Atlantic States Marine Fisheries Commission

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MEMORANDUM

July 30, 2014

To: **South Atlantic State-Federal Management Board**

From: **Spot Plan Review Team and Atlantic Croaker Technical Committee**

RE: **Spot and Atlantic Croaker Management Triggers- 2014 Update**

The Spot Plan Review Team (PRT) and Atlantic Croaker Technical Committee (TC) met in July 2014 via conference call to review the Spot and Atlantic Croaker Management Triggers for the 2013 fishing year.

For Atlantic Croaker, the recreational landings increased relative to 2012, with recreational harvest at 3.9 million pounds (2012 were 3.01 million pounds), making the 2013 harvest much higher than the previous two year average of 2.9 million pounds (136 percent of '11-'12 average). In evaluating the Atlantic Croaker commercial landings, landings decreased from 11.6 million pounds in 2012 to 9.98 million pounds in 2013. In spite of being the lowest commercial landings for Atlantic Croaker in 20 years, landings did not fall below the previous two year average ('11-'12) of11.9 million pounds, making the 2013 commercial landings 83.7 percent of the previous two year average. As such the **management triggers for Atlantic Croaker did not trip**.

For Spot, both commercial and recreational landings increased relative to 2012; commercial landings increased from 1.4 million pounds in 2012 to 3.5 million pounds in 2013, while recreational landings in numbers of fish increased from 4.7 million fish in 2012 to 8.2 million fish in 2013. While commercial landings did increase by more than twice 2012 landings, they remained below the 10 percentile (4.8 million pounds). In evaluating the fishery independent survey data, both the NMFS groundfish trawl survey and Maryland Chesapeake Bay Seine survey indices decreased relative to 2012 numbers, while the SEAMAP (fall and winter) survey increased from 2012. All three surveys remained above their 10 percentile, and as such the **management triggers for Spot did not trip**.

Given the issues in tracking trends in both Spot and Atlantic Croaker fisheries with the current management triggers, the Spot PRT and Atlantic Croaker TC still endorse the use of the Traffic Light Approach (TLA) to monitor these species as proposed in the Draft Addendum to both species Fishery Management Plans.

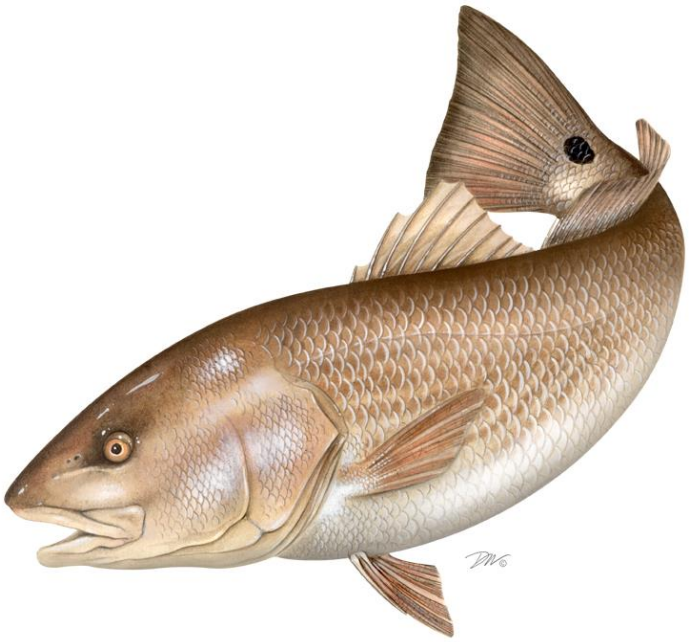
If you have any questions, please contact me at krootes-murdy@asmfc.org or (703) 842-0740.

M14-71

2014 REVIEW OF THE ATLANTIC STATES MARINE FISHERIES COMMISSION FISHERY MANAGEMENT PLAN FOR

RED DRUM (*Sciaenops ocellatus*)

2013 FISHING YEAR



The Red Drum Plan Review Team
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Lee Paramore, North Carolina Division of Marine Fisheries
Kirby Rootes-Murdy, Atlantic States Marine Fisheries Commission, Chair

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I. Status of the Fishery Management Plan

Date of FMP Approval:	Original FMP – October 1984
Amendments:	Amendment 1 – October 1991 Amendment 2 – June 2002
Management Areas:	The Atlantic coast distribution of the resource from New Jersey through Florida Northern: New Jersey through North Carolina Southern: South Carolina through the east coast of Florida
Active Boards/Committees:	South Atlantic State/Federal Fisheries Management Board; Red Drum Technical Committee, Stock Assessment Subcommittee, Plan Development Team, Plan Review Team, Stock Enhancement Subcommittee; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted an interstate Fishery Management Plan (FMP) for Red Drum in 1984. The original management unit included the states from Florida to Maryland. In 1988, the Interstate Fisheries Management Program (ISFMP) Policy Board requested that all states from Florida to Maine implement the plan's recommended management regulations to prevent development of northern markets for southern fish. All Atlantic coastal states Florida through New Jersey are now required to implement the provisions of the FMP, while New York through Maine (including Pennsylvania) are encouraged to implement consistent provisions to protect the red drum spawning stock.

In 1990, the South Atlantic Fishery Management Council (Council) adopted an FMP for red drum that defined overfishing and optimum yield (OY) consistent with the Magnuson Fishery Conservation and Management Act of 1976. Adoption of this plan prohibited the harvest of red drum in the exclusive economic zone (EEZ), a moratorium that remains in effect today. Recognizing that all harvest would take place in state waters, the Council FMP recommended that states implement measures necessary to provide the target level of at least 30% escapement.

Consequently, the ASMFC updated the interstate FMP in 1991 with Amendment 1, which included the goal to attain optimum yield from the fishery over time. Optimum yield was defined as the amount of harvest that could be taken while maintaining the spawning stock biomass per recruit (SSBR) level at or above 30% of the level that would result if fishing mortality were zero. However, the lack of adequate information on the status of the adult stock resulted in the use of a 30% escapement rate of sub-adult red drum to the off-shore adult spawning stock.

Substantial reductions in fishing mortality were necessary to achieve the escapement rate; however, because of a lack of data on the status of adult red drum along the Atlantic coast, a phase-in approach with a 10% SSBR goal was adopted. States were recommended to implement or maintain harvest controls necessary to attain the goal. All states in the management unit north of Florida modified regulations and/or commercial quotas to reach this goal. Florida maintained its strict regulations that were thought to exceed the target escapement rate. The harvest regulations remained unchanged from 1992-1998, except in Florida where regulations were relaxed somewhat by opening the previously closed March-May period.

As hoped, these management measures led to increased escapement rates of juvenile red drum. Escapement estimates for a northern region from New Jersey through North Carolina (18%) and a southern region from South Carolina through the east coast of Florida (17%) were estimated to be above the 10% phase-in goal, yet still below the ultimate goal of 30% (Vaughan and Carmichael 2000). These regions were based on stock identity, mark-recapture experiments, life history, habitat preferences, human dimensions of the fisheries, and management goals. North Carolina, South Carolina, and Georgia implemented substantive changes to their regulations from 1998-2001 that further restricted the harvest of red drum.

The Council adopted new definitions of OY and overfishing for red drum in 1998. Optimum yield was redefined as the harvest associated with a 40% static spawning potential ratio (sSPR), overfishing as an sSPR less than 30%, and threshold overfishing as 10% sSPR. A year later, the Council also recommended that management authority for red drum be transferred to the states through the Commission's Interstate Fishery Management Program (ISFMP) process. One reason the Council recommended this transfer to the ASMFC was the inability to accurately determine an overfished status and therefore stock rebuilding targets and schedules as required under the revised Sustainable Fisheries Act of 1996. The management transfer would necessitate the development of an amendment to the interstate FMP, in order to include the provisions of the Atlantic Coastal Fisheries Cooperative Management Act.

The ASFMC adopted Amendment 2 to the Red Drum FMP in June 2002 (ASMFC 2002), which serves as the current management plan. The goal of Amendment 2 is to achieve and maintain the OY for the Atlantic coast red drum fishery as the amount of harvest that can be taken by U.S. fishermen while maintaining the sSPR at or above 40%. There are four plan objectives:

- Achieve and maintain an escapement rate sufficient to prevent recruitment failure and achieve an sSPR at or above 40%.
- Provide a flexible management system to address incompatibility and inconsistency among state and federal regulations which minimizes regulatory delay while retaining substantial ASMFC, Council, and public input into management decisions; and which can adapt to changes in resource abundance, new scientific information, and changes in fishing patterns among user groups or by area.
- Promote cooperative collection of biological, economic, and sociological data required to effectively monitor and assess the status of the red drum resource and evaluate management efforts.
- To restore the age and size structure of the Atlantic coast red drum population.

The management area extends from New Jersey through the east coast of Florida, and is separated into a northern and southern region with the division occurring at the North Carolina/South Carolina border. The sSPR of 40% is considered a target; an sSPR below 30% (threshold level) results in an overfishing determination for red drum.

All states in the management area were required (rather than recommended as in previous versions of the plan) to implement appropriate recreational bag and size limit combinations needed to attain the target sSPR. Amendment 2 also required all states to maintain their current,

or implement more restrictive, commercial fishery regulations. The states implemented the provisions of Amendment 2 by January 1, 2003. See Table 1 for state commercial and recreational regulations in 2012.

Following the approval of Amendment 2 in 2002, the process was begun to transfer management authority, including an Environmental Assessment and public comment period. The final rule for the transfer of management authority became effective November 5, 2008. It repeals the federal Atlantic Coast Red Drum Fishery Management Plan and transfers the management authority of Atlantic red drum in the exclusive economic zone from the South Atlantic Fishery Management Council, in cooperation with the Mid-Atlantic Fishery Management Council, under the Magnuson-Stevens Conservation and Management Act to the Atlantic States Marine Fisheries Commission under the Atlantic Coastal Fisheries Cooperative Management Act, as requested by the Councils and the Commission.

II. Status of the Stocks

At present, only overfishing status can be determined for red drum (SAFMC 2009). The threshold (below which the stock is experiencing overfishing) and the target fishing mortality rates are those that achieve 30 % and 40 % sSPR, respectively. The three-year average sSPR is compared to these reference points. The stock is assessed by region. The next benchmark assessment is scheduled for 2015.

Northern Region

Recruitment (age 1 abundance) has fluctuated widely and without apparent trend since 1989 (Figure 1). Abundance of age 1 – 3 red drum increased during 1990 – 2000 after which it fluctuated widely (Figure 2). The initial increase in abundance of these age groups can be explained by the reduction in exploitation rates in the early part of the time series with relative stability since then (Figure 3).

The trend in the three-year average sSPR indicates low sSPR at the start of the time series with increases during 1990 – 1997 and fluctuations thereafter (Figure 4). The average sSPR has been above the overfishing threshold ($F_{30\%}$) since 1994, and with the exception of one year (2002) has been at or above the target ($F_{40\%}$) since 1996. Fishing pressure and mortality appear to be stable and holding near the target fishing mortality. There is a high probability that the stock is not subject to overfishing. The average sSPR is also likely above the target benchmark. Fishing mortality could be allowed to increase relative to the overfishing threshold, but the level of risk associated with any increase should be considered and reviewed in conjunction with Addendum II's goal of maintaining a 40% SPR.

Southern Region

The relative trend in recruitment (age 1 abundance) has fluctuated without apparent trend since 1989 (Figure 1). The relative trend in abundance of age 1 – 3 red drum increased during 1989 – 1992, declined during 1992 – 1998 and has fluctuated thereafter (Figure 2). As with the northern stock, the initial increase in abundance of these age groups can be explained by the reduction in exploitation rates in the early part of the time series. There appears to have been a slight increase

in exploitation rates since 1990 (Figure 3). This is reflected in the long-term decline in the three-year average sSPR since 1990 (Figure 4).

There is a high level of uncertainty around the sSPR estimates for the southern region. More work is needed to make definitive statements about sSPR, but it is likely that the average sSPR in 2007 was above the overfishing threshold ($F_{30\%}$), although not above the target as likely in the northern region. The stock is therefore likely not subject to overfishing at this time. Due to the uncertainties, it is not possible to determine status in relation to the target of 40% sSPR.

III. Status of the Fishery

The following discussion utilizes the results from direct queries of the MRIP data through their website. Adjustments needed to make these consistent through time (convert pre-2004 MRFSS data, adjust for changes in for-hire component of survey, and deletion of 1981-85 headboat data) have not been made here.

Total red drum landings from New Jersey through the east coast of Florida in 2013 are estimated at 3.1 million pounds (Tables 2 and 3, Figure 5). This represents a 69.6% increase from the total harvest in 2012 and is above (88%) the previous ten-year (2003-2012) average. The commercial and recreational fisheries harvested 13 and 87% of the total, respectively. In 2013, 51% of the total landings came from the South Atlantic region, where the fishery is exclusively recreational, and 48% from the Mid-Atlantic region (Figure 6).

Few commercial landings of red drum have been recorded in states north of Maryland in recent years, with the exception of New Jersey (Table 2). Coastwide commercial landings show no particular temporal trends, ranging from approximately 55,000 to 440,000 pounds annually over the last 50 years (Figure 5). The greatest harvest was taken in 1950, and the lowest in 2004. In 2013, coastwide commercial harvest increased from 77,513 pounds in 2011 to 402,020 pounds, the majority (92**%**) from North Carolina (Table 2), the second highest total in last 30 years. Historically, the major commercial harvesters were North Carolina and Florida. However, commercial harvest has been prohibited in Florida under state regulation since January 1988. South Carolina also banned the commercial harvest or sale of native caught red drum beginning in 1987, and in 2013 Georgia designated Red Drum Gamefish status, eliminating the commercial harvest and sale.

In North Carolina, a daily commercial trip limit and an annual cap of 250,000 pounds, with payback of any overage, constrain the commercial harvest. The red drum fishing year in North Carolina extends from September 1 to August 31 (all other states operate on a calendar year). In 2008, the Management Board approved using the fishing year to monitor the cap. During the 2009/2010 fishing year, North Carolina had an overage of 25,858 lbs and set its 2010/2011 fishing cap at 224,142 lbs. North Carolina's harvest for 2010/2011 was 126,185 pounds (2011 calendar harvest was 91,951 pounds), which corrected the overage. For fishing year 2012/2013, North Carolina's harvest totaled 370,080 pounds, with an overage of 120,080 lbs.

Recreational harvest of red drum peaked in 1984 at 1.05 million fish (or 2.6 million pounds; Tables 3 and 4). Since 1988, the number has fluctuated without trend between 250,000 and

760,000 fish (800,000 to 2.6 million pounds; Figures 5 and 7). Recreational harvest increased from 504,287 fish (1.7 million pounds) in 2012 to 760,933 fish (2.7 million pounds) in 2013. The 2013 harvest represents a 50% increase in numbers and a 58% increase in pounds from the previous ten year (2002-2011) average. Florida anglers landed the largest share of the coastwide recreational harvest in numbers (39%), followed by North Carolina (22%) and South Carolina (12%). Anglers release far more of the red drum they catch than they keep; the percent of the catch released is generally over 80% during the last decade (Figure 7). Recreational releases show an increasing trend over the time series. The proportion of releases decreased in 2013 to 81% (versus 91% in 2012), and the overall number of fish released decreased by approximately 5.7 million to 3.2 million fish (Figure 3, Table 5). It is estimated that 8% of released fish die as a result of being caught, resulting in an estimated 263,247 dead discarded fish in 2013 (Table 5). Recreational removals from the fishery are thus estimated to be 1,024,180 fish in 2013 (Figure 8).

IV. Status of Assessment Advice

Current stock status information comes from the 2009 benchmark stock assessment (SAFMC 2009) completed by the ASMFC Red Drum Stock Assessment Subcommittee and Technical Committee, peer reviewed by an independent panel of experts at the Southeast Data, Assessment, and Review (SEDAR) 18, and approved by the South Atlantic State-Federal Fisheries Management Board for use in management decisions. Previous interstate management decisions were based on regional assessments conducted by Vaughan and Helser (1990), Vaughan (1992, 1993, 1996), and Vaughan and Carmichael (2000). Several states have also conducted state-specific assessments (e.g., Murphy and Munyandorero 2009; Takade and Paramore 2007).

The 2009 stock assessment uses a statistical catch at age (SCA) model with age-specific data for red drum ages 1 through 7+. The Stock Assessment Subcommittee decided to move away from virtual population analyses used in past assessments primarily because of the assumption inherent in these models that the catch at age is known without error, whereas there is limited data to describe the catch of red drum early in the time series. Data available for the years 1989 through 2007 were included from the following sources: commercial and recreational harvest and discard data, fishery-dependent and -independent biological sampling data, tagging data, and fishery-independent survey abundance data.

The SEDAR 18 Review Panel considered the use of an SCA model appropriate given the types of data available for red drum. With certain revisions made to the data and the model configurations before or at the Review Workshop, the SEDAR 18 Review Panel supported the use of the final model runs. For the northern region, the Review Panel agreed that the model was informative of age 1 – 3 abundance and exploitation rates, but not for older age groups. The model was also found to be informative of annual trends in static spawning potential ratio (sSPR) and the 2005 – 2007 average sSPR. For the southern region, the Review Panel agreed that the model was informative of relative (not absolute) trends in age 1 – 3 abundance and exploitation, but not for older age groups. The model was also considered to be informative of relative trends in annual sSPR and the three-year average sSPR, this result being highly conditional on the estimated fishery selectivity pattern. These results for the southern region allow for only general statements on stock status.

The Review Panel accepted the existing threshold and target overfishing benchmarks of 30% sSPR and 40% sSPR for red drum. However, the Review Panel did not consider annual changes in sSPR to be informative and recommended adopting a three-year running mean of estimated annual sSPR as the indicator to compare to the management benchmarks. Because of the high uncertainty in the age 4 -7^{+} dynamics, the Review Panel did not see value in attempting to estimate indicators and benchmarks of stock biomass which would be used to measure overfished status.

The next benchmark stock assessment is scheduled for 2015.

V. Status of Research and Monitoring

There are no monitoring or research programs required annually of the states except for the submission of a compliance report. The following fishery-dependent (other than catch and effort data) and fishery-independent monitoring programs were reported in the 2012 reports.

Fishery Dependent Monitoring

- Maryland DNR – Samples commercial pound nets once every other week in the Chesapeake Bay from late spring through summer (2013: 16 fish). Monitors the number of sportfishing citations issued for large red drum releases (2013: 0 entry). Monitors licensed charter boat captain logbooks for red drum captures (2013: 140 caught, 127 harvested).
- Virginia MRC – Samples commercially landed red drum through its biological monitoring program (2013: 217 fish). Coordinates volunteer angler tagging of red drum via the Virginia Game Fish Tagging Program that began in 1995 (2013: 5,926 fish tagged, 804 reported recaptures). Collects carcasses through the Marine Sportfish Collection Project (2013: 79 fish).
- North Carolina DMF – Samples commercially-landed red drum through its biological monitoring program (2013: 1,678 fish, primarily gill net).
- South Carolina DNR –Stated finfish survey terminated in February 2013. Monitors charterboat trip reports for catch and effort data (2013: release rate = 94.6%). Runs a cooperative public tagging program to study movement patterns, growth rates, and release-mortality rates (2013: 2209 fish tagged, 316 recaptured).
- Georgia CRD – Collects age, length, and gender data through the Marine Sportfish Carcass Recovery Project (2013: 523 red drum).
- Florida FWC – Conducts a random survey of licensed anglers on the sizes of kept and released fish (conducted through MRIP).
- NMFS – Collects recreational catch, harvest, release, and effort data, and length measurements via the Marine Recreational Information Program.

Fishery Independent Monitoring

- North Carolina DMF - Conducts a seine survey to produce an age-0 abundance index (2013: n=133; CPUE of 1.1, decreased from the 2012 overall state mean of 2.7 and was lower than the long-term mean of 5.7). Conducts a gill net survey in Pamlico Sound to characterize size and age distribution, produce an abundance index, improve bycatch estimates, and study habitat usage (2013: n= 1428; CPUE increased to 6.58, the third highest in the time series); DMF conducts a longline survey to produce an adult index of

abundance and tag fish (2013: n=356; CPUE: remained relatively stable at 4.9 fish per set, with a time series average of 5.2).

- South Carolina DNR – Conducts an estuarine trammel net survey for subadults (CPUE: continual decreased from 2010 relative peak, similar in 2013 to 2012). Conducts an electrofishing survey in low salinity estuarine areas for juveniles and sub-adults (CPUE: continual decreased from 2010 relative peak, similar in 2013 to 2012). Conducts an inshore bottom longline survey for biological data and an abundance index of adults (2013 mix of seasonal increases and decreases in CPUE). Tags fish caught in each of these surveys (48,258 fish from trammel nets since 1991 (2013 n = 1,570); 7,179 fish from electrofishing since 2001 (2013 n = 769); 3,094 fish from longline since 2007 (2013 n = 480)).
- Georgia CRD – Conducts an estuarine trammel net survey for subadult biological data and an abundance index (2013: n = 35; CPUE increased in Wassaw estuary to .12 from 0.10 and increased in the Altamaha river delta from 0.09 to .39). Conducts an estuarine gill net survey for young-of-year biological data and an abundance index (2013: n = 254; CPUE increased in Wassaw estuary from 1.32 from 1.46 and in the Altamaha river delta remained at 1.08). Conducts a survey to determine the age structure of the adult stock on five year intervals (suspended indefinitely). Conducts a bottom longline survey for adult biological data and an abundance index (2013 n = 55).
- Florida FWC-FWRI – Conducts two seine surveys in the northern Indian River Lagoon (IRL) and the lower reaches of the St. Johns River (SJR) for young-of-the-year (< 40 mm SL) abundance indices (CPUE: decreased to constant lower level in 2011 & 2012, increased in 2013 IRL; relatively constant since 2007 although sharp decrease in 2011 in SJR). FWC-FWRI conducts a haul seine survey in these areas and the southern IRL for a subadult index (CPUE: increasing trend from 2003-2008 in the northern and southern IRL before dropping to lower levels in 2009 and 2010; fluctuating with an increasing trend since 2004 in SJR). Age and length data are collected during surveys (2013: 1,226 lengths from 183 meter haul seines, 348 otoliths from sampled fish).

Ageing Workshop

A Red Drum Ageing Workshop was held in October 2008. The Red Drum Technical Committee indicated the need for such as workshop prior to the 2009 stock assessment to standardize the otolith sectioning and ageing procedures and the current age dataset. Representatives from Virginia, North Carolina, South Carolina, Georgia, Florida, the National Marine Fisheries Service, and the Gulf Council participated in the workshop. In addition to improving the age dataset for the ongoing assessment, the resulting standardized ageing procedure was published in an ASMFC reference document, with some states having already incorporated ageing instructions into their references..

VI. Status of Management Measures and Issues

Fishery Management Plan

Amendment 2 was fully implemented by January 1, 2003 and provided the management requirements for 2010. Requirements include: recreational regulations designed to achieve at least 40% sSPR; a maximum size limit of 27 inches or less; and current or more stringent commercial regulations. States are also required to have in place law enforcement capabilities adequate for successfully implementing their red drum regulations. In May 2013, the

Management Board approved for public comment Draft Addendum I to Amendment 2 of the Red Drum FMP. The draft addendum proposes revisions to the habitat section of Amendment 2 to include the most current state of information on red drum spawning habitat and habitat by life stage (egg, larval, juvenile, sub-adult, and adult). It also identifies the distribution of key habitats and habitats of concern, including potential threats and habitat bottlenecks, as well as ecosystem considerations. The final action is set for Addendum I in August 2013.

De Minimis Requests
New Jersey and Delaware requested *de minimis* status through the annual reporting process. While Amendment 2 does not include a specific method to determine whether a state qualifies for *de minimis*, the PRT chose to evaluate the two states' contribution to the fishery by comparing each state's two-year average of combined commercial and recreational landings to that of the management unit. New Jersey and Delaware harvested each harvested zero percent of the two-year average total landings. *De minimis* status does not exempt either state from any requirement; it may exempt them from future management measures implemented through addenda to Amendment 2, as determined by the Management Board.

Changes to State Regulations
Georgia moved to classify Red Drum as a Gamefish in 2013. Therefore, the sale and commercial harvest of Red Drum are prohibited. There were no other changes to state regulations in 2013.

VII. Implementation of FMP Compliance Requirements for 2013

The PRT finds that all states have implemented the requirements of Amendment 2.

VIII. Recommendations of the Plan Review Team

Management and Regulatory Recommendations
< Consider approval of the *de minimis* requests by New Jersey and Delaware
< Support a continued moratorium of red drum fishing in the exclusive economic zone.

Prioritized Research and Monitoring Recommendations (H) =High, (M) =Medium, (L) =Low

Stock Assessment and Population Dynamics
< Improve catch/effort estimates and biological sampling from recreational and commercial fisheries for red drum, including increased effort to intercept night fisheries for red drum. This should include significant efforts to determine the size and age structure of regulatory discards of live red drum. (H)
< States should maintain annual age-length keys. Expand biological sampling based on a statistical analysis to adequately characterize the age/size composition of removals by all statistical strata (gears, states, etc.) (H)
< Each state should develop an on-going red drum tagging program that can be used to estimate both fishing and natural mortality and movements. This should include concurrent evaluations of tag retention, tagging mortality, and angler tag reporting rates. (M)

< Establish programs to provide on-going estimates of commercial discards and recreational live release mortality using appropriate statistical methods. Discard estimates should examine the impact of slot-size limit management and explore regulatory discard impacts due to high-grading. (M)
< Evaluate the broader survey needs to identify gaps in current activities and provide for potential expansion and/or standardization between/among current surveys (M).

Biological

< Explore methods to effectively sample the adult population in estuarine, nearshore, and open ocean waters, such as in the ongoing red drum long line survey. (H)
< Determine if natural environmental perturbations limit recruitment, and if spawning stock size is the cause of recruitment variability (H)
< Continue tagging studies to determine stock identity, inshore/offshore migration patterns of all life stages (i.e. basic life history info gathering). Specific effort should be given to developing a large-scale program for tagging adult red drum (M)
< Fully evaluate the effects and effectiveness of using cultured red drum to facilitate higher catch rates along the Atlantic coast. (M)
< Determine habitat preferences, environmental conditions, growth rates, and food habits of larval and juvenile red drum throughout the species range along the Atlantic coast. Assess the effects of environmental factors on stock density/yearclass strength. (M)
< Refine maturity schedules on a geographic basis. Thoroughly examine the influence of size and age on reproductive function. Investigate the possibility of senescence in female red drum. (M)

Social

< Examine the effectiveness of controlling fishing mortality and minimum size in managing red drum fisheries.
< Encourage the NMFS to fund socioeconomic add-on questions to the recreational fisheries survey that are specifically oriented to red drum recreational fishing.

Economic

< Encourage the NMFS to continue funding socioeconomic add-on questions to the recreational fisheries survey that include data elements germane to red drum recreational fisheries management.
< Where appropriate, encourage member states to conduct studies to evaluate the economic costs and benefits associated with current and future regulatory regimes impacting recreational anglers including anglers oriented toward catch and release fishing trips.
< Fully evaluate the efficacy of using cultured red drum to restore native stocks along the Atlantic Coast including risk adjusted cost-benefit analyses.
< Conduct a special survey and related data analysis to determine the economic and operational characteristics of the "for-hire sector" targeting red drum especially fishing guide oriented businesses in the South Atlantic states.
< Estimate the economic impacts (e.g. sales, jobs, income, etc.) of recreational red drum fisheries at the state and regional level including the "for-hire sector" (e.g. fishing guides).
< States with significant fisheries (over 5,000 pounds) should collect socioeconomic data on red drum fisheries through add-ons to the recreational fisheries survey or by other means.

