also monitors striped bass harvest from the ocean, the Albemarle Sound Management Area, and the Central Southern Management area on a daily basis when the harvest seasons are open. River herring harvest was also monitored during the discretionary harvest season which ended in 2014. Other species such as bluefish, horseshoe crabs, and red drum are monitored by trip tickets. The quotas for bluefish and horseshoe crabs are generally not exceeded but in the event they are the federal fishery management plans allow for transfers from other states. Monthly monitoring of red drum by the division using trip tickets is normally adequate but during years when exceptional year classes enter the slot limit monthly monitoring has been found to be too infrequent.

Many species, such as red drum and southern flounder, are purchased by a large number of dealers and are harvested and landed almost year-round. For those reasons, these species are not considered suitable for daily quota management using the methods currently in place.

### Dealer Survey Results

The trip ticket program distributes a biannual survey to all licensed dealers in order to improve customer service and to gauge the attitude our licensed dealers have towards e-reporting. The results are usually surprising and suggest that we are dealing with a demographic that may not be as computer savvy as other more mainstream small business owners. In addition, a unique problem for seafood dealers is of course the wet, salt air environment that many of the fish houses operate under. Another is the often remote dealer locations that limit availability of cable and other sources of a reliable internet connection required to submit files. According to the US Census Bureau (US Census Bureau data: <http://www.census.gov/prod/2013pubs/p20-569.pdf>), North Carolina ranks in the lower one third of households in the nation with an internet connection. In the general public, 25 percent of households still do not have internet access with 40 percent of seniors not having internet access at home.

Results of the 2012 e-reporting survey indicate that although computer use is increasing among dealers generally, there are still 23 percent reporting they do not own a computer and 13 percent that own a computer reporting they do not have an internet connection. These limitations are not associated with just small dealers. One substantially large dealer in Perquimans County is in such a rural location that no cable or DSL lines are available for internet use, thus requiring a cellular hotspot to be used. This may work adequately for single

data file submission to an FTP site but highly inadequate for a web-based trip ticket data entry program. Multiple responses to the survey indicated similar problems with internet connectivity. Therefore, requiring all trip ticket data to be reported electronically via the internet would place an undue hardship for the dealers that lack connectivity, and for some dealers, reporting electronically via the internet may not be possible from their location.

The survey also showed that 50 percent of dealers responding had a computer but wished to remain using paper tickets and 56 percent overall were not supportive of mandatory electronic reporting.

Therefore, even though many supporters of e-reporting feel the vast majority of the industry has access to computers and an internet connections, the reality is that a significant percentage of the industry does not have, nor wish to have, a computer and internet connection for conducting business. These are issues that will need to be overcome if e-reporting is mandated.

### Current Dealer Use Levels of E-Reporting

There are approximately 120 dealers using the trip ticket software and submitting monthly landings electronically. The number of dealers varies both seasonally and annually as dealers become inactive, go out of business, or new dealers are activated. New state and federal reporting requirements are leading to an increasing number of dealers using the software.

Figure 3a shows the percentage of finfish poundage reported electronically versus paper tickets since 2004. The large increase in percentage of finfish reported electronically from 2004 to 2006 was due to the federal e-reporting requirements being implemented and the distribution of the free North Carolina trip ticket software. By 2013, nearly 82 percent of all finfish landings were submitted electronically.

Conversely, a much lower percentage of shellfish poundage is reported electronically (Figure 3b). Shellfish includes shrimp, crabs, and molluscan shellfish such as oysters, clams and conchs. Only about one third of the total shellfish landings were reported electronically in 2013. There are no federal reporting requirements for shellfish and these dealers have been reluctant to switch to e-reporting.

Much of the 2013 data presented in this paper do not fully encompass the extent of e-reporting due to a new e-reporting initiative adopted May 2013. This rule (15A NCAC 03I. 0114), as adopted by the Commission, requires any finfish dealer reporting an average of 50,000 lb. or more of finfish over the preceding three years to report electronically. Dealers notified of this new requirement came on line throughout the summer and fall of 2013 so trip ticket data submitted prior to e-reporting are not reflected in the 2013 data in this document.

An analysis of all 2013 trip ticket data show that about half of all statewide landings are reported electronically, about 82 percent of the finfish and 18 percent of the shellfish. Predictive analysis of the effect of the 20-30 new e-dealers reporting electronically as a result of the new requirement found that about 95 percent of finfish will be reported electronically once all dealers are compliant. Unfortunately, it's too early to conclusively state the level of e-reporting of finfish because of the transition period.

Figure 4 shows the percentage of landings reported electronically versus by paper tickets for six of North Carolina's most popular commercially harvested species. Certain trends can be seen in these graphs. For instance, 78 percent of the shrimp harvest was reported electronically, while only 23 percent of the blue crab harvest was reported electronically. More than likely this is due to the large shrimp trawlers landing their product at larger dealers which tend to be federally permitted and report electronically. There are between 400 and 500 dealers reporting blue crab landings, many relatively small and located in rural areas. Spotted seatrout and southern flounder harvests are also reported by a large number of dealers; from 250 to 300 and 400 to 500 respectively, with 60 to 70 percent reported electronically. The large number of dealers reporting these species makes quota management difficult.

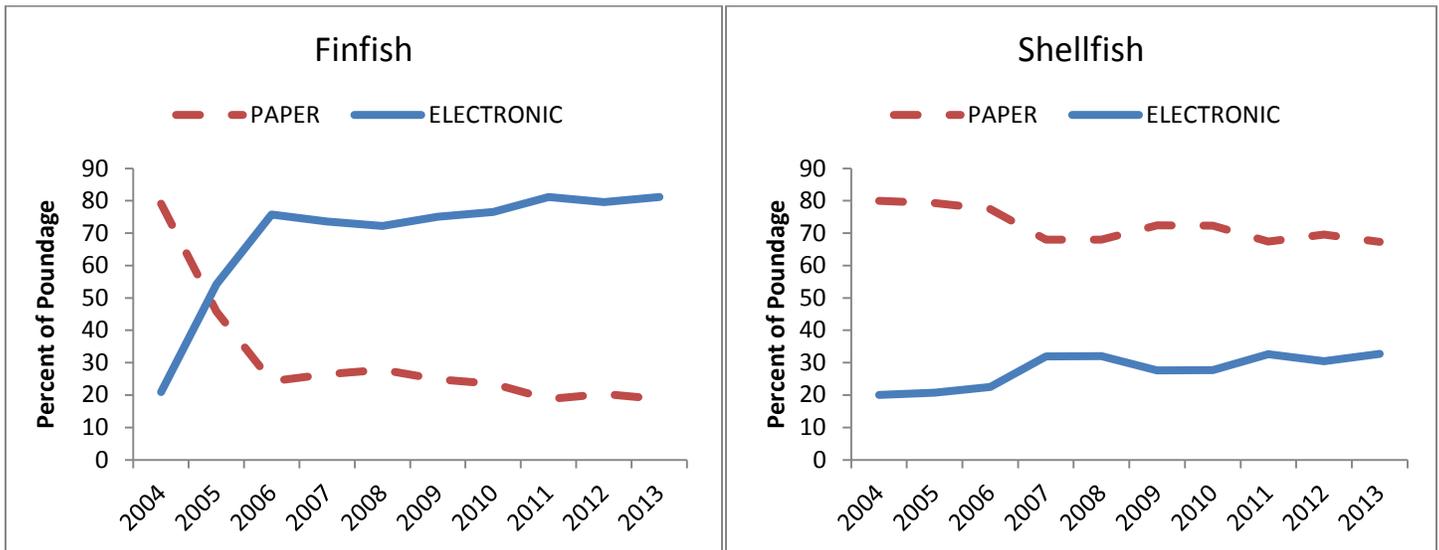


Figure 3. Percentage of landings of finfish (a) and shellfish (b) reported electronically and via paper trip tickets from 2004 to 2013.

The summer flounder and striped bass graphs show more defined trends. Nearly 100 percent of summer flounder harvest is reported electronically because summer flounder are managed under a federal fishery management plan and all dealers purchasing more than 100 lb. are required to be federally permitted. Until 2011, nearly 75 percent of the striped bass landings were reported electronically. Since then, the coastal migratory stock has not appeared off our northern coast and commercial catch is low. When the stock does appear and is accessible to our fishermen, they are generally sold at the larger dealers in and around Wanchese and Avon that report electronically. Since 2011, most of the striped bass harvest has taken place in Albemarle and Pamlico sounds and the percentage reported electronically has declined to 25 percent.

Much of the concern over e-reporting is whether or not to require ALL dealers to report electronically, even the small dealers, arbitrarily selected as those reporting under 10,000 lb. per year. These small dealers combined report only about 1 percent of the statewide landings as compared to the larger dealers reporting over 10,000 lb per year. In 2013, there were 365 small dealers who reported to the division, 18 of which reported electronically, and 165 large dealers with half reporting electronically. These figures are important for any decision to mandate universal e-reporting as the workload required to provide the means to support and to ensure compliance of nearly 350 additional e-dealers is much greater than that for an additional 65 e-dealers.

#### Internal Issues and Costs Associated With E-Reporting

At this time, the North Carolina trip ticket software is only available as a stand-alone software which is adequate for the usage levels we currently have. It is generally accepted that it will be necessary to transition to a web-based program if the usage levels significantly increase beyond status quo. Web-based programs will allow for ease of remote installation, updates and technical fixes, thereby reducing staff resources needed to maintain hundreds of installed software copies.

However, development of a web-based program will entail significant costs. Initial estimates ranged from \$50,000 to over \$300,000. Application developers generally provide maintenance agreements and these recurring costs can also be significant. The division currently pays \$5,000 a year for maintenance costs for the trip ticket software developed in 2004. Web-based applications also incur storage and web hosting costs. In total, these costs may surpass the cost of printing paper tickets which is approximately \$15,000 a year.

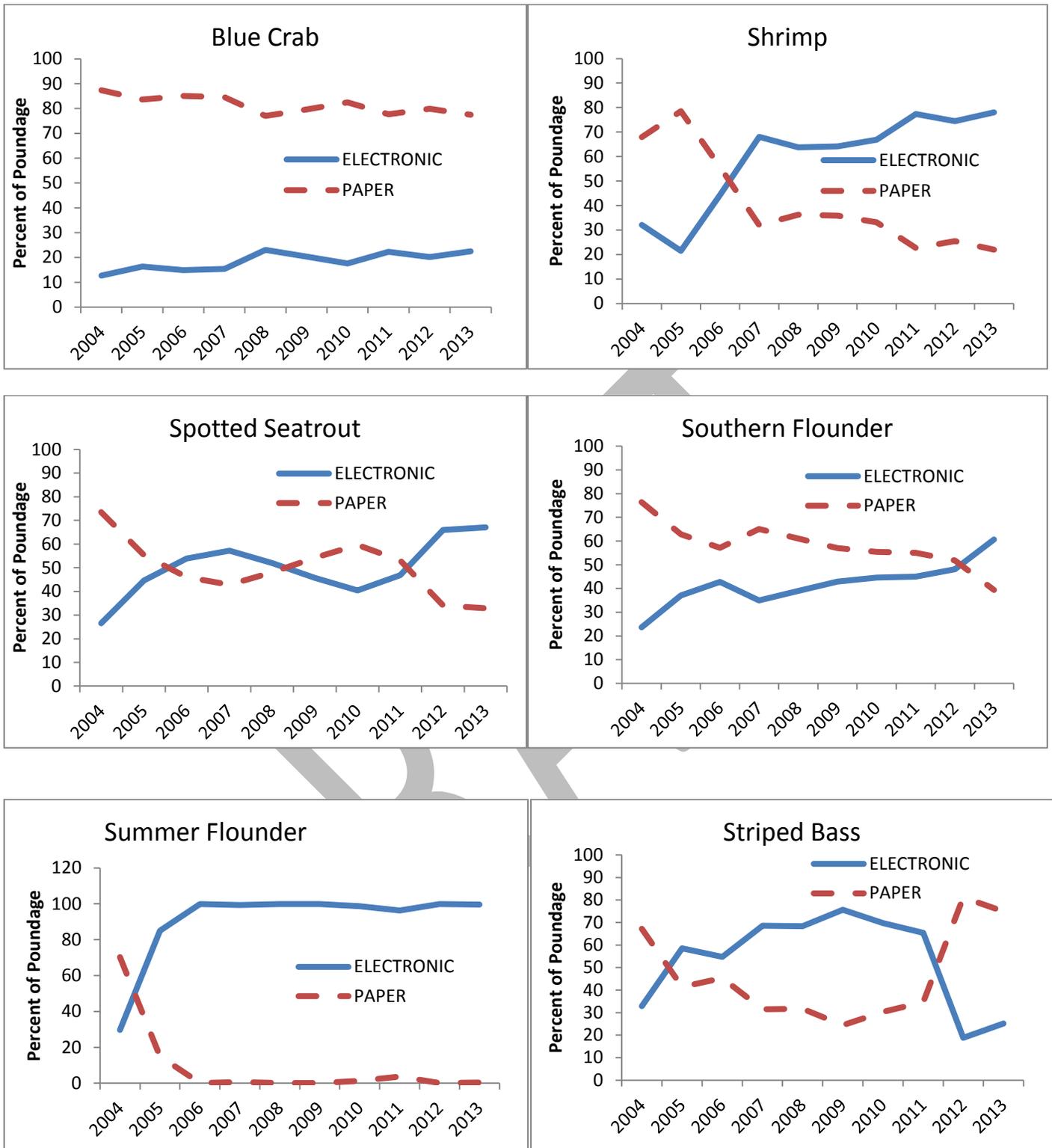


Figure 4. Percentage of landings of blue crab, shrimp, spotted seatrout, southern flounder, summer flounder and striped bass reported electronically and via paper trip tickets from 2004 to 2013.

Although it seems counter intuitive, costs of e-reporting programs are not necessarily lower than paper-based trip ticket programs because of the high cost of initial development and maintenance.

Staff considerations should also be taken into account when deciding to require all dealers to report electronically. The division currently has three data clerks and one temporary data entry clerk who screen, enter, edit, and file all of the paper trip tickets submitted each year (approximately 150,000). In addition, these clerks train new dealers, ship tickets and mailing supplies to the dealers, and work closely with our port agents to fix reporting errors. These clerks are also responsible for importing and uploading the electronic files submitted each month from the 130 dealers using the software. There is also one biologist who handles all quota monitoring duties and provides trip ticket software technical assistance to dealers. The divisions Information Technology Section also provides technical assistance with problems involving transmission of files to state owned servers.

Transitioning to a 100 percent e-reporting program may eliminate the need for one to two of the clerical positions and may require obtaining one or more technical level positions to maintain the file submissions and database. Therefore, transitioning to a strictly e-reporting program shifts personnel costs from relatively low salaried clerical staff to higher salaried technical staff. Savings come from a reduction in the cost of printing the four-part carbon trip ticket forms as well as the costs of mailing and shipping supplies. However, the elimination of paper forms would never be absolute because of legal requirements for seafood dealers to maintain hard copies of their trip ticket reports for Marine Patrol inspections. While Marine Patrol officers can use the output from the trip ticket software as these hard copies, in many cases the computers aren't located on premises. As a work around, the division provides seafood dealers who use the trip ticket software dock tickets to help facilitate Marine Patrol inspections and to help with use for bills of lading while transporting seafood across the state. Although dock tickets (which are two part forms) don't cost nearly as much to print as the traditional trip ticket form, printing costs will never be eliminated entirely.

#### Weekly versus Monthly Reporting

The current trip ticket program is based on monthly submittals of paper and electronic trip tickets. This includes reporting compliance, batching for internal controls and filing based on monthly submissions. The division has always conducted double-key entry of all paper trip tickets to reduce data entry errors. We import and upload e-files manually each month. We allow for monthly closures of dealers and conduct monthly compliance checks.

One aspect of any trip ticket program that should not be forgotten is that dealers are required to submit negative reports as well as positive reports with landings. This is the only way an agency can ensure all licensed dealers are reporting. Currently, we assess reporting compliance on a monthly basis since reports are required to be submitted by the 10th of each month. Along with this comes the notification and tracking processes used to track submittals and requests to the Marine Patrol for enforcement follow-up. Transitioning to a weekly schedule will require weekly compliance checks and follow-up, essentially quadrupling the workload compared to monthly compliance checks.

Shifting to a weekly reporting frequency will require substantial reorganization of all internal processes. This is not to say it can't be done, rather that it will take time and therefore there should be good justification for doing it. Because federal dealer requirements stipulate weekly reporting, most of our federal dealers should not be reluctant to submit the data to the division when they submit to NMFS.

In order to avoid future instances like the 2013 red drum cap overage, weekly reporting should be considered. It will require modifications to reporting requirements both in statute and in rule, improvements to our Information Technology infrastructure, and changes to our internal record management processes. NC General Statute 113-168.2 (i) requires dealers submit trip tickets by the 10th of the following month. So without a statutory change, the division has no authority to require weekly reporting. Because our current trip ticket system is based on monthly submittals, significant changes would need to be made internally and via the General Assembly to change to weekly reporting.

## IV. AUTHORITY

### G.S. 113-168.2. Standard Commercial Fishing License.

- (i) Record-Keeping Requirements. -- The fish dealer shall record each transaction at the time and place of landing on a form provided by the Division. The transaction form shall include the information on the SCFL or shellfish license, the quantity of the fish, the identity of the fish dealer, and other information as the Division deems necessary to accomplish the purposes of this Subchapter. The person who records the transaction shall provide a completed copy of the transaction form to the Division and to the other party of the transaction. The Division's copy of each transaction form shall be transmitted to the Division by the fish dealer on or before the tenth day of the month following the transaction. (1997-400, s. 5.1; 1998-225, s. 4.11; 2001-213, s. 2.)

### 15A NCAC 03I .0114 RECORDKEEPING REQUIREMENTS

- (a) It is unlawful for a fish dealer:
- (1) To fail to complete accurately and legibly all mandatory items on the North Carolina trip ticket for each transaction and submit the trip ticket in accordance with G.S. 113-168.2;
  - (2) To fail to provide to the Division a Trip Ticket Submittal/Transaction form indicating the number of transactions that occurred during the previous month;
  - (3) To fail to make paper copies of trip tickets available at the dealer location for inspection by Marine Patrol inspectors;
  - (4) To fail to submit trip tickets to the Division via electronic file transfer if that dealer reported an annual average of greater than 50,000 pounds of finfish for the previous three calendar years. Dealers subject to the electronic reporting requirement shall be notified by the Division via certified mail and within 120 days of receipt shall:
    - (A) Initiate electronic file transfer of trip tickets; and
    - (B) Continue to report by electronic file transfer until the dealer no longer holds a fish dealer license with finfish or consolidated categories;
  - (5) To fail to use software or web-based utilities authorized by the Division when reporting electronically. Electronic submittals shall meet all other recordkeeping requirements in accordance with G.S. 113-168.2; and
  - (6) To fail to keep all trip tickets and all supporting documentation for each transaction including receipts, checks, bills of lading, records, electronic files and accounts for a period of not less than three years.
- (b) It is unlawful for a seller licensed under G.S. 113, Article 14A or donor to fail to provide to the fish dealer, at the time of transaction, the following:
- (1) A current and valid license or permit to sell the type of fish being offered and if a vessel is used, the commercial fishing vessel registration; and
  - (2) Complete and accurate information on harvest method and area of catch and other information required by the Division, in accordance with G.S. 113-168.2 and 113-169.3.
- (c) It is unlawful to transport fish without having ready at hand for inspection a bill of consignment, bill of lading, or other shipping documentation provided by the shipping dealer showing thereon the name of the consignee, name of the shipper, the date of the shipment, and the quantity of each species of fish shipped. In the event the fisherman taking the fish is also a dealer and ships from the point of landing, all shipping records shall be recorded at the point of landing. Fishermen who transport their fish directly to dealers are exempt from this Paragraph of this Rule.
- (d) It is unlawful to export fish landed in the State in a commercial fishing operation without a North Carolina licensed fish dealer completing all the record keeping requirements in G.S. 113-168.2(i).
- (e) It is unlawful to offer for sale fish purchased from a licensed fish dealer without having ready at hand for inspection by Marine Patrol inspectors or other agent of the Fisheries Director written documentation of purchase showing thereon the name of the licensed dealer, name of the purchaser, date of the purchase, and the quantity of each species purchased.
- (f) It is unlawful for a holder of a Fish Dealer's License to have fish in possession at a licensed location without written documentation from a licensed fish dealer or a completed North Carolina Marine Fisheries Trip Ticket to show the quantity and origin of all fish.

