Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Atlantic States Marine Fisheries Commission

ANNUAL REPORT 2019

Cover photo: American horseshoe crabs (Limulus polyphemus) returning to the ocean after being tagged as part of a cooperative research project involving the South Carolina Department of Natural Resources (SCDNR) and the U.S. Fish and Wildlife Service, aimed at providing a better understanding of the movement patterns of this species. Photo © Robin Frede, SCDNR.

ANNUAL REPORT 2019

To the Congress of the United States and to the Governors and Legislators of the Fifteen Compacting States

1050 North Highland Street
Suite 200 A-N
Arlington, Virginia 22201
703.842.0740

ROBERT E. BEAL
Executive Director

TINA L. BERGER
Editor

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Presented in compliance with the terms of the Compact and the state-enabling acts creating such Commission and Public Law 539-77th Congress assenting thereto (Chapter 283, Second Session, 77th Congress; 56 Stat. 267) approved May 4, 1942, as amended by Public Law 721, 81st Congress, approved August 19, 1950

The Atlantic States Marine Fisheries Commission (Commission) is pleased to present our 2019 Annual Report. The report fulfills our obligation to inform Congress on the Commission's use of public funds, and provides stakeholders with an overview of activities and progress in carrying out our cooperative stewardship responsibilities for the marine, shell, and diadromous species under our care.

In the report, you will find a quick guide to stock status for the 27 species groups the Commission manages; a fisheries management section, which focuses on species which had the most significant management or stock assessment activities in 2019; and sections highlighting our major accomplishments in 2019 in the areas of fisheries science, habitat conservation, and fishery-dependent data collection and management. Please visit the Commission's website at *www.asmfc.org* for additional information on any of our programs or activities.

The Commission was formed 78 years ago by the 15 Atlantic coastal states to assist in managing and conserving their shared coastal fishery resources. With the recognition that fish do not adhere to political boundaries, the states formed an Interstate Compact, which was approved by the U.S. Congress in 1942. The Commission's mission as stated in the Compact is *to promote cooperative management of fisheries – marine, shell, and diadromous – of the Atlantic coast of the United States by the protection and enhancement of such fisheries, and by the avoidance of physical waste of the fisheries from any cause.*

The states have found that their mutual interest in sustaining healthy coastal fishery resources is best promoted by working cooperatively, in collaboration with the federal government. With this approach, the states uphold their collective fisheries management responsibilities in a cost-effective, timely, transparent, and responsive fashion.

The Commission serves as a deliberative forum for the Atlantic coastal states to come together to discuss the biological, socioeconomic, and environmental issues central to developing management programs for each species. Each state is represented on the Commission by three Commissioners: the director of the state's marine fisheries management agency, a state legislator, and an individual appointed by the state's governor to represent fishery interests.

The task of managing finite marine resources continues to grow more complex with the consideration of changing ocean conditions, competing ocean uses, predator/prey interactions and marine mammal interactions, in addition to the more traditional considerations of stock maintenance, rebuilding, and allocation of fisheries resources. To support these activities at both the Commission and state level, the Commission has a budget of $16.6 million, which comes from a combination of state appropriations and federal grants, including the Atlantic Coastal Fisheries Cooperative Management Act.

In 2019, the Commission maintained sustainable fisheries for a number of rebuilt species such as Gulf of Maine/ Georges Bank American lobster, Atlantic cobia, Atlantic menhaden, black sea bass, and summer flounder. The Commission started a new amendment for Atlantic cobia, updated management programs for ten species (via addenda), and initiated three addenda to examine issues including spawning protections for Atlantic herring and resiliency in the Gulf of Maine/Georges Bank American lobster fishery. The Commission and the Mid-Atlantic Fishery Management Council (MAFMC) released the Summer Flounder, Scup and Black Sea Bass Commercial/Recreational Allocation Amendment Scoping and Public Information Document for public comment as the first step in the development of a joint amendment to reevaluate the FMP's commercial and recreational allocations. The Commission and MAFMC also initiated an amendment for bluefish. While these are positive steps forward, there is still substantial work ahead to rebuild valuable Atlantic coastal fishery resources such as American shad and river herring, American eel, Atlantic striped bass, tautog and bluefish.