Habitat

< Identify spawning areas of red drum in each state from North Carolina to Florida so these areas may be protected from degradation and/or destruction. (H)
< Identify changes in freshwater inflow on red drum nursery habitats. Quantify the relationship between freshwater inflows and red drum nursery/sub-adult habitats. (H)
< Determine the impacts of dredging and beach re-nourishment on red drum spawning and early life history stages. (M)
< Investigate the concept of estuarine reserves to increase the escapement rate of red drum along the Atlantic coast. (M)
< Identify the effects of water quality degradation (changes in salinity, DO, turbidity, etc.) on the survival of red drum eggs, larvae, post-larvae, and juveniles. (M)
< Quantify relationships between red drum production and habitat. (L)
< Determine methods for restoring red drum habitat and/or improving existing environmental conditions that adversely affect red drum production. (L)

IX. References

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X. Figures

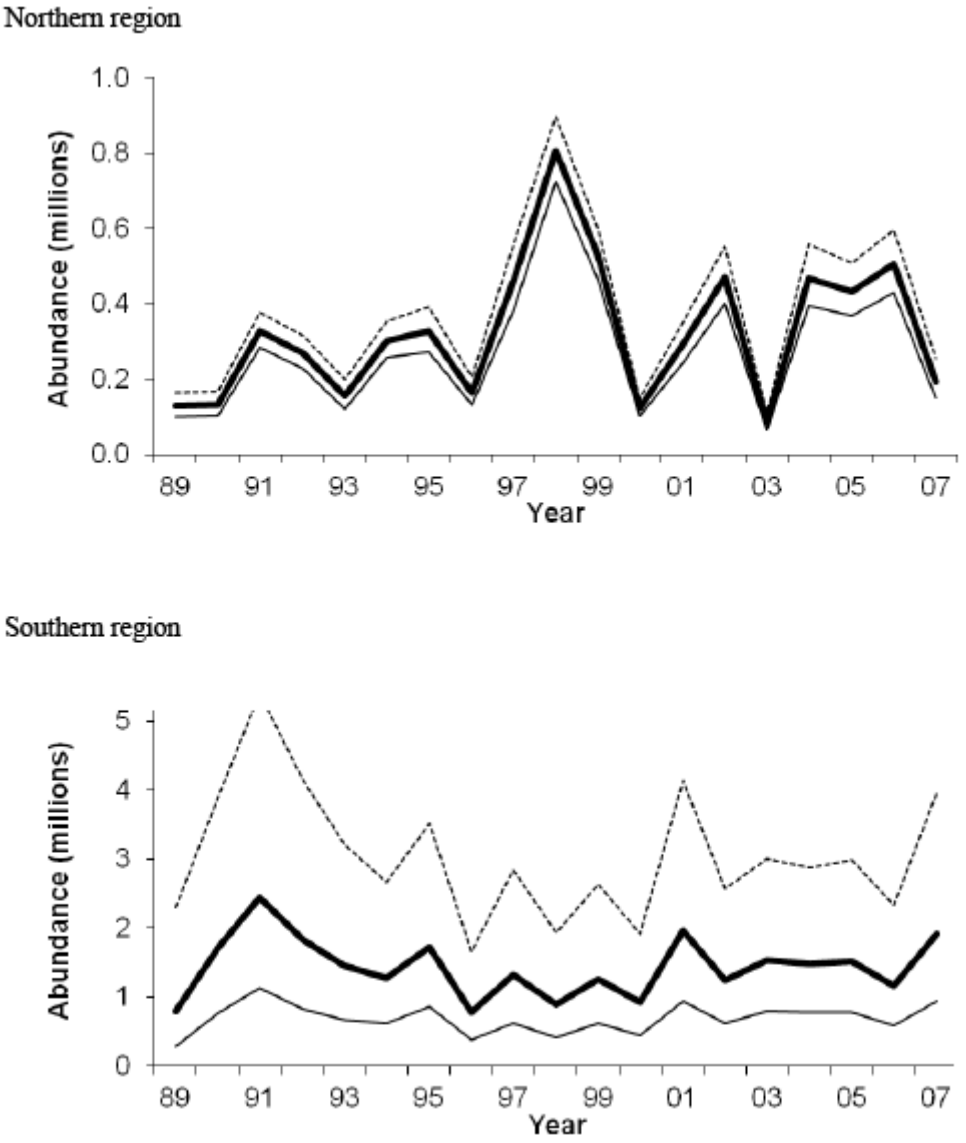


Figure 1. Estimated recruitment (age-1 abundance, heavy solid line) and ± 1.96 standard errors for the northern and southern regions during 1989-2007 (Source: SAFMC 2009). Note: assessment results for the southern region are indicative of relative trends but not absolute values.

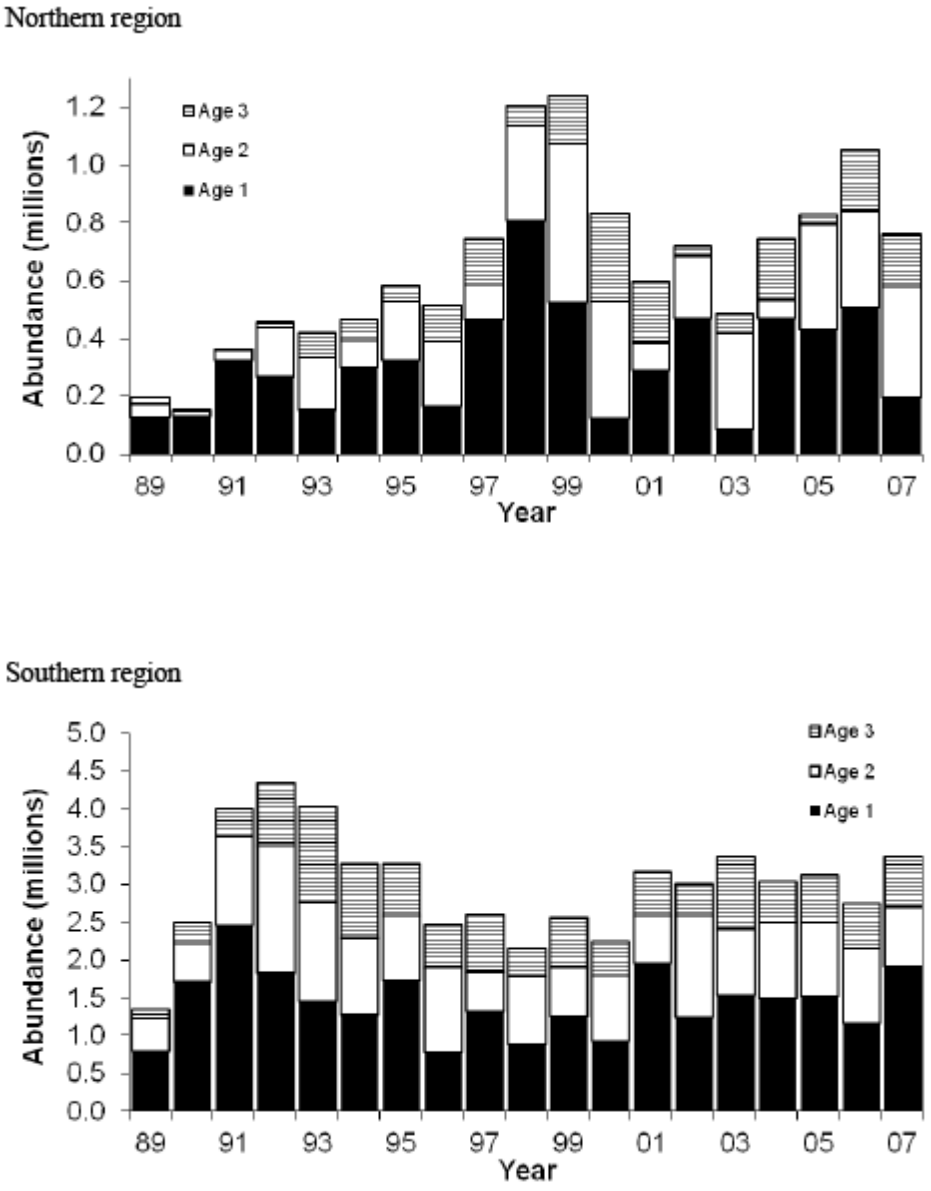


Figure 2. Estimates of abundance of red drum ages 1-3 in the northern and southern regions during 1989-2007 (Source: SAFMC 2009). Note: assessment results for the southern region are indicative of relative trends but not absolute values.

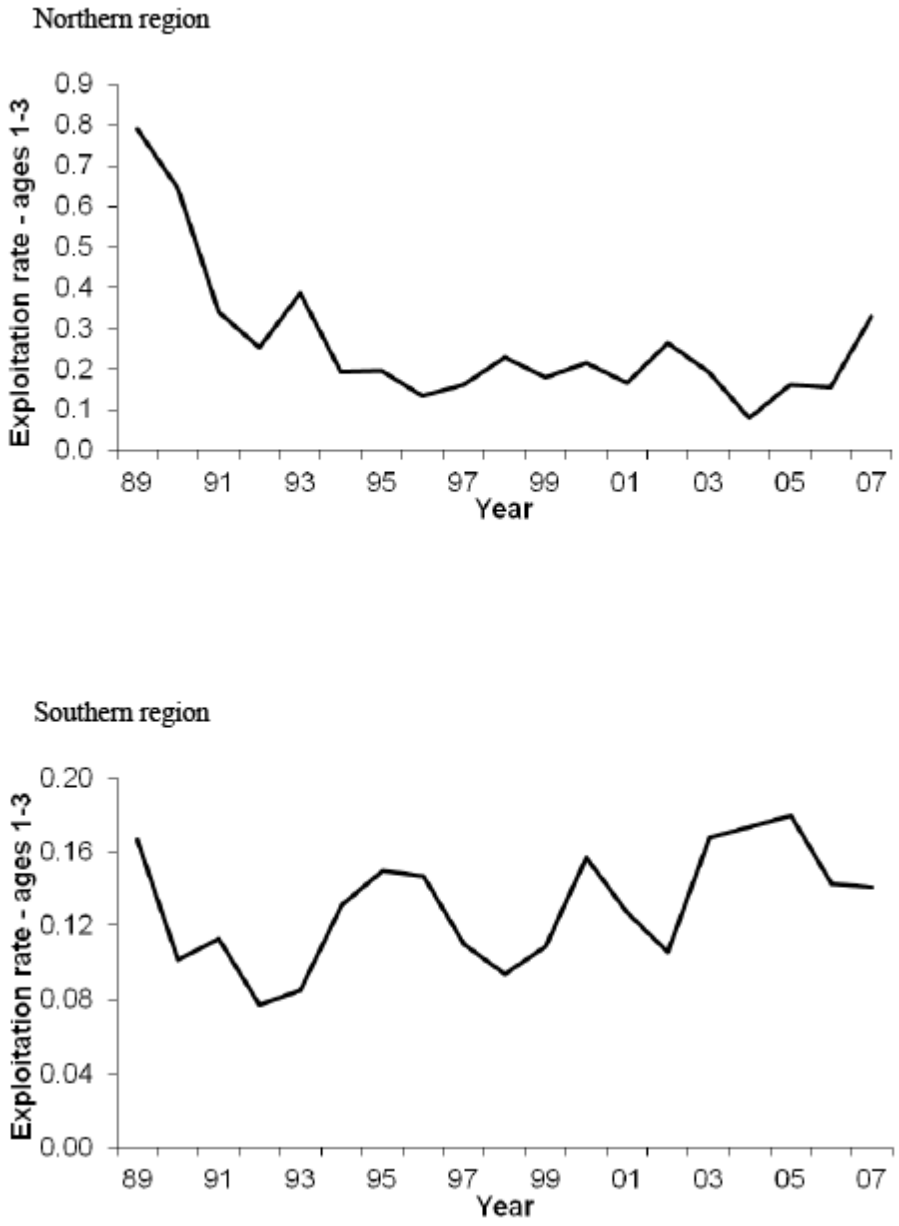
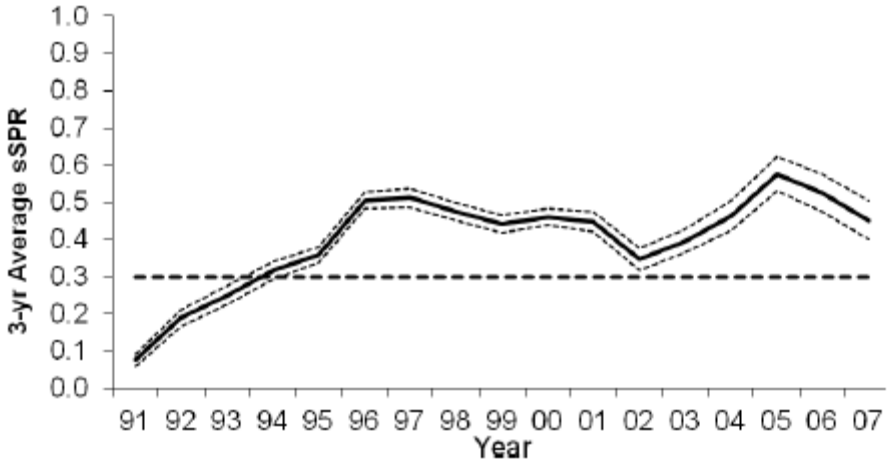


Figure 3. Estimated annual exploitation rate for red drum ages 1-3 in the northern and southern regions during 1989-2007 (Source: SAFMC 2009). Note: assessment results for the southern region are indicative of relative trends but not absolute values.

Northern region



Southern region

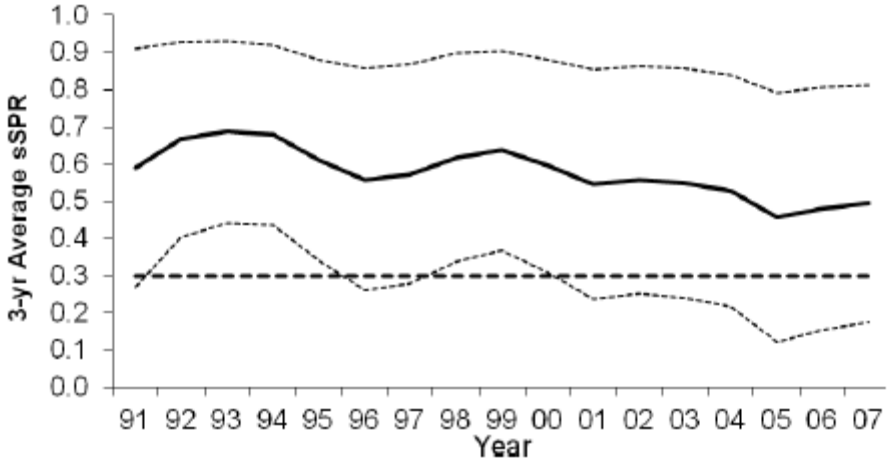


Figure 4. Northern and southern region estimates of three-year average static spawning potential ratio with ± 1.96 standard errors (dashed lines) during 1991-2007. Three-year averages include current and previous two year's sSPR estimates. The heavy dashed line shows the 30% overfishing threshold (Source: SAFMC 2009). Note: assessment results for the southern region are indicative of relative trends but not absolute values.

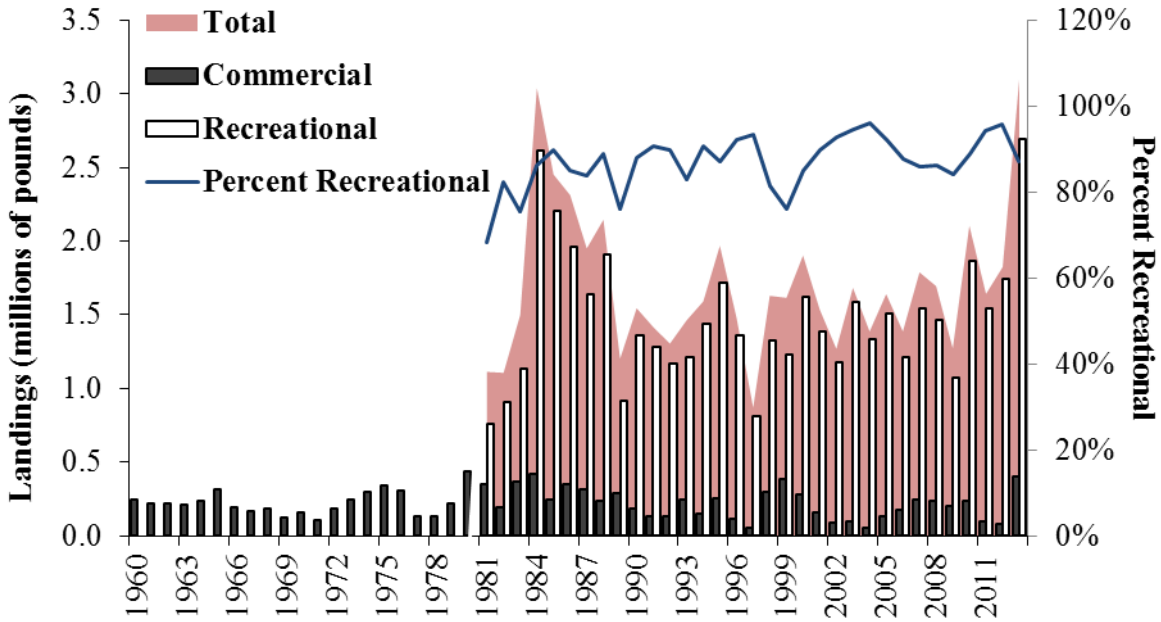


Figure 5. Commercial and recreational landings (pounds) of red drum. Recreational data not available prior to 1981. See Tables 2 and 3 for values and data sources.

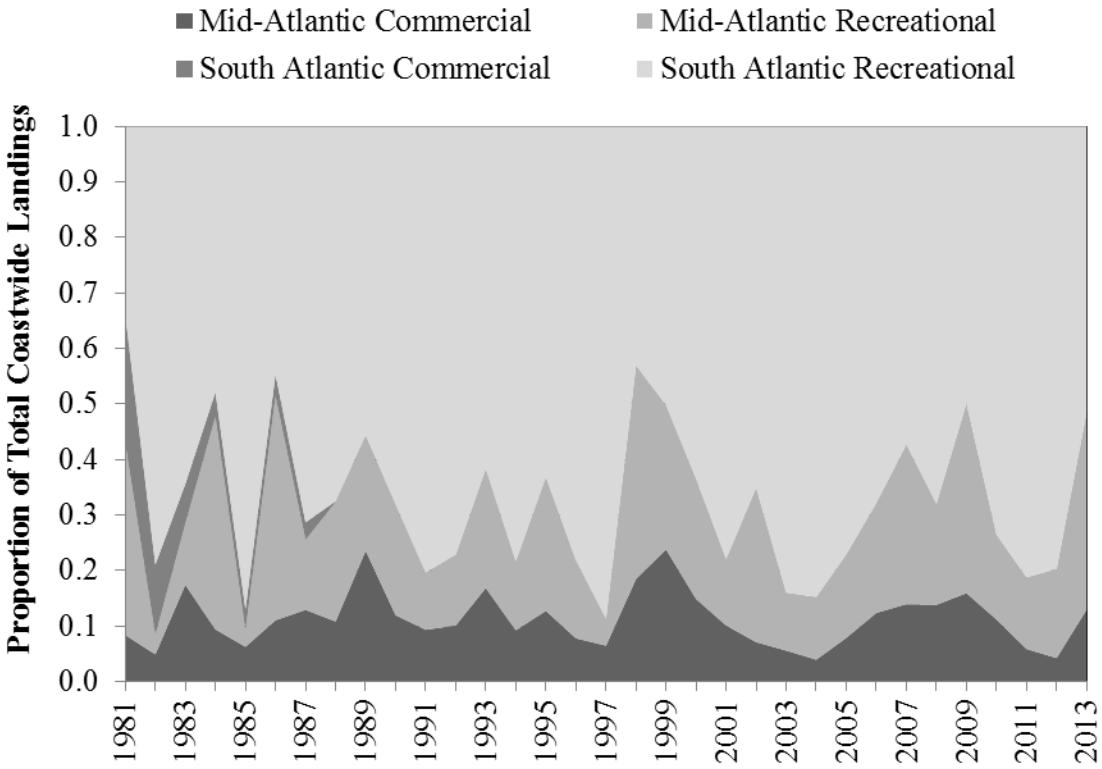


Figure 6. Proportion of regional, sector-specific landings to total coastwide landings (pounds). See Tables 2 and 3 for data sources.

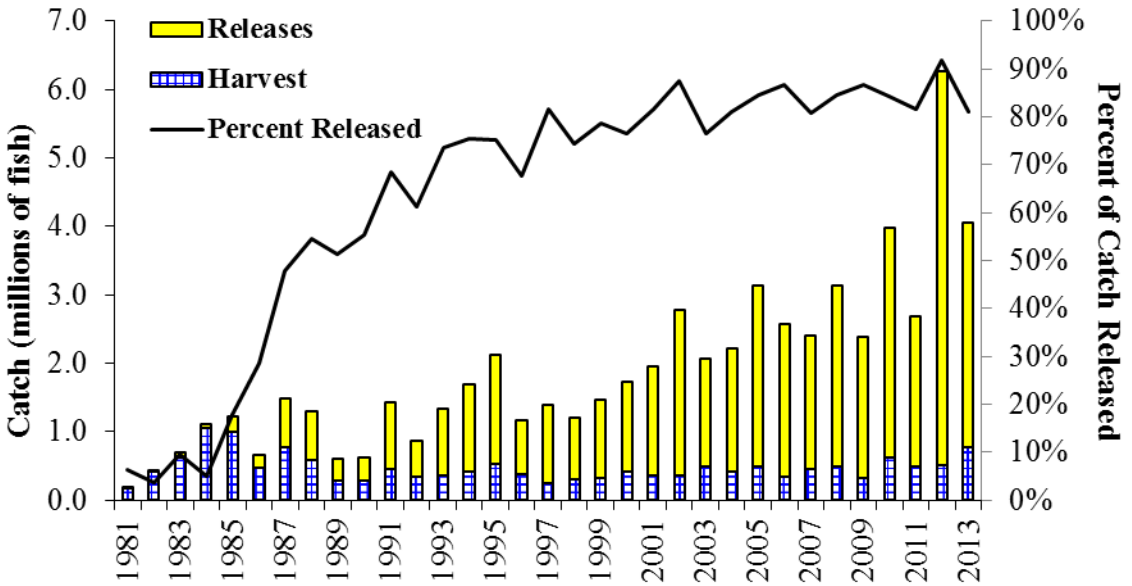


Figure 7. Recreational catch (harvest and alive releases) of red drum (numbers) and the proportion of catch that is released. See Tables 4 and 5 for values and data sources.

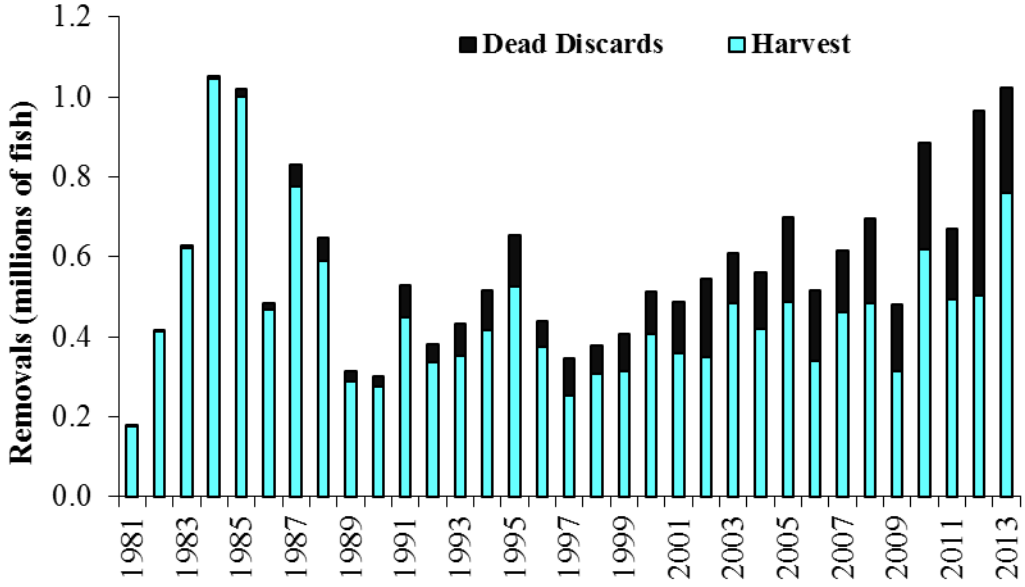


Figure 8. Recreational removals (harvest and dead discards) of red drum (numbers). Dead discards are estimated by applying an 8% discard mortality rate to alive releases. See Tables 4 & 5 for values and data sources.

XI. Tables

Table 1. Red drum regulations for 2013. The states of New Jersey through Florida are required to meet the requirements in the FMP; states north of New Jersey are encouraged to follow the regulations. All size limits are total length.

State	Recreational	Commercial
NJ	18" - 27", 1 fish	18" - 27", 1 fish
DE	20" - 27", 5 fish	20" - 27", 5 fish
MD	18" - 27", 1 fish	18" - 25", 5 fish
PRFC	18" - 25", 5 fish	18" - 25", 5 fish
VA	18" - 26", 3 fish	18" - 26", 3 fish
NC	18" - 27", 1 fish	18" - 27"; 250,000 lb harvest cap with overage payback; 4 and 7 fish daily trip limits during the year (1 fish for hook and line); closed November 23, 2013; red drum must be less than 50% of catch (lbs, excluding menhaden); small mesh (<5" stretched mesh) gill nets attendance requirement May 1 - November 30. Fishing year: September 1 – August 31.
SC	15" - 23", 3 fish. Gigging allowed November - March.	Gamefish Only
GA	14" - 23", 5 fish	Gamefish Only
FL	18" - 27", Northern Region- 2 fish; Southern Region- 1 fish	Sale of native fish prohibited

Table 2. Commercial landings (pounds) of red drum by state, 1981-2013. (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD and ACCSP, Arlington, VA, except where noted below)

Year	NJ	DE	MD	PRFC	VA	NC	SC	GA	FL	Total
1981					200	93,420		261	258,374	352,255
1982					1,700	52,561	2,228	251	139,170	195,910
1983			100		41,700	219,871	2,274	1,126	105,164	370,235
1984					2,600	283,020	3,950	1,961	130,885	422,416
1985					1,100	152,676	3,512	3,541	88,929	249,758
1986			1,000		5,400	249,076	12,429	2,939	77,070	347,914
1987					2,600	249,657	14,689	4,565	42,993	314,504
1988			8,100	2	4,000	220,271		3,281	284	235,938
1989			1,000	86	8,200	274,356	165	3,963		287,770
1990			29	86	1,481	183,216		2,763		187,575
1991			7,533	3,808	24,771	96,045		1,637		133,794
1992			1,087	196	2,352	128,497		1,759		133,891
1993			55		8,637	238,099		2,533		249,324
1994			859		4,080	142,119		2,141		149,199
1995			6		2,992	248,122		2,578		253,698
1996			215		2,006	113,338		2,271		117,830
1997			22	4	3,820	52,502		1,395		57,743
1998	311		336		6,456	294,366		672		302,141
1999	241	6	504	186	10,856	372,942		1,115		385,850
2000			843	10	11,512	270,953		707		284,025
2001			727	191	4,905	149,616		*		155,439
2002			1,161	285	7,361	81,370		*		90,177
2003			631	47	2,716	90,525		*		93,919
2004	12		12		638	54,086		*		54,748
2005			37	51	527	128,770		*		129,385
2006			8	2	2,607	169,206		*		171,823
2007			90	58	6,372	243,227		*		249,747
2008			40	69	4,585	229,809		*		234,503
2009	129		12	157	8,315	194,296		*		202,909
2010			19	22	3,634	231,760		*		235,435
2011				3	4,369	91,951		*		96,323
2012	7,971		334	81	2,609	66,518		*		77,513
2013	176	0	2,730	268	28,766	370,080				402,020

* Notes: NJ landings from SAFIS, 2004-present; MD landings from state reporting program, 1991-present; PRFC landings from agency reporting program, 1988-present; VA landings from state reporting program, 1996-present; NC landings from state reporting program, 1994-present; GA landings from state reporting program, 2000-present, * indicates confidential landings because less than three dealers reported.