*History Note: Authority G.S. 113-134; 113-168.2; 113-168.3; 113-169.3; 113-170; 113-170.3; 113-170.4; 143B-289.52; Eff. March 1, 1994; Recodified from 15A NCAC 3I .0014 Eff. December 17, 1996; Temporary Amendment Eff. July 1, 1999; Amended Eff. June 1, 2013; August 1, 2000.*

## V. DISCUSSION

In order to minimize recurrences of the red drum cap being exceeded the division needs to consider more effective means of monitoring the cap or alter the commercial trip limit to decrease harvest rates. The problem with the latter is that smaller trip limits could lead to more wasted bycatch. Since this paper is about e-reporting as a monitoring tool, this discussion will focus on cost effective and timely monitoring options.

Effective monitoring of fisheries quotas and caps relies on fairly frequent reporting such as daily or weekly, depending on the quota and harvest rates. Reports from dealers are managed by two systems. The first is to have reports phoned in, faxed, sent by email. The second, as mandated by the NMFS, is by electronic file submission. The division has the former system in use for monitoring summer flounder, black sea bass north of Cape Hatteras, spiny dogfish and striped bass quotas and the latter in use for monthly trip ticket submissions. With either system it is imperative to know the universe of dealers who are licensed or permitted to purchase the product to ensure compliance. Both reporting systems require negative reports, as well as positive reports, for all reporting periods. This is the only way of knowing if each dealer required to report has indeed been reporting. Knowing the number of dealers required to report is critical in designing a monitoring system.

For fiscal year 2013, there were 780 licensed fish dealers. Of these dealers, only 630 reported landings between January and December 2013; 530 reported using paper trip tickets and 100 reported electronically. Of the 100 who reported electronically, 65 are also federally permitted and required to report electronically. The remaining 150 dealers did not report any trip tickets either due to inactivity or some other reason such as buying only from other dealers or fishermen/dealers who only sold to other dealers. Mandating e-reporting for all 780 fish dealers increases the compliance checks and file importation workload dramatically.

The division's License and Statistics Section handles all dealer reporting of commercial landings and all quota monitoring duties. Processes and procedures to manage reporting have improved in the last 10 years but technical limitations continue which could impact any expansion of the programs. The following is a summarized list of current and future limitations:

- Cumbersome manual electronic file importation process
- High software maintenance levels
- Inefficient fax/phone/email daily quota monitoring procedures in an effort to have "one-stop" reporting forms
- Limited Information Technology resources to build necessary framework
- High costs of web-based development, maintenance and storage

The commercial fishing industry however, is capable of using newer technologies such as smart phones, tablets, and web-based reporting that the division is currently unable to provide. These new technologies could make reporting much simpler and easier for the industry. However, each of these reporting methods incurs substantial costs for development and maintenance. For instance, each smart phone and tablet operating system (iOs, Android or Windows) requires a separate application to be developed and supported. Without dedicated funding to support a massive increase in e-reporting, it will take the division a long time to address these needs.

Dealer survey results indicate that once fish dealers get accustomed to using our trip ticket software most would not want to revert back to paper trip tickets. However, the majority of dealers are comfortable and accepting of paper tickets and have no desire to incur the costs of e-reporting. The division pays for all paper trip tickets, mailing supplies and postage so the dealers have essentially no cost. Switching to e-reporting will require each dealer to purchase a computer (\$300+) and maintain an internet connection (\$25+/mo). The division has discussed providing computers and internet connections but found that support costs and liabilities would outweigh any advantages.

The division does not have the authority to require dealers to submit the price paid to the fishermen. On paper tickets, the price field is blacked out on the copy submitted. In the trip ticket software, submission of the price

is voluntary. Many dealers gladly submit the price paid to fishermen which is helpful to our calculations of average annual price per unit per species. Many dealers are however extremely reluctant to provide any prices.

With the consideration of weekly submissions of trip ticket data, also comes the consideration that the price a dealer pays to a fishermen or vessel is often not known at the time of purchase. Prior to paying fishermen, dealers often sell the product first to determine an appropriate price to pay the fishermen. The NMFS gets around this problem by allowing their permitted dealers to adjust the price paid within two weeks of initial file submittal. Recent enhancements to the North Carolina trip ticket software allow dealers to send updated files to reflect price changes. These updated files are typically received within a month of the original data submission.

There are advantages of mandating e-reporting for all dealers and advantages to changing the frequency of reporting from monthly to weekly. First, the cost of printing trip tickets, mailing supplies and postage is substantial and will be somewhat reduced. Second, changing to a weekly reporting frequency will allow for needed changes to our daily quota monitoring processes for the federally-managed species. Whether or not these savings are offset by the costs and impacts of development and maintenance of e-reporting methods is unknown at this time.

## **VI. CONCLUSIONS AND RECOMMENDATIONS**

Trip ticket staff met and discussed possible means of enhancing red drum monitoring to avoid future cap overages. Two solutions were developed, one short term that can be implemented prior to the fall 2014 flounder gill net fishery and one long term. Mandatory e-reporting is not recommended at this time due to the high costs and burden to both industry and division staff in comparison to the 5 percent gain in landings of finfish.

After an exhaustive review of existing authorities, it was realized that the division does not have the authority to require weekly reporting by dealers holding a permit for quota monitored species. Therefore, the short term solution proposed above only requests, not require, permitted dealers submit a weekly electronic file. Staff felt that many of the dealers will voluntarily adhere to this request if there are some advantages to them, such as eliminating the need to report daily via fax/phone/or email landings of the federal quota species. Statutory changes will be required to make weekly reporting mandatory.

Short term solution:

1. Request all dealers who hold a division dealer permit for quota monitored species submit weekly files. These dealers are federally permitted and currently submit weekly e-files to NMFS so there is little additional burden on their part.
2. Request all other e-dealers to voluntarily submit weekly files. Many of these dealers fell under the new rule requiring dealers reporting over 50,000 lb. of finfish to report electronically. We will distribute a mail survey to find out the level of interest.
3. Engage other division staff such as Marine Patrol, biologists and technicians to assist with monitoring red drum harvest by reporting any significant harvest seen on the water or in fish houses.

The short term solution has minimal impact on the commercial industry and can be implemented with little cost to division. Trip Ticket staff have discussed the changes to internal procedures and will develop an implementation plan. The results, assuming full compliance, should capture about 95 percent of the total state finfish landings but probably no more than 70 percent of the red drum landings. However, even having 70 percent of the red drum landings submitted weekly will allow for more timely closures of the fishery if the cap is forecast to be exceeded.

Long term solution:

1. Seek statutory authority for weekly or daily, reporting from the General Assembly.

2. Improve internal processes allowing for automated, less resource intensive, importing of e-dealer files.
3. Seek funding for development of electronic solutions for trip ticket reporting.
4. Recommend mandatory e-reporting within five years for all finfish (or dealers transacting in finfish species with a federal Total Allowable Catch, quota or cap) dealers if and when funding becomes available for development and maintenance of web and mobile applications.

The long term solution can probably be implemented within two to five years. A Request for Quotes for the Fisheries Information Network revision is scheduled to be distributed in June 2014. Funding is only partially secured for revising this network to current design standards; any modifications such as smart phone, tablet, or web-based interfaces and automated import processes will increase the cost.

Mandatory e-reporting will impact over 500 dealers who currently do not report electronically which may lead to some likely attrition. Attrition can be reduced if e-reporting is only mandated for dealers who purchase finfish with exemptions for those who only purchase shellfish.

Prepared by Don Hesselman  
April 14, 2014  
Revised: April 30, 2014

DRAFT

Appendix I. List of species landed in North Carolina with a quota or cap.

**List of species monitored by the NC Division of Marine Fisheries**

Species	Governing Body	Type of Monitoring	Frequency of Reporting	State Dealer Permits	Comments
River Herring	DIVISION	Fax, Phone	Daily	Y	Short Discretionary Season
Striped Bass	DIVISION	Fax, Phone	Daily	Y	Inshore and Ocean
Red Drum	DIVISION	Trip Tickets	Monthly	N	250,000 lb. cap
Summer Flounder	Fed/State Allocation	Fax, Phone	Daily	Y	NMFS also monitors
Bluefish	Fed/State Allocation	Trip Tickets	Monthly	N	NMFS also monitors
Spiny Dogfish	Fed/Coastal Allocation	Fax, Phone	Daily	Y	NMFS also monitors
Black Sea Bass	Fed/State Allocation	Fax, Phone	Daily	Y	NMFS also monitors
Horseshoe Crabs	ASMFC	Trip Tickets	N/A	N	de minimus status, ~24K annual quota

**List of species monitored by the NMFS Southeast Region**

Species	Governing Body	Type of Monitoring	Frequency of Reporting	Federal Dealer Permits	Comments
King Mackerel	NMFS	Electronic	Monthly	Y	Miami Office
Spanish Mackerel	NMFS	Electronic	Monthly	Y	Miami Office
Snowy Grouper	NMFS	Electronic	Weekly	Y	Miami Office
Golden Tilefish	NMFS	Electronic	Weekly	Y	Miami Office
Greater Amberjack	NMFS	Electronic	Weekly	Y	Miami Office
Black Sea Bass	NMFS	Electronic	Weekly	Y	Miami Office
Red Porgy	NMFS	Electronic	Weekly	Y	Miami Office
Gag	NMFS	Electronic	Weekly	Y	Miami Office
Vermilion Snapper	NMFS	Electronic	Weekly	Y	Miami Office
Wreckfish	NMFS	Electronic	Weekly	Y	ITQ-Not currently landed in NC
Swordfish	NMFS	Electronic	Weekly	Y	Miami Office

**List of species monitored by the NMFS HMS Division**

Species	Governing Body	Type of Monitoring	Frequency of Reporting	Federal Dealer Permits	Comments
Large Coastal Sharks	NMFS-HMS	Electronic	Weekly	Y	NMFS HMS
Small Coastal Sharks	NMFS-HMS	Electronic	Weekly	Y	NMFS HMS
Pelagic Sharks	NMFS-HMS	Electronic	Weekly	Y	NMFS HMS
Other HMS species	NMFS-HMS	Electronic	Weekly	Y	NMFS HMS

**List of species monitored by the NMFS Northeast Region**

Species	Governing Body	Type of Monitoring	Frequency of Reporting	Federal Dealer Permits	Comments
Atlantic Mackerel	NMFS	Electronic	Weekly	Y	N of Hatteras
Black Sea Bass	NMFS	Electronic	Weekly	Y	N of Hatteras
Butterfish	NMFS	Electronic	Weekly	Y	N of Hatteras
Monkfish	NMFS	Electronic	Weekly	Y	N of Hatteras
Scup	NMFS	Electronic	Weekly	Y	N of Hatteras
Bluefish	NMFS	Electronic	Weekly	Y	N and S of Hatteras
Illex Squid	NMFS	Electronic	Weekly	Y	N and S of Hatteras
Loligo Squid	NMFS	Electronic	Weekly	Y	N and S of Hatteras
Spiny Dogfish	NMFS	Electronic	Weekly	Y	N and S of Hatteras
Summer Flounder	NMFS	Electronic	Weekly	Y	N and S of Hatteras
Atlantic Herring	NMFS	Electronic	Weekly	Y	N of Hatteras

Red Crab	NMFS	Electronic	Weekly	Y	N of Hatteras
Golden Tilefish	NMFS	Electronic	Weekly	Y	N of Hatteras

\*All NE NMFS dealers required to report weekly using an electronic method (ie. SAFIS, SCBI software).

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# NORTH CAROLINA FISHERIES ASSOCIATION, INC.

Post Office Box 335  
Bayboro, North Carolina 28515  
Phone: 252-745-0225 • Fax: 252-745-0258  
Email: [ncfa@ncfish.org](mailto:ncfa@ncfish.org)  
[www.ncfish.org](http://www.ncfish.org)

April 30, 2014

Dr. Louis Daniel, Director  
NC Division of Marine Fisheries  
PO Box 769  
Morehead City, NC 28557

Dear Louis:

I have attached a motion that was passed unanimously this past Monday at a meeting of NCFA's Board of Directors. It came as a recommendation of two of our affiliate groups: Carteret County Fishermen's Association and the Ocracoke Working Watermen's Association.

The unanimous decision was reached after about 4 hours of debate during a meeting that was open to all commercial fishermen regardless of whether they were members of the group or not.

After you review this, Chairman Brent Fulcher and I would like to meet with you to discuss. Our schedules are clear for Thursday morning if that will work for you.

It should be noted that this proposal is being made to address:

- a.) An extremely rich population of red drum that may be an issue only for this calendar year, and
- b.) A failure by DMF to properly monitor the red drum cap in a way that could have precluded the seriousness of the overage for this fishing year.

In other words, this proposal is not being made with the intention of staying in place any longer than necessary to protect the red drum resource and mitigating the negative economic effects on our commercial fishermen.

Sincerely,

(signed)

Jerry Schill  
President

On Motion duly made and seconded, The Board of The North Carolina Fisheries Association voted unanimously to request the Director, of The Division of Marine Fisheries to issue a proclamation with the following provisions that shall apply to the use of large mesh anchored gill nets and bycatch of red drum;

1. Effective May 1, 2014 all internal coastal waters will be closed to the use of large mesh anchored gill nets, gill nets with a mesh length of four (4) inches or greater;
2. Beginning June 1, 2014 the following limited areas will open for the use of large mesh anchored gill nets with four (4) red drum per day allowed as bycatch, described below:
  - A. Albemarle Sound – West of the Intracoastal Waterway
  - B. Pamlico River – a line beginning at a point at 35° 24.5920'N - 76° 32.3810'W near Currituck Point; running southwesterly to a point at 35° 19.6960'N - 76° 36.5360'W near Fulford Point.
  - C. Bay River – a line beginning at a point 35° 11.0760'N - 76° 31.6200'W near Bay Point; running southerly to a point at 35° 08.9290'N - 76° 32.2680'W near Maw Point.
  - D. Neuse River – a line beginning at a point 35°08.9290'N - 76° 32.2680'W near Maw Point; running southerly to a point at 34° 59.2940'N - 76° 34.8230'W on the east shore of the mouth of South River.
  - E. New River – north of the Highway 172 Bridge
3. Effective August 1, 2014 these restrictions will not apply and all areas opened to large mesh gill nets by proclamation M-15-2014 will reopen for large mesh anchored gill nets with seven (7) red drum per day allowed as bycatch;
4. A run around, strike or drop net that is used to surround a school of fish and then is immediately retrieved is exempted from the restrictions above set forth in paragraphs one and two;
5. Drift gill nets that are used to capture fish while being moved along by water currents are exempt from provisions of this proclamation provided the net is being actively fished and attended from deployment through retrieval;
6. That the division implement weekly dealer reporting of red drum catches to ensure proper red drum management.

## PROCLAMATION

### RE: LARGE MESH GILL NETS: INTERNAL COASTAL WATERS

Louis B. Daniel III, Director, Division of Marine Fisheries, hereby announces that effective at **12:01 A.M., Monday, May 5, 2014** the following provisions shall apply to the use of large mesh gill nets in the **Internal Coastal Waters**:

#### I. AREA DESCRIPTION:

This proclamation applies to all internal coastal waters.

#### II. LARGE MESH GILL NETS AND SEASON CLOSURE RESTRICTIONS:

It is unlawful to use large mesh gill nets (**defined as 4 inches through 6 ½ inches mesh length**) in Internal Coastal Waters from Monday, **May 5, 2014 through Saturday, May 31, 2014**.

#### III. GENERAL INFORMATION

- A. This proclamation is issued under the authority of N.C.G. S. 113-134; 113-182; 113-170.4; 113-170.5; 113-182; 113-221.1; 143B-289.52 and N.C. Marine Fisheries Commission Rules 15A NCAC 03H .0103 and 03J .0103.
- B. It is unlawful to violate the provisions of any proclamation issued by the Fisheries Director under his delegated authority pursuant to N.C. Marine Fisheries Commission Rule 15A NCAC 03H .0103.
- C. The restrictions in this proclamation apply to gill nets used by Recreational Commercial Gear License holders as well as Standard and Retired Commercial Fishing Licenses holders.
- D. Proclamation M-3-2014, dated February 3, 2014 prohibits the **setting of gill nets in the Joint Fishing Waters of the state from midnight on Friday to midnight on Sunday each week**. Portions of Albemarle and Currituck sounds are exempt from that provision.
- E. **N.C. Marine Fisheries Commission Rule 15A NCAC 03I .0113 specifies that it is unlawful for any licensee under Chapter 113, Subchapter IV of the General Statutes to refuse to allow the Fisheries Director or his agents to obtain biological data, harvest information, or other statistical data necessary or useful to the conservation and management of marine and estuarine resources from fish in the licensee's possession. The Division of Marine Fisheries has implemented an observer program as an inspection procedure to obtain such data.**
- F. **The small mesh gill net attendance requirements in N.C. Marine Commission Fisheries Rule 15A NCAC 03J .0103 (g) and (h), mesh length restrictions in 03J .0103(a)(2), navigational passage requirements in 03J .0101, as well as all other existing gill net rules and proclamations remain in effect.**
- G. Proclamation M-1-2014, dated January 16, 2014 prohibits the use of gill nets with a stretched mesh length more than 6 ½ inches.
- H. For additional gill net restrictions in the Albemarle Sound Management Area please refer to the most recent M-type proclamations for that area.

- I. The intent of this proclamation is to close the large mesh gill net fishery in all Internal Coastal Waters, to reduce anticipated excessive red drum discards.
- J. Contact N.C. Division of Marine Fisheries, P.O. Box 769, Morehead City, NC 28557 252-726-7021 or 800-682-2632 for more information or visit our website at <http://portal.ncdenr.org/web/mf/>.
- K. This proclamation supersedes Proclamations M-14-2014 and M-15-2014 dated April 10, 2014. **It closes all Internal Coastal Waters to large mesh gill nets.**

BY: \_\_\_\_\_  
Dr. Louis B. Daniel III, Director  
DIVISION OF MARINE FISHERIES

May 2, 2014  
9:00 A.M.  
M-16-2014  
/sab



## N.C. Department of Environment and Natural Resources

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Release: Immediate

Date: May 2, 2014

Contact: Patricia Smith

Phone: 252-726-7021

---

### Coastal waters close to large-mesh gill net fishing Monday

**MOREHEAD CITY** – North Carolina internal coastal waters will close Monday to large-mesh gill net fishing to avoid discards of red drum.

The closure will continue until at least June 1, after the N.C. Marine Fisheries Commission discusses several issues related to this year's overages in the commercial red drum fishery.

The division announced in April that the spring/summer commercial fishing season for red drum will not open this year because the annual harvest limit was exceeded in the fall/winter season. Final calculations from 2013 show that commercial fishermen landed 263,072 pounds of red drum between Sept. 1 and Nov. 23, exceeding the annual harvest limit by 13,072 pounds.

In North Carolina, commercial fishermen are not allowed to target red drum, but when the season is open, they are allowed to retain a certain number of red drum caught incidentally when targeting flounder or other species. Fishery management plans adopted by both the N.C. Marine Fisheries Commission and Atlantic States Marine Fisheries Commission set an annual cap on this harvest at 250,000 pounds for a Sept. 1 to Aug. 31 season.

The commercial fishery must close once the annual harvest limit is met, and overages from one year are deducted from the subsequent year's harvest limit.

Wednesday, the N.C. Division of Marine Fisheries received a request from the N.C. Fisheries Association asking for a closure of internal waters to anchored gill nets with a mesh length of 4-inches or greater. The request also called for:

- Limited areas to open to large-mesh gill nets June 1 with a four-fish red drum bycatch allowance;
- All waters reopening to large mesh gill nets Aug. 1, with seven-fish red drum bycatch allowance;
- Exemptions for run-around gill nets and drift nets; and
- Weekly dealer reporting of red drum landings.

“While the May closure partially addresses this request, the division cannot reopen the red drum commercial fishery until Sept. 1,” said division Director Louis Daniel. “Reopening red drum before Sept. 1 would result in non-compliance with the North Carolina and Atlantic States Marine Fisheries Commission plans.”

The Marine Fisheries Commission will consider how to better monitor the landings of red drum and other aspects of the Fisheries Association's request at its May 21-23 meeting. The division will present a detailed red drum landings data analysis to the commission, as well.

For more specific information on the large-mesh gill net closure, see Proclamation M-16-2014 at <http://portal.ncdenr.org/web/mf/proclamations>.