We remain grateful to Congress, the Administration, our Governors, and state legislators for their continued support of the Commission and its vision of *Sustainable and Cooperative Management of Atlantic Coastal Fisheries*. Many of our accomplishments would not have been possible without their trust and confidence. In addition, the technical support provided by NOAA Fisheries, U.S. Fish and Wildlife Service, and U.S. Geological Survey staff to the Commission and states is an invaluable component of our interstate fisheries management, science, and data collection activities.

As my last opportunity to address you as Commission Chair, I wanted to first thank you for all the support you have given Pat Keliher and me these past two years. It's been a tremendous honor serving as your Chair and I am indebted to you for helping us navigate through some difficult issues. I am particularly grateful to our Legislative and Governor-appointed Commissioners and proxies, who serve without compensation and get little credit for the work they do. I am also deeply appreciative for the efforts of our staff – those at the Commission and within the state and federal agencies – for providing sound scientific advice and technical input to guide us in our decision-making.

From a management perspective, I am very pleased about our quick and decisive response to the decline in the striped bass resource and am hopeful the measures that we approved in October will end overfishing within one year. While this is an important first step in recovering the stock, there will be more that we have to do to fully rebuild it. But, rest assured, we will do so. We've been in a much more dire position before with the striped bass resource and were successful in restoring the stock. There is no reason why we cannot do so again.

I am also excited about the progress we have made towards beginning to manage Atlantic menhaden for its role as a forage species. The Commission and the states have made considerable investments in the development of two related benchmark assessments – a single-species assessment for menhaden and one that explores the use of ecological reference points (ERP) to manage menhaden based on the demands of the species that prey on it. Both of these assessments were peer-reviewed in November 2019 and will be presented to the Management Board in February 2020. If approved for management use, the ERP assessment has the potential to significantly change the way we manage menhaden and its primary predators. However, there is much more work to be done before we fully get there and decisions will need to be made about management goals and objectives for each of the species involved. We are heading into uncharted territory and I am equally excited and a bit overwhelmed about the work we have ahead of us.

The effects of climate change and warming ocean waters will continue to be a growing challenge, with shifts in species productivity and distribution resulting in the need for us to revisit outdated management programs and resource allocation among the states and between users groups. Further complicating resource allocation issues is the effect of revised recreational estimates on the balance of commercial and recreational fisheries. Making changes to long-established allocation schemes can be a highly contentious process, staking one state against the other. Unfortunately, climate change is a reality and our stocks are moving, leaving us no choice but to deal with this issue head on. What is required of us is the shared commitment to work together to seek innovative solutions and the willingness to compromise.

> In the world of fisheries management, there really is no mine, there is only ours. The only way to protect what's ours and do what's best for the resource and our stakeholders is to remain united and approach problem solving together.
>
> *JAMES J. GILMORE, JR.*

Looking ahead, I also see continued challenges to our authority under the Atlantic Coastal Fisheries Cooperative Management Act and our ability to work successfully as an interstate management body. I remain deeply concerned about the political and stakeholder pressure placed upon us as individual states and as an organization as a whole that can fracture our unity and undermine interstate cooperation. We all face the dilemma between state needs and the greater good for the resource, and the real possibility that if you go for the greater good, you may not have a job when you get home. While I have no easy fix, the one constant that will aid us in our decision-making and in ensuring the sustainability of our fishery resources is the absolute need to put the science first.

When faced with challenges or conflicts, the tendency is want to hunker down and take care of what's mine. But in the world of fisheries management, there really is no mine, there is only ours. The only way to protect what's ours and do what's best for the resource and our stakeholders is to remain united and approach problem solving together. Let's find ways to harness the vast array of knowledge and expertise we have among our Commissioners, scientists, and stakeholders and find creative solutions to the problems before us. Most importantly, let us not forget that we are all here for the same reason – we are genuinely committed to being good stewards of the resources under our care not just for short-term gain but for the benefit of future generations.