Table 3. Recreational landings (pounds) of red drum by state, 1981-2013. (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981			4,370	347,939	31,519	50,230	9,442	317,963	761,463
1982					37,511	340,686	52,150	480,676	911,023
1983			3,018	51,299	109,540	222,691	67,298	675,924	1,129,770
1984				1,285	1,160,539	183,282	294,583	976,971	2,616,660
1985					70,677	1,532,316	185,887	414,176	2,203,056
1986			754,161	145,517	31,594	498,586	173,837	360,725	1,964,420
1987				44,332	200,729	913,639	250,795	227,222	1,636,717
1988				9,030	451,974	1,050,049	385,860	12,507	1,909,420
1989			2,348	27,236	214,849	396,771	127,245	146,064	914,513
1990			2,679		302,994	631,819	161,712	258,569	1,357,773
1991			5,635	30,582	108,268	284,290	337,207	516,999	1,282,981
1992				55,324	109,134	411,484	198,751	396,555	1,171,248
1993				45,505	266,459	282,614	328,245	290,930	1,213,753
1994				3,684	192,060	314,632	353,616	578,412	1,442,404
1995				66,270	405,620	417,595	300,337	525,231	1,715,053
1996				1,512	204,556	396,394	164,756	596,483	1,363,701
1997				1,810	39,077	296,155	129,836	345,390	812,268
1998				34,861	591,428	129,619	84,348	487,091	1,327,347
1999				92,794	326,303	103,777	166,630	540,310	1,229,814
2000				95,596	316,029	93,043	228,965	885,447	1,619,080
2001				51,890	132,578	188,198	155,854	853,714	1,382,234
2002		860	15,154	155,212	182,225	103,831	170,572	551,128	1,178,982
2003				57,213	118,808	449,399	234,865	729,446	1,589,731
2004				32415	124,264	312,569	296,777	566,508	1,332,533
2005				7,624	239,694	298,600	177,169	788,993	1,512,080
2006		2,064		21,039	251,735	160,760	143,699	636,742	1,216,039
2007				209,248	305,664	152,190	197,510	674,463	1,539,075
2008				72,510	236,744	254,305	244,594	652,613	1,460,766
2009				148,573	286,702	165,874	125,499	343,359	1,070,007
2010				40,323	281,587	451,144	319,427	776,346	1,868,827
2011					212,245	441,833	229,214	662,811	1,546,103
2012	0	396	26,788	27,422	238,310	368,445	107,368	978,727	1,747,456
2013	0	7,153	6,367	411,236	676,050	236,887	129,279	1,226,481	2,693,453

Table 4. Recreational landings (numbers) of red drum by state, 1981-2013. (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981			601	49,630	15,054	27,319	6,323	75,244	174,171
1982					16,445	160,760	30,757	204,401	412,363
1983			2,413	32,940	81,528	104,806	56,854	344,513	623,054
1984				1,457	108,787	129,547	258,188	549,381	1,047,360
1985				0	22,077	530,110	183,837	265,185	1,001,209
1986			12,804	28,139	17,501	193,188	102,279	113,440	467,351
1987				2,186	61,100	522,420	138,062	51,225	774,993
1988				4,311	142,626	287,916	147,042	9,542	591,437
1989			1,014	12,007	62,359	127,492	51,557	34,748	289,177
1990			1,279	0	33,149	118,666	76,304	44,280	273,678
1991			2,745	17,119	38,658	125,833	162,802	102,727	449,884
1992				13,275	23,593	112,534	83,861	104,265	337,528
1993				14,005	49,493	119,189	105,710	65,140	353,537
1994				1,378	28,953	129,515	134,214	120,938	414,998
1995				3,665	88,593	202,430	134,915	96,927	526,530
1996				572	36,746	130,649	60,251	146,823	375,041
1997				1,920	8,749	129,022	39,041	75,235	253,967
1998				13,070	114,638	46,509	24,929	107,982	307,128
1999				12,425	64,739	44,069	67,283	126,180	314,696
2000				22,603	61,618	37,217	94,144	191,070	406,652
2001				6,967	23,142	61,420	90,376	177,633	359,538
2002		275	5,521	49,795	42,541	41,190	90,993	119,010	349,325
2003				13,607	25,481	162,484	122,259	159,331	483,162
2004				5,005	30,017	107,803	138,893	136,728	418,446
2005				2,766	51,807	130,655	105,655	195,550	486,433
2006		468	6,362	12,665	55,714	48,703	68,813	145,860	338,585
2007				46,405	66,789	72,261	113,237	161,427	460,119
2008				20,847	50,809	119,471	133,107	159,246	483,480
2009				38,670	57,543	70,326	68,857	79,635	315,031
2010				11,076	64,024	172,708	194,826	175,828	618,462
2011	995				45,143	161,503	106,962	180,001	494,604
2012		296	17,869	28,149	52,948	121,068	45,766	238,191	504,287
2013		1,686	2,134	124,156	164,217	97,387	73,826	297,527	760,933

Table 5. Recreational alive releases and dead discards (numbers) of red drum by state, 1981-2013. Dead discards are estimated based on an 8% release mortality rate. (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD.)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total	Dead Discards
1981					2,230	417		9,042	11,689	935
1982						2,496	3,377	10,172	16,045	1,284
1983					1,866	6,751	1,417	54,723	64,757	5,181
1984					2,931	0	4,232	47,196	54,359	4,349
1985				1,115		16,688	6,315	193,399	217,517	17,401
1986				7,595		24,018	56,045	100,095	187,753	15,020
1987					18,499	82,595	234,676	377,959	713,729	57,098
1988				3,958	24,874	269,176	177,319	233,988	709,315	56,745
1989			2,918	7,038	7,566	42,824	71,162	172,303	303,811	24,305
1990			0	934	12,452	102,611	156,263	68,667	340,927	27,274
1991			4,432	14,461	121,178	99,968	92,803	645,773	978,615	78,289
1992	301			15,383	60,230	46,269	128,066	284,893	535,142	42,811
1993				50,434	182,301	146,324	140,386	465,656	985,101	78,808
1994				10,684	107,662	324,706	146,039	691,261	1,280,352	102,428
1995				33,560	164,520	362,844	356,618	683,706	1,601,248	128,100
1996				2,424	35,752	176,517	71,983	500,374	787,050	62,964
1997		2,571		109,754	259,570	175,772	22,736	560,559	1,130,962	90,477
1998			2,768	93,660	199,701	84,274	33,882	481,009	895,294	71,624
1999			2,148	232,893	247,146	87,776	18,586	565,981	1,154,530	92,362
2000			1,458	196,541	203,967	94,050	129,190	693,152	1,318,358	105,469
2001				30,365	238,552	221,045	249,892	850,044	1,589,898	127,192
2002		1,388	18,412	801,239	640,857	142,931	168,902	663,879	2,437,608	195,009
2003		731	2,935	43,379	75,561	430,052	272,897	748,765	1,574,320	125,946
2004				33,777	181,252	438,173	141,972	1,006,814	1,801,988	144,159
2005				28,351	378,541	493,595	334,521	1,405,967	2,640,975	211,278
2006		875	12,357	185,859	510,264	539,936	136,306	847,269	2,232,866	178,629
2007				110,566	416,352	436,797	225,985	758,684	1,948,384	155,871
2008		75	217	236,787	658,887	552,217	313,743	889,550	2,651,476	212,118
2009			14,754	178,396	429,776	751,123	167,704	521,659	2,063,412	165,073
2010			2,182	28,580	635,876	786,452	483,650	1,414,115	3,350,855	268,068
2011				61,330	207,697	664,291	213,781	1,051,143	2,198,242	175,859
2012		5,873	280,000	2,503,237	1,533,006	543,618	90,237	799,428	5,755,399	460,432
2013		407	2,207	220,305	654,030	673,377	198,722	1,541,541	3,290,589	263,247

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF FISH AND WILDLIFE
MARINE FISHERIES ADMINISTRATION
BUREAU OF MARINE FISHERIES

RED DRUM FISHERIES SUMMARY: 2013 AND MANAGEMENT PLAN: 2014

Report By: Jennifer Pyle

Submitted to the Atlantic States Marine Fisheries Commission as a requirement of Amendment 2 to the Interstate Fisheries Management Plan for Red Drum

June 2014

I. SUMMARY OF RED DRUM FISHERY AND RESOURCE MONITORING IN NEW JERSEY

In compliance to Amendment 2 to the Interstate Fishery Management Plan (FMP) for Red Drum, New Jersey has maintained the required size and possession limits of 1 fish between 18 and 27 inches for both recreational and commercial fishermen.

II. REQUEST FOR *DE MINIMUS* STATUS

New Jersey requests *de minimus* status under Amendment 2 to the Interstate Fishery Management Plan for Red Drum.

III. NEW JERSEY RED DRUM FISHERY AND MANAGEMENT PROGRAM: 2013

A. Fishery Dependent Monitoring

The Bureau of Marine Fisheries does not conduct any fishery dependent monitoring for red drum.

B. Fishery Independent Monitoring

The New Jersey Bureau of Marine Fisheries conducts five nearshore (within 12 nautical miles) trawl surveys each year. These surveys occur in January/February, April, June, August, and October. All species taken during these surveys are weighed and measured. Catch per unit effort in number of fish per tow and biomass per tow is calculated each year. Since the survey began in 1988, only two (2) red drum have been caught. Both fish were caught during a single tow on January 24, 2013. Their individual lengths were 410 mm and 470 mm, with a combined weight of 4.89 pounds.

C. New Jersey Regulations on Red Drum in 2013

On May 22, 2002, the Atlantic States Marine Fisheries Commission approved Amendment 2 to the FMP, at which time, those States in the Northern region of red drum distribution, such as New Jersey, were required to develop and implement size and possession limits to meet the FMP's management goal. In November 2002, New Jersey adopted by Notice of Administrative Change the following red drum management measures for both recreational and commercial fishermen under N.J.A.C. 7:25-18.1:

(a) For the purpose of this subchapter, the following common names shall mean the following scientific name(s) for a species or group of species, except as otherwise specified elsewhere in this subchapter.

Common Name	Scientific Name
Red Drum	Sciaenops ocellatus

(b) A person shall not purchase, sell, offer for sale, or expose for sale any species listed below less than the minimum length, measured in inches, except as may be provided elsewhere in this subchapter, and subject to the specific provisions of any such section. Any commercially licensed vessel or person shall be presumed to possess the following species for sale purposes

and shall comply with the minimum sizes below. Fish length shall be measured from the tip of the snout to the tip of the tail (total length), except as noted below.

Species	Minimum Size
Red Drum	18 inches

3. A person shall not take in any one day or possess more than the possession limit specified below for each species listed, except as may be provided elsewhere in this subchapter, and subject to the specific provisions of any such section.

Species	Possession Limit
Red Drum	1 fish, no more than 27 inches

(c) A person angling with a hand line or with a rod and line or using a bait net or spearfishing shall not have in his or her possession any species listed below less than the minimum length, nor shall such person take in any one day or possess more than the possession limits as provided below, nor shall such person possess any species listed below during the closed season for that species. Exceptions to this section as may be provided elsewhere in this subchapter shall be subject to the specific provisions of any such section. Fish length shall measure from the tip of the snout to the tip of the tail (total length), except as noted below:

Species	Open Season	Minimum Size	Possession Limit
Red Drum	Jan. 1 to Dec. 31	18 inches	1 fish, no more than 27 inches

D. New Jersey Red Drum Harvest

Commercial fishery landings for red drum were obtained from the National Marine Fisheries Service statistics website (1950-2004) and the Standard Atlantic Fisheries Information System from 2005 to present (Table 1). Recreational catch data were obtained from the Marine Recreational Information Program from 1980-2013.

E. Addendum III Habitat Requirements

No mandatory measures related to habitat are implemented through this amendment.

IV. NEW JERSEY RED DRUM FISHERY AND MANAGEMENT PROGRAM: 2014

A. New Jersey Regulations on Red Drum in 2014

See III C above for New Jersey's 2014 red drum regulations.

B. Red Drum Monitoring Programs for 2014

There will be no fishery dependent resource monitoring program for red drum in 2014. The State's ocean stock assessment program will continue in 2014 and any red drum taken will be weighed and measured.

C. Significant Changes in Management and/or Monitoring of Red Drum in 2014

No changes from the previous year.

V. PLAN SPECIFIC REQUIREMENTS

There are no plan specific requirements in Amendment 2.

VI. LAW ENFORCEMENT REPORTING REQUIREMENTS

There are no plan specific law enforcement reporting requirements in Amendment 2.

Table 1. New Jersey's Commercial and Recreational Red Drum Landings: 1950-2013

Year	Commercial (pounds)	Recreational (number)
1951	100	-
1992	-	301*
1998	311	-
1999	241	-
2004	12	-
2005	517	-
2006	186	-
2009	129	-
2011	-	955 (2,421 pounds)
2012	7,971	-
2013	176	-

*number caught, not harvested

STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
& ENVIRONMENTAL CONTROL
DIVISION OF FISH & WILDLIFE
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Annual Red drum Report for the State of Delaware: Harvest, Monitoring and Conservation for 2013 and Management Program for 2014

Report to the Atlantic States Marine Fisheries Commission

Compiled by
Michael Greco
Delaware Division of Fish and Wildlife
Dover DE
May 2014

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I. Introduction

Delaware is a *de minimus* state for red drum with no reported commercial landings in 2013. Recreational landings were estimated at 1,671 fish harvested and an estimated weight of 7,089 pounds. There were no changes in monitoring, regulations or harvest for 2013 and there are no changes planned for 2014.

II. Request for *de minimus*

Delaware requests continuation of its de minimus status. A review of historical commercial landings data from National Marine Fisheries Service (NMFS), Standard Atlantic Fisheries Information System (SAFIS) and State logbooks indicate landings of red drum dating back to 1952, with the most recent landings occurring in 2005. However, the seasonality of the 2005 landings is not consistent with the presence of red drum in Delaware waters and discretion should be used with this data. There were no commercial landings of red drum in 2013. Recreational landings were an estimated 7,089 pounds in 2013 (NMFS Fisheries Statistics Division, personal communication). These landings accounted for less than 1% of the coastwide recreational harvest.

III. Previous calendar year's fishery and management program

A. Activity and results of fishery dependent monitoring.

Delaware monitored the commercial fishery through mandatory monthly logbook reports submitted by fishermen to the State of Delaware. Commercial landings data were supplemented through the federal dealer reporting system (SAFIS). There were no red drum landed in 2013 and no biological sampling was conducted. Since mandatory logbook reporting was instituted in 1985, there have been two occurrences with minimal landings of red drum in 1999 (6 pounds) and 2005 (33 pounds). However, the seasonality (February and April respectively) of these landings is not consistent with the time period when red drum would be in Delaware waters and may have been reported in error. Delaware is on the northern end of the range for red drum. Historically, red drum were caught in Delaware waters during the summer months based on estimates from the Marine Recreational Information Program (MRIP).

Delaware relied on the MRIP online data query for estimates of the recreational fishery in 2013. Prior to MRIP, recreational fishery catch estimates were obtained through the Marine Recreational Fisheries Statistics Survey (MRFSS).

B. Activity and result of fishery independent monitoring.

Delaware conducts a 30-ft bottom trawl survey to monitor relative abundance of adult groundfish in the Delaware Bay. This survey has been conducted annually since 1990; prior surveys were conducted from 1966-1971 and 1979-1984. To date, there have been no red drum captured in the survey.

The Division monitors juvenile fish abundance with its 16-ft bottom trawl survey, which has been conducted annually in the Delaware Bay since 1980. This survey was expanded in 1986 to include the Delaware's Inland Bays (Indian River and Rehoboth Bays) and further expanded in 1989 to include six stations in the Delaware River. To date, there have been no red drum captured in the juvenile survey.

C. Copy of regulations that were in effect (Attachment – 1).

Delaware's red drum regulations remained unchanged for 2013 with a legal slot limit of 20-27 inches, and a daily possession limit of 5 fish/person/day with no closed season. These regulations apply to both the commercial and recreational fisheries. In addition, no red drum can be caught and sold in Delaware without a commercial foodfish license.

D. Harvest

Commercial Fishery

There were no red drum harvested in Delaware as reported through commercial logbook system and SAFIS in 2013.

Recreational Fishery

The 2013 catch of red drum was estimated at 2,075 fish by the MRIP. This was a 66% decrease from the 2012 estimates (Table 1). Based on length frequency estimates from the MRIP, the majority (59.9%) of fish caught measured 19 inches and was below the minimum size limit (Table 2). The estimated average weight of red drum harvested was 4.24 pounds.

E. Review of progress in implementing habitat recommendations.

N/A

IV. Planned management programs for the current calendar year

A. Summary of regulations for current year.

1. Commercial Fishery

The commercial size limit will remain with a slot limit of 20-27 inches.

2. Recreational Fishery

Existing regulations remain in place for the current fishing year. The slot limit will remain at 20-27 inches with a 5 fish/person/day and no closed season.

B. Summary of monitoring programs.

1. Commercial Fishery

   The Division will continue to monitor the commercial fishery through mandatory monthly logbook reporting as submitted by the commercial fishermen.

2. Recreational Fishery

   Delaware will rely on the Marine Recreational Information Program for the collection of data characterizing red drum caught recreationally in Delaware waters.

3. Research Trawl Survey

   Delaware will continue to conduct both the adult groundfish and the juvenile trawl surveys in 2014.

Table 1. Recreational harvest of red drum for Delaware, 1991-2013. Source: MRIP, NMFS. Catch includes both landed and released fish.

Year	Observed Harvest (A)	Reported Harvest (B1)	Released Alive (B2)	Total Catch (A+B1+B2)	Harvest Total Weight (lbs)
1991	0	0	0	0	0
1992	0	0	0	0	0
1993	0	0	0	0	0
1994	0	0	0	0	0
1995	0	0	0	0	0
1996	0	0	0	0	0
1997	0	0	2,571	2,571	.
1998	0	0	0	0	0
1999	0	0	0	0	0
2000	0	0	0	0	0
2001	0	275	0	275	0
2002	275	0	1,388	1,662	860
2003	0	0	731	731	.
2004	0	0	0	0	0
2005	0	0	0	0	0
2006	468	0	875	1,343	2,098
2007	0	0	0	0	0
2008	0	0	75	75	0
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	53	243	5,876	6,172	396
2013	884	787	404	2,075	7,089

Table 2. Length frequency distribution from 2013 MRIP samples of the Delaware recreational fishery.

Length Class (Inches - FL)	Est. Number Measured	% Fish Measured	Cumulative Distribution
19.0 - 19.99	1,002	59.93	59.93
20.0 - 20.99	0	0.00	59.93
21.0 - 21.99	146	8.72	68.65
22.0 - 22.99	125	7.48	76.13
23.0 - 23.99	271	16.21	92.34
24.0 - 24.99	128	7.66	100.00

Attachment – 1

Copy of red drum regulations in effect for the 2013 & 2014 fishing seasons.

3500 Tidal Finfish

3000 Division of Fish and Wildlife

3500 Tidal Finfish

Red Drum

3551 Red Drum Size Limits; Creel Limits.

(Penalty Section 7 Del.C. §936(b)(2))

1.0 Unless otherwise authorized, it shall be unlawful for any person to possess any red drum, (*Sciaenops ocellatus*), that measures less than twenty (20) inches, total length or more than twenty-seven (27) inches, total length.

6 DE Reg. 1229 (3/1/03)

2.0 Unless otherwise authorized, it shall be unlawful for any person to possess more than five (5) red drum.

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
Joseph P. Gill, Secretary
Frank W. Dawson III, Deputy Secretary

Maryland Red Drum (*Sciaenops ocellatus*) Compliance Report to the Atlantic States Marine Fisheries Commission – 2013

Prepared by

Genine K. Lipkey

Maryland Department of Natural Resources
Fisheries Service

July 2014

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I. Introduction

Red drum (*Sciaenops ocellatus*) are captured in the Atlantic Ocean off the coast of Maryland and in Maryland's portion of Chesapeake Bay by both commercial and recreational fishermen. Red drum is an infrequent species in Maryland's portion of Chesapeake Bay. However, when Bay salinity increases because of reduced freshwater inflow, red drum catch by bottom fishing anglers becomes more common. Surf casters along the 35 miles of Maryland's Atlantic coast may occasionally catch legal size fish, but more commonly catch oversized individuals.

In 2003, the Maryland Department of Natural Resources (MD DNR) instituted an 18 – 27 inch total length (TL) size limit and one fish per person per day creel limit for recreational fishermen, and an 18 – 25 inch TL size limit and five fish per day catch limit for commercial fishermen. These changes were instituted to meet the requirements outlined in Table 19 of Amendment 2 to the Red Drum Fisheries Management Plan (ASMFC 2002).

II. Request for *de minimis* status

N/A

III. 2013 Fishery and Management Programs.

a. MD DNR fisheries biologists sampled commercial pound nets bi-weekly in Maryland's portion of the Chesapeake Bay from May 28 through September 3. Sixteen red drum were encountered during onboard pound net sampling in 2013. Only two of the previous 20 years of sampling exceeded 21 fish, and no red drum were encountered in eight of the survey years. None of the specimens sampled in 2013 were greater than the 25 inch TL maximum commercial limit, 11 of the measured fish were of legal size, and the remaining 5 were less than the 18 inch minimum TL limit. Mean TL was 469 ± 39 mm.

b. There was no fishery independent monitoring for red drum in 2013.

c. Red drum regulations:

"FISHERIES SERVICE 08.02.05"

.16 Red Drum.

A: Recreational Fishery.

(1) Notwithstanding Natural Resources Article, 4-734, Annotated Code of Maryland, a person may not catch or possess red drum less than 18 inches in total length or greater than 27 inches in total length.
(2) A person may not catch or possess more than one red drum per day.

B: Commercial Fishery.

(1) Notwithstanding Natural Resources Article, 4-734, Annotated Code of Maryland, a commercial licensee may not catch or possess red drum less than 18 inches in total length or greater than 25 inches in total length.
(2) A commercial licensee may not catch or possess more than five red drum per day.

SOURCE: COMAR (http://www.dsd.state.md.us/comar/08/08.02.05.16.htm).

The above regulations conform to those outlined in Table 19 of Amendment 2 (ASMFC 2002).

III. 2013 Fishery and Management Programs (Continued)

d. Commercial fishermen in MD are required to report all red drum harvested on daily fishing reports submitted to DNR. The preliminary 2013 commercial harvest was 2,730 pounds (Figure 1). Ninety-two percent (2,501pounds) of the red drum harvest in 2013 was from the Chesapeake Bay. Pound nets accounted for 42% of harvest, gill nets accounted for 16% of harvest, and the remaining 42% of harvest was from other gear types, which included fyke nets, otter trawls and hook and line. The 2013 red drum harvest was the highest value since the regulation change in 2003, prior to which fishermen were allowed to keep one fish over 27 inches, making higher harvests by weight easier to obtain.

   The Marine Recreational Information Program (MRIP) estimated that recreational fishermen in Maryland harvested 2,134 red drum (PSE = 45.3) in 2013 (Figure 2; MRIP 2014) and the estimated number of red drum released was 2,207 fish (PSE = 71.5; Figure 3; MRIP 2014). The MRIP survey design may not adequately sample the recreational red drum harvest or catch and release fishery, because of the seasonal nature of Maryland's red drum fishery. The current MRIP survey indicates harvest or releases only occurring in 17 of 33 years. While Maryland's red drum fishery is quite modest, it is very likely anglers caught some fish each year.

   Licensed charter boat captains in Maryland are also required to keep log books of their clients catch. Log books from 2013 indicate 140 red drum were caught, 127 of which were harvested. The 2013 harvest is higher than the average harvest of the 20 year time series, but lower than the 2012 harvest (Figure 4). Charter boat red drum catches were reported every year from 1993-2013, except for 1996. MRIP estimated no harvest in nine years with reported charter boat harvest.

e. There were no habitat requirements in Amendment 2.

IV. Planned Management for 2014.

a. No regulation changes are planned for 2014.

b. MD DNR will continue to monitor commercial pound nets in 2014.

V. Plan Specific Requirements

None

VI. Law enforcement requirements

None.

References

ASMFC. 2002. Amendment 2 to the Interstate Fisheries Management Plan for Red Drum. Fisheries Management Report No. 38 of the Atlantic States Marine Fisheries Commission. Washington, D.C.

MRIP. 2014. Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division.

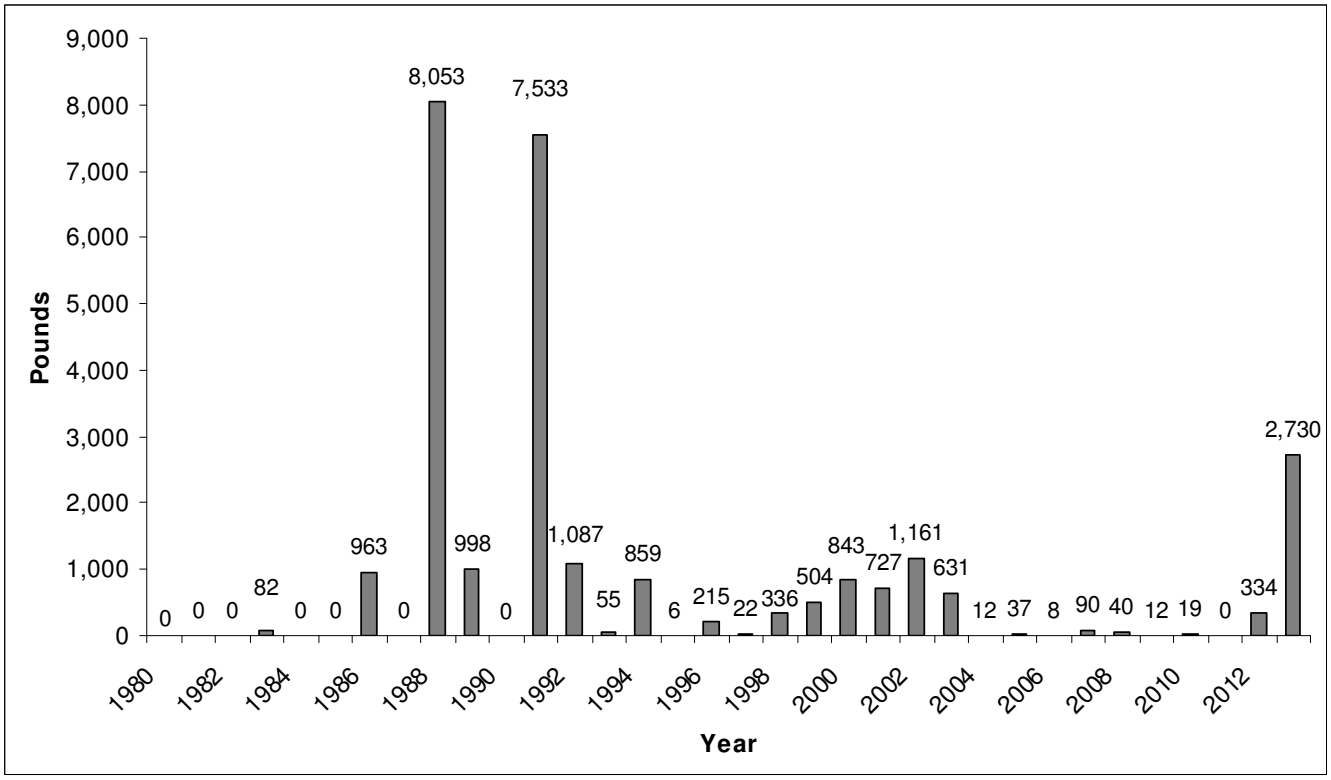


Figure 1. Commercial red drum landings reported to Maryland DNR, 1980-2013.

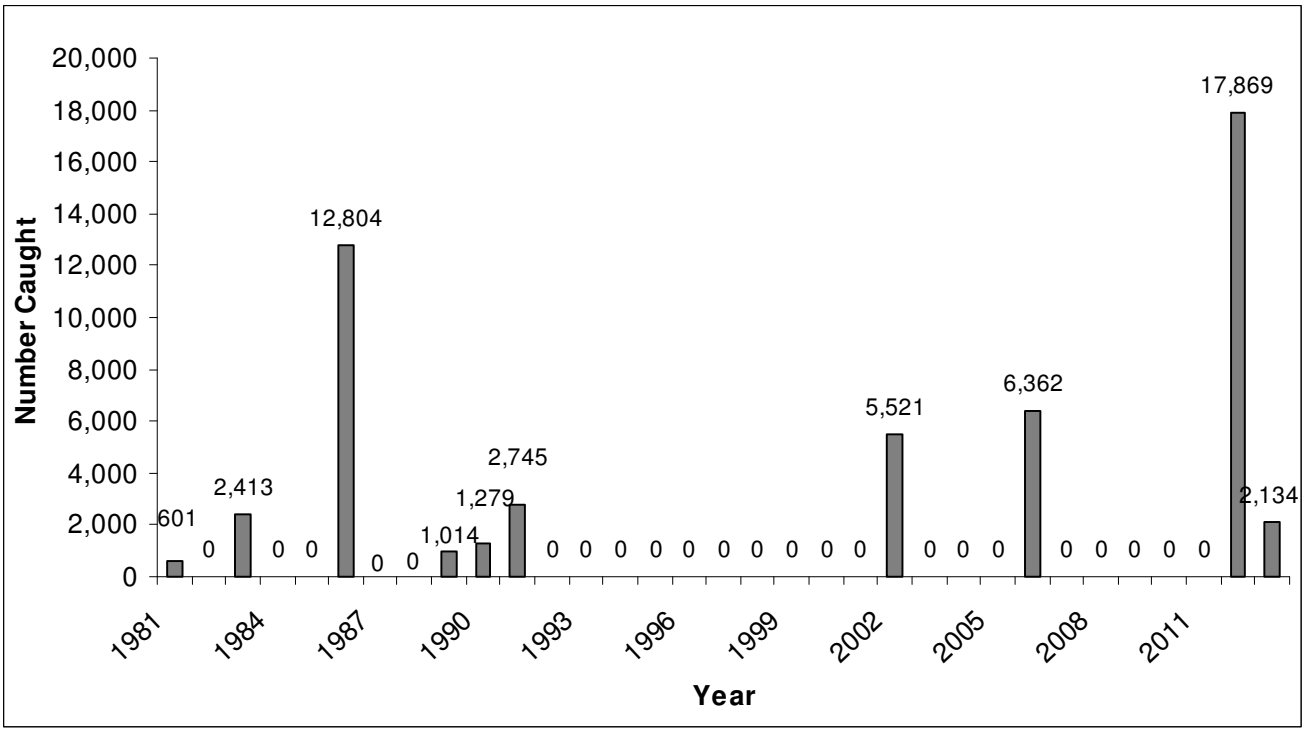


Figure 2. MRIP harvest estimates for red drum in Maryland, 1981-2013.