###



**26 NCAC 05 .0211 SCHEDULE**

(a) The Commission shall review the report prepared for the identified portion of the Administrative Code on the month and year as set forth below:

<b>July 2014</b>	<b>August 2014</b>	<b>September 2014</b>	<b>October 2014</b>	<b>November 2014</b>
03 NCAC 01 21 NCAC 23 21 NCAC 37	04 NCAC 24 21 NCAC 08 21 NCAC 52 24 NCAC 02 25 NCAC 01A 25 NCAC 01B 25 NCAC 01C 25 NCAC 02	04 NCAC 17 15A NCAC 01A 15A NCAC 01S 18 NCAC 03 18 NCAC 05 21 NCAC 01 21 NCAC 30 21 NCAC 42 21 NCAC 45	15A NCAC 02B 15A NCAC 02H 15A NCAC 02T 15A NCAC 02U	04 NCAC 14 11 NCAC 14 11 NCAC 18 11 NCAC 20 11 NCAC 21 11 NCAC 22 13 NCAC 08 13 NCAC 10 15A NCAC 12A 15A NCAC 12B 15A NCAC 12C 15A NCAC 12D 15A NCAC 12F 15A NCAC 12G 15A NCAC 12I 15A NCAC 12J 15A NCAC 12K 15A NCAC 01G 15A NCAC 01H 21 NCAC 20 21 NCAC 21 21 NCAC 28 21 NCAC 69 24 NCAC 03
<b>December 2014</b>	<b>January 2015</b>	<b>February 2015</b>	<b>March 2015</b>	<b>April 2015</b>
10A NCAC 45 21 NCAC 02 21 NCAC 14 21 NCAC 62	02 NCAC 09B 02 NCAC 09C 02 NCAC 09D 02 NCAC 09E 02 NCAC 09F 02 NCAC 09G 02 NCAC 09H 02 NCAC 09J 02 NCAC 09K 02 NCAC 09M 02 NCAC 09N 02 NCAC 09O 02 NCAC 38 02 NCAC 43F 02 NCAC 51 02 NCAC 52A 02 NCAC 52K 02 NCAC 54 10A NCAC 13A 10A NCAC 13D 10A NCAC 14I 15A NCAC 01F	09 NCAC 03 09 NCAC 06 10A NCAC 97 15A NCAC 02S 21 NCAC 06	04 NCAC 08 10A NCAC 05 10A NCAC 09	10A NCAC 13L 10A NCAC 13M 10A NCAC 13O 10A NCAC 26A 10A NCAC 26B 10A NCAC 26D 15A NCAC 02R 21 NCAC 11 21 NCAC 32

<b>May 2015</b>	<b>June 2015</b>	<b>July 2015</b>	<b>August 2015</b>	<b>September 2015</b>
07 NCAC 04 15A NCAC 08 15A NCAC 18D 17 NCAC 03 17 NCAC 06	04 NCAC 02R 10A NCAC 21 10A NCAC 22 21 NCAC 50 21 NCAC 61	02 NCAC 20B 02 NCAC 37 02 NCAC 42 02 NCAC 59A 02 NCAC 59B 02 NCAC 59C 02 NCAC 59E 02 NCAC 59F 02 NCAC 59G 02 NCAC 60A 02 NCAC 60B 15A NCAC 01I 15A NCAC 09 21 NCAC 60 21 NCAC 63	02 NCAC 57 10A NCAC 13H 10A NCAC 70I 10A NCAC 70K 19A NCAC 01 19A NCAC 04 19A NCAC 05 19A NCAC 06	04 NCAC 15 10A NCAC 63 15A NCAC 18C
<b>October 2015</b>	<b>November 2015</b>	<b>December 2015</b>	<b>January 2016</b>	<b>February 2016</b>
06 NCAC 01 06 NCAC 02 06 NCAC 03 06 NCAC 04 10A NCAC 40 10A NCAC 47 11 NCAC 11 11 NCAC 19 18 NCAC 01 18 NCAC 04 18 NCAC 13 25 NCAC 01D	10A NCAC 14J 10A NCAC 46 10A NCAC 48 13 NCAC 15 13 NCAC 20 15A NCAC 12H	15A NCAC 02D 15A NCAC 02Q 15A NCAC 07B	01 NCAC 01 01 NCAC 03 01 NCAC 04 01 NCAC 25 01 NCAC 26 10A NCAC 13P 10A NCAC 26E 10A NCAC 26F 15A NCAC 04 21 NCAC 18 21 NCAC 29	10A NCAC 10 10A NCAC 89 13 NCAC 07 13 NCAC 12
<b>March 2016</b>	<b>April 2016</b>	<b>May 2016</b>	<b>June 2016</b>	<b>July 2016</b>
04 NCAC 01 10A NCAC 17 15A NCAC 01L 15A NCAC 01N 20 NCAC 01 20 NCAC 04 20 NCAC 07	10A NCAC 13J 10A NCAC 27A 10A NCAC 27B 10A NCAC 27D 11 NCAC 06 11 NCAC 13 16 NCAC 01 16 NCAC 02 16 NCAC 03 25 NCAC 01F	01 NCAC 05 10A NCAC 23 10A NCAC 25 21 NCAC 38 26 NCAC 01 26 NCAC 02 26 NCAC 03 26 NCAC 04	04 NCAC 02S 17 NCAC 01 17 NCAC 09 17 NCAC 10 17 NCAC 11 17 NCAC 12 25 NCAC 01H 25 NCAC 01I 25 NCAC 01J	19A NCAC 02
<b>August 2016</b>	<b>September 2016</b>	<b>October 2016</b>	<b>November 2016</b>	<b>December 2016</b>
10A NCAC 06 10A NCAC 67 10A NCAC 68 10A NCAC 69 10A NCAC 70A 10A NCAC 70B 10A NCAC 70C 10A NCAC 70D 10A NCAC 70E 10A NCAC 70F 10A NCAC 70G 10A NCAC 70H 10A NCAC 72	12 NCAC 01 12 NCAC 02 12 NCAC 03 12 NCAC 04 12 NCAC 06 21 NCAC 12 21 NCAC 17 21 NCAC 22 21 NCAC 64 25 NCAC 01E 25 NCAC 01K 25 NCAC 01L 25 NCAC 01M	10A NCAC 39 10A NCAC 43C 10A NCAC 43E 10A NCAC 43G 10A NCAC 43H 10A NCAC 43I 10A NCAC 43J 18 NCAC 06 18 NCAC 07 18 NCAC 10	10A NCAC 14F 15A NCAC 10F 15A NCAC 10H 20 NCAC 03 20 NCAC 08 20 NCAC 09 20 NCAC 10	01 NCAC 09 01 NCAC 15 01 NCAC 17 01 NCAC 19 01 NCAC 35 08 NCAC 01 08 NCAC 02 08 NCAC 03 08 NCAC 04 08 NCAC 05 08 NCAC 06 08 NCAC 07 08 NCAC 08

	25 NCAC 01N 25 NCAC 01O			08 NCAC 09 08 NCAC 10 08 NCAC 12 08 NCAC 13 11 NCAC 10 11 NCAC 16 14B NCAC 01 14B NCAC 02 14B NCAC 03 14B NCAC 04 14B NCAC 05 14B NCAC 06 14B NCAC 07 15A NCAC 02A 15A NCAC 02C 15A NCAC 02E
<b>January 2017</b>	<b>February 2017</b>	<b>March 2017</b>	<b>April 2017</b>	<b>May 2017</b>
02 NCAC 48C 02 NCAC 48D 02 NCAC 48F 02 NCAC 52B 02 NCAC 52C 02 NCAC 52D 02 NCAC 52E 02 NCAC 52F 02 NCAC 52G 02 NCAC 52H 02 NCAC 52I 02 NCAC 59D 02 NCAC 59H 10A NCAC 27E 10A NCAC 27F 10A NCAC 27H 15A NCAC 05A 15A NCAC 05B 15A NCAC 05C 15A NCAC 05F 15A NCAC 05G	04 NCAC 06 10A NCAC 01 15A NCAC 01D 15A NCAC 01E	10A NCAC 71 21 NCAC 04 21 NCAC 31	10A NCAC 27I 10A NCAC 28A 13 NCAC 14 15A NCAC 01C 15A NCAC 13A 15A NCAC 13B 15A NCAC 13C	07 NCAC 01 07 NCAC 02 07 NCAC 03 07 NCAC 05 07 NCAC 06 07 NCAC 07 07 NCAC 08 07 NCAC 09 07 NCAC 10 07 NCAC 11 07 NCAC 12 10A NCAC 13B 12 NCAC 10
<b>June 2017</b>	<b>July 2017</b>	<b>August 2017</b>	<b>September 2017</b>	<b>October 2017</b>
04 NCAC 02T 15A NCAC 07O 17 NCAC 05 21 NCAC 25 21 NCAC 26	02 NCAC 29 02 NCAC 31 02 NCAC 39 02 NCAC 43A 02 NCAC 43B 02 NCAC 43C 02 NCAC 43D 02 NCAC 43E 02 NCAC 43G 02 NCAC 43L 02 NCAC 43M 02 NCAC 53 02 NCAC 58 21 NCAC 54 24 NCAC 01	04 NCAC 12 10A NCAC 70J 10A NCAC 70L 10A NCAC 70M 10A NCAC 70N 10A NCAC 70O 12 NCAC 11 21 NCAC 57	04 NCAC 03 10A NCAC 43A 10A NCAC 43B 10A NCAC 43F	10A NCAC 13C 10A NCAC 42 10A NCAC 43D 10A NCAC 44 15A NCAC 02K 18 NCAC 02 18 NCAC 12

<b>November 2017</b>	<b>December 2017</b>	<b>January 2018</b>	<b>February 2018</b>	<b>March 2018</b>
01 NCAC 38 01 NCAC 39 01 NCAC 40 01 NCAC 43 01 NCAC 44 10A NCAC 14A 10A NCAC 14G 10A NCAC 14H 11 NCAC 08 14B NCAC 08 14B NCAC 09 14B NCAC 10 14B NCAC 11 14B NCAC 12 14B NCAC 13 14B NCAC 14 21 NCAC 39	10A NCAC 41A 10A NCAC 41B 10A NCAC 41D 10A NCAC 41E 10A NCAC 41F 10A NCAC 41G <b>15A NCAC 03</b> 15A NCAC 10B 15A NCAC 10C	10A NCAC 13F 10A NCAC 28B 10A NCAC 28C 15A NCAC 07A 15A NCAC 07H 15A NCAC 07I 15A NCAC 07J 15A NCAC 07K 15A NCAC 07L 15A NCAC 07M	01 NCAC 41B 04 NCAC 19 15A NCAC 02L 15A NCAC 02N 15A NCAC 02O 15A NCAC 02P	21 NCAC 58 21 NCAC 68
<b>April 2018</b>	<b>May 2018</b>	<b>June 2018</b>	<b>July 2018</b>	<b>August 2018</b>
10A NCAC 26C 10A NCAC 27C 10A NCAC 28D 10A NCAC 28E 11 NCAC 12 15A NCAC 22 15A NCAC 28 21 NCAC 19	01 NCAC 06 01 NCAC 30 13 NCAC 01 13 NCAC 04 13 NCAC 05 13 NCAC 06 13 NCAC 13 13 NCAC 16 13 NCAC 17 13 NCAC 18 13 NCAC 19 21 NCAC 33 21 NCAC 36	21 NCAC 07 21 NCAC 34 21 NCAC 46	19A NCAC 03	12 NCAC 07 20 NCAC 02 21 NCAC 48 21 NCAC 65 21 NCAC 66
<b>September 2018</b>	<b>October 2018</b>	<b>November 2018</b>	<b>December 2018</b>	<b>January 2019</b>
02 NCAC 09L 02 NCAC 34 04 NCAC 16	10A NCAC 13K 10A NCAC 41H 17 NCAC 04 18 NCAC 08 18 NCAC 11 21 NCAC 40	10A NCAC 14C 11 NCAC 05 11 NCAC 07 15A NCAC 18A	01 NCAC 41A 01 NCAC 41C 01 NCAC 41D 01 NCAC 41E 10A NCAC 13G 10A NCAC 41C 15A NCAC 01O 15A NCAC 02G 15A NCAC 02I 15A NCAC 02J 15A NCAC 10A 15A NCAC 10D 15A NCAC 10E 15A NCAC 10G 15A NCAC 10I 15A NCAC 10J 15A NCAC 10K 15A NCAC 18B 15A NCAC 27	02 NCAC 46 02 NCAC 48A 02 NCAC 48B 02 NCAC 52J 02 NCAC 61 11 NCAC 01 11 NCAC 04 11 NCAC 17 <b>15A NCAC 18A,</b> <b>Sections .0100,</b> <b>.0300 - .0900 and</b> <b>.3400</b>

<b>February 2019</b>	<b>March 2019</b>	<b>April 2019</b>	<b>May 2019</b>	<b>June 2019</b>
04 NCAC 20 21 NCAC 03 21 NCAC 10 21 NCAC 16 21 NCAC 53 21 NCAC 56	12 NCAC 09 17 NCAC 07	15A NCAC 11 15A NCAC 14	04 NCAC 10 10A NCAC 27G	10A NCAC 14E 10A NCAC 28F 10A NCAC 28G 10A NCAC 28H 10A NCAC 28I 10A NCAC 29C 10A NCAC 29D

(b) The report shall be filed in accordance with Rule .0203 of this Chapter.

*History Note:* Authority G.S. 150B-21.3A;  
Eff. April 1, 2014.



## N.C. Marine Fisheries Commission 2013-2014 Annual Rulemaking Cycle

May 2014

Time of Year	Action
January 2013	Last opportunity for a new issue to be presented to DMF Rules Advisory Team
February 2013	Second review by DMF Rules Advisory Team
January-May 2013	Fiscal analysis of rules prepared by DMF staff and approved by Office of State Budget and Management
May 2013	MFC considers approval of Notice of Text for Rulemaking
August 2013	Publication of proposed rules in the North Carolina Register
September 2013	Public hearing(s) held
November 2013	MFC considers approval of permanent rules
January 2014	Rules reviewed by Office of Administrative Hearings Rules Review Commission
(January)	(Last opportunity for a new issue to be presented to DMF Rules Advisory Team)
(February)	(Second review by DMF Rules Advisory Team)
February/March 2014	New rules formatted for publication of rulebook supplement
April 1, 2014	Effective date of new rules
April 1, 2014	New rulebook supplement available online and for distribution
April 15, 2014	Commercial license sales begin



## N.C. Marine Fisheries Commission 2014-2015 Annual Rulemaking Cycle

May 2014

Time of Year	Action
January 2014	Last opportunity for a new issue to be presented to DMF Rules Advisory Team
February 2014	Second review by DMF Rules Advisory Team
January-July 2014	Fiscal analysis of rules prepared by DMF staff and approved by Office of State Budget and Management
August 2014	MFC considers approval of Notice of Text for Rulemaking
October 2014	Publication of proposed rules in the North Carolina Register
November 2014	Public hearing(s) held
(January)	(Last opportunity for a new issue to be presented to DMF Rules Advisory Team)
(February)	(Second review by DMF Rules Advisory Team)
February 2015	MFC considers approval of permanent rules
February/March 2015	New rulebook formatted and published
April 1, 2015	New rulebook available online and for distribution
April 15, 2015	Commercial license sales begin
April 2015	Rules reviewed by Office of Administrative Hearings Rules Review Commission
May or June 1, 2015	Effective date of new rules
May or June 1, 2015	New rulebook supplement available online and for distribution



# N.C. FISHERY MANAGEMENT PLANS

May 2014

- Administrative steps for Hard Clam, Kingfish and Oyster plan reviews are underway.







# Fish Dealer Report



License & Statistics Section, PO Box 769, Morehead City, NC 28557

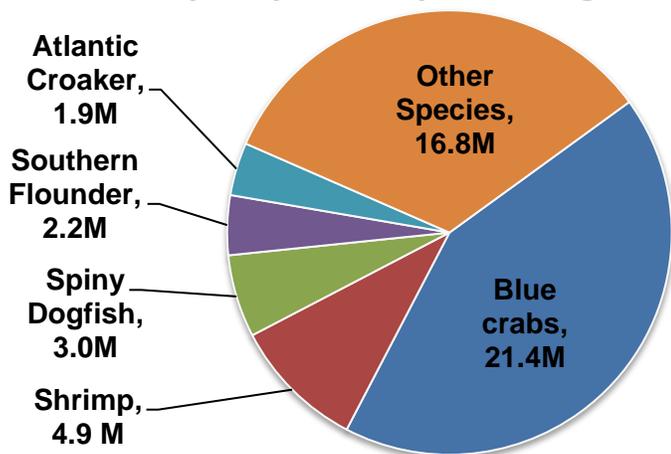
April 2014

## 2013 ANNUAL COMMERCIAL LANDINGS REVIEW

Based on data collected through the N. C. Division of Marine Fisheries Trip Ticket Program, 50.1 million pounds of finfish and shellfish were landed in 2013 with a dockside value of \$79 million. This reflects a 12 percent drop in landings when compared with the 2012 harvest but a 9 percent increase in value. Harvest levels for the previous five years averaged 63 million pounds with an average value of \$76.7 million dollars.

The top five species by poundage for 2013 were hard blue crabs with 21.3 million pounds, followed by shrimp (4.9 million pounds), spiny dogfish (3 million pounds), southern flounder (2.2 million pounds), and Atlantic croaker (1.9 million pounds). Eighty other species make up the remaining 16.8 million pounds of landings.

### 2013 Top 5 Species by Poundage



Hard crab landings decreased 18 percent from the 2012 landings while peelers and soft blue crabs decreased 5 percent and 2 percent, respectively. Despite the decrease in landings the values increased by 30 percent for both hard crabs and peelers, and 40 percent for soft crabs. Crab dredge and crab trawl trips remained low during 2013 after large decreases were observed for both in 2012.

Shrimp landings decreased by 21 percent in 2013 from the four year high seen in 2012. The landings in 2012 were driven by large increases in landings of pink and white shrimp. Though landings of white shrimp remained high, the landings of pink shrimp were much lower, as were landings of brown shrimp. Shrimp landings value decreased by 3 percent this year from the 2012 value, but increased by 19 percent when compared to the previous four-year average. The 2013 landings decrease coincided with a 9 percent decrease in the number of shrimp trawl trips and a 10 percent increase in the number of skimmer trawl trips compared to 2012.

Landings of spiny dogfish and southern flounder were both at multi-year highs in 2013. Spiny dogfish landings were at a five-year high in 2013 increasing 10 percent over 2012 landings. The value, however, dropped considerably by 53 percent. Southern flounder landings climbed 32 percent over the previous year, to a four-year high.

Landings of Atlantic croaker were down by 38 percent from 2012, the third year of decreased landings. Over the past five years greater than 95 percent of all croaker landings were caught in three gears; flounder trawl, flynet and small mesh gill net. Beginning in 2011 there have been large decreases in flynet gear landings, which is likely a result of continuing navigation issues in Oregon Inlet. Since 2011, however, decreasing small mesh gill net landings have accounted for the continuing decrease in the overall croaker landings. Small mesh gill net landings were at a five-year high in 2011 at 4.4 million pounds, but dropped to only 1.5 million pounds in 2013.

Oyster landings were up 33 percent from the five-year low seen in 2012. Despite the substantial drop in 2012, landings have been relatively high over the last five years. From 2013 to 2009 average landings were 688,237 pounds (130,101 bushels), an approximately 64 percent increase from the previous five-year average (2004 to 2008) of 420,291 pounds (79,450 bushels).

Oregon Inlet continued to be an issue during 2013 year. The inlet was dredged at various times during the year but continued shoaling resulted in sporadic usability by the fishing fleet.

For a full listing of pounds and ex-vessel value by species and further information on last year's landings data see the *2013 Annual Fisheries Bulletin*. The bulletin also contains landings for 2009 to 2012 as well as a summary of the number of trips by major gears used in North Carolina.

### **NEW SOUTHEAST FEDERAL DEALER REPORTING REQUIREMENTS AND UNIVERSAL DEALER PERMIT**

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NOAA Fisheries published a final rule on April 7 that will implement a new universal dealer permit for federally-managed South Atlantic and Gulf species, as well as new dealer reporting requirements. Both will be effective beginning **August 7, 2014**.