Again, it has been my honor to serve as your Chair and I look forward to continuing to work with you all and our new leadership to achieve our vision of *Sustainable and Cooperative Management of Atlantic Coastal Fisheries.*

QUICK GUIDE TO STOCK STATUS

✓= Rebuilt /Sustainable ↑ / ⇔ = Recovering/Rebuilding ↓= Declining/Depleted ? = Unknown ✸ = Concern

STATUS/ TRENDS	SPECIES		OVERFISHED	OVERFISHING	REBUILDING STATUS & SCHEDULE
↓		American Eel	Depleted	Unknown	2017 stock assessment update indicates resource remains depleted.
✓		American Lobster – Gulf of Maine/ Georges Bank (GOM/GBK)	Not Depleted	N	GOM/GBK stock abundance has increased since the 1980s; benchmark assessment scheduled for 2020.
↓		American Lobster – Southern New England (SNE)	Depleted	N	SNE stock has collapsed and is experiencing recruitment failure; benchmark assessment scheduled for 2020.
↓		American Shad	Depleted	Unknown	Depleted on coastwide basis; Amendment 3 established 2013 moratorium unless river-specific sustainability can be documented; benchmark assessment scheduled for 2020.
?		Atlantic Croaker	Unknown	Unknown	Status unknown; traffic light analysis (TLA) indicates relatively low harvest in 2018; no management action triggered.
✸		Atlantic Herring	N	N	2018 stock assessment indicates declines in total biomass, spawning stock biomass (SSB), and recruitment over the past 5 years.
✓		Atlantic Menhaden	N	N	2020 total allowable catch (TAC) set at 216,000 mt.; single-species and ecological reference points benchmark assessments scheduled for 2020.
↓		Atlantic Striped Bass	Y	Y	Overfished and overfishing occurring on a coastwide basis; Addendum VI requires states implement measures in 2020 to achieve an 18% reduction in total removals.
↑/⇔		Atlantic Sturgeon	Depleted	N	40+ year moratorium implemented in 1998; listed in 2012 under the Endangered Species Act (ESA); 2017 benchmark assessment indicates stock is depleted coastwide though slow recovery has been occurring since 1998 and total mortality is sustainable.
✓		Black Drum	N	N	2015 benchmark assessment found 2012 median biomass well above median biomass that produces MSY.
✓		Black Sea Bass	N	N	Operational assessment found SSB was 240% of the target in 2018 and overfishing was not occurring. After a record peak in 2016, biomass has slightly declined.
✸		Bluefish	Y	N	Operational assessment found stock did not experience overfishing in 2018, though overfishing has occurred, relative to the updated reference points, since 1985.
✸		Coastal Sharks	Varies by species & species complex		
✓		Cobia	N	N	Amendment 1 approved in 2019; benchmark stock assessment scheduled for 2020.
✸		Horseshoe Crab	Unknown	Unknown	2019 benchmark assessment found New England region and DE Bay stocks are neutral; NY region stock is poor; and the Southeast region stock is good. Coastwide abundance has fluctuated, with many surveys decreasing after 1998 but increasing in recent years. ARM Framework used since 2013 to set harvest levels for horseshoe crabs of DE Bay origin.
?		Jonah Crab	Unknown	Unknown	No range-wide assessment; Interstate FMP adopted in August 2015.
↓		Northern Shrimp	Depleted	N	2019 data update indicates stock remains depleted, with SSB at extremely low levels since 2013. Abundance, biomass, and SSB at new time-series lows, and recruitment 3rd lowest in the time series. Environmental conditions continue to be unfavorable for northern shrimp. Fishing moratorium in place since 2014 to protect remaining spawning population.