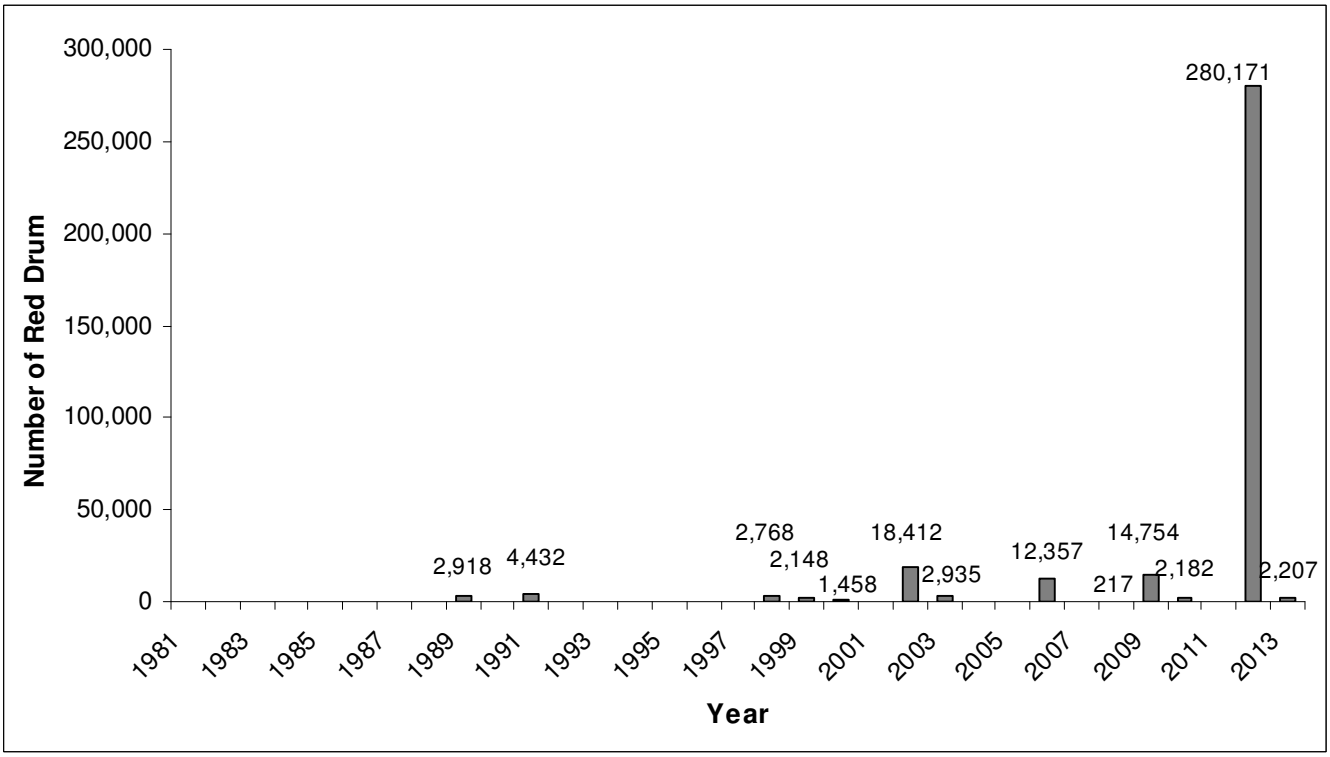


Figure 3. MRIP release estimates for red drum in Maryland, 1981-2013.

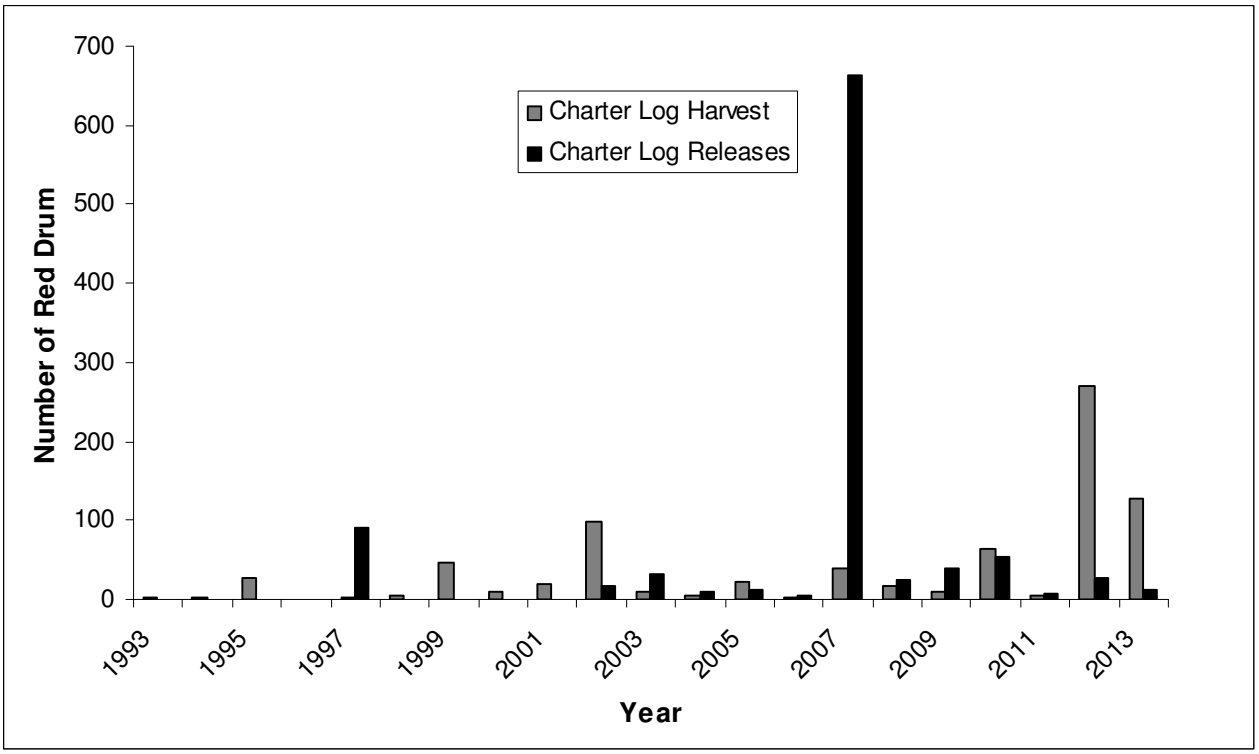


Figure 4. Red drum harvest and releases reported from Maryland's charter boat fishery in numbers, 1993-2013.

MARYLAND - VIRGINIA
"Potomac River Compact of 1958"
Potomac River Fisheries Commission
222 Taylor Street
P.O. BOX 9
Colonial Beach, Virginia 22443
TELEPHONE: (804) 224-7148 · (800) 266-3904 · FAX: (804) 224-2712

Red Drum
2013 Annual Compliance Report
June 1, 2014

I. Introduction

Although commercial harvest of red drum in the Potomac River in 2013 was negligible, it increased slightly from 2012. There was an increase in the amount of juvenile (small) red drum reported as encountered and released in 2013 in the Potomac River.

II. Request *de minimis,* where applicable – N/A

III. Previous calendar year's fishery and management program

A. Fishery Dependent Monitoring

Red drum are taken as incidental harvest in the commercial pound net and haul seine fisheries. The PRFC has a mandatory commercial harvest daily reporting system that collects harvest as well as discards or releases. Pound netters reported releasing 2 pounds of red drum that were too small and 40 pounds of red drum that were too large. Haul seine reports indicated that 290 pounds of small red drum were released.

B. Fishery Independent Monitoring - None.

C. Regulations in Effect

The commercial red drum season was January 1st through December 31st. There was an 18" minimum and a 25" maximum size limit and the catch limit was five fish per person per day.

The recreational red drum season was January 1st through December 31st. There was an 18" minimum and a 25" maximum size limit and the catch limit was five fish per person per day.

D. Characterization of Harvest

Commercial red drum harvest in 2013 was reported as 268 pounds, from the PRFC's mandatory commercial harvest reporting system. The pound net fishery effort is expressed as "PN fishing days' which is one pound net fished one time (net-days fished). The term "gear days" is used to express effort for the miscellaneous gear types.

Harvest (lbs)	Gear	Effort
223	Pound Net	21 PN fishing days
45	Miscellaneous	7 gear days

We know of no directed recreational harvest of red drum. Results are reported and included as either MD or VA catch.

Tables and Figures:

Table 1 shows the annual Potomac River commercial harvest of red drum from 1988 through the reporting year.
Table 2 shows commercial pound net harvest of red drum and CPUE.

Figure 1 illustrates the Potomac River commercial red drum harvest.
Figure 2 illustrates the Potomac River commercial red drum harvest and pound net CPUE.

IV. Planned management programs for the current calendar year

A. Summarize regulations that will be in effect

The pound net fishery is a limited entry fishery, with a maximum of 100 licenses on a total riverwide basis. A pound net is defined as a fixed fishing device with one head, trap or pound measuring not less than 20 feet square at the surface of the water on the channel end and only one leader or hedging not less than 300 feet in length. We have no specific regulations for red drum.

Effective January 1, 2011 – all pound nets in the Potomac River must have at least six PRFC approved fish cull panels properly installed in each pound net to help release undersize fish. These fish cull panels were being used by some pound netters on a voluntary basis prior to 2011.

B. Monitoring programs - We will continue our mandatory daily harvest reports.

C. Any changes from the previous year. - None

Table 1

Potomac River Commercial Harvest (lbs) for Red Drum by gear type

				LBS LANDED		
YEAR	POUND NET	HOOK & LINE	MISCELLANEOUS	IN MARYLAND	IN VIRGINIA	TOTAL
1988	2	-	-	-	2	2
1989	86	-	-	-	86	86
1990	86	-	-	29	57	86
1991	3,808	-	-	1,033	2,775	3,808
1992	196	-	-	-	196	196
1993	-	-	-	-	-	0
1994	-	-	-	-	-	0
1995	-	-	-	-	-	0
1996	-	-	-	-	-	0
1997	4	-	-	-	4	4
1998	-	-	-	-	-	0
1999	186	-	-	-	186	186
2000	10	-	-	-	10	10
2001	191	-	-	-	191	191
2002	285	23	2	2	308	310
2003	47	-	-	-	47	47
2004	-	-	-	-	-	0
2005	51	-	-	-	51	51
2006	2	-	-	-	2	2
2007	58	-	-	-	58	58
2008	69	-	-	-	69	69
2009	157	-	-	35	122	157
2010	22	-	-	-	22	22
2011	3	-	-	-	3	3
2012	71	-	10	13	68	81
2013	223	-	45	268	-	268

Table 2

Potomac River Commercial Red Drum Pound Net Harvest & CPUE

Year	Pounds	Effort	CPUE
1988	2	18	0.11
1989	86	78	1.10
1990	86	88	0.98
1991	3,808	304	12.53
1992	196	62	3.16
1993			
1994			
1995			
1996			
1997	4	8	0.50
1998			
1999	186	44	4.23
2000	10	3	3.33
2001	191	10	19.10
2002	310	75	4.13
2003	47	5	9.40
2004			
2005	51	5	10.20
2006	2	1	2.00
2007	58	12	4.83
2008	69	13	5.31
2009	157	27	5.81
2010	22	5	4.40
2011	3	1	3.00
2012	71	10	7.10
2013	223	21	10.62

Figure 1

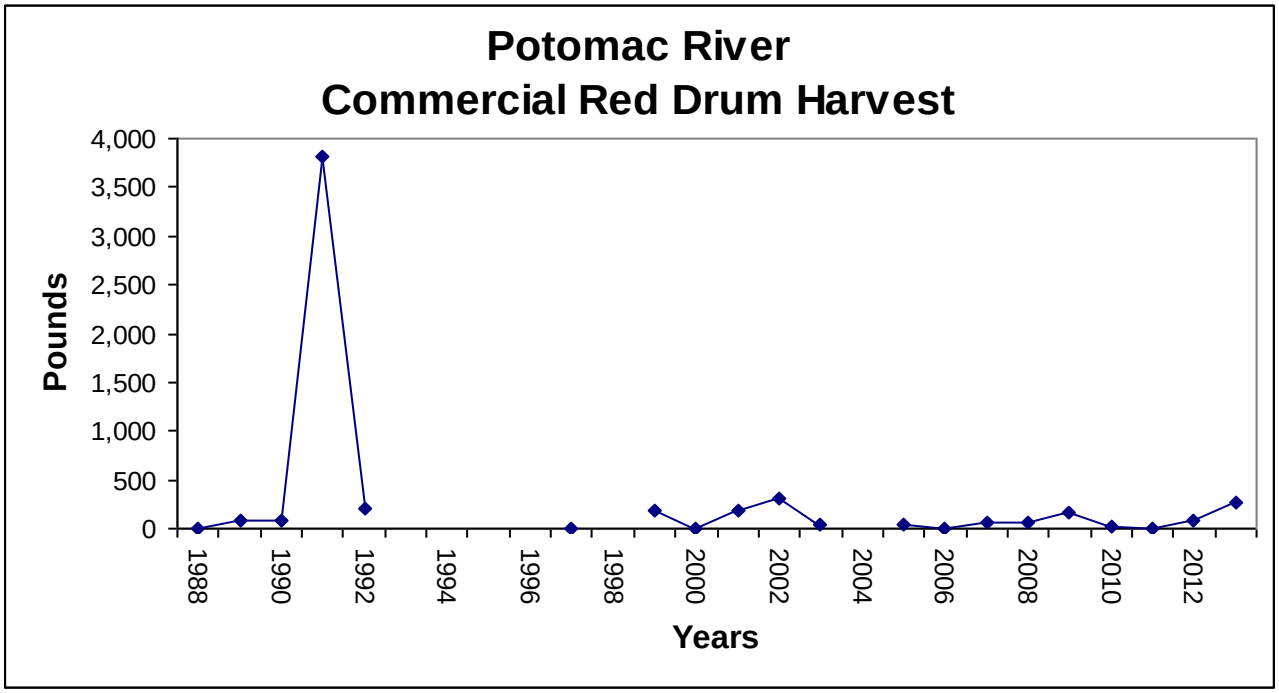
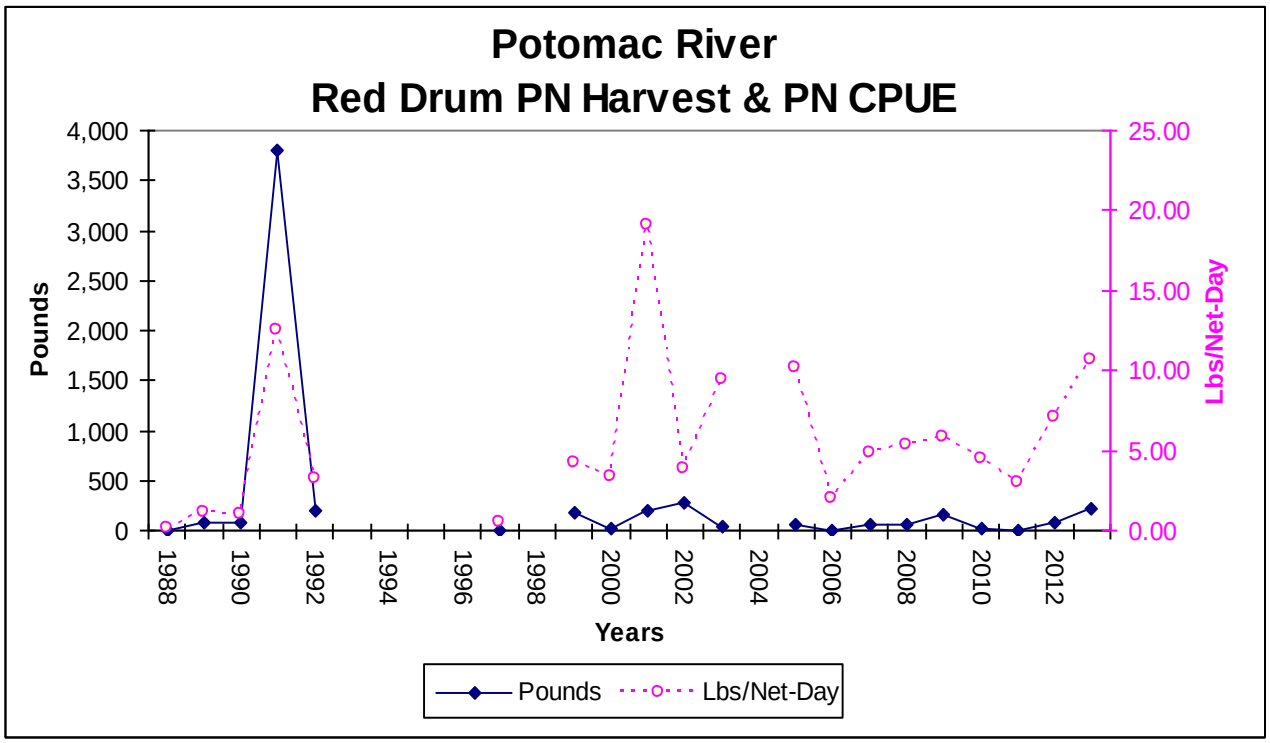


Figure 2



COMMONWEALTH of VIRGINIA

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Molly Joseph Ward
Secretary of Natural Resources

John M.R. Bull
Commissioner

July 1, 2014

MEMORANDUM

TO: Kirby Rootes-Murdy, FMP Coordinator
Atlantic States Marine Fisheries Commission

FROM: Adam Kenyon, Biological Sampling Program Manager,
Fisheries Management Division, Virginia Marine Resources Commission

SUBJECT: Virginia's 2014 Compliance Report for Red Drum

I. Introduction

From spring to fall, red drum *(Sciaenops ocellatus)* are harvested in the coastal waters of Virginia. All fishermen in Virginia, whether recreational or commercial, were limited to the possession of three red drum. It was unlawful for any person to take, catch or possess any red drum less than 18 inches in length or greater than 26 inches in length (Chapter 4 VAC 20-280-10 et seq. "Pertaining to Speckled Trout and Red Drum").

The Virginia Marine Resources Commission (VMRC) currently manages a mandatory reporting program (Chapter 4 VAC 20-610-10 et seq. "Pertaining to Commercial Fishing and Mandatory Harvest Reporting"), that records commercial harvest data, and obtains recreational fisheries data from the Marine Recreational Information Program (MRIP), the Virginia Game Fish Tagging Program and the Marine Sportfish Collection Project.

II. Request for *de minimis* status

The VMRC does not request *de minimis* status for this fishery.

III. Previous Calendar Year's Fishery and Management Program

a. Activity and results of Fishery Dependent Monitoring

1. Commercial fishery dependent monitoring

Because of the small number of red drum captured by the commercial fishery, fishery dependent sampling opportunities are limited. The total number of

commercial red drum sampled ranged from a low of four in 1997 to a high of 217 in 2013. In 2013, there were 217 fish sampled from gill nets, pound nets, hand line, and haul seines. Using otolith ageing methods, a sub-sample of 46 fish, of 217, were aged, and all were determined to be 2-year olds. All samples taken outside of the legal harvest ranges were obtained from confiscated fish or biological research projects.

2. Recreational fishery dependent monitoring

The Virginia Game Fish Tagging Program (VGFTP) began in 1995 and is jointly operated by the VMRC and the Virginia Institute of Marine Science (VIMS). It utilizes trained volunteers who target and tag several primary species depending on data needs for the current year. Since 1995, volunteer participants in the VGFTP tagged 52,954 red drum and recorded 5,745 recaptures. Volunteer anglers with the VGFTP tagged and released 5,926 red drum in 2013 and recaptured 804 red drum.

Beginning in June 2007, VMRC began the Marine Sportfish Collection Project (MSCP). This project places freezers at various high traffic weigh stations, where recreational anglers can voluntarily leave legal size whole fish or carcasses. Red drum is one of the species the project collects. Seventy-nine recreational red drum samples were collected through the MSCP during 2013. Of those 79 fish, 74 had ages determined by otoliths techniques, all were two years of age.

b. Activity and results of fishery independent monitoring

There were no fishery independent monitoring programs during the 2013 calendar year.

c. Copy of regulations in effect for 2013

A copy of regulations in effect for 2013 can be found in Appendix I.

d. Harvest for commercial and recreational fisheries

Virginia's commercial fishery harvested 28,766 pounds of red drum in 2013 (Table 1). This is the highest harvest from Virginia tidal waters from 1996 through 2013. Of the 2013 harvest, gill nets accounted for the greatest percentage of the red drum harvest with 48%, pound nets 25%, haul seines 15%, and hook-and-line 11%. (Table 2).

The 2013 MRIP estimated recreational landings of red drum in Virginia totaled 124,028 fish (A+B1). The 2013 MRIP estimated number of fish released (B2) totaled 220,333 fish which is slightly lower than the 1996 through 2012 average of 286,903 fish (Table 3). In Virginia, saltwater anglers took 2,460,466 trips in 2013 for all species (Table 4).

Currently, no fishery-independent sampling programs or estimates of non-harvest loss are available.

e. Review of progress in implementing habitat recommendations
There have not been programs initiated relating specifically to red drum.

IV. 2014 Planned Red Drum Fisheries Management

a. Summarize regulations that will be in effect for 2014

In 2014 the Virginia recreational fishery will continue to be constrained by a three-fish possession limit, and it shall be illegal possess any red drum less than 18 inches in length or greater than 26 inches in length. The commercial fishery will be allowed a five-fish possession limit, and it shall be illegal to possess any red rum less than 18 inches in length or greater than 25 inches in length. This change in the commercial possession limit and size limit in Virginia were approved by the South Atlantic Board under the guidelines of Amendment 2, on February 6, 2014, and were adopted by the VMRC on March 25, 2014 (Appendix II).

b. Summarize monitoring programs that will be performed
The VMRC will continue to monitor commercial harvests of red drum through the mandatory reporting program and collect biological data from commercial and recreational fisheries, as well as fishery-independent sampling when possible. The VGFTP will continue to tag red drum in 2014. A yearly summary report, which includes annual data of all tagged and recaptured fish, is available by July 1st.

c. Highlight any changes from the previous year
N/A

Table 1. Virginia commercial harvest (pounds) of red drum, 1996 through 2013.

Year	Harvest (pounds)
1996	2,006
1997	3,820
1998	6,456
1999	10,856
2000	11,512
2001	4,951
2002	7,361
2003	2,716
2004	638
2005	527
2006	2,607
2007	6,505
2008	4,910
2009	8,315
2010	3,634
2011	4,369
2012	2,609
2013	28,766
Total	112,557

Table 2. Virginia commercial harvest of red drum, by gear, in 2013.

Gear		Pounds
Gill Net, Sink/Anchor, Other		13,722
Handline, Other		3,298
Other*		249
Pound Net, Fish		7,275
Seine Haul, Common		4,224
	Total	28,766

*Other includes pots, trot line, and fyke net.
Data combined into other category because of confidentiality rules.

Table 3. Virginia red drum recreational landings (A+B1) and releases (B2) 2004 through 2013.

	Harvest (Type A +B1)				Released Alive (Type B2)	
Year	Number	PSE [Number]	Weight (lb)	PSE [Weight]	Number	PSE [Number]
1996*	572	99.2	1,513	.	2,424	46.3
1997	1,920	62.3	1,810	.	109,754	36.1
1998	13,070	30.2	34,861	34.4	93,660	22.3
1999	12,425	38.7	92,794	39.1	232,893	31.4
2000	22,603	27.8	95,596	28.8	196,541	35.7
2001	6,967	39.8	51,890	16.9	30,365	31.1
2002	49,795	22.8	155,212	24.7	801,239	14.7
2003	13,607	38.1	57,213	39.3	43,379	40.1
2004	5,005	84.7	32,415	78.9	33,777	33.4
2005	2,766	101.6	7,624	101.6	28,351	44.9
2006	12,665	62.8	21,440	61.1	185,859	41.6
2007	46,405	28.8	209,225	30.3	110,566	28.9
2008	20,847	29	84,491	30.2	236,787	18.5
2009	38,670	27.2	147,444	31.4	178,396	44.1
2010	11,076	32.3	43,126	32.6	28,580	32.2
2011	0	.	0	.	61,330	61.8
2012	28,159	56.1	27,446	59.1	2,503,456	20.9
2013	124,028	32	408,578	25.8	220,333	32.5

*1996 through 2003 taken from MRFSS data

Table 4. Total number of recreational trips recorded for Virginia, all species combined, 2004 through 2013.

Year	Trips
1996*	2,743,913
1997	3,712,259
1998	2,956,024
1999	2,693,943
2000	3,390,719
2001	4,128,242
2002	3,253,844
2003	3,113,183
2004	3,663,879
2005	3,964,054
2006	3,787,818
2007	3,511,486
2008	3,498,928
2009	3,047,706
2010	2,596,891
2011	2,898,696
2012	2,521,577
2013	2,460,466
Average	3,219,090

*1996 through 2003 taken from MRFSS data

Appendix I.

VIRGINIA MARINE RESOURCES COMMISSION
"PERTAINING TO SPECKLED TROUT AND RED DRUM"
CHAPTER 4VAC20-280-10 ET SEQ.

PREAMBLE

This chapter establishes minimum size limits for the taking or possession of speckled trout and red drum (channel bass) by commercial and recreational fishermen. The minimum size limits will protect the spawning stocks and increase yield in the fishery. This chapter is designed to assure that Virginia is consistent with all federal and interstate management measures for speckled trout and red drum. In addition, this chapter establishes a commercial landings quota for speckled trout. The goal of these management measures is to perpetuate the speckled trout and red drum resources in fishable abundance throughout their range and generate the greatest possible economic and social benefits from their harvest and utilization over time.

This chapter is promulgated pursuant to authority contained in §§28.2-201 and 28.2-304 of the Code of Virginia. This chapter amends and re-adopts, as amended, previous Chapter 4VAC20-280-10 et seq., which was adopted December 17, 2002, and effective January 1, 2003. The effective date of this chapter, as amended, is April 1, 2011.

4VAC20-280-10. Purpose.

The purpose of this chapter is to protect and rebuild the spawning stocks of speckled trout and red drum, minimizing the possibility of recruitment failure, and to increase yield in their fisheries.

4VAC20-280-20. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise.

"Red drum" means red drum or channel bass and is any fish of the species *Sciaenops ocellatus*.

"Speckled trout" means speckled trout or spotted seatrout and is any fish of the species *Cynoscion nebulosus*.

4VAC20-280-30. Size limits.

A. It shall be unlawful for any person to take, catch, or possess any speckled trout less than 14 inches in length provided however, the catch of speckled trout by pound net or haul seine may consist of up to 5.0%, by weight, of speckled trout less than 14 inches in length.

B. It shall be unlawful for any person fishing with hook-and-line, rod-and-reel, or hand-line to possess more than one speckled trout 24 inches or greater from December 1 through March 31 of any year.

Appendix I.

VIRGINIA MARINE RESOURCES COMMISSION
"PERTAINING TO SPECKLED TROUT AND RED DRUM"
CHAPTER 4VAC20-280-10 ET SEQ.

C. It shall be unlawful for any person to take, catch or possess any red drum less than 18 inches in length or greater than 26 inches in length.

D. Length is measured in a straight line from tip of nose to tip of tail.

4VAC20-280-40. Possession limits.

A. It shall be unlawful for any person fishing with hook-and-line, rod-and-reel, or hand-line to possess more than 10 speckled trout from April 1 through November 30 in any year.

B. It shall be unlawful for any person fishing with hook-and-line, rod-and-reel, or hand-line to possess more than 5 speckled trout from December 1 through March 31 in any year.

C. It shall be unlawful for any person to possess more than three red drum.

4VAC20-280-50. Commercial landings quota.

A. For each 12-month period of September 1 through August 31, the commercial landings of speckled trout shall be limited to 51,104 pounds.

B. When it is projected that the commercial landings quota will be met by a certain date within the above period, the Marine Resources Commission will provide notice of the closing date for commercial harvest and landing of speckled trout during that period; and it shall be unlawful for any person to harvest or land speckled trout for commercial purposes after such closing date for the remainder of that period.

4 VAC 20-280-60. Penalty.

A. Pursuant to §28.2-304 of the Code of Virginia, any person violating any provision of 4VAC20-280-40 C of this chapter shall be guilty of a Class 1 misdemeanor.

B. Pursuant to §28.2-903 of the Code of Virginia, any person violating any provision of this chapter other than 4VAC20-280-40 C shall be guilty of a Class 3 misdemeanor, and a second or subsequent violation of any provision of this chapter, other than 4VAC20-280-40 C, committed by the same person within 12 months of a prior violation is a Class 1 misdemeanor.

Appendix II.

VIRGINIA MARINE RESOURCES COMMISSION
"PERTAINING TO SPECKLED TROUT AND RED DRUM"
CHAPTER 4VAC20-280-10 ET SEQ.

PREAMBLE

This chapter establishes minimum size limits for the taking or possession of speckled trout and red drum (channel bass) by commercial and recreational fishermen. The minimum size limits will protect the spawning stocks and increase yield in the fishery. This chapter is designed to assure that Virginia is consistent with all federal and interstate management measures for speckled trout and red drum. In addition, this chapter establishes a commercial landings quota for speckled trout. The goal of these management measures is to perpetuate the speckled trout and red drum resources in fishable abundance throughout their range and generate the greatest possible economic and social benefits from their harvest and utilization over time.

This chapter is promulgated pursuant to authority contained in §§28.2-201 and 28.2-304 of the Code of Virginia. This chapter amends and re-adopts, as amended, previous Chapter 4VAC20-280-10 et seq., which was adopted March 29, 2011, and effective April 1, 2011. The effective date of this chapter, as amended, is April 1, 2014.

4VAC20-280-10. Purpose.

The purpose of this chapter is to protect and rebuild the spawning stocks of speckled trout and red drum, minimizing the possibility of recruitment failure, and to increase yield in their fisheries.

4VAC20-280-20. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise.

"Red drum" means red drum or channel bass and is any fish of the species *Sciaenops ocellatus*.

"Speckled trout" means speckled trout or spotted seatrout and is any fish of the species *Cynoscion nebulosus*.

4VAC20-280-30. Size limits.

A. It shall be unlawful for any person to take, catch, or possess any speckled trout less than 14 inches in length provided however, the catch of speckled trout by pound net or haul seine may consist of up to 5.0%, by weight, of speckled trout less than 14 inches in length.

B. It shall be unlawful for any person fishing commercially with commercial hook and line gear, or fishing recreationally with any gear type to possess more than one speckled trout

24 inches or greater in any one day from January 1 through December 31, except as described in 4 VAC 20-280-40 B.

C. It shall be unlawful for any person fishing recreationally with any gear type to take, catch, or possess any red drum less than 18 inches in length or greater than 26 inches in length.