Currently, the dealer permits required in the Gulf and South Atlantic are based on the species purchased. The new universal dealer permit will replace and consolidate the individual species dealer permits into one permit for both regions, and will add new species that are in three different management plans. The universal dealer permit will apply to the following federally-managed species: South Atlantic snapper grouper, golden crab, rock shrimp; Atlantic and Gulf of Mexico king and Spanish mackerel, and cobia; South Atlantic and Gulf of Mexico spiny lobster; Gulf of Mexico reef fish and red drum.

Dealers purchasing federally-managed species under the above plans will be required to report electronically, weekly, by 11:59pm each Tuesday. This is the same reporting frequency, method and timeline required for dealers holding NOAA Fisheries Northeast Region permits.

Dealers with an existing South Atlantic or Gulf of Mexico permit may continue to use their existing permit(s) until they expire, but must adhere to the new reporting requirements (below) beginning August 7, 2014. Dealers without a current South Atlantic or Gulf of Mexico permit may now apply for permits (as of April 9), however, the permit will not be effective until August 7, 2014.

For questions regarding the final rule, please contact Rich Malinowski in the NOAA Fisheries Southeast Regional Office at rich.malinowski@noaa.gov or 727-824-5305.

### **AN ECONOMIC PROFILE ANALYSIS OF COASTAL COMMERCIAL FISHING COUNTIES IN NORTH CAROLINA**

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The N. C. Division of Marine Fisheries periodically updates the economic profile analyses that are used during the development of state fishery management plans. The most recent update was to Part 1 of the Economic Profile which describes the economic impact of the fishing industry, species landed and landings by gear in all coastal fishing counties. A brief summary of the information is described below, however, the full report is available on the divisions' website.

The overall commercial landings for North Carolina were analyzed from 1972 to 2012, while more detailed analyses were done using data from 1994 to 2012 because of improved data quality in the latter years. Landings reached a maximum of 432 million pounds in 1981, and the most profitable year for the state's fisheries occurred in 1995 when landings were valued at \$110 million.

The top three finfish species by weight landed in North Carolina from 1994 to 2012 were Atlantic menhaden, Atlantic croaker, and dogfish sharks. The top three finfish by value were summer flounder, southern flounder, and Atlantic croaker. The top non-fish species by weight from 1994 to 2012 were hard blue crabs and shrimp. Likewise, landings of hard blue crabs and shrimp were the most valuable non-fish. The gear types contributing the most to the total pounds landed in North Carolina between 1994 and 2012 include pots, purse seines, gill nets, and trawls. Pots, trawls, and gill nets had the highest values in North Carolina but pots and gill nets made up the majority of the trips.

On a county by county basis, the economic impact was not uniform. It was greatest in Dare and Carteret counties, which led all other counties in landings by weight and value between 1994 and 2012. Carteret County accounted for over 38 percent of the state's total landings while Dare County had the majority of the total value (26 percent).

To view the full report labeled, "Economic Profile: N. C. Commercial Fishing Industry Pt. 1: Counties" can be found

<b>N.C. Division of Marine Fisheries Fee Increase Schedule</b>		
<b>License Type</b>	<b>License Year</b>	
	<b>2013-14</b>	<b>2014-15</b>
Standard Commercial Fishing License	\$200	\$250
Retired Standard Commercial Fishing License	\$100	\$125
Fish Dealer License	\$50	\$62.50 each category
Commercial Fishing Vessel Registration	\$1.00-\$6.00	\$1.25-\$7.50 per foot
Land or Sell License	\$200	\$250
Spotter Plan License	\$100	\$125
Tournament License	\$100	\$125
License Replacement Fee	\$10.00	\$12.50
Recreational Commercial Gear License	\$35.00	\$43.75

at the following web address <http://portal.ncdenr.org/web/mf/marine-fisheries-catch-statistics> under the Socioeconomic Reports and Data heading.

### **COMMERCIAL LICENSE FEES TO INCREASE**

The 2013 state budget increased commercial license fees for fiscal year 2014-15 by 25 percent to help pay for the Marine Fisheries At-Sea Observer Program. When you obtain a new or renewal license for the new fiscal year the license fees will be as listed in the table above. In addition, the Atlantic Ocean Striped Bass Commercial Gear Permit was increased from \$10 to \$30.

### **FISHERY MANAGEMENT PLAN UPDATES**

State law requires the division to prepare a fishery management plan for adoption by the Marine Fisheries Commission for all commercially and recreationally significant species or fisheries in North Carolina. These plans provide management strategies designed to ensure long-term viability of each fishery. State law also requires the N. C. Division of Marine Fisheries to review each plan every five years.

Following are highlights from fishery management plans recently or currently under review.

- At its November 2013 meeting, the commission approved amendments to the Blue Crab and Oyster fishery management plans. Implementing rules became effective April 1.
- At its February 2014 meeting, the commission approved draft amendments to the Bay Scallop, River Herring and Shrimp fishery management plans for departmental and legislative review. The rulemaking process is scheduled to begin at the commission's May 2014 meeting.
- An amendment to the Striped Mullet Fishery Management Plan is underway. Implementing rules are not expected to become effective until 2016.

Amendments to the Oyster and Hard Clam fishery management plans are just beginning.

For more information regarding upcoming fishery management plan reviews, please see the News Releases page at (<http://portal.ncdenr.org/web/mf/news-releases>).

### **SOCIOECONOMIC STUDY OF COMMERCIAL FISHING IN THE ALBEMARLE SOUND AND PAMLICO SOUND**

The N. C. Division of Marine Fisheries Fisheries Economics Program recently completed an economic and social study examining commercial fishing in the Albemarle Sound and Pamlico Sound. The study sought to describe fishermen's perceptions of commercial fishing and fisheries management, demographics, and fishing business characteristics, as well as trends in the major commercial fisheries that take place in the two regional water bodies. The final report includes summarized results from surveys conducted with 221 commercial fishermen who use the sounds. Among the findings, the study concluded that based on 2012 seafood landings, commercial fishing in the sounds supported approximately 1,800 full-time and part-time jobs, \$26.7 million in labor income, and \$60.6 million in total sales in the state's economy. The results of the study have been used to update the division's economic impact model for commercial fishing and will be incorporated into the socioeconomic sections of all state fishery management plans. A full copy of the report will be available in May 2014 and can be found by visiting the division's website at <http://portal.ncdenr.org/web/mf/social-economic-data-reports> or by contacting John Hadley at [john.hadley@ncdenr.gov](mailto:john.hadley@ncdenr.gov) or (252) 808-8107.

**NEW LOOK FOR COMMERCIAL LICENSES**

Commercial licenses will look a little different this year due to the division switching to new license formats. For dealers, the biggest change took place last year with the new SCFL hard cards and large format dealer certificate. This year, commercial vessel owners will receive a new vessel decal and wallet size tear-out license card. Most other commercial licenses will be printed on a durable clean-release wallet size card. We think you will like the



The new hard card front (top image) and back (bottom image) are shown above. Instead of a new card being issued when a license is renewed, a security decal will be placed on the back of the card with the new expiration date displayed. This decal can be seen here in the bottom left hand corner on the back of the hard card.

**NEW FEDERAL RULE PROPOSED FOR BAG LIMIT SALES OF KING AND SPANISH MACKEREL**

The National Marine Fisheries Service has issued a proposed rule regarding king and Spanish mackerel that prohibits the sale of fish caught under the recreational bag limit harvested from federal waters unless the vessel holds a federal commercial king or Spanish mackerel permit. Currently, N. C. fishermen with a Standard Commercial Fishing License may harvest up to the bag limit of both

species from either state or federal waters and sell those bag limit quantities without a federal commercial vessel permit. The permit for Spanish mackerel is open access and can be obtained for a cost of \$25, while the permit for king mackerel is limited entry and available to existing permit holders only. There are two additional provisions in the proposed rule: The first allows for sale of fish from state-permitted recreational fishing tournaments (if all proceeds are donated to charity), and the second eliminates the existing income requirements to obtain/renew the federal commercial permits for these species. Please go to the NOAA Fisheries Bulletin FB14-021 ([http://sero.nmfs.noaa.gov/fishery\\_bulletins/documents/pdfs/2014/fb14-021\\_cmp\\_am20\\_pr.pdf](http://sero.nmfs.noaa.gov/fishery_bulletins/documents/pdfs/2014/fb14-021_cmp_am20_pr.pdf)) for more information.

**NCMFC Business Meeting Schedule for the Remainder of 2014**

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**May 21-23:** Clam Digger Inn  
Pine Knoll Shores, NC

**August 20-22:** Brownstone Hotel  
Raleigh, NC

**November 19-21:** To Be Determined

**LICENSE SALES**

**JULY 1, 2013 to APRIL 22, 2014**

Below are sales as of April 22, 2013 by license type for the 2014 license year. The values below include active licenses only. Totals do not include transfers, replacements or voids.

Standard Commercial Fishing License	5,006
Retired Standard Commercial Fishing License	1,170
Commercial Fishing Vessel Registration	8,117
License to Land Flounder from Atlantic Ocean	157
Land or Sell License	82
NC Resident Shellfish License Without SCFL	1,374
Fish Dealer License	732
Ocean Pier License	19
Recreational Fishing Tournament License	15
Recreational Commercial Gear License	3,972
<b>Total Licenses For All License Types</b>	<b>20,644</b>

Licenses for license year 2015 (July 1, 2014 – June 30, 2015) went on sale April 15 and renewal by mail is available. If you want to avoid the lines at the license office, please use the mail-in process.

# Annual Fisheries Bulletin

## 2013 Commercial & Recreational Statistics



License and Statistics Section  
 PO Box 769  
 Morehead City, NC 28557  
 April 2014



The Annual Fisheries Bulletin contains the North Carolina commercial and recreational fisheries harvest statistics for 2013. Included in this bulletin are the 2013 landings from the commercial and recreational fisheries programs, along with the 2009 to 2012 landings for comparison purposes. The bulletin also contains a summary of commercial fishing trips by major gears.

The North Carolina Trip Ticket Program collects commercial fishery landings and effort statistics. This program mandates trip level fish dealer reporting of all finfish and shellfish landed in the state. Recreational fishery harvest and effort statistics are derived from the Marine Recreational Information Program (MRIP) that conducts recreational angler interviews at public access points and telephone surveys.

### Total Pounds Harvested in 2013

Commercial
50,088,699 pounds

Recreational
13,288,019 pounds

### Top Five Species Caught In Each Fishery

Commercial	
Species	Pounds
Blue crabs	21,347,308
Shrimp	4,859,633
Spiny Dogfish	3,010,958
Southern Flounder	2,175,518
Atlantic Croaker	1,928,635

Recreational	
Species	Pounds
Yellowfin tuna	2,024,584
Dolphinfish	1,967,876
Bluefish	971,279
Red Drum	682,964
Spotted Seatrout	652,102

Issued by the North Carolina Division of Marine Fisheries, Department of Environment and Natural Resources.

For additional information regarding Commercial and Recreational Statistics, please contact:

Alan Bianchi, Commercial Statistics  
 (252) 726-7021 or (800) 682-2632  
[alan.bianchi@ncdenr.gov](mailto:alan.bianchi@ncdenr.gov)

Doug Mumford, Recreational Statistics  
 (252) 948-3876 or (800) 338-7804  
[doug.mumford@ncdenr.gov](mailto:doug.mumford@ncdenr.gov)

# 2013 North Carolina Commercial Landings 2013

Issued: April 23, 2014

	POUNDS (Whole/Round Weight)	VALUE
<b>FINFISH</b>		
Amberjacks <sup>1</sup>	90,181	\$90,036
Anglerfish (Monkfish including Monklivers)	10,566	\$9,053
Bluefish	1,159,785	\$564,457
Bonito	10,506	\$15,460
Butterfish	93,147	\$53,370
Carp	14,133	\$1,360
Catfishes	548,494	\$92,436
Cobia	35,456	\$73,142
Croaker, Atlantic	1,928,635	\$1,724,422
Cutlassfish, Atlantic	145,362	\$204,869
Dolphinfish	178,922	\$534,228
Drum, Black	127,003	\$79,377
Drum, Red	372,345	\$716,438
Eel, American	33,980	\$88,649
Flounder, Southern	2,175,518	\$5,646,185
Flounder, Summer	541,661	\$1,386,627
Flounders, Other	*	*
Garfish	5,893	\$1,208
Grouper, Gag	167,334	\$704,382
Grouper, Red	72,259	\$259,861
Grouper, Scamp	42,711	\$180,679
Grouper, Snowy	20,274	\$72,067
Groupers, Other	8,856	\$31,637
Grunts	44,702	\$47,062
Hakes	614	\$231
Harvestfish (Starbutters)	221,168	\$253,604
Herring, River (Alewife and Blueback Herring)	743	\$743
Hogfish (Hog Snapper)	7,847	\$30,640
Jacks	14,492	\$10,639
Mackerel, Atlantic (Boston)	154	\$61
Mackerel, King	345,177	\$877,497
Mackerel, Spanish	620,752	\$1,015,965
Menhaden, Atlantic	454,172	\$73,490
Mullet, Sea (Kingfishes)	600,980	\$666,041
Mullet, Striped	1,544,787	\$1,398,741
Perch, White	275,630	\$255,613
Perch, Yellow	31,479	\$40,543
Pigfish	62,099	\$28,093
Pinfish	1,536	\$463
Pompano	15,423	\$41,351
Porgies	72,671	\$116,780
Pufferfish	5,846	\$2,858
Scup	28,691	\$13,323
Sea Basses	329,731	\$868,920
Seatrout, Spotted	367,412	\$817,601
Shad, American	257,869	\$307,475
Shad, Gizzard	112,295	\$4,492
Shad, Hickory	71,326	\$29,144

# 2013 North Carolina Commercial Landings

(continued)

	POUNDS (Whole/Round Weight)	VALUE
Sharks <sup>2</sup>	553,665	\$282,318
Sharks, Dogfish, Smooth	783,053	\$344,182
Sharks, Dogfish, Spiny	3,010,958	\$302,248
Sheepshead	179,969	\$145,674
Skates	2,286	\$429
Skippers	15,780	\$4,652
Snapper, Red <sup>3</sup>	2,686	\$11,942
Snapper, Vermilion (Beeliner)	267,260	\$886,596
Snappers, Other	6,587	\$19,449
Spadefish, Atlantic	20,369	\$9,246
Spot	768,585	\$690,029
Striped Bass	96,538	\$302,270
Swordfish	1,058,089	\$2,935,940
Tilefish	217,079	\$522,652
Triggerfish	160,861	\$342,228
Tuna, Bigeye	243,637	\$939,909
Tuna, Bluefin	106,197	\$608,952
Tuna, Yellowfin	648,039	\$1,434,318
Tunas, Other	96,937	\$113,429
Tunny, Little (False Albacore)	189,746	\$114,416
Wahoo	23,380	\$75,577
Weakfish (Gray Trout)	120,018	\$150,494
Unclassified Fish for Food	118,974	\$116,156
Unclassified Fish for Industrial Use or Bait	24,389	\$2,565
<b>TOTAL FINFISH</b>	<b>21,985,697</b>	<b>\$29,786,985</b>
<b>SHELLFISH</b>		
Shrimp (Heads On) <sup>4</sup>	4,859,633	\$12,946,373
Clams, Hard (Meats)	347,058	\$2,295,161
	(17,854,321 numbers)	--
Blue Crabs, Hard	21,347,308	\$26,358,946
Blue Crabs, Peeler	447,120	\$1,449,542
Blue Crabs, Soft	317,426	\$2,091,382
Octopus	1,205	\$2,069
Oysters (Meats)	586,541	\$3,352,625
	(110,877 bushels)	
Scallop, Bay (Meats)	1,337	\$9,506
Scallop, Sea (Meats)	36,445	\$402,717
Squid	12,082	\$10,695
Stone Crabs	6,839	\$18,479
Unclassified Shellfish	89,930	\$115,183
Whelks/Conchs (Meats)	50,079	\$123,236
<b>TOTAL SHELLFISH</b>	<b>28,103,002</b>	<b>\$49,175,915</b>
<b>GRAND TOTAL</b>	<b>50,088,699</b>	<b>\$78,962,900</b>

<sup>1</sup> Includes species from the genus *Seriola* (amberjacks, almaco jacks, and banded rudderfish.)

<sup>2</sup> Includes shark fins and the following sharks: blacknose, blacktip, bonnethead, bull, finetooth, hammerhead, shortfin mako, spinner, thresher, tiger, and Atlantic sharpnose.

<sup>3</sup> The red snapper fishery closed on January 4, 2010.

<sup>4</sup> Includes brown, pink, and white shrimp.

\* Units and value not shown to avoid disclosure of private enterprise.

Updated: April 23, 2014

	<b>POUNDS</b> (Whole/Round Weight)	<b>VALUE</b>
<b>FINFISH</b>		
Amberjacks <sup>1</sup>	124,325	\$104,212
Anglerfish (Monkfish including Monklivers)	21,649	\$25,286
Bluefish	758,858	\$349,288
Bonito	11,343	\$15,833
Butterfish	127,536	\$65,553
Carp	6,199	\$586
Catfishes	489,492	\$116,379
Cobia	31,972	\$61,603
Croaker, Atlantic	3,106,616	\$2,135,458
Cutlassfish, Atlantic	50,867	\$61,601
Dolphinfish	249,020	\$756,346
Drum, Black	94,352	\$54,133
Drum, Red	66,519	\$138,833
Eel, American	64,110	\$160,275
Flounder, Southern	1,646,070	\$4,451,308
Flounder, Summer	1,090,218	\$2,969,370
Flounders, Other	0	\$0
Garfish	18,490	\$2,339
Grouper, Gag	187,483	\$758,371
Grouper, Red	111,781	\$363,767
Grouper, Scamp	49,556	\$195,370
Grouper, Snowy	25,740	\$78,235
Groupers, Other	7,542	\$26,152
Grunts	49,734	\$50,044
Hakes	280	\$100
Harvestfish (Starbutters)	161,751	\$202,146
Herring, River (Alewife and Blueback Herring)	678	\$678
Hogfish (Hog Snapper)	8,256	\$28,738
Jacks	16,200	\$13,414
Mackerel, Atlantic (Boston)	1,374	\$567
Mackerel, King	297,423	\$831,297
Mackerel, Spanish	916,439	\$1,374,648
Menhaden, Atlantic	538,783	\$82,974
Mullet, Sea (Kingfishes)	596,249	\$645,607
Mullet, Striped	1,859,587	\$1,041,659
Perch, White	189,448	\$150,940
Perch, Yellow	20,511	\$23,446
Pigfish	37,555	\$19,834
Pinfish	1,017	\$257
Pompano	22,525	\$43,376
Porgies	83,918	\$132,025
Pufferfish	5,531	\$2,799
Scup	3,954	\$2,768
Sea Basses	256,007	\$687,905
Seatrout, Spotted	265,016	\$522,130
Shad, American	235,861	\$257,748
Shad, Gizzard	123,813	\$4,333
Shad, Hickory	65,645	\$22,389

# 2012 North Carolina Commercial Landings

(continued)

	POUNDS (Whole/Round Weight)	VALUE
Sharks <sup>2</sup>	701,924	\$376,171
Sharks, Dogfish, Smooth	980,275	\$379,946
Sharks, Dogfish, Spiny	2,728,882	\$640,820
Sheepshead	109,881	\$92,837
Skates	5,738	\$1,433
Skippers	21,998	\$5,804
Snapper, Red <sup>3</sup>	445	\$1,898
Snapper, Vermilion (Beeliner)	276,172	\$889,691
Snappers, Other	2,751	\$8,036
Spadefish, Atlantic	24,238	\$9,043
Spot	489,676	\$465,750
Striped Bass	144,555	\$368,516
Swordfish	903,178	\$3,009,107
Tilefish	361,094	\$753,966
Triggerfish	143,114	\$278,968
Tuna, Bigeye	232,943	\$1,036,747
Tuna, Bluefin	130,496	\$1,017,958
Tuna, Yellowfin	855,006	\$2,130,454
Tunas, Other	105,815	\$122,890
Tunny, Little (False Albacore)	157,849	\$89,798
Wahoo	23,521	\$73,998
Weakfish (Gray Trout)	91,383	\$111,461
Unclassified Fish for Food	111,190	\$111,452
Unclassified Fish for Industrial Use or Bait	34,775	\$7,615
<b>TOTAL FINFISH</b>	<b>22,734,190</b>	<b>\$31,016,480</b>
<b>SHELLFISH</b>		
Shrimp (Heads On) <sup>4</sup>	6,141,291	\$13,332,879
Clams, Hard (Meats)	396,290	\$2,090,114
	(20,066,732 clams)	--
Blue Crabs, Hard	25,991,387	\$20,198,891
Blue Crabs, Peeler	469,761	\$1,114,177
Blue Crabs, Soft	325,426	\$1,496,021
Octopus	248	\$382
Oysters (Meats)	440,063	\$2,572,073
	(83,188 bushels)	--
Scallop, Bay (Meats)	0	\$0
Scallop, Sea (Meats)	58,882	\$567,230
Squid	11,916	\$10,881
Stone Crabs	5,221	\$17,125
Unclassified Shellfish	77,602	\$79,721
Whelks/Conchs (Meats)	39,078	\$75,705
<b>TOTAL SHELLFISH</b>	<b>33,957,165</b>	<b>\$41,555,199</b>
<b>GRAND TOTAL</b>	<b>56,691,355</b>	<b>\$72,571,679</b>

<sup>1</sup> Includes species from the genus *Seriola* (amberjacks, almaco jacks, and banded rudderfish.)