✓= Rebuilt /Sustainable ↑ / ⇔ = Recovering/Rebuilding ↓ = Declining/Depleted ? = Unknown ✸ = Concern

STATUS/ TRENDS	SPECIES		OVERFISHED	OVERFISHING	REBUILDING STATUS & SCHEDULE
↑/⇔	Red Drum 	Northern Region	Unknown	N	2017 benchmark assessment indicates spawning potential ration (SPR) above target and threshold SPRs.
		Southern Region	Unknown	N	2017 benchmark assessment indicates SPR above target and threshold SPRs, though high uncertainty.
↓		River Herring	Depleted	Unknown	2017 assessment update indicates stock remains depleted on coastwide basis; Amendment 2 established 2012 moratorium unless river-specific sustainability can be documented.
✓		Scup	N	N	Rebuilt
✓		Spanish Mackerel	N	N	Benchmark stock assessment scheduled for 2021.
✓		Spiny Dogfish	N	N	Rebuilt since 2008.
?		Spot	Unknown	Unknown	Status unknown; TLA indicates relatively low harvest in 2018; no management action triggered.
?		Spotted Seatrout	Unknown	Unknown	Omnibus Amendment includes measures to protect spawning stock & establishes 12" minimum size limit.
↑/⇔		Summer Flounder	N	N	2019 assessment update indicates in 2018 aggregate size increased and recruitment was above average.
✸	Tautog 	MA-RI	N	N	Amendment 1 establishes regional stock units and reference points.
		Long Island Sound	Y	Y	
		NJ-NY Bight	Y	Y	
		DE / MD / VA	Y	N	
↓		Weakfish	Depleted	N	2019 assessment update indicates weakfish depleted since 2003; population has been experiencing very high levels of total mortality (fishing mortality plus natural mortality), preventing the stock recovery.
✸	Winter Flounder 	Gulf of Maine	Unknown	N	Stock biomass is unknown; unknown why stock is not responding to low catches and low exploitation rates.
↓		Southern New England/ Mid-Atlantic	Y	N	Biomass at 18% of SSB target based on 2017 operational assessment.

WHAT DOES A STATUS MEAN?

Rebuilt/Sustainable - Stock biomass is equal to or above the biomass level established by the FMP to ensure population sustainability. When between benchmark assessments, a stock can still be considered rebuilt/sustainable if it drops below the target but remains above the threshold.

Recovering/Rebuilding - Stocks exhibit stable or increasing trends. Stock biomass is between the threshold and the target level established by the FMP.

Unknown - There is no accepted stock assessment to estimate stock status.

Declining/Depleted – Stock is on the decline or at low levels of abundance though it is unclear whether fishing mortality is the primary cause for reduced stock size.

Concern – Those stocks developing emerging issues, e.g., increased effort, declining landings, or impacts due to environmental conditions.

Overfished - Occurs when stock biomass falls below the threshold established by the FMP, significantly reducing the stock's reproductive capacity to replace fish removed through harvest.

Overfishing - Occurs when fish are removed from a population at a rate that exceeds the threshold established in the FMP, which over the long-term will lead to declines in the population. A stock that is experiencing overfishing is having fish removed at a rate faster than the population can sustain in the long run, which will lead to declines in the population.

Stable/ Unchanged - Stock biomass has been consistent in recent years.

Benchmark stock assessment - A full analysis and review of stock condition, focusing on the consideration of new data sources and newer or improved assessment models. This assessment is generally conducted every 3-5 years and undergoes a formal peer review by a panel of independent scientists who evaluate whether the data and the methods used to produce the assessment are scientifically sound and appropriate for management use.

Stock assessment update - Incorporates data from the most recent years into a peer-reviewed assessment model to determine current stock status (abundance and overfishing levels.