D. It shall be unlawful for any person fishing commercially with any gear type to take, catch, or possess any red drum less than 18 inches in length or greater than 25 inches in length.

E. Length is measured in a straight line from tip of nose to tip of tail.

4VAC20-280-40. Possession limits.

A. It shall be unlawful for any person fishing commercially with commercial hook and line gear or recreationally with any gear type to possess more than 5 speckled trout in any one day from January 1 through December 31, except as described in subsection B of this section.

B. It shall be unlawful for any person fishing commercially with commercial hook and line gear or recreationally with any gear type to take, harvest, or possess any speckled trout from March 1 through July 31, 2014.

C. It shall be unlawful for any person fishing recreationally with any gear type to possess more than three red drum.

D. It shall be unlawful for any person fishing commercially with any gear type to possess more than five red drum.

4VAC20-280-50. Commercial landings quota and daily bycatch limit.

A. For each 12-month period of September 1 through August 31, the commercial landings of speckled trout shall be limited to 51,104 pounds.

B. When it is projected and announced that 80 percent of the commercial landings quota has been taken, it shall be unlawful for any commercial fisherman registration licensee to take, harvest, land, or possess a daily bycatch limit of up to 100 pounds of speckled trout, and that daily bycatch landing limit of speckled trout shall consist of at least an equal amount of other fish species.

Appendix II.

VIRGINIA MARINE RESOURCES COMMISSION
"PERTAINING TO SPECKLED TROUT AND RED DRUM"
CHAPTER 4VAC20-280-10 ET SEQ.

C. When it is projected that the commercial landings quota will be met by a certain date within the above period, the Marine Resources Commission will provide notice of the closing date for commercial harvest and landing of speckled trout during that period; and it shall be unlawful for any person to harvest or land speckled trout for commercial purposes after such closing date for the remainder of that period.

4VAC20-280-55. Seafood Buyer Reporting Requirements.

On each Monday from August 1 through November 30, of an open commercial season for speckled trout, any licensed seafood buyer who purchased speckled trout during the previous 7 days shall contact the Commission's Interactive Voice Recording System and report any purchases of speckled trout, in pounds, during the previous 7 days.

4VAC20-280-60. Penalty.

A. Pursuant to §28.2-304 of the Code of Virginia, any person violating any provision of 4VAC20-280-40 C of this chapter shall be guilty of a Class 1 misdemeanor.

B. Pursuant to §28.2-903 of the Code of Virginia, any person violating any provision of this chapter other than 4VAC20-280-40 C shall be guilty of a Class 3 misdemeanor, and a second or subsequent violation of any provision of this chapter, other than 4VAC20-280-40 C, committed by the same person within 12 months of a prior violation is a Class 1 misdemeanor.

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North Carolina's 2013 Red Drum Compliance Report
June 30, 2014

1. Introduction

The management goal for Amendment 2 is to achieve and maintain the Optimum Yield for the Atlantic coast red drum fishery as the amount of harvest that can be taken by U.S. fishermen while maintaining the Spawning Potential Ratio (SPR) at or above 40%. The regulatory requirements of Amendment 2 state that:

1) All states are required to implement red drum harvest controls (e.q. bag and size limits) in order to achieve a minimum 40% SPR.
2) A maximum size limit of 27 inches or less shall be implemented for all red drum fisheries.
3) All states must maintain current or more restrictive commercial fishery regulations for red drum, i.e. no relaxation of current fisheries management measures.

In August 2003, the ASMFC South Atlantic Board approved a motion to allow the NC Fisheries Director to raise or lower the daily commercial trip limit while maintaining the 250,000 pound harvest cap. More recently in 2009, the Board honored a request by North Carolina to monitor the annual 250,000 lb commercial cap based on a September 1 to August 31 fishing year. Changes to the fishing year were considered resource equivalent and were made to be consistent with existing monitoring conducted by North Carolina under the NC Red Drum FMP.

No regulatory changes occurred in the recreational fishery during 2013. The commercial fishery was closed on November 23, 2013 because harvest exceeded the 250,000 lb annual cap for the 2013/2014 fishing year.

2. Current/Previous Years Management Program in North Carolina

a. Activity and results of fishery dependent monitoring.

Commercial red drum landings and the red drum commercial cap are monitored through the North Carolina trip ticket program. Under this program licensed fishermen can only sell commercial catch to licensed NCDMF fish dealers. The dealer is required to complete a trip ticket every time a licensed fisherman lands fish. Trip tickets capture data on gears used to harvest fish, area fished, species harvested, and total weights of each individual species. Trip tickets are submitted to NCDMF on the 10th of the month following the month in which the landings occurred. Landings are available approximately 30-45 days after they are submitted from the dealers.

Commercial fishing activity is monitored through fishery dependent sampling conducted under Title III of the Interjurisdictional Fisheries Act and has been ongoing since 1982. Data collected in this program allow the size and age distribution of red drum to be characterized by gear/fishery. Predominant fisheries for red drum include estuarine gill nets, long haul seine/swipe nets, pound nets, and beach haul seines. (Assessment of North Carolina Commercial Finfisheries, North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries Completion Reports 1984-2013; NCDMF unpublished data). Over the past decade gill nets have been the dominant gear used for red drum accounting for >90% of the overall harvest. In 2013, 92% of the red drum harvest

was taken in gill nets, followed by pound nets with 7%. In all, 1,678 red drum, primarily from set gill nets, were measured from the commercial fishery (Table 1). With the 18 to 27 inch slot limit on harvest, nearly all landings were from age one and two year old fish.

Recreational fishing activity is monitored through the Marine Recreational Information Program (MRIP).

b. Activity and results of fishery independent monitoring.

NCDMF has conducted a juvenile red drum seine survey on an annual basis since 1991 (Survey of Population Parameters of Marine Recreational Fishes in North Carolina, North Carolina Department of Enviroment and Natural Resources, Division of Marine Fisheries Completion Report, Grant F-42, 1991-2013). The seine survey provides an index of abundance for juvenile (age-0) red drum with sampling occurring from September through November. The relative abundance of juvenile red drum is highly variable with both high and low abundance occurring in recent years. In 2013, 133 juvenile red drum were taken in 120 seine samples for an overall state mean CPUE of 1.1. The 2013 overall mean CPUE was lower than 2012 (2.7) and was lower than the long term average of the survey (5.7; Figure 1). Information gathered from this survey is currently used as an input parameter in the ASMFC Atlantic coast red drum stock assessment.

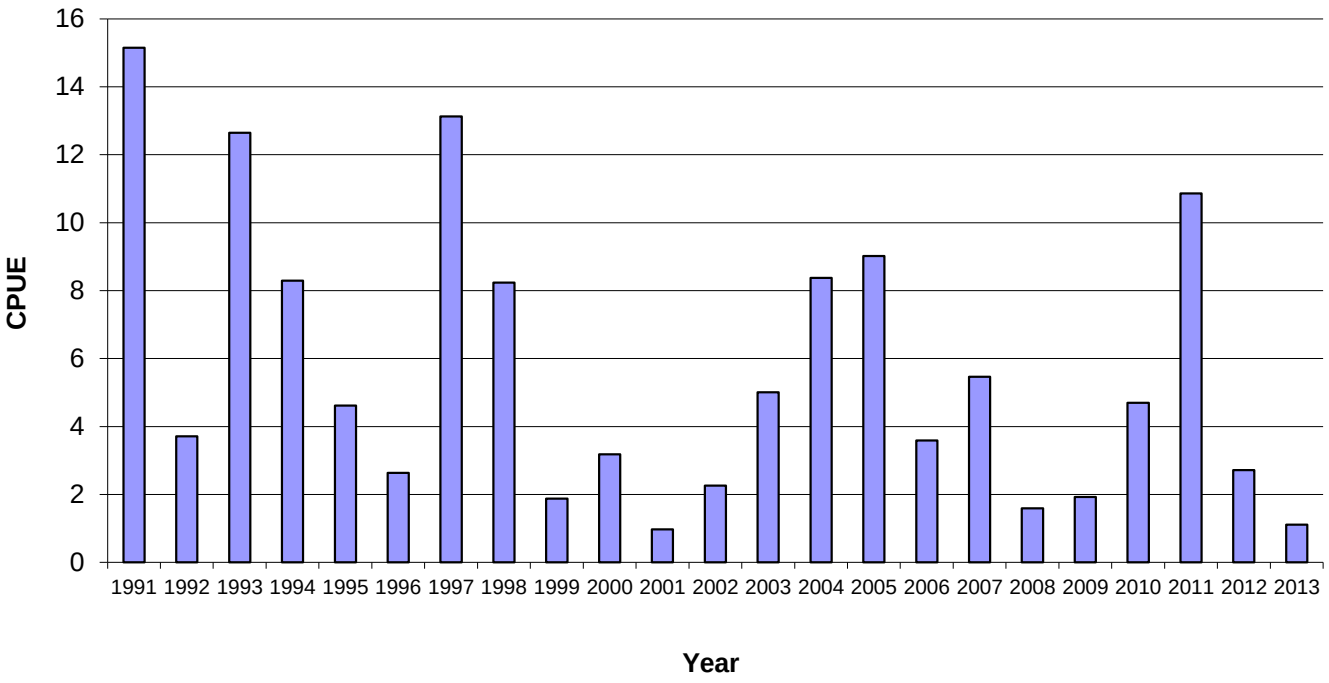


Figure 1. The annual juvenile (age-0) abundance index from the North Carolina Red Drum Juvenile Seine Survey for the period of 1991-2013.

A fishery independent gill net survey was initiated by the NCDMF in May of 2001. The survey utilizes a stratified random sampling scheme designed to characterize the size and age distribution for key

estuarine species in Pamlico Sound (Pamlico Sound Independent Gill Net Survey, North Carolina Department of Environment and Natural Resources, Division of Marine Fisheries Completion Report, Grant F-70, 1991-2013). By continuing a long-term database of age composition and developing an index of abundance for red drum this survey will help managers assess the red drum stocks without relying solely on commercial and recreational fishery dependent data. Additionally, data collected is used to help improve bycatch estimates, evaluate the success of management measures, and look at habitat usage. The overall red drum CPUE was 6.58 (n=1,428) in 2013, the highest in the time series (Figure 2). The age composition for 2013 is currently unavailable but lengths from the survey are generally representative of ages 1-4. During 2013, the average fork length was 18 inches with a range of 11 to 49 inches.

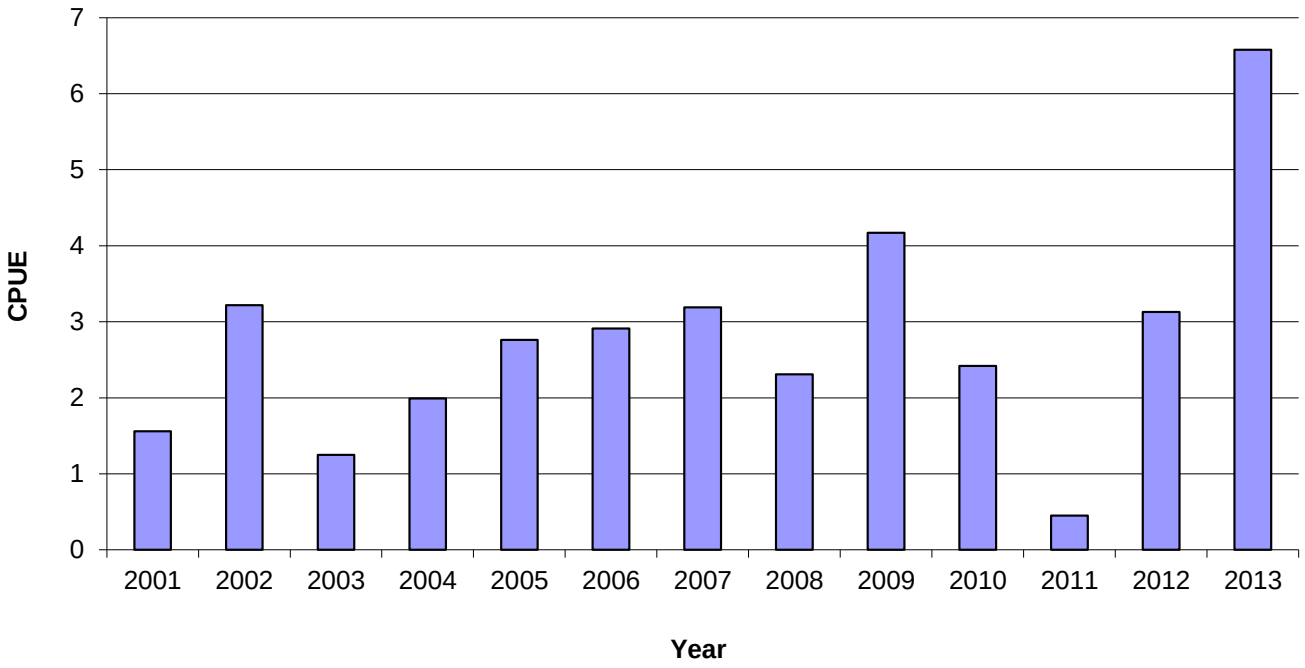


Figure 2. Annual weighted red drum CPUE (ages combined) from the North Carolina Pamlico Sound Independent Gill Net Survey.

North Carolina initiated an adult red drum longline survey in 2007 that has continued through 2013. The primary objective of the survey is to develop a sampling protocol that provides a fisheries independent index of abundance for adult red drum occurring in North Carolina. Initially, all sampling was non-random (exploratory) and was used to standardize proper methods and effort. From July through October, sampling was standardized and a stratified random sample design was implemented and has been in place since 2007. A standard sample consisted of 1,500 meters of mainline set with 100 gangions placed at 15 meter intervals (100 hooks/set). Soak times were approximately 30 minutes. All random sampling took place in Pamlico Sound. During the 2013 season, 356 red drum were captured out of 72 stratified random sets (4.9 red drum per set) which was near the time series average of 5.2 red drum per set. Red drum ranged from 29 to 47 inches fork length with most being >40 inches in length. Sampling is scheduled to continue in 2014.

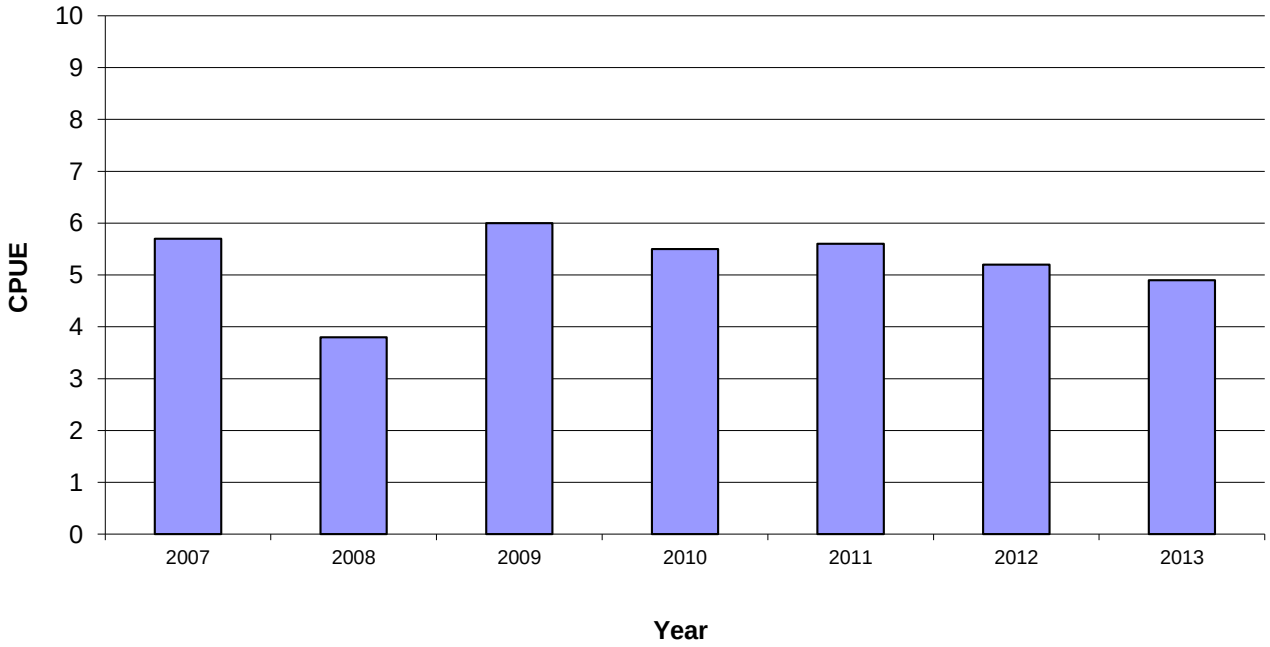


Figure 3. Red drum CPUE calculated from stratified random sampling occurring in the North Carolina Red Drum Longline Survey for the period of 2007 to 2013.

c. Regulations in effect for North Carolina in 2013.

15A NCAC 03M .0501 RED DRUM

(a) It is unlawful to remove red drum from any type of net with the aid of any boat hook, gaff, spear, gig, or similar device.
(b) It is unlawful to take or possess red drum taken by any boat hook, gaff, spear, gig, or similar device.
(c) It is unlawful to possess red drum less than 18 inches total length or greater than 27 inches total length.
(d) It is unlawful to possess more than one red drum per person per day taken-by hook-and-line or for recreational purposes.
(e) The annual commercial harvest limit (September 1 through August 31) for red drum is 250,000 pounds. The annual commercial harvest limit is allotted in two periods: September 1 through April 30 at 150,000 pounds, and May 1 through August 31 at 100,000 pounds plus any remainder from the first period allotment. Any annual commercial harvest limit that is exceeded one year will result in the poundage overage being deducted from the subsequent year's commercial harvest limit and the Fisheries Director shall adjust the period allotments accordingly. If the harvest limit is projected to be taken in any period, the Fisheries Director shall, by proclamation, prohibit possession of red drum taken in a commercial fishing operation for the remainder of that period.
History Note: Authority G.S. 113-134; 113-182; 113-221; 113-221.1; 143B-289.52;
Eff. January 1, 1991;
Amended Eff. March 1, 1996; October 1, 1992; September 1, 1991;
Temporary Amendment Eff. May 1, 2000; July 1, 1999; October 22, 1998;
Amended Eff. April 1, 2001;
Temporary Amendment Eff. May 1, 2001;
Amended Eff. April 1, 2009; October 1, 2008; August 1, 2002.

15A NCAC 03M .0512 COMPLIANCE WITH FISHERY MANAGEMENT PLANS
(a) In order to comply with management requirements incorporated in Federal Fishery Management Council Management Plans or Atlantic States Marine Fisheries Commission Management Plans or to implement state management measures, the Fisheries Director may, by proclamation, take any or all of the following actions for species listed in the Interjurisdictional Fisheries Management Plan:
(1) Specify size;
(2) Specify seasons;
(3) Specify areas:
(4) Specify quantity;
(5) Specify means and methods; and
(6) Require submission of statistical and biological data.
(b) Proclamations issued under this Rule shall be subject to approval, cancellation, or modification by the Marine Fisheries Commission at its next regularly scheduled meeting or an emergency meeting held pursuant to G.S. 113-221.1.
History Note: Authority G.S. 113-134; 113-182; 113-221; 113-221.1; 143B-289.4;
Eff. March 1, 1996;
AMENDED EFF. OCTOBER 1, 2008.

Under proclamation authority the NCDMF Director enacted the following restrictions in 2013:

- Commercial trip limit - set by NCDMF Director at a level that reduces discard mortality while still maintaining harvest below the commercial cap. Trip limit was set at 10 fish during most of 2013.
- 50% bycatch rule - no person may possess red drum incidental to any commercial fishing operation unless the weight of the combined catch of finfish (excluding menhaden) exceeds the weight of the red drum retained.
- On November 23, 2013 the sale of red drum was prohibited because the annual commercial cap of 250,000 lb was reached for the 2013/2014 fishing year. The red drum closure will be in place until September 1, 2014.

The intent of these rules are to prevent the targeting of red drum and to only allow red drum harvest incidental to legitimate fisheries where red drum bycatch is most common.

d. Harvest by commercial (gear type), recreational, and non-harvest losses (when available)

Commercial landings in 2013 were 370,080 lb; an increase from 2012 landings (66,518 lb) and higher than the ten-year mean of 178,850 lb (2004-2013). Gill nets dominated the catch in 2013 accounting for 92% of the commercial landings (Table 1).

Table 1. North Carolina's 2013 red drum commercial harvest (lb and percent by gear) and the number of individuals measured by NCDMF.

Gear	Landings (lb)	%	Number Measured
Long Haul/Seine Net	1,869	<1%	23
Pound Net	27,352	7%	167
Gill Net	341,279	92%	1,455

Other Gears	1,449	<1%	33
Total	370,080	100%	1,678

In addition to calendar year landings, North Carolina monitors the 250,000 lb annual cap based on a fishing year starting September 1 and ending August 31. For the 2008/2009 fishing year, landings totaled 134,161 lb. During the 2009/2010 fishing year, North Carolina exceeded the 250,000 lb annual cap with landings totaling 275,924 lb. Under the compliance requirements of Amendment 2, North Carolina was required to reduce the 250,000 lb cap in 2010/2011 by 25,924 lb. Landings during the 2010/2011 fishing year totaled 126,185 lb. In the most recent fishing year, 2012/2013, landings totaled 134,372 lb. Landings for 2013/2014 are yet to be determined, but high landings in the fall of 2013 prompted a closure of for the commercial harvest of red drum as the fishing year annual cap was exceeded. The commercial season is set to re-open on September 1 of 2014.

Table 2. North Carolina's annual commercial harvest based on a fishing year beginning September 1 and ending August 31.

Fishing Year	Landings (lb)	Annual Cap
2008/2009	134,161	250,000
2009/2010	275,924	250,000
2010/2011*	126,185	224,142
2011/2012	94,298	250,000
2012/2013	134,372	250,000
2013/2014**	262,676	250,000

*adjusted to pay back overage in 2009/2010 fishing year

**Landings are preliminary (season closed in November of 2013 due to annual cap being exceeded)

Recreational landings in 2013 were 682,964 lb; a large increase from 2012 landings (238,310 lb) and near the ten-year average (2004-2013 – 286,628 lb).

Non-harvest loss in the commercial fishery is currently not fully known. The primary loss is likely due to undersized bycatch of red drum in the gill net fishery. Small mesh gill nets (<5 inch stretch mesh) select for red drum less than 18" TL and are a significant source of the bycatch mortality, particularly in months when water temperatures are high. In October of 1998, as part of the state NC Red Drum FMP, measures were taken requiring the attendance of small mesh gill nets (<5" stretch mesh). These regulations required the attendance of small mesh gill nets from May 1 through October 31 in areas known to be critical for juvenile red drum. Amendment 1 to the NC Red Drum FMP, passed in 2008, takes further action by extending small mesh gill net attendance rules through November.

Adequate NCDMF observer data is available to provide some estimates of estuarine gill net discards from 2004 to 2006. Total dead red drum discards were estimated by multiplying the total number of trips for a fishery (NC Trip Ticket Program) by the CPUE (number or weight of dead red drum discards per observed trip) of that fishery. Overall, estimates of dead discards ranged from 20,142 lb in 2004 to 68,997 lb in 2005 and represented between 20% and 39% of the total commercial removals by weight. The majority of the dead discards were undersized (<18 inch). By number, commercial dead red drum discards represented

approximately 50% of the total commercial removals. Estimates from this study were included in the most recent stock assessment (SEDAR 18).

Non-harvest loss in the recreational fishery is primarily the result of regulatory discards. The total number of releases in the recreational fishery is estimated through the MRIP. The most recent stock assessment assumes an 8% mortality rate for all releases. With the low recreational bag limit of one fish and an increasing trend in the catch and release fishery, non-harvest losses are a significant contributor to the overall fishing mortality in the red drum fishery. Beginning in 2009, as a result of Amendment 1 to the NC Red Drum FMP, barbless circle hooks along with short leaders and fixed sinkers are required in the Pamlico Sound adult red drum fishery from July through September. The rule applies to anyone fishing at night using natural bait and a hook size greater than 4/0. This rule is designed to reduce deep hooking which traditionally was common in this fishery. Research has shown that for this fishery, circle hooks rigged in this fashion can significantly reduce discard mortality.

e. Review of progress in implementing habitat recommendations.
No new implementation at this time.

3. Planned management program for the current calendar year.
   a. Regulations Summary
   In compliance with the requirements of the ASMFC Red Drum Amendment 2 FMP North Carolina will continue under its current management program.
   North Carolina's current regulations:
   - Maintain a prohibition on the possession of all red drum <18 inches or >27 inches TL
   - Maintain the current recreational bag limit at 1 fish
   - Maintain a commercial trip limit along with the 50% bycatch requirement. Director maintains the authority to adjust the trip limit as necessary to avoid commercial cap overages and to prevent excessive discards.
   - Maintain commercial landings within the commercial cap (250,000 lb) based on a September 1 to August 31 fishing year and implement management measures that require that any annual overages in the commercial cap be deducted from the following year (see 3c. below).
   - Require attendance of small mesh gill nets from May 1 through November 30 in order to help reduce non-harvest mortality in the commercial fishery (See Section 2d).

   b. Current monitoring programs outlined in Section 2a,b will be continued.

   c. Changes from previous year.
   No changes planned.

South Carolina
Red Drum Fishery and Management Program
Compliance Report for the Year 2013

DNR

July 1, 2014

Prepared by: Steve Arnott, Erin Levesque, Eric Hiltz, Robert Wiggers
Marine Resources Division
South Carolina Department of Natural Resources

I. INTRODUCTION

Red drum, ***Sciaenops ocellatus***, is one of the most sought after recreational fish species along the South Carolina coastline, with a status equivalent to that of striped bass in the mid-Atlantic and southern New England states.

Anglers of all modes (beach-bank, private-rental boats and charter boats) target a variety of sizes of red drum in both the estuarine and near-shore coastal waters of South Carolina. Initial analyses of fishery dependent and fishery independent data in the 1980s indicated that red drum were overfished along the southeastern coast of the U.S., with survival of young fish until sexually maturity considered insufficient to ensure a sustainable spawning stock biomass.

A series of management measures were put in place to reduce fishing mortality to levels that permitted sufficient escapement of sub-adults into the adult spawning population. These included US Exclusive Economic Zone regulations that banned both recreational and commercial harvest, and South Carolina state water regulations that banned commercial harvest and imposed new recreational regulations, including seasonal gear restrictions and size, slot and bag limits.

The history of changes in the management measures passed by the South Carolina legislature and signed into law by the governor was summarized in a document entitled "Marine Resources Division Background Information Related to Red Drum Creel Limits" by David Whitaker and Mel Bell on April 27, 2005. The authors indicated that South Carolina's creel and size limits for red drum have changed at least seven times within the past 20 years (**Table 1**). A full history of regulations for all the Atlantic states is available from the SEDAR 18 stock assessment[1].

The 2006 session of the South Carolina Legislature yielded the most recent changes to red drum regulations within the state. These modification were implemented in 2007 and increased the bag limit to three fish per angler per day (previously two), but decreased the maximum allowable size by one inch, with a new slot of 15 to 23 inches total length (previously 15 to 24 inches). Gear restrictions remained unchanged, allowing for capture by rod and reel (year-round) or by gig (March through November).

II. REQUEST FOR *de minimis*

Not applicable.

[1] SEDAR18-DW03 Atlantic States Red Drum Management Overview

III. PRESENT RED DRUM FISHERY AND MANAGEMENT PROGRAM

A. Fishery Dependent Monitoring:

Current fishery dependent monitoring covers only the recreational sector, since commercial harvest was banned when red drum was designated a state game fish in 1987.

Fishery dependent angler survey data for South Carolina are available from several sources, including: (i) the National Marine Fisheries Service's Fisheries Statistics Division (their Marine Recreational Information Program, or MRIP), (ii) a SCDNR-managed mandatory trip reporting system for licensed charter boat operators, and (iii) the SCDNR State Finfish Survey (SFS). Note, however, that the SFS was terminated after February 2013, at which time SCDNR took on the contract to perform the MRIP creel surveys.

Additional fishery dependent biological data are obtained by SCDNR staff from (i) angler-donated fish carcasses left at prescribed freezer drop-off locations (freezer program), (ii) measurements and biological samples taken from fish at tournament weigh-ins (although most tournaments have now eliminated red drum as a target species), (iii) fishery-based evaluation of the impacts of SCDNR's experimental red drum stocking program, and (iv) public participation in various SCDNR tag-return programs. The size composition of harvested red drum sampled from the freezer and tournament programs is shown in **Fig. 1**. Samples from these fish have been used for monitoring size, age, sex and maturity of harvested red drum.

State Finfish Survey (SFS) – PROGRAM TERMINATED FEB 2013 - The SFS was a fishery dependent survey designed to collect catch, effort and length data for certain species taken by private boat anglers in either South Carolina state waters or adjacent federal waters. Data were not collected for other fishing modes, and are available from 1988 through the end of February 2013. After that date, the SFS was terminated because SCDNR assumed the contract to perform the MRIP survey.

Among the 71 angler parties that were interviewed during Jan-Feb 2013, 28 (39%) of them said they were targeting red drum. These 28 parties had a statewide mean catch rate of 0.78 red drum per targeted fishing hour and caught a total of 115 red drum, of which 21 (18%) were harvested. Together, all of the 71 angler parties that were interviewed (including those not targeting red drum) caught 145 red drum, harvesting 29 (20%) of them.