<sup>2</sup> Includes shark fins and the following sharks: blacktip, bonnethead, bull, finetooth, hammerhead, shortfin mako, spinner, thresher, tiger, and Atlantic sharpnose.

<sup>3</sup> The red snapper fishery closed on January 4, 2010.

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\* Units and value not shown to avoid disclosure of private enterprise.

Updated: April 23, 2014

	POUNDS (Whole/Round Weight)	VALUE
<b>FINFISH</b>		
Amberjacks <sup>1</sup>	72,797	\$62,815
Anglerfish (Monkfish including Monklivers)	38,892	\$48,702
Bluefish	1,897,408	\$848,327
Bonito	11,039	\$20,041
Butterfish	59,951	\$31,176
Carp	24,367	\$2,485
Catfishes	444,445	\$85,039
Cobia	19,924	\$34,908
Croaker, Atlantic	5,054,186	\$3,164,034
Cutlassfish, Atlantic	8,439	\$9,397
Dolphinfish	94,210	\$244,752
Drum, Black	56,083	\$26,432
Drum, Red	91,980	\$166,966
Eel, American	61,960	\$123,920
Flounder, Southern	1,247,450	\$2,753,128
Flounder, Summer	2,854,122	\$6,136,614
Flounders, Other	*	*
Garfish	25,933	\$2,334
Grouper, Gag	201,467	\$790,710
Grouper, Red	154,277	\$481,431
Grouper, Scamp	37,321	\$143,336
Grouper, Snowy	8,999	\$24,680
Groupers, Other	6,454	\$22,869
Grunts	33,443	\$34,344
Hakes	873	\$591
Harvestfish (Starbutters)	106,660	\$102,927
Herring, River (Alewife and Blueback Herring)	1,611	\$1,611
Hogfish (Hog Snapper)	10,793	\$37,688
Jacks	1,068	\$706
Mackerel, Atlantic (Boston)	6,512	\$3,286
Mackerel, King	408,162	\$1,062,081
Mackerel, Spanish	871,217	\$1,188,154
Menhaden, Atlantic	3,529,967	\$336,528
Mullet, Sea (Kingfishes)	486,853	\$520,413
Mullet, Striped	1,627,294	\$1,015,596
Perch, White	245,636	\$223,248
Perch, Yellow	27,838	\$38,554
Pigfish	39,838	\$12,838
Pinfish	905	\$252
Pompano	17,016	\$42,724
Porgies	90,792	\$133,648
Pufferfish	1,490	\$916
Scup	308,907	\$126,875
Sea Basses	272,280	\$627,825
Seatrout, Spotted	75,239	\$144,596
Shad, American	204,085	\$182,894
Shad, Gizzard	101,025	\$5,051
Shad, Hickory	85,096	\$23,607

# 2011 North Carolina Commercial Landings

(continued)

	POUNDS (Whole/Round Weight)	VALUE
Sharks <sup>2</sup>	584,238	\$327,802
Sharks, Dogfish, Smooth	1,241,252	\$401,178
Sharks, Dogfish, Spiny	2,557,923	\$383,748
Sheepshead	120,976	\$90,068
Skates	19,204	\$7,730
Skippers	24,510	\$6,594
Snapper, Red <sup>3</sup>	0	\$0
Snapper, Vermilion (Beeliner)	323,389	\$997,623
Snappers, Other	2,982	\$7,077
Spadefish, Atlantic	21,535	\$6,839
Spot	936,970	\$728,475
Striped Bass	410,685	\$1,164,426
Swordfish	803,725	\$2,617,201
Tilefish	133,824	\$314,600
Triggerfish	220,204	\$411,373
Tuna, Bigeye	277,659	\$1,094,276
Tuna, Bluefin	48,358	\$270,637
Tuna, Yellowfin	526,238	\$944,099
Tunas, Other	76,661	\$68,578
Tunny, Little (False Albacore)	131,549	\$66,986
Wahoo	15,870	\$44,685
Weakfish (Gray Trout)	65,897	\$78,522
Unclassified Fish for Food	113,326	\$145,153
Unclassified Fish for Industrial Use or Bait	54,904	\$9,304
<b>TOTAL FINFISH</b>	<b>29,738,179</b>	<b>\$31,278,019</b>
 <b>SHELLFISH</b>		
Shrimp (Heads On) <sup>4</sup>	5,140,360	\$10,885,795
Clams, Hard (Meats)	295,466	\$1,896,627
	<i>(15,088,575 clams)</i>	--
Blue Crabs, Hard	28,964,473	\$18,016,552
Blue Crabs, Peeler	624,362	\$1,186,286
Blue Crabs, Soft	446,397	\$2,079,242
Octopus	327	\$501
Oysters (Meats)	800,543	\$4,486,741
	<i>(151,331 bushels)</i>	--
Scallop, Bay (Meats)	0	\$0
Scallop, Sea (Meats)	91,077	\$883,772
Squid	1,267,192	\$291,060
Stone Crabs	7,630	\$21,926
Unclassified Shellfish	90,932	\$83,407
Whelks/Conchs (Meats)	34,002	\$73,456
<b>TOTAL SHELLFISH</b>	<b>37,762,761</b>	<b>\$39,905,365</b>
<b>GRAND TOTAL</b>	<b>67,500,940</b>	<b>\$71,183,385</b>

<sup>1</sup> Includes species from the genus *Seriola* (amberjacks, almaco jacks, and banded rudderfish.)

<sup>2</sup> Includes shark fins and the following sharks: blacktip, bonnethead, bull, finetooth, hammerhead, shortfin mako, spinner, thresher, tiger, and Atlantic sharpnose.

<sup>3</sup> The red snapper fishery closed on January 4, 2010.

<sup>4</sup> Includes brown, pink, and white shrimp.

\* Units and value not shown to avoid disclosure of private enterprise.

Updated: April 23, 2014

	<b>POUNDS</b> <b>(Whole/Round Weight)</b>	<b>VALUE</b>
<b>FINFISH</b>		
Amberjacks <sup>1</sup>	128,762	\$96,197
Anglerfish (Monkfish including Monkfish)	47,305	\$60,280
Bluefish	3,216,019	\$1,139,352
Bonito	15,686	\$20,312
Butterfish	55,087	\$32,538
Carp	23,807	\$2,200
Catfishes	354,892	\$70,082
Cobia	43,715	\$64,569
Croaker, Atlantic	7,312,159	\$3,490,567
Cutlassfish, Atlantic	19,753	\$14,753
Dolphinfish	239,551	\$540,543
Drum, Black	69,194	\$33,043
Drum, Red	231,828	\$423,540
Eel, American	122,104	\$244,207
Flounder, Southern	1,689,557	\$3,652,016
Flounder, Summer	3,310,992	\$7,192,920
Flounders, Other	358	\$374
Garfish	12,182	\$696
Grouper, Gag	222,749	\$772,616
Grouper, Red	231,780	\$625,578
Grouper, Scamp	60,163	\$199,584
Grouper, Snowy	35,472	\$106,720
Groupers, Other	11,761	\$30,527
Grunts	47,219	\$42,731
Hakes	5,001	\$1,418
Harvestfish (Starbutters)	80,459	\$106,626
Herring, River (Alewife and Blueback Herring)	1,765	\$1,765
Hogfish (Hog Snapper)	13,046	\$36,693
Jacks	2,288	\$1,693
Mackerel, Atlantic (Boston)	45,276	\$17,512
Mackerel, King	328,806	\$649,785
Mackerel, Spanish	911,866	\$1,028,749
Menhaden, Atlantic	1,299,130	\$124,807
Mullet, Sea (Kingfishes)	886,841	\$956,648
Mullet, Striped	2,082,832	\$1,053,896
Perch, White	200,501	\$166,539
Perch, Yellow	57,027	\$62,077
Pigfish	32,867	\$13,494
Pinfish	14,579	\$3,635
Pompano	14,840	\$39,257
Porgies	84,781	\$106,995
Pufferfish	2,472	\$1,703
Scup	102,853	\$51,424
Sea Basses	401,489	\$953,624
Seatrout, Spotted	200,822	\$351,129
Shad, American	234,520	\$190,594
Shad, Gizzard	87,340	\$4,367
Shad, Hickory	108,032	\$22,636

# 2010 North Carolina Commercial Landings

(continued)

	POUNDS (Whole/Round Weight)	VALUE
Sharks <sup>2</sup>	629,421	\$324,405
Sharks, Dogfish, Smooth	1,614,844	\$503,232
Sharks, Dogfish, Spiny	1,708,437	\$256,510
Sheepshead	157,631	\$100,744
Skates	7,503	\$1,454
Skippers	13,937	\$3,991
Snapper, Red	*	*
Snapper, Vermilion (Beeliner)	316,782	\$953,955
Snappers, Other	3,435	\$9,265
Spadefish, Atlantic	18,827	\$6,091
Spot	572,315	\$385,895
Striped Bass	500,152	\$1,227,881
Swordfish	629,933	\$1,897,151
Tilefish	430,394	\$817,319
Triggerfish	225,682	\$343,734
Tuna, Bigeye	96,464	\$338,881
Tuna, Bluefin	48,562	\$122,072
Tuna, Yellowfin	368,027	\$616,467
Tunas, Other	43,626	\$40,195
Tunny, Little (False Albacore)	147,337	\$76,395
Wahoo	12,626	\$32,091
Weakfish (Gray Trout)	106,328	\$105,243
Unclassified Fish for Food	76,320	\$165,817
Unclassified Fish for Industrial Use or Bait	67,663	\$14,491
<b>TOTAL FINFISH</b>	<b>32,497,778</b>	<b>\$33,146,288</b>
<b>SHELLFISH</b>		
Shrimp (Heads On) <sup>3</sup>	5,955,335	\$10,804,105
Clams, Hard (Meats)	354,961	\$2,295,951
	(18,233,183 clams)	--
Blue Crabs, Hard	29,794,329	\$23,672,658
Blue Crabs, Peeler	568,210	\$1,196,799
Blue Crabs, Soft	320,472	\$1,555,288
Octopus	941	\$931
Oysters (Meats)	1,040,407	\$5,045,408
	(196,674 bushels)	--
Scallop, Bay (Meats)	*	*
Scallop, Sea (Meats)	171,898	\$1,222,893
Squid	1,228,715	\$284,458
Stone Crabs	5,593	\$16,994
Unclassified Shellfish	47,308	\$86,292
Whelks/Conchs (Meats)	15,672	\$33,003
<b>TOTAL SHELLFISH</b>	<b>39,503,840</b>	<b>\$46,214,780</b>
<b>GRAND TOTAL</b>	<b>72,001,618</b>	<b>\$79,361,068</b>

<sup>1</sup> Includes species from the genus *Seriola* (amberjacks, almaco jacks, and banded rudderfish.)

<sup>2</sup> Includes shark fins and the following sharks: blacktip, hammerhead, lemon, shortfin mako, thresher, and Atlantic sharpnose.

<sup>3</sup> The red snapper fishery closed on January 4, 2010.

<sup>4</sup> Includes brown, pink, white and rock shrimp.

\* Units and value not shown to avoid disclosure of private enterprise.

Updated: April 23, 2014

	<b>POUNDS</b> (Whole/Round Weight)	<b>VALUE</b>
<b>FINFISH</b>		
Amberjacks <sup>1</sup>	153,099	\$104,982
Anglerfish (Monkfish including Monklivers)	99,549	\$112,354
Bluefish	2,360,078	\$782,597
Bonito	9,981	\$14,060
Butterfish	56,481	\$26,799
Carp	14,087	\$1,019
Catfishes	412,122	\$77,709
Cobia	31,898	\$46,516
Croaker, Atlantic	6,135,437	\$3,003,861
Cutlassfish, Atlantic	59,379	\$38,519
Dolphinfish	611,962	\$1,030,145
Drum, Black	148,994	\$64,875
Drum, Red	200,296	\$325,625
Eel, American	65,481	\$154,536
Flounder, Southern	2,396,240	\$4,609,932
Flounder, Summer	2,859,039	\$5,513,799
Flounders, Other	261	\$202
Garfish	5,632	\$509
Grouper, Gag	220,925	\$733,054
Grouper, Red	296,255	\$774,109
Grouper, Scamp	71,225	\$232,278
Grouper, Snowy	32,927	\$94,025
Groupers, Other	16,134	\$45,265
Grunts	74,054	\$63,394
Hakes	561	\$155
Harvestfish (Starbutters)	96,742	\$117,965
Herring, River (Alewife and Blueback Herring)	643	\$836
Hogfish (Hog Snapper)	10,839	\$28,476
Jacks	4,891	\$3,880
Mackerel, Atlantic (Boston)	1,147	\$448
Mackerel, King	777,585	\$1,500,112
Mackerel, Spanish	961,811	\$929,748
Menhaden, Atlantic	2,124,733	\$229,648
Mullet, Sea (Kingfishes)	721,924	\$789,000
Mullet, Striped	1,685,615	\$715,265
Perch, White	376,820	\$303,971
Perch, Yellow	66,949	\$68,153
Pigfish	27,905	\$11,207
Pinfish	12,655	\$5,046
Pompano	21,668	\$58,228
Porgies	98,771	\$114,791
Pufferfish	799	\$344
Scup	244,337	\$100,956
Sea Basses	615,179	\$1,401,506
Seatrout, Spotted	320,247	\$528,985
Shad, American	167,631	\$204,142
Shad, Gizzard	73,232	\$2,197
Shad, Hickory	86,662	\$22,963

# 2009 North Carolina Commercial Landings

(continued)

	POUNDS (Whole/Round Weight)	VALUE
Sharks <sup>2</sup>	447,405	\$238,806
Sharks, Dogfish, Smooth	1,221,150	\$381,790
Sharks, Dogfish, Spiny	1,416,362	\$212,165
Sheepshead	132,390	\$82,340
Skates	*	*
Skippers	12,506	\$4,131
Snapper, Red	10,228	\$35,284
Snapper, Vermilion (Beeliner)	361,923	\$1,033,555
Snappers, Other	1,930	\$4,002
Spadefish, Atlantic	20,636	\$6,520
Spot	1,006,500	\$601,844
Striped Bass	310,604	\$747,308
Swordfish	502,884	\$1,319,917
Tilefish	469,293	\$735,189
Triggerfish	215,759	\$303,580
Tuna, Bigeye	168,089	\$536,721
Tuna, Bluefin	138,902	\$1,444,351
Tuna, Yellowfin	546,406	\$852,155
Tunas, Other	39,277	\$37,459
Tunny, Little (False Albacore)	146,088	\$61,559
Wahoo	16,397	\$39,022
Weakfish (Gray Trout)	163,146	\$163,210
Unclassified Fish for Food	81,205	\$142,962
Unclassified Fish for Industrial Use or Bait	59,109	\$9,716
<b>TOTAL FINFISH</b>	<b>32,319,066</b>	<b>\$33,981,773</b>
<b>SHELLFISH</b>		
Shrimp (Heads On) <sup>3</sup>	5,407,708	\$8,527,714
Clams, Hard (Meats)	350,669	\$2,036,793
	<i>(18,011,221 clams)</i>	--
Blue Crabs, Hard	29,140,473	\$25,039,379
Blue Crabs, Peeler	367,881	\$1,106,883
Blue Crabs, Soft	198,878	\$1,282,733
Octopus	4,410	\$4,863
Oysters (Meats)	573,630	\$2,655,463
	<i>(108,437 bushels)</i>	--
Scallop, Bay (Meats)	29,003	\$124,256
Scallop, Sea (Meats)	382,010	\$2,278,321
Squid	52,342	\$37,386
Stone Crabs	5,933	\$19,281
Unclassified Shellfish	108,239	\$77,720
Whelks/Conchs (Meats)	11,901	\$21,593
<b>TOTAL SHELLFISH</b>	<b>36,633,075</b>	<b>\$43,212,386</b>
<b>GRAND TOTAL</b>	<b>68,952,141</b>	<b>\$77,194,159</b>

<sup>1</sup> Includes species from the genus *Seriola* (amberjacks, almaco jacks, and banded rudderfish.)

<sup>2</sup> Includes shark fins and the following sharks: blacktip, bull, hammerhead, shortfin mako, sandbar, thresher, tiger, and Atlantic sharpnose.

<sup>3</sup> Includes brown, pink, and white shrimp.

# North Carolina Commercial Fishing Trips By Major Gears

(2009 - 2013)

Gear	Trips				
	2009	2010	2011	2012	2013 <sup>1</sup>
Beach Seine	123	183	102	68	57
By Hand	16,813	18,275	15,931	15,188	16,445
Cast Net	880	905	612	804	703
Channel Net	1,089	1,069	538	1,507	1,626
Clam Dredges	355	603	400	492	344
Clam Trawl Kicking	538	518	286	188	180
Crab Dredge	44	147	69	5	1
Crab Pot	54,625	50,428	48,140	48,052	48,050
Crab Trawl	484	274	228	20	85
Eel Pot	78	121	93	177	70
Fish Pot	909	649	538	613	623
Flounder Trawl	334	384	344	108	71
Flynet	243	286	190	14	4
Fyke Net	293	277	266	329	424
Gigs	1,572	2,424	2,183	3,147	2,584
Gill Net – Anchored	39,560	33,219	30,079	31,277	36,894
Gill Net – Drift	107	269	182	392	236
Gill Net – Runaround	3,251	3,677	2,606	3,590	3,778
Haul Seines <sup>2</sup>	380	372	369	177	273
Longlines	517	568	529	578	719
Oyster Dredge	4,481	10,712	7,433	2,264	3,762
Peeler Pot	2,728	3,347	2,908	3,516	3,334
Peeler Trawl <sup>3</sup>	0	31	41	24	29
Pound Nets	2,356	2,298	2,260	2,679	2,577
Rakes	11,334	10,335	9,404	9,400	9,987
Rod-n-Reel	3,237	2,486	1,986	2,151	2,066
Shrimp Trawl	5,749	5,592	4,372	6,195	5,649
Skimmer Trawl	807	1,096	330	1,088	1,194
Spears (Diving)	98	84	57	134	159
Tongs	4,956	4,797	6,020	5,527	4,090
Trolling	4,035	2,193	1,866	1,887	2,184
Trotline	1	6	20	50	38
Other Gears <sup>4</sup>	808	134	89	94	238
<b>Total trips<sup>5</sup></b>	<b>157,071</b>	<b>152,126</b>	<b>136,060</b>	<b>136,790</b>	<b>141,847</b>

A **trip** is defined as the time period beginning when a vessel or fisherman leaves port to conduct fishing activities and ends when that vessel or fisherman returns to land the catch. The duration of a trip can vary from a few hours, as in hand clamming, to several days, as in ocean flounder trawling. An assessment of the number of trips gives an indication of the amount of effort conducted by commercial fishermen within that fishery.

<sup>1</sup> Trips are preliminary.

<sup>2</sup> Includes long hauls, common seines, and swipe nets.

<sup>3</sup> A new code to distinguish peeler trawl gear was put into effect in 2010.

<sup>4</sup> Includes greenstick trolling, butterfly nets, conch pots, dip nets, purse seines, bay scallop dredges, scallop scoops and trawls, shrimp pots and turtle pots; includes 701 scallop scoop trips in 2009.

<sup>5</sup> Total trips are not equal to the sum of trips by gear due to multi-gear trips.

Source: North Carolina Division of Marine Fisheries Trip Ticket Program (April 2014).