ATLANTIC HERRING

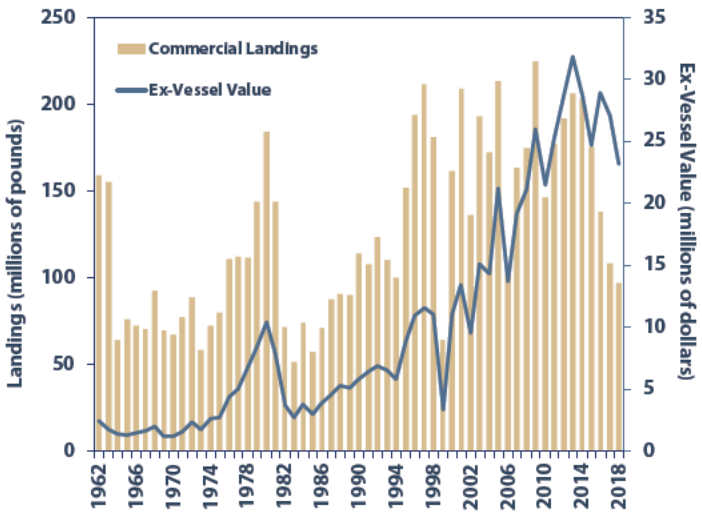
Managed cooperatively by the Commission's Atlantic Herring Management Board and the New England Fishery Management Council (NEFMC), Atlantic herring play an integral role throughout the Northeast and Mid-Atlantic as both a key forage fish for marine mammals, seabirds, and many fish and an important commercial commodity supporting bait fisheries. In 2018, total domestic harvest was 96.5 million pounds, with an ex-vessel value of $23 million.

While the 2018 benchmark stock assessment concluded that Atlantic herring are not overfished and not experiencing overfishing, the assessment highlighted concerns about recent trends in recruitment and spawning stock biomass (SSB). Specifically, recruitment has been below the time series average since 2013, with 2016 recruitment being the lowest on record at 1.7 million fish. While recruitment has been variable throughout time, these continuing low levels of recruitment indicate there will be fewer fish available to harvest in future years. SSB has also been lower in recent years, with 2017 SSB estimated at 311.9 million pounds. Fishing mortality has also decreased, with a 2017 level of 0.45, below the fishing mortality threshold of 0.51.

Due to concerns regarding projected declines in herring biomass, the sub-annual catch limits (ACLs) for the four herring management areas were significantly reduced in 2018 and 2019, representing an overall reduction in harvest of nearly 85% from 2017 levels. Additionally, in 2019, the Board approved Addendum II to Amendment 3 to the Interstate Fishery Management Plan (FMP) to strengthen spawning protections in Area 1A (inshore Gulf of Maine). Under Amendment 3, the Board uses a series of closures to protect spawning aggregations in Area 1A. Technical Committee analysis found greater protection could be provided by initiating a closure when a lower percentage of the population is spawning and extending the closure for a longer time. As a result, the Board approved Addendum II, which lowers the spawning percentage threshold so that a closure can be initiated when 20% of the population is spawning (down from 25%) and extends the length of the closure from four to six weeks. The Addendum also modifies the trigger level necessary to reclose the fishery, with the fishery reclosing when 20% or more of the sampled herring are mature but have not yet spawned.

In 2019, the Board also initiated an addendum to consider new approaches for managing the Area 1A sub-ACL under low quota scenarios for the 2020 fishing season and beyond. The draft addendum will also consider expanding landing provisions for permit holders within the days out program. Final action on the addendum will occur in 2020.

Atlantic Herring Landings and Ex-Vessel Value
Source: ACCSP Data Warehouse, 2019



Atlantic herring collected for sampling from the Northeast Fisheries Science Center (NEFSC) Pelagic Trawl Survey (top) and catch-at-age samples collected as part of the Gulf of Maine Northern Shrimp Survey (bottom). Photos © NEFSC and Ashton Harp, respectively.

ATLANTIC MENHADEN

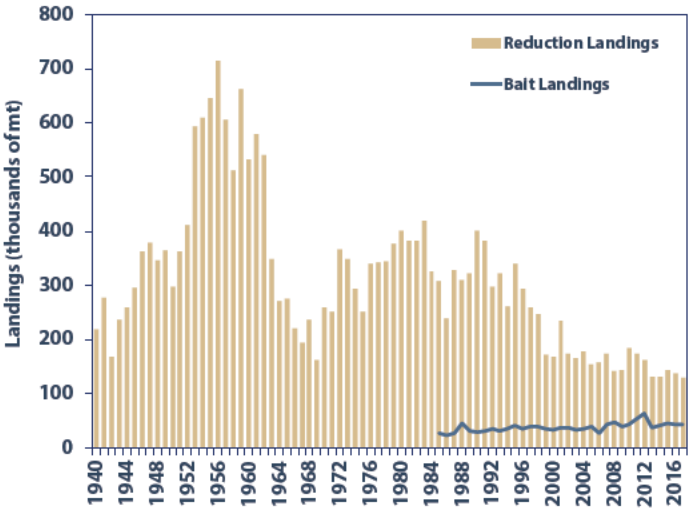
Atlantic menhaden are a small, oily, schooling fish of historical, economic, and ecological importance. Like Atlantic herring, Atlantic menhaden play an important role in the marine ecosystem as prey species for fish, marine mammals, and sea birds, as well as supporting bait and reduction fisheries.