Marine Recreational Information Program - MRIP (formally the Marine Recreational Fisheries Statistics Survey - MRFSS) – According to the catch time series available from the National Marine Fisheries Service's Fisheries

Statistics Division[1], the total number of red drum caught in South Carolina by all modes of anglers in 2013 was 770,763, with 705,730 (91.6%) caught in inshore waters (creeks, estuaries, etc), 65,033 (8.4%) caught within 3 miles of shore, and 0 (0%) caught further than 3 miles offshore.

Of the 770,763 red drum that were caught, 673,377 (87.4 %) were released alive (B2 disposition) and 97,386 (12.6 %) were harvested (A+B1 dispositions) (**Fig. 2A**). These values were calculated using the new MRIP method[2].

The National Marine Fisheries Service estimated that 1.98 million marine recreational angler fishing trips occurred in South Carolina during 2013, which is slightly lower than the 2.21 million trips estimated for 2012 (**Fig. 2B**). Most of the trips occurred in coastal waters (≤ 3 miles from shore; 995,550 trips, or ~50%), followed by inshore waters (928,241 trips, or ~47%) and then offshore waters (> 3 miles from shore; 53,640 trips, or ~3 %).

Charter Vessel Trip Reporting – Since 1993, the Statistics Section of the Office of Fisheries Management at SCDNR has implemented a mandatory trip reporting system for participants in the charter boat fishery. The main target species of the inshore component of the charters is red drum. There has been a general growing trend in the number of captains that carry patrons to fish for red drum, with a total of 438 active vessels licensed (out of 545 issued) in 2013. The fishery is conducted throughout the year, and more charter boat activity occurs in the central and southern parts of the state (from Winyah Bay south) because there are many more large bays and sounds that provide appropriate habitat for red drum. The fishery targets a wide range of sizes, with the majority of the catch being sub-adult red drum (< 5 years old). Most captains either require, or strongly suggest, the practice of catch and release, even for legal-size fish.

Based on mandatory logbook reports, a total of 4,987 targeted charter boat trips took place during 2013 (out of a total of 12,926 charter boat trips). The targeted trips caught 34,267 red drum (mean of 6.8 red drum per targeted trip), of which 32,411 (94.6%) were released alive, 41 (0.1%) were released dead and 1,815 (5.3%) were harvested. Among all 12,926 trip (targeted or not), a total of 43,960 red drum were caught, of which 41,176 were released alive (93.7%), 65 were released dead (< 0.1%) and 2,719 were harvested (6.2%).

Prior to 1999, only the total release rate was recorded (i.e. alive + dead releases). However, over the last decade the release rate of live red drum by charter boats has remained fairly steady (mean = 93.1%), as has the release rate of dead red drum (mean = 0.14%).

South Carolina Marine Game Fish Tagging Program – Since 1974, the SC Marine Resources Division's Office of Fisheries Management has operated a

[1] http://www.st.nmfs.noaa.gov/st1/recreational/queries/index.html, accessed 13 June 2014.
[2] See http://www.countmyfish.noaa.gov/aboutus/downloads/MRIP_Catch_Estimation_Presentation_(Jan_26).pdf

tagging program that trains volunteer anglers to deploy external tags in marine game fish. The program serves as a useful tool for promoting the conservation of marine game fish, and partnering with the public has proved an efficient and cost-effective way of collecting data that incorporates anglers into the data acquisition process. In 1993, anglers tagging red drum were asked to concentrate their efforts on fish over 18 inches and not to place tags in smaller fish. Before this request, red drum of all sizes were routinely tagged. In 2012, volunteer taggers were asked to tag red drum of all sizes once again, and this protocol continued through 2013.

Historically, red drum has accounted for most of the tagging activity by volunteer anglers. During 2013 the species accounted for 58% of all fish tagged, with tags being applied to 2,209 red drum ranging from 9-49 inches total length (mean = 20.9 inches). There were 316 reported recaptures of red drum during 2013, of which 288 (91%) were released alive.

B. Fishery Independent Monitoring:

SCDNR uses three fishery independent surveys to monitor the abundance of red drum in South Carolina waters. These include (i) an electrofishing survey, which catches juvenile and sub-adult red drum in upper estuary nursery habitats, (ii) a trammel net survey, which catches larger sub-adults in lower estuary habitats, and (iii) a longline survey, which catches large adult fish in deeper sounds and outside the estuaries. Nearly all of the captured red drum are released alive, with those ≥ 350 mm receiving an external tag. Scales are removed from some of the red drum caught in the electrofishing and trammel net surveys for ageing purposes, and some red drum are sacrificed for other biological sampling purposes (otolith ageing, reproductive assessment, mercury analysis, parasite studies, etc). A small fin clip (< 1 cm^2) is also taken from every captured red drum and archived by the SCDNR Genetics Laboratory. The data from the surveys are used for examining aspects such as abundance indices, size, age, sex, maturity, movement patterns and genetic structure of the population.

Data from these fishery independent surveys were incorporated into the most recent stock assessment of red drum[1]. A new stock assessment is planned for 2015 and work is underway to incorporate our survey data into the October 2014 data workshop.

Inshore Fisheries Program – Electrofishing Survey

SCDNR began operating a stratified random electrofishing survey of upper estuarine habitats in 2001. The survey uses a dedicated Smith-Root electrofisher boat and currently covers five strata each month (the Combahee and Edisto Rivers, entering the ACE Basin in St. Helena Sound; the Ashley and Cooper Rivers, entering Charleston Harbor; and the Waccamaw River, entering Winyah

[1] SEDAR 18 (2009).

Bay). From May 2001 through December 2013, a total of 3,683 random electrofishing sets were made in these five strata, with 302 occurring in 2013.

The mean catch per unit effort (CPUE) of red drum pooled across all electrofishing strata was 3.24 red drum per set, which is an increase compared with 2.43 in both 2011 and 2012 (**Fig. 3**).

Inshore Fisheries Program – Trammel Net Survey

The SCDNR trammel net survey began in November 1990. It uses a stratified random sampling design and initially covered two strata (Charleston Harbor and the lower Wando River). The survey has expanded over the years and presently covers seven monthly strata and two quarterly strata. The monthly strata include ACE Basin, lower Ashley River, lower Wando River, Charleston Harbor, Muddy/Bulls Bay, Cape Romain and Winyah Bay. The quarterly strata include Colleton River and Broad River, both located within Port Royal Sound in the southern part of the state. A total of 16,271 random trammel sets were made in these nine strata from January 1991 through December 2013, with 911 occurring in 2013. Overall, the mean CPUE of red drum was similar in 2013 to 2012, with a slight increase in five of the strata and slight decrease in the remaining four (**Fig. 4**).

Previous analyses have shown that annual changes in red drum CPUE fluctuate in a relatively synchronous manner across estuaries along the South Carolina coastline[1]. Based on this assumption, and after standardizing CPUE from each stratum onto a common scale of z-scores (**Fig. 5**), it is evident that red drum in South Carolina has undergone multi-year, statewide oscillations. A general decline occurred during the mid- to late-1990s before a general increase from 2000-2004 due to a series of strong year classes. Since then, the population has gone through a smaller oscillation, peaking again in 2010 before declining to a relatively low level at present. However, the general increase in the electrofishing index during 2013 (**Fig 5**) suggests that the trammel net index may increase during 2014, since the electrofishing CPUE has historically correlated with the trammel net CPUE with a lag of one year.

Inshore Fisheries Program - Ocean Bottom Longline Survey

The longline survey began in 1994. At that time, it used one-mile, 120 hook sets and visited a relatively small number of fixed stations. The data were used for determining preliminary estimates of adult red drum abundance as well as size and (some) age composition.

In July 2007, the longline survey was redesigned. It now uses shorter gear (third-mile, 40 hook sets) and covers many more stations (253) spread over a larger extent of the South Carolina coastline. Stations are sampled using a stratified

[1] Arnott et al. (2010) *Mar Ecol Prog Ser*. 415: 221-236.

random design to give more rigorous estimates of fish abundance. Sampling occurs in August – December in four strata located off Winyah Bay, Charleston Harbor, St Helena Sound and Port Royal Sound. A total of 2,263 (August – December) random sets have been deployed by the new longline survey since July 2007, with 358 of these sets performed in 2013.

The longline survey primarily catches adult red drum in post-spawning condition (based on gross and histological assessments of sacrificed fish), with CPUE tending to increase from August through October before declining again through December. The distribution of red drum also tends to shift from near-shore stations (presumed spawning habitat) towards offshore stations as the sampling season progresses (**Fig. 6**).

Due to the relatively short duration of the survey (only seven years of information), it is too soon to explore meaningful long-term trends in the adult red drum population. However, a portion of adult red drum caught by the longline surveys has been sacrificed to determine age composition of the adult stock. Prior to 2007, only small size classes of red drum were selectively sacrificed, but since then, all size classes have been taken (as requested by the Atlantic States Marine Fisheries Commission). Under the new system, a total of 552 fish have been randomly sacrificed or collected as a result of mortality during the survey (120 in 2013). The year class composition of these fish (n = 548 aged, to date) is shown in **Fig. 7**. Previous analysis on a sub-set of these data has shown that a significant correlation exists between adult year class composition and corresponding juvenile recruitment indices determined from the electrofishing and trammel net surveys[1].

Inshore Fisheries Program – Tagging Studies

The trammel net, electrofishing and longline surveys each have a tag-recapture component. The tagging data have been used for a variety of purposes such as estimating angler tag-reporting rates[2], calculating mortality[3] and examining movement patterns.

By the end of 2013, the trammel net survey had tagged a total of 48,258 red drum, including 1,570 that were tagged during 2013. The electrofishing survey has tagged far less red drum because it was initiated more recently and catches fewer red drum per year, especially in the range big enough to tag (i.e. ≥ 350 mm). From 2001 – 2013, the electrofishing survey tagged a total of 7,179 red drum, including 769 in 2013.

Historically, the sub-adult, shallow water component of the red drum population was also tagged by some other (now discontinued) surveys. These included a stop

[1] Arnott et al. (2010) *Mar Ecol Prog Ser*. 415: 221-236.
[2] Denson et al (2002) *Fish Bull.* 100: 35-41.
[3] Latour et al (2001) *N Am J Fish Manag.* 21: 733-744.

net survey, which tagged a total of 4,608 red drum between 1986 and 1998, and a separate trammel net survey (different net dimensions), which tagged a total of 3,665 red drum between 1994 and 1997.

By the end of 2013, all of SCDNR's fishery-independent tagging of sub-adult red drum, over all years, had resulted in a total of 27,967 reported tag recapture events. This included 13,430 recaptures by recreational anglers and 14,537 recaptures by SCDNR surveys. During 2013 alone, 849 reported tag recapture events occurred, of which 611 were by anglers and 238 were by SCDNR surveys. Among the angler recaptures, 493 (80.7%) of the capture events resulted in the fish being released alive while the remaining 118 events (19.3%) resulted in the fish being harvested.

The SCDNR tag recapture data indicate that there has been a notable long-term increase in the proportion of fish released alive by anglers, rising from < 10% in the mid-1980s to ~80% in recent years. This trend closely reflects those seen from other data sources, including MRFSS/MRIP, the SCDNR State Finfish Survey and the Charter Vessel Trip Reporting program (**Fig 8**). The release rate from chartered trip tends to be higher than other sectors, which is not surprising since the charter captains encourage their customers to release fish. Nevertheless, the general increase in release rates over time is probably due to a combination of regulatory changes (**Table 1**), as well as a shift in fishing ethic among the angling public. This shift is evident from the fact that there has also been an increase in the percent of legal-sized fish released alive, despite more stringent harvest regulations. The observed change in angler behavior over time implies that inadvertent mortality caused by hook injuries[1] may be of increasing importance in managing and assessing the population.

The old and new longline surveys have also tagged adult red drum since 1994. Many of the tagged fish have been multiple-tagged using a combination of two types of plastic darts, a stainless steel dart tag and a PIT tag (passive integrated transponder tag). The purpose of the multiple tag study was to examine tag retention[2]. A number of tagged fish have also been injected with tetracycline to validate annulus formation in the adult otoliths.

The old long-line survey that ran from 1994-2006 (1 mile, 120 hook sets) tagged 2,703 adult red drum. Since the inception of the randomly stratified longline survey in 2007 (third mile, 40 hook sets), 2,094 red drum have been tagged, including 480 in 2013. During 2013, 14 of the longline-tagged red drum were recaptured by the longline survey itself, and a further 22 were recaptured by recreational anglers. All (100%) of these angler recaptures were released alive.

Data from all these surveys have been archived in electronic databases and have been made available to biologists during assessments.

[1] Vecchio & Wenner, 2007. *N Am J Fish Manag*. 27: 891–899.
[2] Hendrix, C. (2010). Master's Thesis, College of Charleston, Charleston, SC.

C. Red Drum Regulations in Effect:

South Carolina's current red drum-related fisheries regulations meet all management plan compliance criteria listed in Section 5.1.1.1 of Amendment 2 to the ASMFC Interstate Fishery Management Plan for Red Drum (June 2002).

Harvest controls – Recreational anglers are limited to three fish per person per day in state waters and no harvest in federal waters. Red drum must be between 15 and 23 inches total length to be retained. Fish may be taken by rod and reel year-round, or by gigging from March through November. The state's combination of bag limit and size limits are within the recommended range.

Maximum size limit – Retained red drum must be no greater than twenty-three inches total length, which is below the ASMFC-required a maximum of twenty-seven inches or less.

Commercial restrictions – Commercial harvest of red drum is prohibited in South Carolina, as is the sale of native caught fish.

D. Red Drum Harvest:

Recreational harvest data - The National Marine Fisheries Service's Fisheries Statics Division estimated that the recreational harvest of red drum during 2013 was 97,386 fish, which was lower than the 121,068 estimated for 2012 (see section A, above, and **Fig. 2**).

Commercial harvest data – Not applicable.

Non-harvest losses – Non-harvest-related losses undoubtedly occur in red drum stocks, whether from by-catch associated with other legitimate fisheries, or losses related to dramatic weather events. No specific program currently exists to track such losses.

E. Progress Related to Habitat Recommendations:

From approximately three decades of monitoring and research, SCDNR scientific and fisheries management staff has amassed a significant amount of general and specific knowledge pertaining to the different habitats of importance to the success of red drum in the state's estuarine and nearshore coastal waters. Much of this knowledge has been acquired through the significant efforts of the various on-going fishery independent and fishery dependent programs described above. However, no specific section, program or project within the SCDNR has been assigned responsibility for oversight or implementation of the specific red drum-related habitat conservation and restoration recommendations listed in Section 4.4 of Amendment 2 to the Red Drum Plan. Current habitat development-focused

projects, such as those responsible for the restoration of estuarine oyster reefs[1], may provide some benefit to juvenile and sub-adult red drum in some areas, but evaluation of any potential benefit is needed before this can be fully substantiated. During 2012 and 2013, SCDNR staff shared data and worked with the US Army Corps of Engineers on their environmental assessment of the proposed Charleston Harbor Deepening Project. Part of the process includes the development of habitat suitability models for red drum within the Charleston Harbor system.

IV. PLANNED RED DRUM MANAGEMENT PROGRAM FOR 2014

A. Summary of Regulations:

No changes foreseen. Current regulations include a size limit of 15-23 inches TL and a bag limit of 3 fish per day. Fish may be taken by rod and reel year-round, or by gigging from March through November.

B. Planned Monitoring Activities:

Fishery dependent and fishery independent red drum-related monitoring activities described for 2013 will continue in 2014 without significant change.

C. Changes from previous year

There are no planned changes from the previous year.

V. PLAN SPECIFIC REQUIREMENTS

Not applicable.

[1]South Carolina Oyster Reef Restoration Program, http://score.dnr.sc.gov/

Table 1. History of changes in red drum size and bag limits in the South Carolina recreational fishery.

Year	Action
1986	No creel limit; Minimum size 14 inches TL, June 1- Sept. 1; May keep one fish per day greater than 32 inches TL
1987	Game fish status (no commercial harvest); Creel limit set at 20 fish per day; May keep one fish per day greater than 32 inches TL
1988	14-inch TL minimum, June 1 to October 1; 20 fish creel, one fish greater than 32 inches
1990	Creel limit is 20 fish per day; Slot limit of 14 to 32 inches TL established; May keep one fish greater than 32 inches TL in State Waters; So. At. Fish. Mgt Council prohibits retention of red drum in Federal Waters
1991	Creel limit reduced to 5 fish per day; Slot limit remains at 14-32 inches TL; May keep one fish greater than 32 inches TL
1993	Creel limit remains at 5 fish per day; Slot limit is changed to 14 to 27 inches TL; No larger fish may be retained.
2001	Creel limit is reduced to 2 fish per day; Slot limit slot is modified to 15 to 24 inches TL.
2007	Creel limit is raised to 3 fish per day; slot limit is modified to 15 to 23 inches TL

Fig. 1 Size composition of red drum sampled by the SCDNR recreational freezer and tournament programs (fishery-dependent data). Dash lines indicate the most recent slot limit of 15”-23”, which was implemented during 2007.

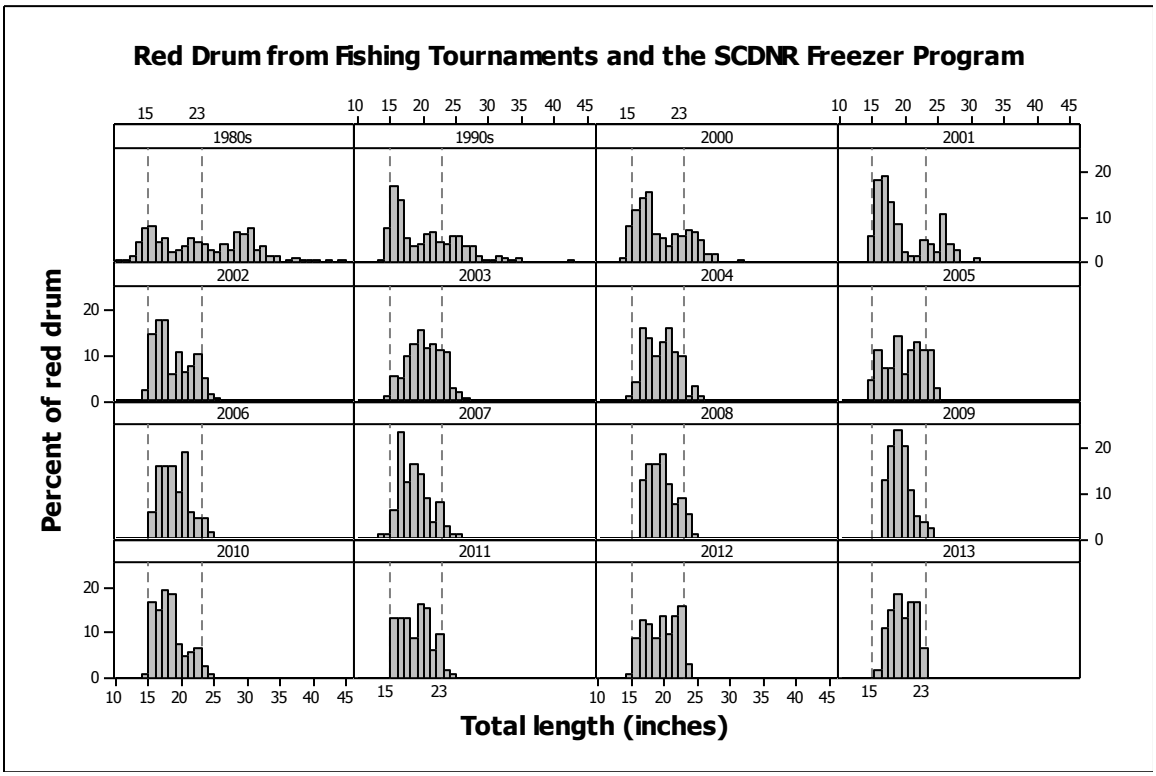
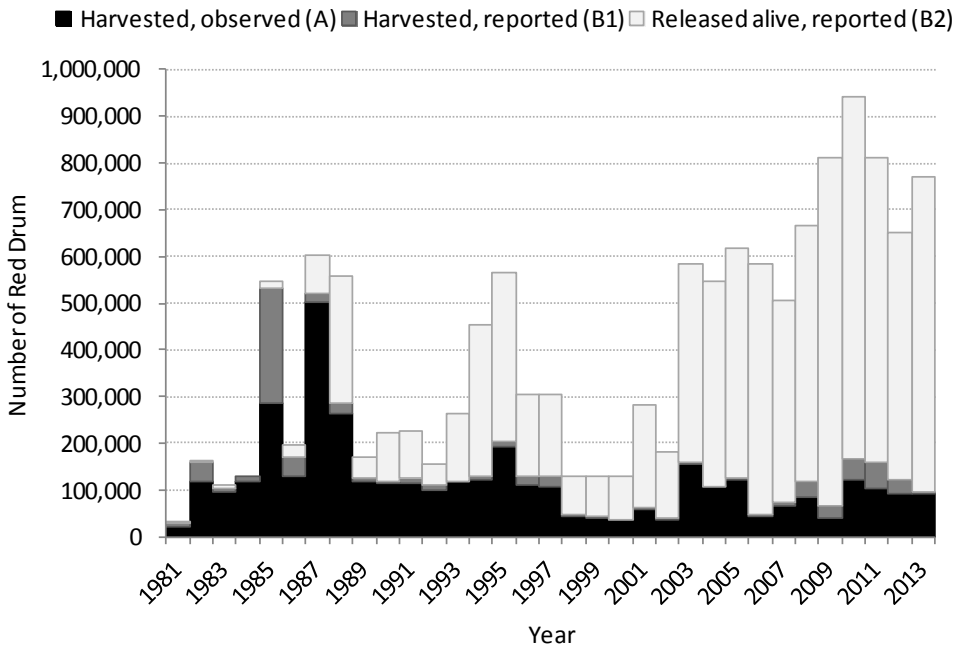
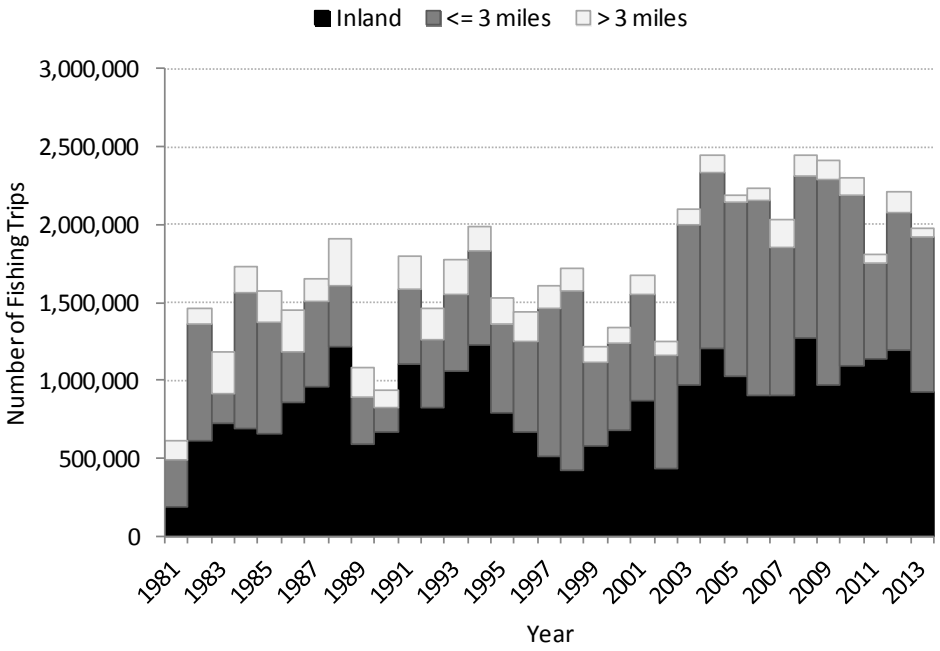


Fig. 2 (**A**) Annual estimates of the number of red drum caught in South Carolina since 1981, by disposition. (**B**) Annual estimates of the number of fishing trips per year in South Carolina, by area. (Note: "Inland" refers to brackish creeks, estuaries, bays, sounds, etc.). Data are from the National Marine Fisheries Service, Fisheries Statistics Division[1].

A



B



[1] http://www.st.nmfs.noaa.gov/st1/recreational/index.html, accessed June 13, 2014.

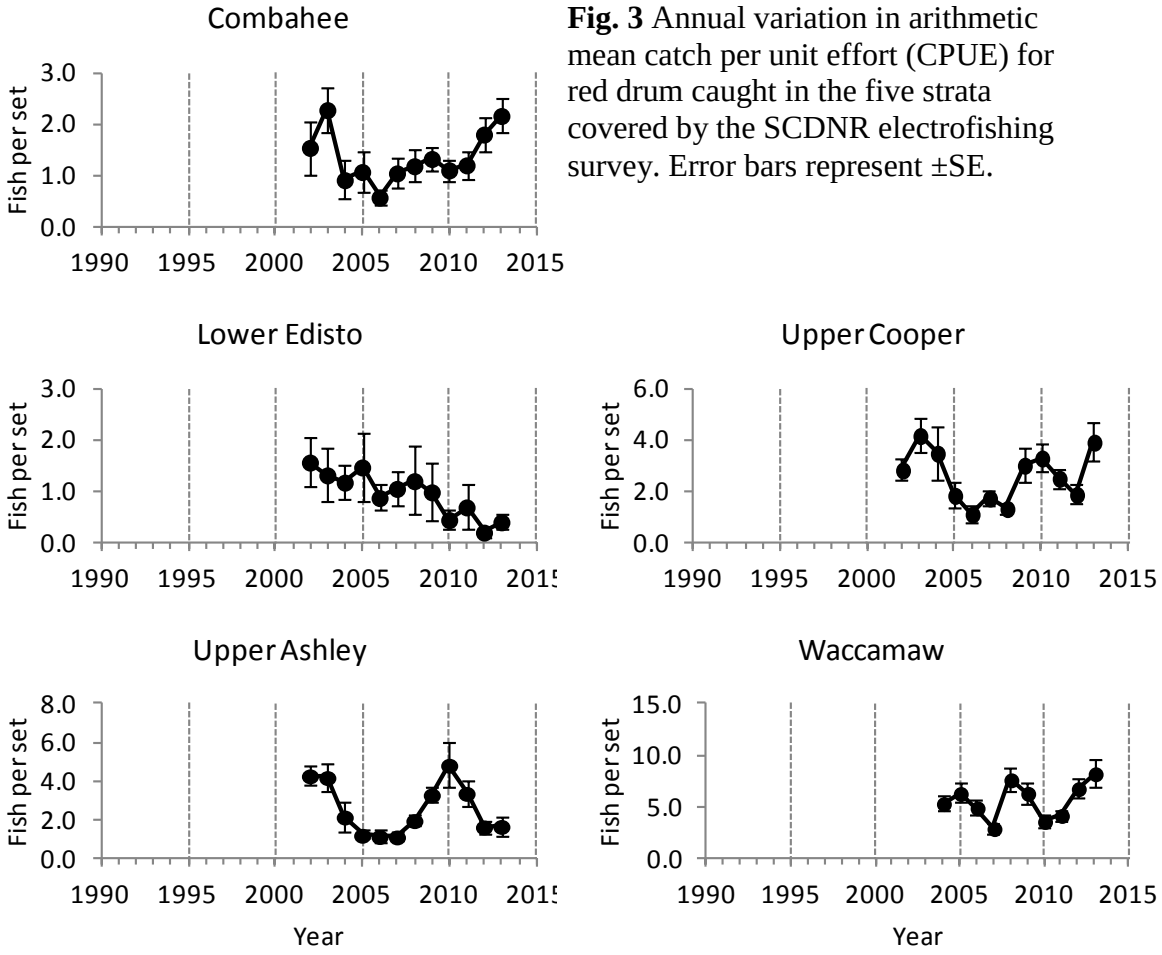


Fig. 3 Annual variation in arithmetic mean catch per unit effort (CPUE) for red drum caught in the five strata covered by the SCDNR electrofishing survey. Error bars represent ±SE.