# PRELIMINARY

## North Carolina Marine Recreational Finfish Harvest

### 2012 and 2013

<u>SPECIES</u>	<u>NUMBER 2012</u>	<u>NUMBER 2013</u>	<u>POUNDS 2012</u>	<u>POUNDS 2013</u>
Amberjacks	8,976	11,638	154,734	202,081
Barracudas	683	297	8,535	2,260
Bluefish	888,888	1,187,893	1,010,575	971,279
Bonito	4,281	9,296	38,551	134,097
Cobia	2,050	21,116	104,106	581,400
Croaker, Atlantic	288,813	410,943	105,530	139,968
Dolphin	327,116	248,987	2,559,382	1,967,876
Drum, Red	52,948	166,608	238,312	682,964
Drum, Black	139,363	363,769	243,965	651,118
Flounder, Southern	118,614	177,742	298,043	408,642
Flounder, Summer	63,135	45,240	101,642	71,466
Groupers	10,198	5,669	126,567	65,995
Grunts	62,734	19,961	95,724	26,991
Jacks	19,239	25,688	20,463	27,733
Kingfishes	1,050,826	1,373,625	383,427	343,253
Mackerel, King	27,353	22,788	333,614	215,585
Mackerel, Spanish	491,238	520,760	665,201	637,284
Perch, Silver	22,053	13,352	3,988	2,411
Pigfish	334,052	296,773	117,021	100,707
Pinfish	259,674	355,099	40,471	60,734
Pompano	107,260	472,330	57,882	172,462
Porgies	15,857	10,629	26,249	20,977
Puffers	268,515	197,738	134,113	82,793
Sea Bass, Black	75,638	57,027	127,621	82,191
Seatrout, Spotted	500,522	369,500	817,551	652,102
Sharks	2,350	13,846	44,170	23,483
Sharks, Dogfish	316	5,000	1,454	10,169
Sheepshead	119,899	272,709	293,570	497,616
Snappers	27,822	13,205	60,163	18,236
Spot	784,272	1,464,771	230,250	462,884
Striped Bass <sup>1</sup>	0	0	0	0
Tuna, Bluefin <sup>2</sup>	189	201	31861.23	40979
Tuna, Yellowfin	57,100	62,110	1,579,260	2,024,584
Wahoo	30,885	10,386	854,568	284,701
Weakfish	40,299	33,792	46,081	34,890

<sup>1</sup> Striped Bass landings reflect Atlantic Ocean catches only.

<sup>2</sup> Landings for Atlantic Bluefin Tuna (ABT) reflect the Highly Migratory Species fishing year (January 1 through December 31).

**NOTE:** The number and pounds of finfish listed represent estimated harvest; finfish released alive are not included. Headboat landings are not included but are available upon request from NOAA Beaufort Lab's Southeast Region Headboat Survey.

# North Carolina Marine Recreational Finfish Harvest 2009, 2010 and 2011

<u>SPECIES</u>	<u>NUMBER</u>	<u>NUMBER</u>	<u>NUMBER</u>	<u>POUNDS</u>	<u>POUNDS</u>	<u>POUNDS</u>
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
Amberjacks	18,035	16,536	5,752	497,157	369,224	112,991
Barracudas	1,553	1,410	916	13,864	11,011	10,882
Bluefish	827,788	1,104,077	1,152,105	958,214	953,113	999,240
Bonito	1,258	551	11,144	11,909	9,967	147,403
Cobia	5,754	15,125	4,478	166,195	498,581	145,796
Croaker, Atlantic	368,990	478,156	246,676	131,742	241,993	99,298
Dolphin	367,351	498,626	472,174	3,784,128	3,291,521	3,538,922
Drum, Red	57,543	64,024	45,143	288,958	283,286	212,245
Drum, Black	92,058	122,709	211,396	121,038	305,517	151,407
Flounder, Southern	147,447	250,790	152,557	319,662	539,941	380,158
Flounder, Summer	74,641	77,157	60,422	103,867	111,539	100,543
Groupers	78,580	21,067	9,676	925,195	275,085	107,853
Grunts	78,858	44,877	27,490	117,684	56,802	44,214
Jacks	6,369	14,103	15,548	20,385	71,622	25,712
Kingfishes	956,687	953,327	587,151	363,592	389,905	246,886
Mackerel, King	91,138	36,541	14,220	984,739	336,327	180,014
Mackerel, Spanish	677,787	483,956	367,086	824,225	565,830	470,541
Perch, Silver	22,143	6,460	33,909	6,680	1,736	6,261
Pigfish	177,321	175,430	225,472	69,923	57,759	73,538
Pinfish	145,255	218,975	143,300	36,159	35,308	27,601
Pompano	110,213	100,541	122,819	56,913	46,660	47,406
Porgies	40,410	21,391	6,683	72,704	40,812	11,117
Puffers	40,725	149,704	156,916	19,266	72,952	91,384
Sea Bass, Black	106,670	138,961	95,004	121,041	186,803	143,234
Seatrout, Spotted	608,790	195,065	215,922	954,845	407,534	403,517
Sharks	3,948	7,145	5,831	38,157	50,787	21,241
Sharks, Dogfish	929	2,610	4,334	16,251	8,434	12,086
Sheepshead	124,328	145,873	66,689	220,237	420,108	180,145
Snappers	30,914	23,713	13,376	54,949	35,041	25,167
Spot	1,056,346	834,560	1,207,335	363,998	260,341	410,317
Striped bass <sup>1</sup>	5,650	23,778	94,182	160,922	435,756	2,042,981
Tuna, Bluefin <sup>2</sup>	135	579	329	17,236	88,463	53,941
Tuna, Yellowfin	29,107	23,251	25,039	805,674	828,571	811,673
Wahoo	21,654	12,610	14,798	756,069	365,697	396,775
Weakfish	68,553	41,598	13,464	89,652	38,721	17,621

<sup>1</sup> Striped bass landings reflect Atlantic Ocean catches only.

<sup>2</sup> Landings for Atlantic Bluefin Tuna represent Highly Migratory Species fishing year January 1 through December 31.

**NOTE:** The number and pounds of finfish listed represent estimated harvest; finfish released alive are not included. Headboat landings are not included but are available upon request from NOAA Beaufort Lab's Southeast Region Headboat Survey.

# North Carolina Coastal Angling Program

## North Carolina Marine Recreational Finfish Harvest and Release Catch Estimates

Year	<u>Number Harvested</u>	<u>Pounds Harvested</u>	<u>Number Released</u>
2009	9,688,277	14,719,818	17,192,498
2010	10,062,809	13,636,398	20,006,836
2011	8,564,946	13,240,808	15,865,229
2012	8,472,954	12,059,556	18,536,492
2013	11,578,655	13,288,019	20,986,928

## North Carolina Marine Recreational Fishing Trip Estimates (number)

Year	<u>Beach/Bank</u>	<u>Charter Boat</u>	<u>Manmade</u>	<u>Private Boat</u>	<u>Total</u>
2009	1,716,858	145,759	1,441,055	2,005,019	5,308,691
2010	1,930,919	165,304	1,382,296	2,199,055	5,677,574
2011	1,404,886	151,681	1,284,670	1,898,507	4,739,744
2012	1,599,759	160,097	1,482,635	2,060,989	5,303,480
2013	1,208,501	147,289	1,544,450	2,096,263	4,996,503

## Coastal Recreational Fishing License (CRFL) Sales by Residency, 2008 - 2012.

Year	<u>In State</u>	<u>Out-of-State</u>	<u>Total</u>
2009	267,061	144,819	411,880
2010	296,173	157,346	453,519
2011	289,925	149,321	439,246
2012	304,840	155,457	460,297
2013	317,653	162,351	480,004
Grandfathered <sup>1</sup>	250,239	6,460	256,699

<sup>1</sup> All lifetime inland state fishing licenses sold prior to 2007 were grandfathered into the new CRFL requirement on January 01, 2007.

### Survey Methods

The survey consists of telephone and on-site angler interviews. Telephone interviews are used to collect data on number of trips, fishing location, and when these trips were made. Information on actual catch (species, number, weight, and length) is collected through on-site angler interviews. Information from both types of interviews is combined to produce estimates of total number and pounds of finfish caught.

### Precision of Estimates

Numbers and pounds presented are estimates, not actual counts, therefore having varying levels of precision.



Coastal recreational fishery statistics are provided through participation in the Marine Recreational Information Program. In North Carolina, this project is supported in part by the U.S. Fish and Wildlife Service through the Sport Fish Restoration Program, Grant F-31.



# Electronic Trip Ticket Reporting Survey

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This survey is being conducted as a result of recent inquiries by the N. C. Marine Fisheries Commission regarding requirements of electronic reporting by all dealers. These inquiries were in response to the recent red drum cap overage. We are trying to assess dealer opinions about possible changes in electronic reporting to improve quota monitoring and will be using the results of this survey to direct our recommendations to the commission.

This survey is related to all dealers reporting landings of any quota monitored species either monitored daily (e.g., summer flounder, black sea bass North of Hatteras, spiny dogfish, striped bass) or monthly (e.g., red drum, menhaden, horseshoe crab, etc.). Whether you are an electronic dealer or not, we are interested in your opinion, so please take the time to follow the link below and fill out this survey. We know your time is valuable and appreciate your participation.

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The Electronic Trip Ticket Reporting Survey can be found at:

[https://www.surveymonkey.com/s/Electronic\\_Dealer\\_Survey](https://www.surveymonkey.com/s/Electronic_Dealer_Survey)

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# **NORTH CAROLINA DIVISION OF MARINE FISHERIES LIBRARY SUBCOMMITTEE BYLAWS**

## ***PURPOSE***

The Division of Marine Fisheries (Division) Library Subcommittee is hereby established to review and make recommendations to the Biological Review Team (BRT), Management Review Team (MRT), and the Division Deputy Director on issues related the management and retention of Division-produced documents and reference materials.

## ***VISION STATEMENT***

The Library Subcommittee will remain as a permanent body to provide direction on the disposition of Division-produced documents and reference documents used by Division staff, as well as office files through a records retention policy.

## ***GOALS AND OBJECTIVES***

- To organize, catalog, and manage all publications, reports, and other documents used by the Division.
- To create and maintain an electronic library for staff and public use of Division-produced documents.
- To update and maintain the Division records retention policy.
- To serve as a forum for communication regarding library and record retention needs.
- To ensure Division employee awareness of all available resources.
- To optimize research efficiency.
- To increase operational transparency between the Division, Marine Fisheries Commission, and the public.
- To resolve storage space issues both electronically and physically.
- To provide customer service.

## ***ORGANIZATION AND OPERATIONS***

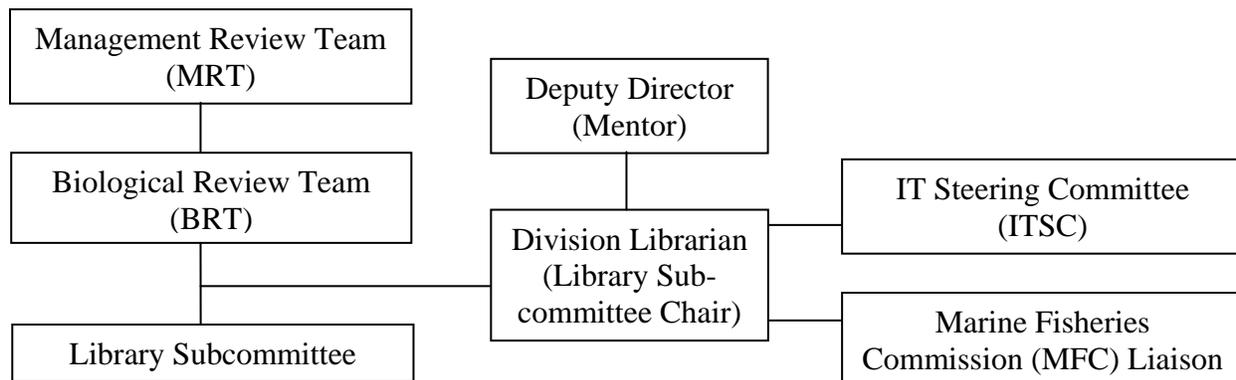
The Library Subcommittee is a subcommittee of the Biological Review Team (BRT). Membership of the subcommittee includes the executive assistant in the Director's office, who serves as the subcommittee chair, and at least one representative from each of the division sections, including Administration, Fisheries Management, License and Statistics, Administrative Services, Marine Fisheries Commission, Protected Resources, Habitat and Enhancement, Shellfish Sanitation and Recreational Water Quality, Marine Patrol, and DENR Public Affairs. Other staff members within the Division will participate as necessary. These members will be included on the "DMF.Library.committee@ncdenr.gov" mailing list. At least one member of BRT will serve as a representative on the Library Subcommittee, as designated by the BRT chair. The assigned staff shall possess the skills, knowledge, and authority to make

decisions for their represented section. Those on the subcommittee must be committed to the process and accountable for deliverables.

The chair of the subcommittee may appoint a vice-chair and workgroups as deemed necessary. The chair shall act as a liaison between the subcommittee and BRT, as well as other Division committees. The chair can assign duties and responsibilities to subcommittee members. The Library Subcommittee will meet at least annually, and additional meetings will be scheduled as needed. Agendas and other materials will be distributed prior to the meeting and official minutes will be produced. All subcommittee-produced minutes, electronic documents, projects, presentations, etc. will be stored on the DMF shared drive in the ALL SHARED\BRT\Sub Coms\Library folder.

### ***AUTHORITY***

The Library Subcommittee shall review and recommend all changes and additions to the library standard operating procedure, policies, and content as well as the records retention policies. All final decisions and questions shall be approved and answered by BRT. BRT may recommend decisions or questions to be approved and answered by MRT. Routine updates shall be reported to the Division Director, BRT, MRT, the IT Steering Committee, the Marine Fisheries Commission (through the MFC Liaison), and other committees as deemed necessary.



*Figure: The Library Subcommittee is a subcommittee of BRT, which reports to MRT. The Library Subcommittee Chair, mentored by the Deputy Director, acts as a liaison to the ITSC and the MFC.*

### ***AMENDING BYLAWS***

The Library Subcommittee Bylaws should be reviewed at least once every five years to stay current with organizational needs and to accurately represent membership. The chair and vice-chair should review the Bylaws and suggest any updates or changes with approval by consensus from the members of the Subcommittee, BRT, MRT, and the Deputy Director.

**REVISIONS**

<b>Version</b>	<b>Date</b>	<b>Revisions Made</b>
V.1.0	April 9, 2013	Original effective date.
V.1.1	July 10, 2013	Revised to include "To provide customer service" in the Goals and Objectives section. A Revisions section was also added.
V.1.2	August 14, 2013	Minor revision to correct the title of the Goals and Objectives section.
V.1.3	September 16, 2013	Revised to include a Vision Statement, an Amending Bylaws section, a rewritten Purpose, reflect DMF section changes, and minor edits.



# **N.C. Division of Marine Fisheries**

## **Publications Library**

### **Standard Operating Procedure**



**March 2014  
V.2.1**

## Foreword

The Division of Marine Fisheries Library Subcommittee was created in June 2008. The original charge consisted of:

1. Sort retained material currently housed in the hallway and library office. Purge what is not needed and only retain items truly needed.
2. Clean out the library room except for one bookshelf.
3. Devise a library tracking system for retained material.
4. Incorporate the Division's produced reports within the library.
5. Nominate a librarian and list their role and responsibilities along with the all section's and staff's roles and responsibilities in regards to the library.
6. Record retention schedule needs to be revised for the division.

Version 1.0 of the Standard Operating Procedure was finalized in June 2010. The Subcommittee finished items 1, 2 and 3 of the original charge.

In June 2012, the Library Subcommittee was reconvened and charged with the following tasks:

1. Complete items from original charge.
2. Update and finalize SOP and implement current process (update publications list, complete tracking database, etc.).
3. Document and resolve electronic housing/LAN space issues, if any.
4. Discuss housing of documents for public transparency (web) to help resolve issues.
5. Publications List (Marla maintains). The DMF publication list had always been just reports that DMF created, not reports by others that we might have copies. This list now appears to be a mix. This needs to be resolved – two separate lists.
6. Disc with reports – reports are of no use being on a disc. Need a solution.
7. Record Retention Schedule – needs to be updated and someone needs to be in charge.

This document meets tasks 3, 4 and 5 of the 2008 charge and tasks 2, 3, 4, 5, and 6 of the 2012 charge. The remaining tasks will be addressed under a separate SOP.

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## 1.0 Purpose

This Standard Operating Procedure was developed to provide standards and processes for cataloging North Carolina Division of Marine Fisheries publications. This document guides the Library Subcommittee members in housing and locating documents produced by the division and includes standards and procedures for cataloging electronic documents.

Housing finalized documents within the Library has a two-prong approach:

1. Catalog the documents and
2. Store the documents electronically for staff and public use.

This SOP is housed on the division's Local Area Network on the DMF shared drive in the Biological Review Team Library Subcommittee folder in Word document form and on the library shared drive in PDF form.

## 2.0 Terminology

For the purposes of this SOP, various terminologies used throughout the document are defined as:

- *Database* – one searchable electronic file for staff use that contains all division documents and document updates.
- *Document* – a final publication with a release date. This definition includes other terms such as “report” and “paper”.
- *Draft* – a non-final document that is not included in the database.
- *Publications Library* – a tool for searching the database. The Publications Library is located on the division website and is available for public use.
- *Update* – a final document that is a change to a previous document already included in the database. This definition includes other terms such as “revision” and “version”.

## 3.0 Division Responsibilities

It is the responsibility of all staff within the division to comply with the standards and processes set forth in this SOP.

The section chiefs ensure all program managers and supervisors are aware and trained on these standards. Program managers and supervisors ensure all staff that produce documents important to the mission of the division are trained and abide by these standards. The Publications Library is only beneficial as long as staff follows the SOP (see section 11.0 for further information regarding staff training). Authors are responsible for submitting their final documents and document updates to the librarian.

The librarian is the central contact person for the Publications Library and acts as the chairperson for the Library Subcommittee. The subcommittee enacts the Publications Library SOP and maintains the library materials for staff and public use.

A summary table of responsibilities follows.

Title of Responsible Person	Action
Library Subcommittee Chair	<ul style="list-style-type: none"> <li>• Serve as the librarian of the DMF Publications Library and act as its central contact person.</li> <li>• Receive library submissions via email. Enter the document information into the database and the document itself into the internal folder, following the guidelines in section 5.0.</li> <li>• Bring forward inclusion justifications from staff to the subcommittee and BRT for decisions regarding document disposition.</li> <li>• Bring forward library and new keyword suggestions from staff and the public to the subcommittee for approval and implementation.</li> <li>• Ensure staff and MFC commissioners are notified in a timely manner of the existence of new documents.</li> <li>• Serve as the link between employees, public and the internet. Guarantee quality control of the Publications Library and other library materials.</li> </ul>
Library Subcommittee Members	<ul style="list-style-type: none"> <li>• Attend Library Subcommittee meetings. If unable to attend, ensure section is otherwise represented at all meetings.</li> <li>• Complete assignments and responsibilities within the given timeframe. If unable to ensure completion, appoint a proxy.</li> <li>• Ensure new submission PDFs are uploaded to the database, and Publications Library in a timely manner following the procedures in section 6.0.</li> <li>• Meet at least annually to review this SOP and training materials to identify deficiencies and areas for improvement.</li> <li>• Enact the Publications Library SOP.</li> <li>• Maintain the library materials for staff and public use.</li> <li>• Forward any concerns to the subcommittee chairperson.</li> </ul>
Biological Review Team	<ul style="list-style-type: none"> <li>• Review Library Subcommittee recommendations in regards to the Publications Library. In cases of disagreement, provide the final decision.</li> </ul>
Deputy Director	<ul style="list-style-type: none"> <li>• Provide guidance on library operations to the chair and the subcommittee.</li> </ul>
Section Chiefs	<ul style="list-style-type: none"> <li>• Ensure all program managers and supervisors are aware and trained on these standards.</li> </ul>
Supervisors	<ul style="list-style-type: none"> <li>• Ensure all staff that produce documents important to the mission of the division are trained on and abide by these standards.</li> </ul>
All Employees	<ul style="list-style-type: none"> <li>• Comply with the standards and processes set forth within this SOP.</li> <li>• Authors are responsible for submitting final documents and document updates to the librarian within two weeks of completion following the guidelines in section 8.0.</li> <li>• Ensure the documents within the internal folder on the shared drive are not removed or altered in any way by anyone other than a subcommittee member.</li> <li>• Submit inclusion justification or request clarity from the librarian for documents not listed in section 4.0.</li> <li>• Use and provide feedback on the Publications Library and this SOP as necessary and requested by the subcommittee.</li> </ul>

#### 4.0 Inclusion Guidelines

All documents produced by DMF staff and important to the DMF mission will be included in the database and made available to the public through the Publications Library. The following documents will be included:

- Federal grant/contract reports
- Coastal Recreational Fishing License grant/contract reports
- Coastal Habitat Protection Plans (CHPP)
- CHPP implementation plans and annual reports
- Strategic Habitat Area (SHA) assessments and related documents
- Inter-jurisdictional species Fishery Management Plan compliance reports (i.e., Atlantic States Marine Fisheries Commission (ASMFC) compliance reports)
- Pamlico Sound Survey cruise reports
- Growing Area Sanitary Survey reports
- Fish Dealer reports
- Species profile reports
- Landings and Harvest Bulletins
- Annual Fisheries Statistics Report (“Big Book”)
- Socioeconomic Survey reports
- Education/Outreach annual reports
- Submerged lands claims resolutions
- Shellfish Rehabilitation Program annual report to Joint Legislative Committee on Seafood and Aquaculture
- Incidental Take Permit (ITP) applications and compliance reports (i.e., Pamlico Sound Gill Net Restricted Area annual compliance reports)
- Rules review issue and information papers (RAT) that are not included in other documents found in this list
- Fishery Management Plans (FMPs)
- Stock status reports
- Stock assessments
- Marine Fisheries Commission (MFC) meeting summaries
- Legislative reports
- Public information/education materials (i.e., Anglers’ Guide)

If a document produced by staff is not listed in this section, the author is to send the document to the librarian ([SVC\\_DENR.DMF.Library@ncdenr.gov](mailto:SVC_DENR.DMF.Library@ncdenr.gov)) with justification for its inclusion. The librarian will bring the document forth to the Library Subcommittee and to BRT for a decision regarding the document’s disposition. If the author is unclear as to whether the document should be included in the library, the author is to send the document to the librarian for clarity.

## **5.0 Library Shared Drive**

The Library Subcommittee maintains the library shared drive on the division's LAN. The shared drive contains two main folders, internal and external. Document files are named using the naming guidelines in section 9.1.

### **5.1 Internal**

The internal folder is accessible by all DMF staff. The folder contains the Microsoft Word (read-only) format or PDF format, for older scanned documents, of all DMF documents contained in the Library, organized by publication decade and publication year. This folder also contains the library database (see section 7.0). Documents are added to this folder as they are submitted (see section 8.0).

### **5.2 External**

The external folder is accessible by Library Subcommittee members only to ensure documents uploaded to the Publications Library remain unchanged. This folder contains the most recent PDF version of all documents and document updates within the internal folder, organized in the same manner as the internal folder. The external folder is populated as documents are added to the Publications Library.

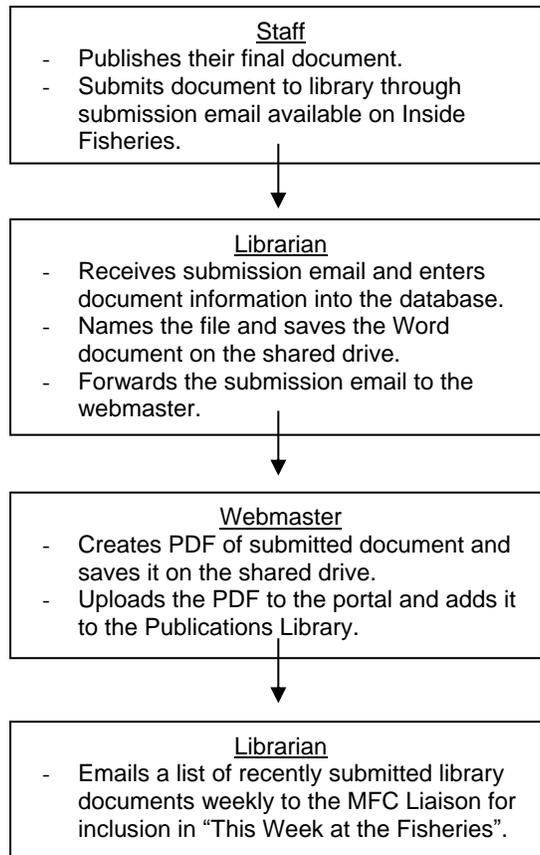
## **6.0 Publications Library**

The Library Subcommittee maintains the Publications Library on the DMF internet portal. The Publications Library is a tool available to the public allowing them to search all documents in the database. Documents are uploaded to the Publications Library as they are received.

### **6.1 Procedure**

1. When a submitted document is received by the librarian via email, the librarian enters the document information into the database. The librarian ensures the file is named properly, using the naming guidelines found in section 9.1, and saves the file in Word (read-only) format in the appropriate location in the internal folder on the library shared drive. Updates are identified with the month and year of publication at the end of the file name.
2. The librarian notifies the webmaster that a new document was submitted by forwarding him the submission email. The webmaster saves the PDF (with bookmarks, if available) to the appropriate location within the external folder. The webmaster then uploads the PDF version of the document to the portal and adds it to the Publications Library with all relevant information. Instructions for this process can be found in Appendix 3.
  - a. Updates added to the external folder and the Publications Library replace the original document.
3. The librarian maintains a list of all documents submitted each week. On Monday mornings, the librarian emails the list of new documents to the MFC liaison for inclusion in the weekly "This Week at the Fisheries". Staff, commissioners and committee members are then considered notified of the availability of new documents.

## 6.2 Procedure Flow Chart



## 7.0 Database

The Library Subcommittee maintains an electronic database of all division documents. The database is maintained in a Microsoft Access file and is located on the division's LAN on the Library shared drive. The division librarian enters the information from the submission email form into the database. All division staff will have the ability to search cataloged documents in this database. The database will provide the researcher information on each document and where to locate the document.

## 8.0 Document Submission

### 8.1 Format

Final division-produced documents are to be submitted to the Library as editable Microsoft Word files to allow for proper security measures to be taken before the document is made available to staff and the public. Older documents may be submitted in PDF format. The documents are to follow DMF formatting standards as determined by the DMF Editorial Guidelines, located on the DMF Inside Fisheries website under "Fisheries Management and Rules".

### 8.2 Responsibility

The division staff is responsible for submitting newly published documents and all final document updates to the librarian for inclusion in the DMF Library within two weeks of completion. The librarian and Library Subcommittee ensure documents are uploaded in a timely manner and staff and MFC commissioners are notified of their existence.

### 8.3 Procedure

1. A staff member publishing a new document or a document update is to submit their final product to the librarian via email to: [SVC\\_DENR.DMF.Library@ncdenr.gov](mailto:SVC_DENR.DMF.Library@ncdenr.gov).
  - a. A link to a submission email can be found on the Inside Fisheries website under "Other Links". The chart within the email is shown below. Staff is to fill out the appropriate information (as available) in the chart, attach the document, and send the email.

<b>Publication Year:</b>	
<b>Author(s):</b>	
<b>DMF Section:</b>	
<b>Organization:</b>	
<b>Title of Document:</b>	
<b>Keywords:</b>	
<b>Sampling Year(s):</b>	
<b>Type of Document:</b>	
<b>Funding Program:</b>	
<b>Funding Agency:</b>	
<b>Grant Award Number:</b>	
<b>Short Description (2-3 sentences):</b>	

- b. A submission email containing examples and explanations is below:

Categories	Examples
<b>Publication Year:</b>	1998, 1999, 2000, etc.
<b>Author(s):</b>	One author: author last name Two authors: author last name and author last name Three+ authors: primary author last name et al (please note there is no period after et al) See also section 9.1
<b>DMF Section:</b>	Fisheries Management, License & Statistics, Protected Resources, Habitat & Enhancement, Shellfish Sanitation and Recreational Water Quality, Administration, Administrative Services
<b>Organization:</b>	Non-DMF author's organization name (applicable only to DMF-funded works, for example, CRFL grants)
<b>Title of Document:</b>	Exactly how it appears in the report.
<b>Keywords:</b>	Using Appendix 1, list all primary, secondary, and tertiary keywords relevant to the document using the following format:  Primary Keyword 1, Secondary Keyword 1, Tertiary Keyword 1 Primary Keyword 2, Secondary Keyword 2, Tertiary Keyword 2
<b>Sampling Year(s):</b>	List all sampling years individually and not as a date range; ex. 2000, 2001, 2002, 2003 (not 2000-2003).
<b>Type of Document:</b>	Grant report, permit report, fishery management plan, etc.
<b>Funding Program:</b>	ACCSP, ACFCMA, SFR, CRFL, etc.

<b>Funding Agency:</b>	NOAA, NFWF, NCDMF, USFWS
<b>Grant Award Number:</b>	NA10NMF4330117, F12AF01139 Do not use old SFR grant numbers (i.e., F-28) for new grants.
<b>Short Description (2-3 sentences):</b>	The description should be concise and contain the pertinent information about the paper.

2. Library Subcommittee members will enter the new document into the library database and upload it to the Publications Library. Procedures for this process are found in section 6.1.
3. To notify staff, commissioners and committee members of recently published documents, the librarian will send a list of submitted documents on a weekly basis to the Marine Fisheries Commission liaison for inclusion in “This Week at the Fisheries”.

## 9.0 Naming Document Files

The librarian ensures that all documents contained on the library shared drive and in the database have file names that allow for search ease.

### 9.1 Guidelines

1. Document files are to be named using a “Year\_Author\_Title” convention. The file name should not include any punctuation or symbols other than the separating underscore.
  - a. Year – the publication year.
  - b. Author – the author’s last name.
    - i. Two authors – use an “Author and Author” convention. Do not use the ampersand “&”.
    - ii. Three or more authors – use an “Author et al” convention. Do not use a period after “al”.
  - c. Title – a short yet concise description of the document.
2. Document updates within the internal folder are named with the month and year of publication following the title.
  - a. For example, “2013\_Boyd et al\_Atlantic Sturgeon ITP\_June 2013”.

## 10.0 Historical Documents and Paper Copy Disposition

This section is a work in progress.

## 11.0 Training, Implementation, and Compliance

All division staff are to be trained on the library process through email distribution and review of the SOP during section and program staff meetings. This SOP is to be distributed to all new employees during program and section orientation.

Compliance guidelines are a work in progress.

The Library Subcommittee will meet annually to review this SOP, the library shared drive, the database and the Publications Library to identify deficiencies and areas for improvement. Any deficiencies will be corrected as updates to this SOP, tracked in Appendix 3.

## Appendix 1: Keywords

Keywords provided with document submissions will be used to search for that document within the Publications Library and database. When choosing keywords for document submission, use the list below to choose the most applicable primary keywords (identified in **bold**), secondary keywords (identified in *italics*), and tertiary keywords (identified as plain type). Please use all applicable primary and secondary keywords if more than one is appropriate for the document. These keywords should be listed in the keywords section of the submission email.

Example: If the document is “Spotted Seatrout Fishery Management Plan”, the appropriate keywords would be listed as “Species; Seatrout, Spotted; Fishery Management Plan”.

Primary 1; Secondary 1; Tertiary 1

Primary 2; Secondary 2; Tertiary 2

If the most applicable keywords are not listed below, division staff and the public may contact the librarian at [SVC\\_DENR.DMF.Library@ncdenr.gov](mailto:SVC_DENR.DMF.Library@ncdenr.gov) and request the addition of new keywords. The subcommittee will review and approve all suggested additions at their next meeting.

### A

#### **Administrative**

*Handbook, Employee*

*Manuals (external use only)*

Shellfish Dealer Training

Trip Ticket Dealers

*Manuals (internal use only)*

BDB Coding Manual

GIS

Safety

Wonderful World of Documentation

#### **Aquaculture**

*Algae*

*Crustacean*

*Finfish*

*Mollusk*

*Operation*

*Shellfish*

### B

### C

### D

#### **Disease**

*Crustacean*

*Finfish*

*Miscellaneous*

*Mollusk*

*Parasites*

Dermo

### E

#### **Education/Outreach**

*Ethical Angling*

*Finfish*

*Habitat*

*Protected Species*

*Recreational Fishing*

*Shellfish/Crustaceans*

### F

#### **Finfish**

*Alewife*

*Amberjack, all*

*Anadromous*

*Bass, Striped*

Compliance Report

Fishery Management Plan

Stock Assessment

*Bass, Striped, Estuarine*

Fishery Management Plan

Stock Assessment

*Bass, Striped, Hybrid*

*Billfish*

*Bluefish*

Fishery Management Plan

Stock Assessment

*Catadromous*

*Catfish, all*

*Catfish, Blue*

*Catfish, Channel*

*Catfish, White*

*Coastal Ground*

Croaker

Flounder

Spot

Spotted Seatrout

*Coastal Pelagic*

Bluefish

Mackerel

Mullet

Tarpon

*Cobia*

*Croaker, Atlantic*

Fishery Management Plan  
 Stock Assessment  
*Diadromous*  
*Dogfish, Spiny*  
 Fishery Management Plan  
 Stock Assessment  
*Dolphinfish*  
*Drum, Black*  
 Stock Assessment  
*Drum, Red*  
 Fishery Management Plan  
 Stock Assessment  
*Eel, American*  
 Fishery Management Plan  
 Stock Assessment  
*Flounder, Southern*  
 Fishery Management Plan  
 Stock Assessment  
*Flounder, Summer*  
 Fishery Management Plan  
 Stock Assessment  
*Foodfish*  
*Freshwater*  
 Bass  
 Brim  
 Catfish  
 Carp  
 Gar  
*Grouper, all*  
*Grouper, Gag*  
*Herring, Atlantic thread*  
*Herring, Blueback*  
*Herring, River*  
 Fishery Management Plan  
 Stock Assessment  
*Hind, Speckled*  
*Highly Migratory Species*  
 Fishery Management Plan  
*Hogfish*  
*Interjurisdictional*  
*Introduced, Invasive or Nuisance*  
*Kingfish*  
 Fishery Management Plan  
 Stock Assessment  
*Mackerel, King*  
 Fishery Management Plan  
 Stock Assessment  
*Mackerel, Spanish*  
 Fishery Management Plan  
 Stock Assessment  
*Menhaden, Atlantic*  
 Fishery Management Plan  
 Stock Assessment  
*Monkfish*  
*Mullet, Striped*  
 Fishery Management Plan  
 Stock Assessment  
*Mullet, White*  
*Multispecies*  
*Ocean Ground*  
 Halibut

Offshore Flounder  
*Ocean Pelagic*  
 Dolphinfish  
 Mako Shark  
 Marlin  
 Tuna, all  
 Wahoo  
*Offshore Reef*  
 Grouper, all  
 Porgy  
 Snapper, all  
 Triggerfish  
*Perch, White*  
*Perch, Yellow*  
*Pinfish*  
*Scrapfish*  
*Scup*  
 Fishery Management Plan  
 Stock Assessment  
*Sea Bass, Black*  
 Fishery Management Plan  
 Stock Assessment  
*Seatrout, Spotted*  
 Fishery Management Plan  
 Stock Assessment  
*Shad, American*  
 Fishery Management Plan  
 Stock Assessment  
*Shad, Hickory*  
 Fishery Management Plan  
 Stock Assessment  
*Shark, all*  
*Shark, Coastal*  
*Large Coastal*  
*Pelagic*  
*Small Coastal*  
*Smooth Dogfish*  
*Sheepshead*  
*Smoothhound Complex*  
*Snapper, all*  
*Snapper Grouper Complex*  
 Fishery Management Plan  
 Stock Assessment  
*Snapper, Red*  
*Spot*  
*Sturgeon, Atlantic*  
 Fishery Management Plan  
 Incidental Take Permit Application  
 Stock Assessment  
*Swordfish*  
*Tarpon*  
*Tilefish, all*  
*Tuna, all*  
*Wahoo, Atlantic*  
*Weakfish*  
*Unmarketable*  
**Fishery**  
*Bycatch*  
 Bycatch Reduction Devices (BRDs)  
 Finfish

- Fish Excluder Devices (FEDs)
- Gear Development
- Protected Species
- Seabirds/Shorebirds
- Turtle Excluder Devices (TEDs)
- Carcass Collection*
- Commercial*
  - Dealers
  - Economic Profile
  - Electronic Reporting
  - Landings Statistics
  - Licenses
  - Logbooks
  - Observers
  - Quota Monitoring
  - Trip Limits
- Dependent Surveys*
- Derelict Gear*
- Discards*
- Independent Surveys*
- Mortality*
  - Fishing
  - Fish Kills/Cold Stun Events
- Recreational*
  - CatchCards
  - Harvest Statistics
  - For-Hire
  - Licenses
  - Pier
  - Quota Monitoring
  - Size and Creel Limits
  - Tournaments
- Stock Status Reports*
- Tagging/Tag Returns*

**G**  
**Gear**

- Bait-and-Line*
- Biodegradable*
- Bycatch Reduction Devices (BRDs)*
- Circle Hook*
- Corkline*
- Culling Panels*
- Cull Rings*
- Dredge*
  - Crab
  - Clam
  - Escalator
  - Hydraulic
  - Oyster
  - Scallop
- Electrofishing*
- Fish Excluder Devices (FEDs)*
- Gig*
- Gill net*
  - Anchored/Sink*
  - Drift*
  - Float*
  - Large mesh*
  - Small mesh*
- Greenstick*

- Hand*
- Headrope*
- Hook-and-Line*
- Longline*
- Mechanical*
- Multigear*
- Net*
  - Bunt
  - Butterfly
  - Cast
  - Channel
  - Dip
  - Drop
  - Fixed
  - Fyke
  - Hoop
  - Runaround
  - Stop
  - Strike
  - Swipe
- Pot*
  - Crab
  - Eel
  - Fish
  - Lobster
  - Shrimp
- Pound net*
  - Bait
  - Flounder
  - River Herring
  - Shrimp
- Rake*
  - Bull
  - Hand
- Rod-and-Reel*
- Scoop*
- Seine*
  - Beach
  - Hand
  - Long Haul
  - Purse
- Sling*
- Spear*
- Tags*
- Tong*
  - Hand
  - Patent
- Trap*
  - Minnow
- Trawl*
  - Crab
  - Flynet
  - Otter
  - Peeler
  - Shrimp
  - Skimmer
- Trolling*
- Trotline*
- Turtle Excluder Devices (TEDs)*

**H**

**Habitat**

*Anadromous Fish Spawning Areas*  
*Artificial Reefs*  
*Coastal Habitat Protection Plan (CHPP)*  
*Cultch Planting Sites*  
*Land Use*  
*Nursery Areas*  
     Inland Primary  
     Primary  
     Secondary  
     Special Secondary  
*Enhancement*  
     Artificial Reefs  
     Oyster Sanctuaries  
     Living Shorelines  
*Protection*  
*Restoration*  
     Oyster  
     Stream Obstruction Removal  
     Wetlands  
*Sanctuaries*  
     Crab Spawning  
     Oyster  
*Shellfish Polluted Areas*  
*Strategic Habitat Areas (SHAs)*  
*Suitability Index*  
*Threats*  
     Agriculture  
     Beach Nourishment  
     Boating Activity  
     Bottom-Disturbing Fishing Gear  
     Channelization/Ditching  
     Climate Change  
     Dredging and Filling  
     Disease  
     Docks  
     Development  
     Flow Alteration/Obstruction  
     Energy Infrastructure  
     Habitat Degradation/Loss  
     Introduced, Invasive or Nuisance  
         Species  
     Marinas  
     Marine Debris  
     Mining Operations  
     Pollution  
     Sea-Level Rise  
     Sedimentation  
     Shoreline Stabilization  
     Water Quality Degradation  
*Types*  
     Ocean Hard Bottom  
     Submerged Aquatic Vegetation (SAV)  
     Shell Bottom  
     Soft Bottom  
     Water Column  
     Wetlands

**I****Interjurisdictional**

*Atlantic States Marine Fisheries Commission*

Compliance Reports  
 Fishery Management Plans  
 Meeting Memos and Summaries  
*Fishery Management Plan*  
*Mid-Atlantic Fishery Management Council*  
 Compliance Reports  
 Fishery Management Plans  
 Meeting Memos and Summaries  
*South Atlantic Fishery Management Council*  
 Compliance Reports  
 Fishery Management Plans  
 Meeting Memos and Summaries

**Invertebrates**

*Benthic*  
*Boring Sponge*  
*Comb Jelly*  
*Coral*  
*Gastropods*  
*Introduced, Invasive or Nuisance*  
*Isopods*  
*Jellyfish*  
*Sand Dollar*  
*Sea Cucumber*  
*Sea Urchins*  
*Segmented Worms*  
*Tunicates*