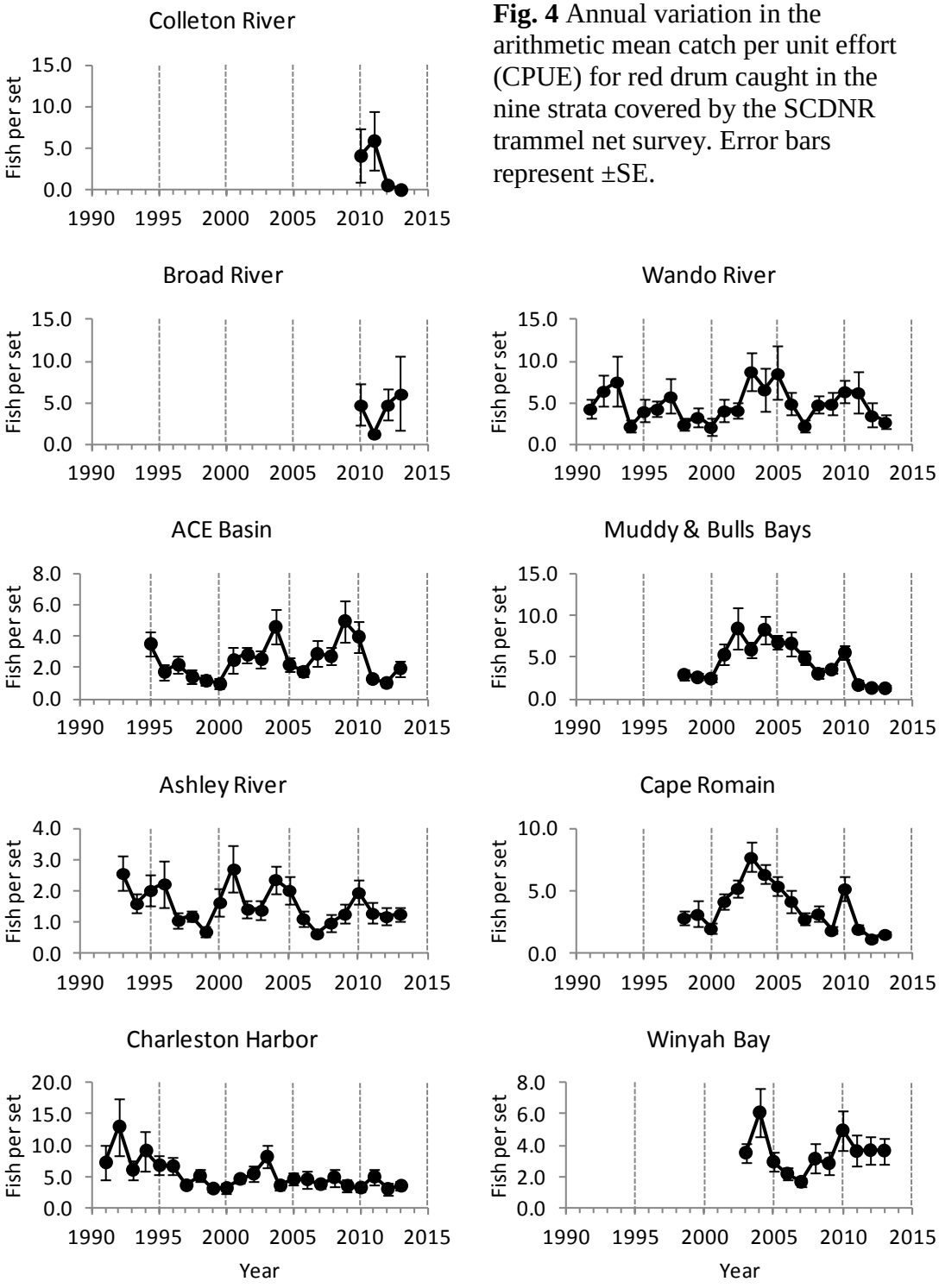


Fig. 4 Annual variation in the arithmetic mean catch per unit effort (CPUE) for red drum caught in the nine strata covered by the SCDNR trammel net survey. Error bars represent ±SE.

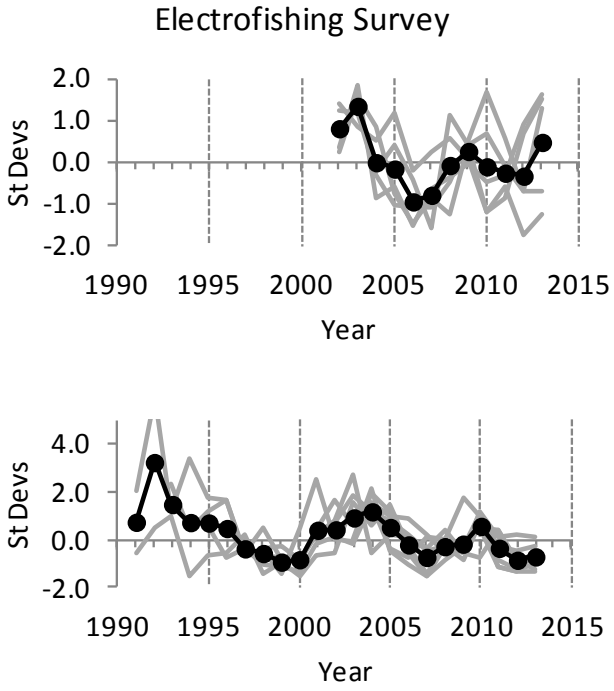


Fig. 5 Catch per unit effort of red drum expressed as Z-scores ($[CPUE - \overline{CPUE}]/SD$, with the mean and SD calculated for the period 2001-2013). Gray lines: individual strata; Black lines: mean of all strata).

Fig. 6 Arithmetic mean CPUE (±SE) of adult red drum caught by the SCDNR longline survey during the months August-December. Data are shown for random sets (1/3-mile, 40 hook sets) in the inner (nearshore) and outer (offshore) stations, pooled from 2007-2013.

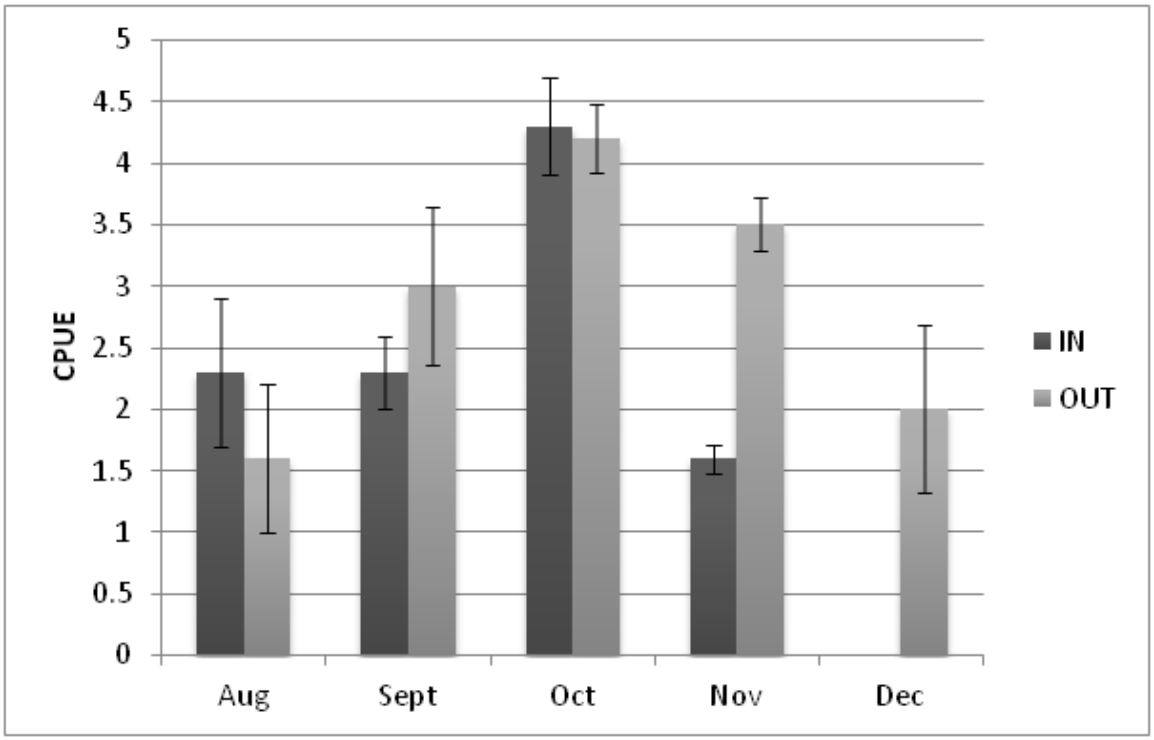


Fig. 7 Year class composition of sacrificed adult red drum caught by the SCDNR longline survey between 2007 and 2013 (n=548).

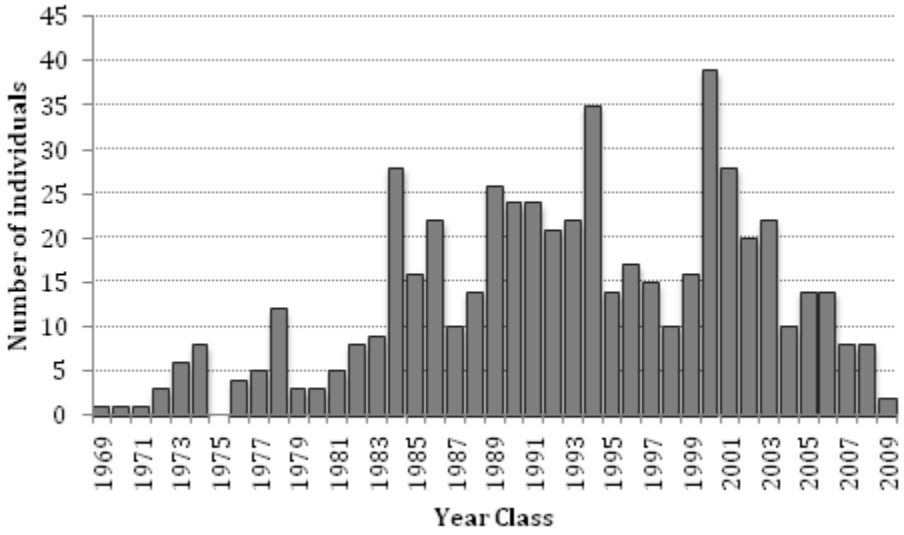
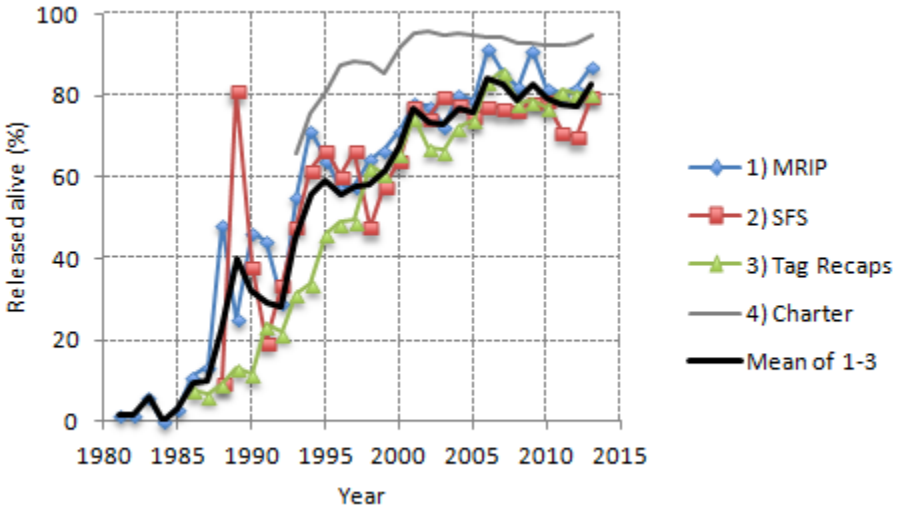


Fig. 8 Estimated annual percentage of B2 red drum (released alive) based on data from MRIP, the SCDNR State Fishery Survey (SFS), tag return information from the SCDNR Inshore Fisheries tagging program, and the SCDNR charter boat logs.



Note 1: Prior to 1999, charter boat data includes releases of both dead and alive red drum. Since 1999, when records of separate release dispositions have been recorded, the dead component has only accounted for ~0.1% of all releases).
Note 2: Data for 2013 from the SFS only covers Jan-Feb, after which the program was terminated because SCDNR took over the MRPI contract.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION

MARK WILLIAMS
COMMISSIONER

A.G. 'SPUD' WOODWARD
DIRECTOR

July 1, 2014

Kirby Rootes-Murdy
FMP Coordinator
Atlantic States Marine Fisheries Commission
1050 N. Highland St., Suite 200 A-N
Arlington VA, 22201

Kirby:

Please find enclosed Georgia's 2013 Red Drum Compliance Report. Let me know if you require additional information.

Sincerely,

Chris Kalinowsky

Chris Kalinowsky
Marine Fisheries Section

cc: Pat Geer, Spud Woodward

1. **Introduction: Summary of the year: highlight any significant changes in monitoring, regulations, or harvest.**

Georgia currently has a size slot limit of 14 to 23 inches, total length. The daily bag/creel limit is five fish per person.

During the 2013 session, the Georgia General Assembly passed House Bill 36 which designates red drum as a game fish. Unless otherwise provided for in law, game fish cannot be sold. In the case of red drum, the legislation did not provide for an exception. Therefore, effective July 1, 2013, it became illegal to sell red drum caught from Georgia waters.

The red drum is typically ranked among the top three species targeted by recreational anglers in Georgia. Recreational harvest will continue to be monitored through the National Marine Fisheries Service's (NMFS) Marine Recreational Information Program (MRIP). CRD has been the contractor for the intercept survey since 2000.

A variety of sampling gear including trammel nets, gill nets, and hook and line are used in the Marine Sportfish Population Health Survey (MSPHS) to collect red drum and other fishes of recreational importance from two Georgia estuaries. During 2013, 366 trammel and gill net sets resulted in the capture of 289 red drum.

2. **Request for *de minimis*, where applicable.**

Georgia is not seeking *de minimis* status at this time.

3. **Previous calendar year's fishery and management program**

a. Activity and results of fishery dependent monitoring.

Finfish Carcass Recovery

The Marine Sportfish Carcass Recovery Project, a partnership with recreational anglers along the Georgia coast, was used to collect biological data from finfish such as red drum, spotted seatrout, southern flounder, sheepshead, and southern kingfish. Chest freezers were located at public access points along the Georgia coast. Each freezer was clearly marked and contains a supply of plastic bags, pencils, and data cards. Anglers place their filleted fish carcasses in plastic bags along with a completed data card in the freezer. CRD personnel collected the carcasses and processed them to determine species, length, and sex. Sagittal otoliths were removed and processed to determine the age of the fish.

In 2013, a total of 4390 fish carcasses were donated through this project. Red drum comprised 11.9% (523) of the total, with an average length of 395.6 mm (323 mm CL min, 643 mm CL max). Samples were reported from 14 of the 18 active recovery locations.

b. Activity and results of fishery independent monitoring.

The MSPHS is a multi-faceted ongoing survey used to collect information on the biology and population dynamics of recreationally important finfish. Currently two Georgia estuaries are sampled on a seasonal basis using entanglement gear. Specific information collected includes: 1) age composition of the sampled portion of the stock; 2) ratio of males to females in the stock; 3) movement and/or migration; 4) fishing mortality; and 6) growth. To provide age information, otoliths are removed from a size-stratified subsample of the catch from select sampling events.

Gill and Trammel Nets

Between June and August young-of-the-year red drum in the Altamaha River delta and Wassaw estuary are collected using gillnets to gather data on relative abundance and location of occurrence. Centerline lengths are measured in millimeters and total numbers recorded by species. All fish are then released (Table 1).

Between September and November, fish populations in the Altamaha River delta and Wassaw estuary are sampled using trammel nets to gather data on relative abundance and size composition. Centerline lengths are measured in millimeters and total numbers recorded by species. During fall trammel net sampling, size-stratified sub-samples of red drum are used to produce age-specific fishery-independent indices of relative abundance**.** Each fish is measured, weighed, and sex determined. Sagittal otoliths are removed. Whole ovaries are removed from each female, weighed and assigned a level of development based on macroscopic evaluation. All fish not sub-sampled are released (Table 1).

Table 1. Preliminary annual trammel net and gill net data summarized by estuary, including effort, catch-per-unit-effort and length statistics for red drum, 2013.

Gear	Sound	Effort	Geo. Mean	Arith. Mean	Total N	CL Mean (mm)	CL Min (mm)	CL Max (mm)
Trammel	Wassaw	75	0.08	0.12	9	340	310	355
	Altamaha	75	0.24	0.39	26	371	305	722
Gill	Wassaw	108	0.58	1.46	139	274.1	216	378
	Altamaha	108	0.52	1.08	115	293.9	240	525

Evaluation of Spawning Stock

The Coastal Resources Division fishery management plan for red drum recommends a periodic (every 5 years) collection of adult red drum to determine the age structure of spawning stock. However, in more recent years staffing limitations have affected the Division's ability to participate in these sampling activities. The decision was made during Fall 2013 to table these sampling activities indefinitely.

Adult Red Drum Index of Abundance

The adult red drum longline survey was conducted from May through December 2013. 2013 marked the seventh sampling season for this survey. Twenty-five bottom-set longline stations were sampled in Georgia coastal waters each month, with an additional 10 sets added each month from September through December to provide information about red drum in NE Florida waters. Two hundred seventeen (217) sets consisting of 13,014 hooks and 108.5 hours of soak time produced 55 red drum.

c. Copy of regulations that were in effect, including a reference to the specific compliance criteria as mandated in the FMP.

4.1 Recreational Fisheries Management Measures

4.1.1 Recreational Bag and Size Limits

4.1.2 Maximum Size Limit

During 2013, Georgia's size slot limit for red drum was 14 to 23 inches total length with a daily five fish bag limit. (O.C.G.C. 27-4-130.1 and DNR Rule 391-2-4-.04 previously submitted) Based on Amendment 2 to the Interstate Fishery Management Plan these harvest regulations result in an escapement rate that achieves a 40% SPR. (O.C.G.C. 27-4-130.1 and DNR Rule 391-2-4-.04 previously submitted)

4.2 Commercial Fisheries Management Measures

During the 2013 session, the Georgia General Assembly passed House Bill 36 which designates red drum as a game fish. Unless otherwise provided for in law, game fish cannot be sold. In the case of red drum, the legislation did not provide for an exception. Therefore, effective July 1, 2013, it became illegal to sell red drum caught from Georgia waters.

4.2.4 Commercial Gear Restrictions

During the 2013 session, the Georgia General Assembly passed House Bill 36 which designates red drum as a game fish. Unless otherwise provided for in law, game fish cannot be sold. In the case of red drum, the legislature did not provide for an exception. Therefore, effective July 1, 2013, it became illegal to sell red drum caught from Georgia waters.

4.2.6 Data Collection and Reporting Requirements
Georgia is in full compliance with the ACCSP data collection and reporting requirements. Seafood dealers are required to maintain a record and report seafood purchased for commercial harvests in Georgia. Records must be submitted to the Department by the 10th day of the month subsequent to fishing. (O.C.G.A. 27-4-110 and 136 and DNR Rule 391-2-4-.09 previously submitted). Harvesters are required to maintain a logbook of fishing activity but at this time, are not required to report that activity (O.C.G.A. 27-4-118 previously submitted).

4.2.6.1 Vessel Registration System
Every commercial vessel fishing in Georgia waters is required to purchase either a trawler or non-trawler boat license, dependent on fishing practices (27-2-8 previously submitted).

4.3 For-Hire Fisheries Management Measures
4.3.1 Bag and Size Limits
4.3.2 Maximum Size Limit
Georgia for-hire and charter boats are limited to the recreational bag limits previously listed.

4.3.3 Data Collection and Reporting Requirements
If a for-hire captain sells his catch in Georgia, he is subject to the same reporting requirements as dealers and harvesters as noted above. During the 2013 session, the Georgia General Assembly passed House Bill 36 which designates red drum as a game fish. Unless otherwise provided for in law, game fish cannot be sold. In the case of red drum, the legislation did not provide for an exception. Therefore, effective July 1, 2013, it became illegal to sell red drum caught from Georgia waters.

d. **Harvest broken down by commercial (by gear type where applicable) and recreational, and non-harvest losses (when available).**

Commercial

During the 2013 session, the Georgia General Assembly passed House Bill 36 which designates red drum as a game fish. Unless otherwise provided for in law, game fish cannot be sold. In the case of red drum, the legislation did not provide for an exception. Therefore, effective July 1, 2013, it became illegal to sell red drum caught from Georgia waters.

Recreational

Since 2000, CRD has been the contractor for the intercept survey within the NMFS's Marine Recreational Information Program (MRIP). In 2013, survey clerks interviewed 1,396 anglers.

Table 2. Red Drum (# fish) expanded NMFS data for Georgia, 2013.

		Number of Angler Trips		A +B1 + B2 Released + Harvest		B2 Released Alive		A+B1 Harvest	
FISHING AREA	MODE	Total	PSE	Total	PSE	Total	PSE	Total	PSE
INLAND	CHARTER	14,174	16.3	11,342	25.0	6,860	38.5	4,482	23.3
	PRIVATE	347,623	14.1	211,256	25.2	152,093	33.8	59,163	23.6
	SHORE	142,482	28.7						
INLAND Total		**504,279**	12.7	**222,598**	23.9	**158,953**	32.3	**63,645**	22.0
OCEAN (<= 3 MI)	CHARTER	3,498	24.0	9,701	43.2	9,701	43.2		
	PRIVATE	12,245	57.4	32,121	65.8	26,602	76.9	5,519	95.0
	SHORE	140,148	31.5	3,280	83.7	615	70.8	2,665	101.7
OCEAN (<= 3 MI) Total		**155,891**	28.7	**45,102**	48.1	**36,918**	56.6	**8,184**	72.1
OCEAN (> 3 MI)	CHARTER	3,367	22.3	852	46.6	852	46.6		
	PRIVATE	26,825	31.8	3,996	56.1	1,998	79.4	1,998	79.4
OCEAN (> 3 MI) Total		**30,193**	28.4	**4,848**	47.0	**2,850**	57.4	**1,998**	79.4
Grand Total		**690,362**	11.4	**272,548**	21.1	**198,722**	27.9	**73,827**	20.7

e. Review of progress in implementing habitat recommendations.

With over 2,344 linear miles of coastline and tidal marsh covering 378,000 acres, the entirety of Georgia's coast provides habitat for red drum. CRD is involved in activities related to many of the recommendations in Section 4.4, but without a specific focus on red drum. The Georgia Coastal Management Program (GCMP) provides an overarching entity under which many activities related to habitat protection are conducted both by CRD staff and others who are funded with Coastal Incentive Grants.

Georgia's "Marshland Protection Act" requires permits from the Coastal Marshlands Protection Committee and the U.S. Corps of Engineers for all activities that alter the marsh. This includes oyster restoration / enhancement projects. Thus, the appropriate federal and state regulatory agencies are informed of all restoration / enhancement sites. This minimizes the potential of negative impacts to critical habitats from other permitted activities.

Habitat conservation and restoration has been addressed in previous compliance reports. Included in the following are only additions or changes within the reporting year.

During 2012, the Coastal Marshlands Protection Committee issued 6 new CMPC permits. CRD also issued 41 bank stabilization permits and 108 revocable licenses for private docks.

An important function of the Georgia Coastal Management Program (GCMP) is to ensure that federal projects affecting coastal resources are consistent with the enforceable policies of the Program. The GCMP also works to maintain and to improve customer service regarding consolidation, coordination, and timeliness of processing revocable licenses for private recreational docks and shoreline stabilization.

GCMP also provides a process by which permit applications relative to the Coastal Marshlands Protection Act and Shore Protection Act are processed and reviewed for compliance.

CRD has built 30 offshore artificial reefs over the past 30 years. These reefs are known habitat for adult red drum during winter months. CRD continues to add new materials to these reefs thereby increasing the available habitat. Three new reefs were established during July 1, 2013 - July 1, 2014. A 254' long hopper barge loaded with 330 metal chicken coops was deployed at the KC reef site in November 2013. A 110' long clear deck barge was deployed at the SAV reef site in February 2014. Materials of opportunity such as concrete culvert, chicken coops, and a steel structure were deployed at the SAV reef site in June 2014. Twenty-six donated concrete power poles were deployed to create additional habitat at one inshore artificial reef site, Little River, in May 2014.

CRD entered into an oyster reef restoration partnership with the Coastal Conservation Association of Georgia (CCAGA) in 2012. Oyster reefs are considered essential fish habitat and their restoration has numerous benefits. During this report period, oyster cultch material and spat sticks have been deployed in the inter-tidal zone to restore/enhance multiple sites within Georgia's Glynn and Chatham Counties.

4. Planned management programs for the current calendar year

a. **Summarize regulations that will be in effect.**

During the 2012 General Assembly the Georgia legislature granted the Board of Natural Resources and the Commissioner of the Department of Natural Resources greater authority over the management of saltwater fishing, effective January 1, 2013,. Attached hereto are the rewritten code sections from Title 27 of the Official Code of Georgia, Annotated (O.C.G.A 27-4-10 and 27-4-130) and the resulting rewritten regulations (Board Rule 391-2-4-.04), as they pertain to red drum. Ultimately, no changes to recreational (5 fish, 14 to 23" TL) or commercial fishing were made due to this change.

For 2013, harvest regulations for red drum will be five fish per person per day with a 14 to 23 inch, total length slot size limit.

b. Summarize monitoring programs that will be performed.

Monitoring described in Section III will continue throughout 2013.

c. Highlight any changes from the previous year.

During the 2013 session, the Georgia General Assembly passed House Bill 36 which designates red drum as a game fish. Unless otherwise provided for in law, game fish cannot be sold. In the case of red drum, the legislation did not provide for an exception.

Therefore, effective July 1, 2013, it became illegal to sell red drum caught from Georgia waters. Import of commercially-harvested red drum from states where such harvest is legal or from states where red drum are produced through mariculture will be legal. At the time of this report, updated Code sections were not available and will be included in the 2013 compliance report.

Florida's Compliance Report Under Amendment 2 to the Interstate Fishery Management Plan for Red Drum

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I. Introduction

There have been no significant changes in Florida's Atlantic coast monitoring programs during the last year. The fishery-dependent monitoring programs continued and made 8,194 Marine Recreational Fisheries Statistics Survey (MRFSS) intercepts during 2013. This is down substantially from previous years due to a modification of the protocol for creel clerk that better matches the MRIP survey estimation model. Fishery-independent monitoring of Red Drum continued for young-of-the-year in the northern Indian River Lagoon and lower St Johns River areas and for larger Red Drum in the lower St. Johns River and the northern and southern Indian River Lagoon areas. Biostatistical data were collected through both the fishery-independent and fishery-dependent monitoring programs during 2013. Recreational harvest (including 8% release mortality) of red drum on Florida's Atlantic coast during 2013 was estimated at about 376,500 fish, representing a 32% increase over the 2010-2012 mean harvest of about 285,100 Red Drum.

II. Request for *de minimis*, where applicable.

Florida does not request *de minimis* status at this time.

III. Previous calendar year's fishery and management program

a. Activity and results of fishery dependent monitoring (provide general results and references to technical documentation).

Fishery-dependent monitoring of Red Drum in Florida consists solely of sampling from the recreational fishery. There has been no commercial fishery for Red Drum in Florida since 1988. During 2013, MRFSS samplers conducted 8,194 trip interviews at Florida's Atlantic coast boat ramps, bridges, and other fishing sites, the lowest number of interviews made since 1991 (Table 1). This decline in intercepts can be attributed to new procedures that emphasize collecting information on fishing site activity over a full day rather than only at peak landings times. Data collected during these intercepts are used to identify patterns in average observed total-catch rates and to describe the sizes of Red Drum landed by anglers. Though Florida changed to regional management of Red Drum in 2013, recreational fisheries data from Florida were analyzed as a single coast wide dataset since the ASMFC manages this species on a wider geographic scale (SC-FL for southern stock). Standardized total-catch (MRFSS-only through 2012,

Type A+B1+B2) rates for anglers targeting or catching Red Drum declined through 2000 before fluctuating around a lower mean catch rate during 2000-2003. Since 2004 there have been large fluctuations in catch rates with peak rates occurring in 2004 and 2010 (Fig. 1). A small FWC program was used during 2002-2009 to conduct a random survey of Florida's licensed anglers and collect information on the sizes of Red Drum that anglers kept or released alive. This program met with very limited success on the Atlantic coast and since 2011 has been modified to include voluntary, self-reported data using postcards left at fishing spots during MRIP interviews.

b. Activity and results of fishery independent monitoring (provide general results and references to technical documentation).

The Florida Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute (FWC-FWRI) has three field laboratories on the Atlantic coast whose staff conducts random, stratified sampling using 183-m haul seines. Two of these laboratories also utilize a 21.3-m, 3.2-mm mesh seine for young-of-the-year monitoring. Stratified random sampling for subadult abundance has been carried out in the northern Indian River Lagoon since 1990 and in the lower reaches of the St. Johns River since 2001. In these areas and in the Tequesta/southern Indian River Lagoon (since 1997), 183-m, 5-cm-stretched-mesh haul seines are used to monitor the abundance of larger fish (FWC-FWRI 2013). The survey design for sampling newly recruited Red Drum (<40 mm standard length) during a September-March recruitment 'window' in the Southeast region is considered comparable over time since September 1997. Note that the index based on this 'window' is labeled the January year, e.g., September 1999 - March 2000 data are used to develop the 2000 recruitment index. The relative abundance for young-of-the-year Red Drum on Florida's Atlantic coast have shown peaks for 1999, 2005, and 2013 (Fig. 2). Lower abundance levels were seen during 2011 and 2012 before the rebound in 2013. Calendar-year catch rates for larger Red Drum captured in the 183-m haul seine follow an increasing trend during 2003-2008 before declining to lower relative abundance levels in 2009, 2010, and 2011 (Fig. 3). The 2013 index of larger red drum abundance was the lowest seen during the monitoring program. During 2013, 1,226 lengths were measured and 348 otolith pairs collected during these Fishery-Independent Monitoring programs.

c. Copy of regulations that were in effect, including a reference to the specific compliance criteria as mandated in the FMP.

Appendix A contains the current regulations for managing red drum (Chapter 68B-22, Florida Administrative Code).

Current, Red Drum regulations call for an 18-inch minimum size, 27-inch maximum size in both management regions designated along the Atlantic coast of Florida (Northeast: Nassau County through Flager County; Southeast Volusia through Miami-Dade County). There is a one-fish-per-person-per-day bag limit in the Southeast and a 2-fish-per-preson-per-day limit in the Northeast. Florida's

current regulations in the Southeast region meet the management measures included in Amendment 2 (ASMFC 2002). Florida's 18" minimum size limit, 27" maximum size limit, and one-fish bag limit correspond to a 40.7 percent SPR in Table 20 of the Amendment 2 document. In the Northeast region where the bag limit was relaxed in February 2012, a regional stock assessment estimated that the static SPR averaged 76% during 2008-2010 (FWC-FWRI unpublished data). The same analysis gave estimates of the 2008-2010 sSPR that averaged 30% in the Southeast region .These estimates, weighted by the annual recruitment estimated for each region, give an overall average sSPR of about 62% for the Atlantic coast of Florida during 2008-2010 (Murphy 2012).

d. Harvest broken down by commercial (by gear type where applicable) and recreational, and non-harvest losses (when available).

Harvest (including 8% of fish released alive that are thought to subsequently die) of Red Drum on the Atlantic coast of Florida has shown a generally increasing trend since 1989 when the fishery opened under management regulations quite similar to those in place today. From a low of about 46,000 Red Drum harvested in 1989 the harvest increased to nearly 308,000 fish by 2005. Harvest fluctuated around an average of about 225,500 fish during 2000-2008, dropped in 2009 before increasing sharply to 376,500 fish harvested in 2013 (Table 1).

e. Review of progress in implementing habitat recommendations.

No mandatory measures related to habitat or habitat protection has been implemented through this amendment (Amendment 2 of the Red Drum FMP, Section 4.4). However, habitat areas of particular concern range over the entire estuarine system, from lower reaches of rivers to the inlets. Numerous government entities, including municipal, county, state, and federal, and numerous agencies, including water management districts, aquatic preserves, and national estuary programs, strive to protect and rehabilitate habitat utilized by Red Drum. There are no specific habitat recommendations in Amendment 2 for Red Drum but progress made in restoring and conserving habitat is available from reports from many agencies charged with the stewardship of Florida's Atlantic coast estuaries (ASMFC 2002).

IV. Planned management programs for the current calendar year

a. Summarize regulations that will be in effect (copy of current regulations if different from 3c).

Regulations have not changed from those in force during the last compliance report submission.

b. Summarize monitoring programs that will be performed.

Monitoring will remain the same during 2014 as it was in 2013 (see III b.), though we are still evaluating ways to increased the collection of angler-volunteered catch information.

c. Highlight any changes from the previous year.

None.

Literature

Anonymous. 2010. Regional analysis of Florida's gulf and Atlantic stocks of red drum. Report from the Florida Fish and Wildlife Research Institute Stock Assessment Sub-group to the Division of Marine Fisheries Management, Florida Fish and Wildlife Conservation Commission, Tallahassee.

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FWC-FWRI. 2013. Fisheries-independent monitoring program 2012 annual data summary report. Compiled by the Fishery-Independent Monitoring Program staff, Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, St. Petersburg. FWRI In-House Report 2013-003.

Murphy, M.D. 2005. A stock assessment of red drum, *Sciaenops ocellatus*, in Florida: status of the stocks through 2003. Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, St. Petersburg. FWRI In-House Report 2005-006.

Murphy, M.D. 2012. Compliance evaluation for the regional management of red drum in Florida and recent increase in bag limit in Florida's northern region along the Atlantic coast. Report to the ASMFC Red Drum Technical Committee, 20 January 2012.

Table 1. Reported fishing effort and estimated number of Red Drum reported landed by the commercial fishery, total number of trip interviews made by the FWC-Marine Recreational Information Program's samplers, estimated number of recreational fishing trips directed at catching Red Drum, estimated number of Red Drum landed, released alive, and overall kill (which includes landings and 8% release mortality of fish released alive) for the recreational fishery, and total numbers of Red Drum deaths attributed to the fisheries operating on the Atlantic coast of Florida during 1982-2013. For a description of the data and estimation methods for the commercial trips and landings and recreational trips see Murphy (2005). All pre-2004 numbers for recreational catch were adjusted using methods recommended for the new MRIP program.

	Commercial Trips	Commercial landings	Total trips sampled	Directed Recreational Trips	Recreational landings	Recreational released alive	Total recreational kill	Total number killed
1982		32,749	4,496	190,455	188,717	10,342	189,544	222,293
1983		28,803	4,884	585,769	318,082	55,636	322,533	351,336
1984		29,963	5,820	673,093	507,233	47,983	511,072	541,035
1985	2,575	21,180	4,733	494,406	244,839	196,625	260,569	281,749
1986	1,705	16,394	4,907	431,164	104,737	101,765	112,878	129,272
1987	595	9,170	4,659	230,969	47,294	384,263	78,035	87,205
1988	29	107	6,082	103,764	8,810	237,891	27,841	27,948
1989	0	0	5,381	241,512	32,082	175,177	46,096	46,096
1990	0	0	5,057	198,479	40,883	69,812	46,468	46,468
1991	0	0	6,018	495,116	94,847	656,544	147,371	147,371
1992	0	0	11,434	427,728	96,267	289,645	119,439	119,439
1993	0	0	13,395	416,723	60,142	473,423	98,016	98,016
1994	0	0	15,144	672,789	111,661	702,791	167,884	167,884
1995	0	0	14,039	656,941	89,491	695,110	145,100	145,100
1996	0	0	11,753	596,214	135,558	508,720	176,256	176,256
1997	0	0	12,225	607,280	69,463	569,909	115,056	115,056
1998	0	0	13,680	744,242	99,698	489,032	138,821	138,821
1999	0	0	18,029	885,543	116,500	575,421	162,534	162,534
2000	0	0	17,058	1,401,991	176,411	704,714	232,788	232,788
2001	0	0	19,728	1,435,016	164,005	864,223	233,143	233,143
2002	0	0	22,191	1,093,550	109,878	674,952	163,874	163,874
2003	0	0	19,833	1,173,237	147,107	761,254	208,007	208,007
2004	0	0	16,218	1,183,913	136,728	1,006,814	217,273	217,273
2005	0	0	16,697	1,621,405	195,550	1,405,967	308,027	308,027
2006	0	0	18,916	1,273,254	145,860	847,269	213,642	213,642
2007	0	0	17,817	1,407,735	161,427	758,684	222,122	222,122
2008	0	0	15,152	1,494,729	159,246	889,550	230,410	230,410
2009	0	0	14,665	937,871	79,635	521,659	121,368	121,368
2010	0	0	15,043	1,383,296	175,828	1,414,115	288,957	288,957
2011	0	0	13,255	1,364,061	180,001	1,051,143	264,092	264,092
2012	0	0	12,661	1,330,905	238,191	799,428	302,145	302,145
2013	0	0	8,194	1,614,027	297,527	1,541,541	376,479	376,479

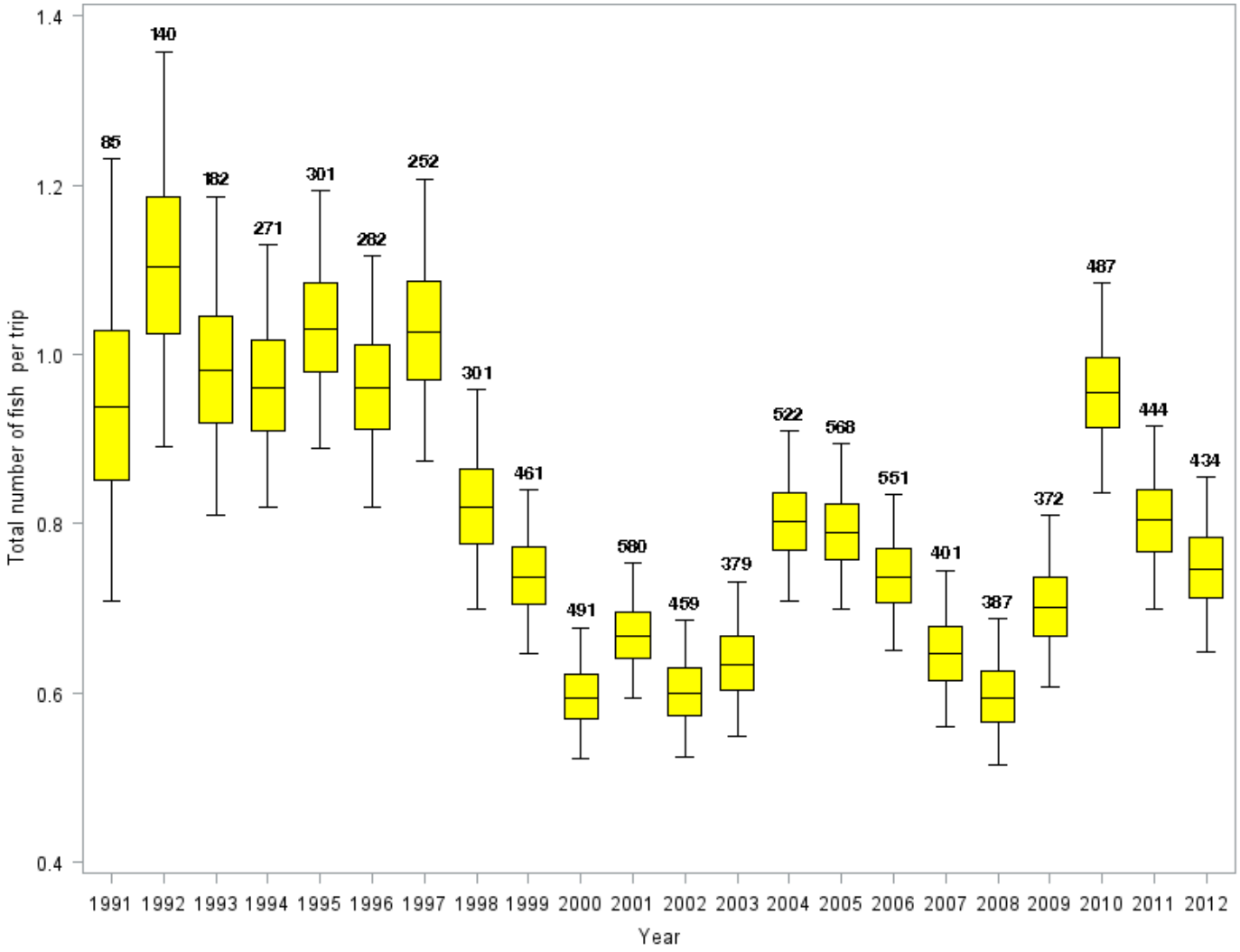

Figure 1. Standardized catch-per-trip for anglers catching and/or targeting Red Drum along Florida's Atlantic coast during 1991-2012. A targeted trip is defined as those in which Red Drum were caught or those where the angler indicated that red drum were being sought during the fishing trip. Only comparable MRFSS data were used in this graph while newer MRIP catch data were still being evaluated. The distribution of the standardized estimates show the median (horizontal bar), the interquartile range (box) and the tails of the distributions to the 2.5^{th} and 97.5^{th} percentiles, and provide the annual number of intercepts used in the analysis.

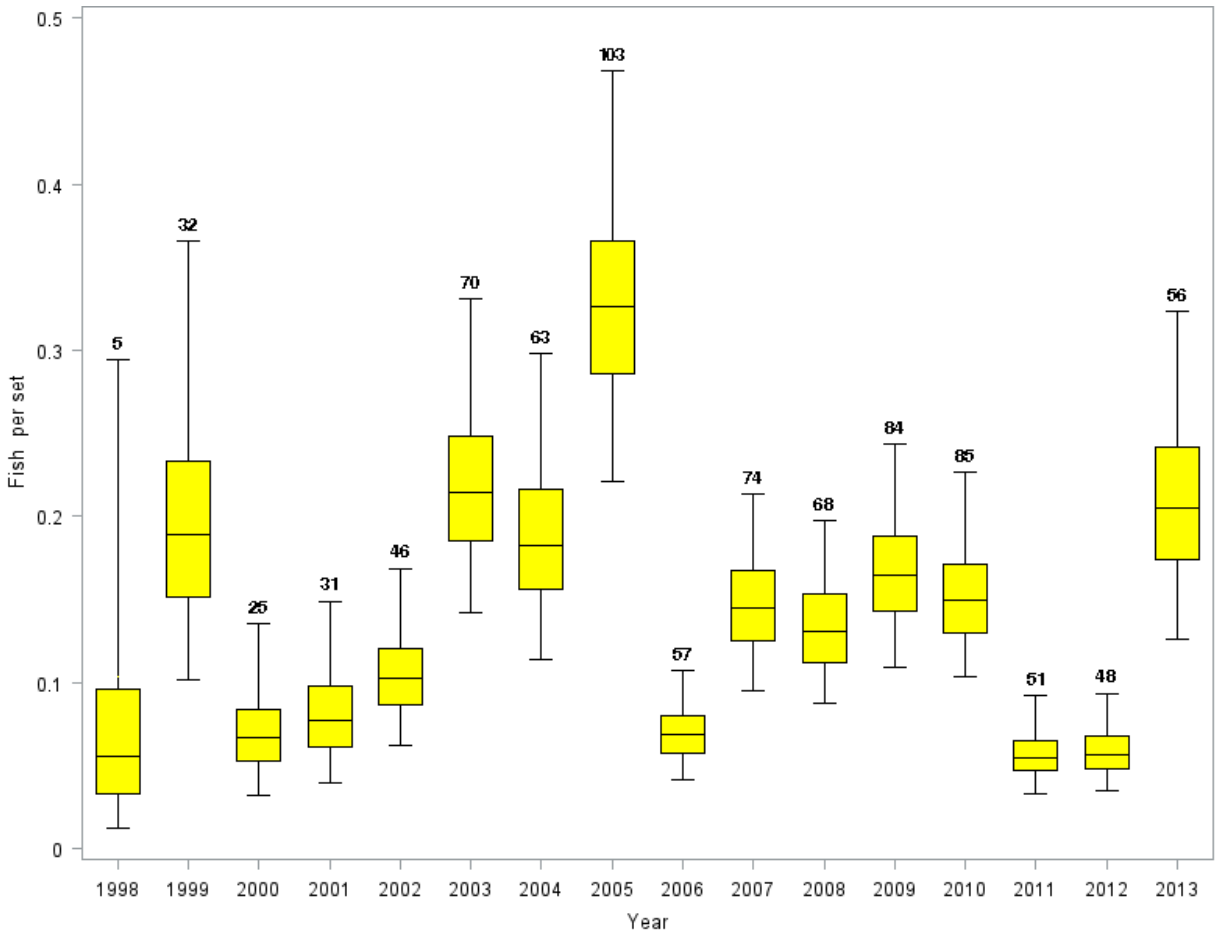

Figure 2. Standardized catch-per-set of Red Drum less than 40 mm SL in the Southeast and Northeast regions along the Florida Atlantic coast during 1998-2013. Data were restricted to that collected during a recruitment 'window' of September through March, with the year label indicating the January year. The January-March 2014 data were not available yet to determine the 2014 index value.

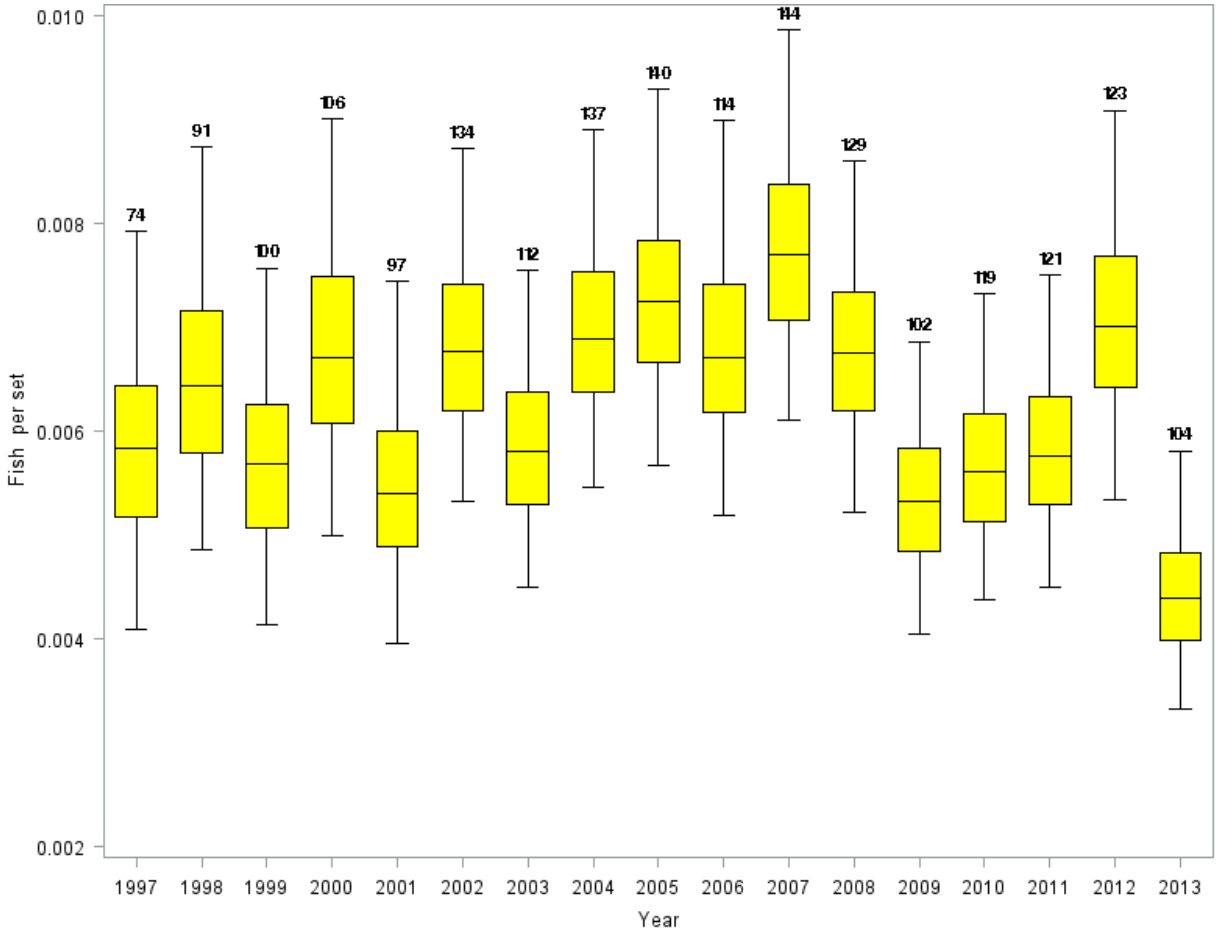

Figure 3. Standardized catch-per-set of Red Drum larger than 300 mm SL along the Florida Atlantic coast during the 1997-2013 calendar years. Data symbols are explained in the caption for Figure 2.

APPENDIX A.

CHAPTER 68B-22
RED DRUM (REDFISH)

68B-22.001 Purpose and Intent; Repeal of Certain Laws; Designation as Protected Species.

(1) The purpose and intent of this chapter is to protect, manage, conserve and replenish Florida's depleted red drum (redfish) resource, species Sciaenops ocellatus, which has suffered extreme declines in abundance in recent years.

(2) Accordingly, it is the intent of this chapter to repeal and replace those portions of Section 370.11(2)(a)4., F.S. (1985), dealing with redfish. This chapter is not intended, and shall not be construed, to repeal any other portion of Section 370.11(2)(a)4., F.S. (1985); any other subdivision of Section 370.11, F.S. (1985); or any other general or local law directly or indirectly relating to or providing protection for the redfish resource.

(3) Redfish are hereby declared and designated a protected species. The purposes of this designation are to increase public awareness of the need for extensive conservation action in order to prevent this resource from becoming endangered and to encourage voluntary conservation practices, including catch-and-release practices for all redfish caught unless they are needed for food.

Rulemaking Authority Art. IV, Sec. 9, Fla. Const., Chapter 83-134, Laws of Fla., as amended by Chapter 84-121, Laws of Fla. Law Implemented Art. IV, Sec. 9, Fla. Const., Chapter 83-134, Laws of Fla., as amended by Chapter 84-121, Laws of Fla. History–New 9-12-85, Amended 1-1-89, 6-3-91, Formerly 46-22.001.

68B-22.002 Definitions.

(1) "Catch, hold and release", means the intentional release of a live redfish, possessed in a live well or recirculating tank aboard a boat, for the purpose of harvesting another redfish.

(2) "Fishing pier" means a platform extending from shore over water, used primarily to provide a means for persons to harvest or attempt to harvest fish therefrom. The term shall not be construed to include any residential dock, marina, or facility at which vessels are launched or moored, but shall include any abandoned bridge serving the function of a fishing pier.

(3) "Fishing tournament", as used in this chapter, means a fishing competition involving 50 or more participants that has written rules and regulations, requires an entry fee, and awards prizes to competitors.

(4) "FWC" means the Florida Fish and Wildlife Conservation Commission.

(5) "Harvest" means the catching or taking of a fish by any means whatsoever, followed by a reduction of such fish to possession. Fish that are caught but immediately returned to the water free, alive and unharmed are not harvested. In addition, temporary possession of a fish for the purpose of measuring it to determine compliance with the minimum or maximum size requirements of this chapter shall not constitute harvesting such fish, provided that it is measured immediately after taking, and immediately returned to the water free, alive and unharmed if undersize or oversize. A person engaged in catch, hold, and release pursuant to Rule 68B-22.007, F.A.C., shall not be considered to have harvested a redfish if it is released alive.

(6) "Land," when used in conjunction with the harvest of a fish, means the physical act of bringing the harvested fish ashore.

(7) "Northeast Region" means all state waters lying north of the Flagler-Volusia County Line to the Florida-Georgia border, and adjacent federal Exclusive Economic Zone (EEZ) waters.

(8) “Northwest Region” means all state waters north and west of a line running due west from the westernmost point of Fred Howard Park Causeway (28°9.35'N., 82°48.398'W.), which is approximately 1.17 miles south of the Pasco-Pinellas County Line, to the Florida-Alabama border, and adjacent federal Exclusive Economic Zone (EEZ) waters.

(9) “Person” means any natural person, firm, entity or corporation.

(10) “Red drum” or “redfish” means any fish of the species Sciaenops ocellatus, or any part thereof. “Native redfish” means any redfish harvested from waters subject to the jurisdiction of the Fish and Wildlife Conservation Commission and the State of Florida.

(11) “South Region” means state waters lying between the Flagler-Volusia County Line on the Atlantic Ocean and the southern boundary of the Northwest Region on the Gulf of Mexico in Pinellas County, as specified in subsection (8), and adjacent federal Exclusive Economic Zone (EEZ) waters.

(12) “Spearing” means the catching or taking of a fish by bow hunting, gigging, spearfishing, or by any device used to capture a fish by piercing the body. Spearing does not include the catching or taking of a fish by a hook with hook and line gear or by snagging (snatch hooking).

(13) “Total length” means the straight line distance from the most forward point of the head with the mouth closed, to the farthest tip of the tail with the tail compressed or squeezed, while the fish is lying on its side.

(14) “Vessel” means and includes every description of water craft used or capable of being used as a means of transportation on water, including nondisplacement craft and any aircraft designed to maneuver on water.

Rulemaking Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 9-12-85, Amended 2-12-87, 1-1-89, 1-1-96, 1-1-98, Formerly 46-22.002, Amended 3-17-04, 7-1-06, 2-1-12.

68B-22.003 Size Limits.

No person shall harvest in or from the waters of the State of Florida at any time, or unnecessarily destroy, any redfish of total length less than 18 inches, nor greater than 27 inches.

Rulemaking Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 9-12-85, Amended 2-12-87, 1-1-89, Formerly 46-22.003.

68B-22.005 Bag and Vessel Limits; Sale Prohibited.

(1) Northwest and Northeast Regional Bag Limit – Except as provided for in Rule 68B-22.007, F.A.C., in the northeast and northwest regions, no person shall harvest nor possess more than two native redfish per day while in, on, or above the waters of the state or on any dock, pier, bridge, beach, boat ramp, or other fishing site adjacent to such waters, and any parking location adjacent to said fishing sites.

(2) South Regional Bag Limit – Except as provided for in Rule 68B-22.007, F.A.C., in the south region, no person shall harvest nor possess more than one native redfish per day while in, on, or above the waters of the state or on any dock, pier, bridge, beach, boat ramp, or other fishing site adjacent to such waters, and any parking location adjacent to said fishing sites.

(3) Vessel Limit – Notwithstanding subsections (1) and (2) above, no more than 8 red drum shall be possessed aboard any vessel in or on state waters at any time.

(4) Transport Possession Limit – No person shall possess more than six native red drum while in transit on land.

(5) Sale of Native Redfish Prohibited – The purchase, sale, or exchange of any native redfish is prohibited. This prohibition, however, does not apply to legally harvested non-native redfish that have entered the State of Florida in interstate commerce. The burden shall be upon any person possessing such redfish for sale or exchange to establish the chain of possession from the initial transaction after harvest, by appropriate receipt(s), bill(s) of sale, or bill(s) of lading, and to show that such redfish originated from a point outside the waters of the State of Florida, and entered the state in interstate commerce. Failure to maintain such documentation or to promptly produce same at the request of any duly authorized law enforcement officer shall constitute a violation of this rule.

Rulemaking Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 2-12-87, Amended 1-1-89, 6-3-91, 1-1-96, Formerly 46-22.005, Amended 3-17-04, 2-1-12.

68B-22.006 Other Prohibitions; Applicability.

(1) The harvest of any redfish in or from state waters by or with the use of any multiple hook in conjunction with live or dead natural bait is prohibited. Spearing or snagging (snatch hooking) of redfish in or from state waters is prohibited.

(2) It is unlawful for any person to possess, transport, buy, sell, exchange or attempt to buy, sell or exchange any redfish harvested in violation of this chapter.

(3) No operator of a vessel in or on state waters shall allow the possession aboard the vessel of any redfish not in compliance with established bag limits, size limits, seasons or any prohibited gear as specified in this chapter or in Chapter 68B-4, F.A.C.

(4) All redfish harvested from Florida waters shall be landed in a whole condition. The possession, while in or on state waters, on any public or private fishing pier, or on a bridge or catwalk attached to a bridge from which fishing is allowed, or on any jetty, of any redfish that has been deheaded, sliced, divided, filleted, ground, skinned, scaled or deboned is prohibited. Mere evisceration or "gutting" of redfish, or mere removal of gills from redfish, before landing is not prohibited. Preparation of redfish for immediate consumption on board the vessel from which the fish were caught is not prohibited.

(5) Provisions of this rule chapter shall not apply to redfish artificially spawned and raised in commercial aquaculture facilities. Failure to maintain appropriate receipt(s), bill(s), bill(s) of sale, or bill(s) of lading, that such redfish were artificially spawned and raised in commercial aquaculture facilities, shall constitute a violation of this rule.

(6) The simultaneous possession aboard a vessel of any gill net or entangling net together with any redfish is prohibited.

Rulemaking Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 2-12-87, Amended 6-3-91, 1-1-96, 1-1-98, Formerly 46-22.006.

68B-22.007 Catch-Hold-and-Release Tournament Exemption.

(1) Except as provided in this rule, the practice of catching, holding, and releasing redfish is prohibited. The Executive Director of the FWC, or his designee, shall issue a tournament exemption permit to the director of a catch-and-release fishing tournament to allow redfish to be caught, held, and released during the tournament, and to allow the tournament to exceed redfish bag and possession limits pursuant to subsection 68B-22.005(1), F.A.C., after redfish have been weighed-in, provided that each of the following conditions is met:

(a) Tournament anglers and tournament staff agree to attempt to release alive all redfish that are caught, including those fish that are weighed-in.

(b) Each two person team of tournament anglers possesses no more than two live redfish in the boat's live well or recirculating tank at any one time.

(c) All boats used in the tournament contain recirculating or aerated live wells that are at least 2.4 cubic feet or 18 gallons in capacity.

(d) Dead redfish possessed by a two person team of tournament anglers are not discarded. A dead redfish is considered harvested and will count as the daily bag limit for the team of tournament anglers who harvested that fish.

(e) Redfish are maintained in an aerated recovery holding tank prior to release. Recovery holding tank requirements may be specified in the tournament exemption permit at the FWC's discretion in order to increase survival of released redfish.

(f) The tournament provides the FWC with a description of the aerated recovery holding tank(s) used to maintain redfish alive after weigh-in.

(g) The tournament provides the FWC with a description of the location where tournament caught redfish will be released after they are weighed in. In order to increase survival of released redfish, release locations may be specified in the tournament exemption permit at the FWC's discretion.

(h) The tournament permit holder shall submit a post-tournament report to the FWC indicating the number of fish weighed-in each day of the tournament, the number of fish weighed-in dead each day, and the number of fish

that died after being weighed-in, but prior to release each day. The FWC may specify additional tournament reporting requirements as a condition of the tournament exemption permit.

(i) The tournament agrees to allow FWC staff the opportunity to collect research data and conduct research and onboard monitoring during the tournament, as needed.

(2) Application for issuance of a tournament exemption permit shall be made on a form provided by the FWC (Form DMF-SL 5000 (3-04), incorporated herein by reference). Tournament exemption permits will only be issued to catch-and-release redfish tournaments that agree to the permit conditions in subsection (1).

(3) Any anglers participating in a redfish tournament for which a tournament exemption permit has been issued shall have a copy of the permit in his or her possession at all times during tournament operating hours.

(4) Any violation of the conditions and requirements specified within the tournament exemption permit will be considered a violation of this rule.

Rulemaking Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 3-17-04.