**J****K****L****M****Management**

*Agencies/Commissions*  
     Atlantic States Marine Fisheries  
         Commission (ASMFC)  
     Department of Environment & Natural  
         Resources (DENR)  
     Division of Marine Fisheries (DMF)  
     Marine Fisheries Commission (MFC)  
     Mid-Atlantic Fisheries Management  
         Council (MAFMC)  
     National Marine Fisheries Service  
         (NMFS)  
     South Atlantic Fisheries Management  
         Council (SAFMC)  
     Wildlife Resources Commission  
         (WRC)  
*Allocations*  
     Limited Entry  
*Areas*  
     Albemarle Sound Management Area  
         (ASMA)  
     Central  
     Central-Southern Management Area  
         (CSMA)  
     Northern  
     Pamlico

Pamlico Sound Gill Net Restricted Area (PSGNRA)  
 Southern  
*Environmental Impact Statements*  
*Fishery Management Plans*  
 Law  
     Enforcement  
     Implications  
*Licenses*  
     Commercial  
     Recreational  
*Permits*  
     Aquaculture  
     Biomedical Use  
     Dealer  
     Fishing  
     Incidental Take  
     Under Dock Oyster Culture  
*Quotas*  
     Commercial Quota Monitoring  
     Individual Fishery Quota (IFQ)  
     Individual Transferable Quota (ITQ)  
     Recreational  
*Rules and Regulations*  
*Shellfish*  
     Leases  
     Franchises  
     Management areas  
*Socioeconomics*  
*Stock Assessments*

**Marine Fisheries Commission**

*Minutes*

**N**

**O**

**P**

**Programs (Division)**

*Artificial Reef Program*  
*At-Sea Observer Program*  
*Carcass Collection Program*  
*Citation Program*  
*Coastal Angling Program (CAP)*  
*Coastal Habitat Protection Plan (CHPP)*  
*Coastal Recreational Fishing License Grant Program (CRFL)*  
*Cultch Planting Program*  
*Habitat Protection Program*  
*Marine Mammal Stranding Response Program*  
*Marine Recreational Fishery Statistics Survey (MRFSS)*  
*Marine Recreational Information Program (MRIP)*  
*Oyster Sanctuary Program*  
*Oyster Shell Recycling Program*  
*Shellfish Habitat Mapping Program*  
*Shellfish Rehabilitation Program*  
*Shellfish Sanitation Program*

*Trip Ticket Program*  
*Under Dock Oyster Culture Program*

**Protected Species**

*Marine Mammals*  
*Turtles, Sea*  
     Incidental Take Permit  
     Incidental Take Permit Application  
*Seabirds/Shorebirds*  
*Sturgeon, Atlantic*  
     Incidental Take Permit  
     Incidental Take Permit Application  
*Sturgeon, Shortnose*

**Q**

**R**

**Research/Surveys**

*Gear Development*  
*Genetics*  
*Life History*  
     Age  
     Community Structure  
     Competition  
     Disease Incidence  
     Distribution  
     Exploitation  
     Food Habits  
     Fecundity  
     Growth  
     Larvae  
     Maturity  
     Movement  
     Natural Mortality  
     Sex Ratio  
*Population Dynamics*  
     Abundance, Adult  
     Abundance, Juvenile  
     Maturity  
     Migration  
     Mortality, Fishing  
     Mortality, Release  
     Predation  
     Recruitment  
     Reproduction  
     Spatfall  
     Spawning  
     Stocking  
     Stock Structure  
     Survival  
     Tagging  
     Telemetry

*Programs*

100 – Juvenile Anadromous Sampling  
 101 – Juvenile Anadromous Survey in the Cape Fear and New Rivers  
 105 – Striped Bass Nursery Area Ecology Study  
 110 – Albemarle Non-Anadromous Juvenile Study

- 115 – Albemarle Non-Anadromous Spawning Area Survey
- 118 – North Carolina Estuarine Reef Essential Fish Habitat Survey (EFH)
- 119 – North Carolina Estuarine Gag Trawl Survey (JAI)
- 120 – North Carolina Estuarine Trawl Survey
- 122 – Nursery Area Pilot PNA Study
- 123 – Red Drum Juvenile Survey
- 125 – Vandemere Creek Study
- 126 – Orchard Creek Study
- 127 – Assessment of Fish Populations in Lower Cape Fear River
- 130 – Freshwater Drainage Study
- 135 – Striped Bass Independent Gill Net Survey
- 140 – Artificial Reef Monitoring
- 141 – Deployment Density Study/Fish Count Survey
- 142 – Deployment Density Study/Recreational Hook and Line Availability Index
- 143 – Gag Ingress Study
- 145 – Striped Mullet CPUE
- 146 – Striped Mullet Electroshock Survey
- 150 – Adult Anadromous Spawning Area Survey
- 160 – Anadromous Egg and Larval Survey
- 171 – Mullet Beach Seine Fishery
- 175 – DMF Eel Pot Sampling
- 176 – North Carolina American Eel Elver Young of the Year (Y-O-Y) Survey
- 190 – Pamlico River Survey
- 195 – Pamlico Sound Survey
- 300 – Anadromous Inshore Tagging
- 301 – Atlantic and Shortnose Tagging
- 305 – Ocean Shad Tagging
- 310 – Red Drum MARFIN
- 311 – Striped Bass CRFL
- 315 – Statewide Striped Mullet Tagging
- 320 – Scrap Fish Tagging
- 325 – Dolphin Tagging
- 330 – Flounder Tagging
- 340 – Albemarle Sound Non-Anadromous Tagging
- 350 – Croaker Tagging
- 355 – Spotted Seatrout Conventional Tagging
- 356 – Electronic Tagging Program
- 360 – Red Drum Tagging
- 365 – Red Drum Longline Survey
- 370 – King Mackerel Tagging
- 380 – Spanish Mackerel Tagging
- 390 – Grouper Tagging
- 400 – Anadromous Commercial Harvest
- 405 – Trip Ticket Landed Unit to Whole Weight Conversions
- 410 – Anadromous Commercial Samples
- 420 – Striped Bass Commercial Harvest
- 421 – Striped Bass Flight Survey
- 422 – Striped Bass Logbook Survey
- 430 – Albemarle Non-Anadromous Commercial Harvest
- 431 – Sciaenid Pound Net
- 432 – Flounder Pound Net Fishery (IJFA)
- 433 – Winter Trawl Fishery (IJFA)
- 434 – Ocean Gill Net Fishery (IJFA)
- 435 – Beach Seine Fishery
- 436 – Commercial Crab Harvest Samples
- 437 – Long Haul Seine Fishery (IJFA)
- 438 – Offshore Live Bottom Fishery (IJFA)
- 439 – Coastal Pelagic (IJFA)
- 450 – Scrap Fish Studies
- 451 – King Mackerel Tournament Sampling
- 455 – Sciaenid Pound Net Bycatch
- 456 – Sciaenid Pound Net Bycatch Reduction Studies
- 457 – Long Haul Seine Fishery Bycatch Reduction Studies
- 458 – Long Haul Bycatch Mortality Study
- 459 – Hook and Line Discard Mortality
- 460 – Miscellaneous Species Survey
- 461 – Estuarine Gill Nets and Seine Sampling
- 462 – Estuarine Gill Net Selectivity
- 463 – Ocean Sink Gill Net Bycatch Study
- 464 – Estuarine Gillnet Mortality
- 465 – Cold Stun Sampling
- 466 – Sea Turtle Bycatch Monitoring
- 467 – Alternative Platform Observations
- 468 – Commercial Cast Net Fishery
- 469 – Atlantic and Shortnose Sturgeon Gill Netting
- 471 – Pamlico River Blue Crab Fishery
- 475 – Gig Fishery Survey
- 476 – Commercial Gig Fishery Survey
- 482 – Gill Net Selectivity
- 510 – Juvenile Shrimp Sampling
- 515 – Shrimp Pot Study
- 516 – Shrimp Cast Net Study
- 517 – Fish Pot Study
- 518 – Pink Shrimp Migration
- 520 – Shrimp Tagging
- 530 – DMF Crab Pot Sampling

531 – Commercial Crab Pot Fishery	916 – Fisheries Independent Assessment Program/Ocean Gillnet
532 – Blue Crab Morphometric Study	920 – Gear Testing (Gill Net)
533 – Blue Crab Sentinel Study	924 – Flounder Pound Net Escape Panels
540 – Blue Crab Trawl Program	925 – Estuarine Trawl Survey Gear Comparison
543 – Ghost Pot Study	928 – Albemarle Sound Gill Net Study (Striped Bass)
547 – Biodegradable Panels in Crab Pots	930 – Aging Samples
550 – Blue Crab Tagging	940 – Artificial Reef Buoy Tracking System
555 – Flynet Selectivity Study	F41 – Artificial Reef Monitoring and Evaluation
556 – Flounder Trawl	
557 – Mesh Selectivity	<i>Surveys</i>
558 – Flounder Net Mesh Selectivity	Angler (Fishing Activity)
559 – Fyke Net Study	Creel
561 – Mesh Selectivity for Striped Mullet in the Run-Around Gill Net Fishery in the Eastern Pamlico Sound and Roanoke Sound	Dealer
562 – Ocean TED Gear Testing	Economic, Commercial
565 – Separator Trawl Testing	Economic, Recreational
568 – Fin Fish Excluder Testing in the Shrimp Trawl Fishery	For-Hire
570 – Commercial Shrimp Trawl Fishery Characterization	
600 – Cultch Plantings	<b>S</b>
601 – Oyster Sanctuary Deployment	<b>Sanitary Surveys</b>
610 – Spatfall Evaluation	<i>South</i>
611 – Oyster Sanctuary Evaluations	A-1
615 – Spatfall Evaluation	A-2
616 – Oyster Recruitment Survey	A-3
620 – Seed Clam Study	B-1
625 – Oyster Shoal Survey	B-2
635 – Shellfish Bottom Mapping	B-3
637 – North Carolina’s Cooperative Interagency SAV Mapping and Monitoring Program	B-4
640 – Hard Clam Survey	B-5
645 – Mechanical Clam Harvest Survey	B-6
646 – Commercial Shellfish Harvest	B-7
650 – Clam Escalator Dredge Study	B-8
655 – Mechanical Oyster Harvest Survey	B-9
660 – Shellfish Lease Investigations	C-1
675 – Oyster Disease Survey	C-2
695 – Calico Scallop Survey	C-3
697 – Bay Scallop Monitoring	
700S – R/V Dan Moore Cruises	<i>Central</i>
800 – Marine Recreational Fishery Statistics Survey	C-4
810 – Albemarle Sound Creel Survey	D-1
830 – Artificial Reef Catch Survey	D-2
850 – Food Habits Survey	D-3
900 – Artificial Reef Site and Material	D-4
905 – Trawl Vessel Contracted	E-1
909 – Albemarle Sound Water Quality Monitoring	E-2
910 – Fish Kill Samples	E-3
911 – Bluefish PCB	E-4
915 – Fisheries Independent Assessment (FIA)	E-5
	E-6
	E-7
	E-8
	E-9
	F-1
	F-2
	F-3
	F-4
	F-5

	F-6	B-1
	G-1	B-2
	G-2	B-3
<i>North</i>		B-4
	G-3	B-5
	G-4	B-6
	G-5	B-7
	G-6	B-8
	H-1	B-9
	H-2	C-1
	H-3	C-2
	H-4	C-3
	H-5	
	I-2	<i>Central</i>
	<i>I Areas</i>	C-4
		D-1
		D-2
<b>Shellfish/Crustacean</b>		D-3
<i>Clam, Hard</i>		D-4
	Fishery Management Plan	E-1
	Stock Assessment	E-2
	Sanitary Survey Reports	E-3
<i>Clam, Atlantic Rangia</i>		E-4
<i>Crab, Blue</i>		E-5
	Fishery Management Plan	E-6
	Hard	E-7
	Peeler	E-8
	Soft	E-9
	Stock Assessment	F-1
<i>Crab, Horseshoe</i>		F-2
	Compliance Report	F-3
	Fishery Management Plan	F-4
	Stock Assessment	F-5
<i>Crab, Stone</i>		F-6
<i>Lobster, American</i>		G-1
<i>Lobster, Spiny</i>		G-2
<i>Multispecies</i>		
<i>Mussels</i>		<i>North</i>
<i>Octopus</i>		G-3
<i>Oyster, Eastern</i>		G-4
	Fishery Management Plan	G-5
	Stock Assessment	G-6
	Sanitary Survey Reports	H-1
<i>Scallop, Bay</i>		H-2
	Fishery Management Plan	H-3
	Stock Assessment	H-4
<i>Scallop, Atlantic Calico</i>		H-5
<i>Scallop, Sea</i>		I-2
<i>Shrimp</i>		<i>I Areas</i>
	Fishery Management Plan	
	Stock Assessment	
<i>Shrimp, Brown</i>		<b>Statistics</b>
<i>Shrimp, Pink</i>		<i>Commercial</i>
<i>Shrimp, White</i>		Effort
<i>Squid</i>		Harvest
<i>Whelk</i>		Landings
		License Sales
		<i>Methods</i>
		Analysis
		Sampling
		<i>Recreational</i>
		Effort
		Harvest
		License Sales
<b>Shellfish Growing Areas</b>		
<i>South</i>		
	A-1	
	A-2	
	A-3	

**T****Technology**

ALVIN  
 Biological Database (BDB)  
 Electronic Mobile Devices  
 Electronics  
     Depth Recorders  
     GoPro  
     GPS  
     Lorans  
     Vemco  
     YSI  
 Geographic Information Systems (GIS)  
 Image Processing  
 Fisheries Information Network (FIN)  
 Logbooks  
 Passive Acoustic Monitoring Systems  
 Side Scan Sonar

**U****V****Vertebrates**

Amphibians  
 Birds  
     Seagulls  
     Pelicans  
     Terns  
  
 Introduced, Invasive or Nuisance  
 Marine Mammals  
     Dolphins  
     Porpoises  
     Seals  
     Whales  
 Rays  
 Reptiles  
     Snakes  
     Terrapins  
     Turtles  
 Skates

**W****Waterbody**

Bay, Abel  
 Bay, Batchelor  
 Bay, Big Porpoise  
 Bay, Chocowinity  
 Bay, Bull  
 Bay, Deep Cove  
 Bay, Edenton  
 Bay, Gaylord  
 Bay, Judith Narrows  
 Bay, Jones  
 Bay, Kitty Hawk  
 Bay, Little Porpoise  
 Bay, Middle  
 Bay, Raleigh (Cape Hatteras)  
 Bay, Rose  
 Bay, Sound

Bay, Spencer  
 Bay, Stumpy Point  
 Bay, Swan  
 Bay, Swanquarter  
 Bay, Tolers  
 Bay, West  
 Bay, White Perch  
 Canal, Outfall  
 Creek, Bath  
 Creek, Big Flatty  
 Creek, Blounts  
 Creek, Broad  
 Creek, Cypress  
 Creek, Davis  
 Creek, Deep  
 Creek, Duck  
 Creek, Goose  
 Creek, Hobb  
 Creek, Jacks  
 Creek, Juniper  
 Creek, Little Goose  
 Creek, Long  
 Creek, Mackeys  
 Creek, Mallard  
 Creek, Middins  
 Creek, Middle  
 Creek, Mixon  
 Creek, North  
 Creek, Oyster  
 Creek, Roman  
 Creek, Rose Bay  
 Creek, Runyon  
 Creek, St. Clair  
 Creek, Webster  
 Creek, Willow  
 Estuarine waters  
 Harbor, Mouse  
 Inlet, Beaufort  
 Inlet, Bogue  
 Inlet, Drum  
 Inlet, Hatteras  
 Inlet, New River  
 Inlet, Ocracoke  
 Inlet, Oregon  
 Inlet, Shallotte  
 Inlet, Tubbs  
 Inshore waters  
 Multibody  
 Ocean, Atlantic  
 River, Bay  
 River, Black  
 River, Brunswick  
 River, Cape Fear  
 River, Chowan  
 River, Eastmost  
 River, Little  
 River, Long Shoal  
 River, Middle  
 River, Pamlico  
 River, Pungo  
 River, Newport

<i>River, North</i>		
<i>River, Neuse</i>		
<i>River, Pasquotank</i>		
<i>River, Perquimans</i>		
<i>River, Roanoke</i>		
<i>River, Scuppernong</i>		
<i>River, Tar</i>		
<i>River, Trent</i>		
<i>River, White Oak</i>		
<i>River, Yeopim</i>		
<i>Riverine waters</i>		
<i>Sound, Albemarle</i>		
<i>Sound, Back</i>		
<i>Sound, Bogue</i>		
<i>Sound, Core</i>		
<i>Sound, Croatan</i>		
<i>Sound, Currituck</i>		
<i>Sound, Masonboro</i>		
<i>Sound, Middle</i>		
<i>Sound, Myrtle</i>		
<i>Sound, Pamlico</i>		
<i>Sound, Roanoke</i>		
<i>Sound, Stump</i>		<b>X</b>
<i>Sound, Topsail</i>		<b>Y</b>
<i>Sound, Wrightsville</i>		<b>Y</b>
<b>Water Quality</b>		<b>Z</b>

*Biological*

Bacterial Contamination  
 Bioaccumulation  
 Fish Kill

*Environmental*

Acid Rain  
 Eutrophication  
 Non-Point Source Pollution  
 Oxygen Depletion  
 Point Source Pollution  
 Red Tide  
 Sedimentation  
 Turbidity

*Parameters/Data*

Conductivity  
 Dissolved Oxygen  
 pH  
 Salinity  
 Temperature  
 Turbidity

## Appendix 2: Webmaster Process Instructions

The webmaster is responsible for uploading documents to the portal and web library. On occasion, when the webmaster is unavailable and has made previous arrangements, other subcommittee members may need to help with these duties.

1. Logging on to the portal:
  - a. Open the Firefox web browser to the DMF homepage.
  - b. Locate and click on "Employee Sign In" at the top right corner of the page.
  - c. Log on using the appropriate NCID and password which is the same log-in information used to access Outlook.
  - d. Locate and click on "My Places" in the top right corner of the page.
  - e. Select "Marine Fisheries" in the pop-up menu.
  - f. Locate and click on "Public" in the top right corner of the page.
  - g. Log-in is successful. The tools menu is now available.
2. Uploading files to the portal:
  - a. After logging on to the portal, navigate to the DMF public homepage.
  - b. Under the tools menu in the top right corner of the page, click on "Control Panel".
  - c. Select "Document Library" on the left hand side of the page.
  - d. On page five of the Document Library, select the "Library" folder. It is important that no changes are made to any folder other than this one.
  - e. Select the folder to which the files will be uploaded.
  - f. Click on "Add Document".
  - g. Select "Browse" and locate the file(s) within "My Computer". Click on "Save".
  - h. Click on "Upload Files". The file(s) will begin to upload to the portal. There is a process bar for each file being uploaded.
  - i. After the files finish uploading, click on the name of the folder (above the files) to return to that folder.
  - j. The file now resides in that folder on the portal.
3. Adding data entries to the Library Database:
  - a. After logging on to the portal, navigate to the DMF public homepage.
  - b. Under the tools menu in the top right corner of the page, click on "Control Panel".
  - c. On the left side of the page, select "Web Content" and click on the "Structures" tab under "Content for Marine Fisheries".
  - d. Locate and click on "Actions" at the lower right corner of the page.
  - e. Select "View Web Content" from the pop-up menu.
  - f. Click on the "Add Web Content" button.
  - g. After deciding which document to add to the database, fill out the web content form entirely. The "Download Link" box needs to contain the hyperlink for the document on the control panel.
    - i. In the navigation menu on the left side of the screen, select "Document Library" and right click on "Control Panel" to open it in a new tab.
    - ii. Click on the "Library" folder on page five of the Document Library.
    - iii. Select the folder for the document to be added to the library.
    - iv. Locate the document PDF to be added to the library and click on "Actions" and then "Edit" from the pop-up menu.
    - v. From the top URL box, select and copy the entire URL for the document.
    - vi. Paste the URL into the "Download Link" box on the Web Content page.
  - h. Click on the "Save and Approve" button at the bottom of the Web Content page.
  - i. The document is now added to the web library.

### Appendix 3: SOP Updates

Version	Date	Changes Made
V.1.0	June 2010	Original effective date
V.2.0	February 2014	Overall updates made to reflect new library goals and processes
V.2.1	March 2014	Updates to Appendix 1