Atlantic menhaden being transferred from purse seine net to fishing vessel in the Chesapeake Bay. Photo © John Surrick, Chesapeake Bay Foundation.

In 2019, the Commission completed work on two Atlantic menhaden benchmark stock assessments: a single-species assessment and the highly anticipated ecosystem-based assessment, which aims to develop ecological reference points specific to menhaden and will be used to evaluate the health of the stock and inform the management of the species in an ecological context. Both assessments were peer-reviewed through the SouthEast Data Assessment and Review (SEDAR) process in November. The results of the assessments and peer-reviews will be considered by the Atlantic Menhaden Management Board in February 2020.

The Atlantic Menhaden Board maintained the total allowable catch (TAC) of 216,000 mt for the 2020 fishing season with the option to revisit the 2020 TAC following review of the assessments and peer-review reports. The TAC will be distributed to the states based on the state-by-state allocation established in Amendment 3 to the FMP.

Atlantic Menhaden Bait and Reduction Landings
Sources: ACCSP Data Warehouse and NOAA Fisheries Beaufort Laboratory, 2019



In September 2019, the Commission received notification that the 51,000 mt Chesapeake Bay reduction fishery cap (a mandatory provision of Amendment 3) had been exceeded. In October, based on the recommendation of the Atlantic Menhaden Board and pursuant to the provisions of the Atlantic Coastal Fisheries Cooperative Management Act, the Commission found the Commonwealth of Virginia out of compliance with the Interstate FMP for failing to effectively implement and enforce Amendment 3's Chesapeake Bay reduction fishery cap. In forwarding its noncompliance finding to the Secretary of Commerce, the Commission stated that implementation of the Bay cap was necessary to achieve the goals and objectives of Amendment 3, to maintain the Chesapeake Bay marine environment, and to assure the sustainability of the ecosystem's resources on a long-term basis.

In December 2019, the Secretary of Commerce concurred with the Commission's finding of non-compliance and declared a moratorium on the Atlantic menhaden fisheries in Virginia waters, effective June 17, 2020. To come back into compliance and avoid a moratorium, the Commonwealth must effectively implement and enforce the cap prior to June 17.th

ATLANTIC STRIPED BASS

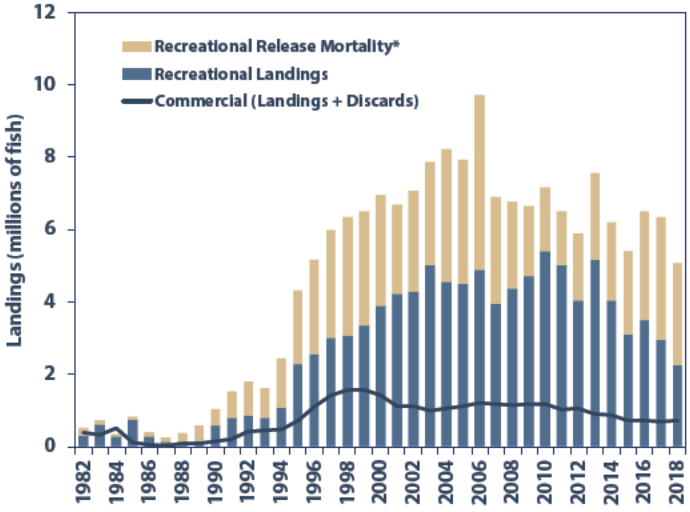
Known throughout New England and the Mid-Atlantic as striper, rockfish, linesider, rollers, squidhound, or simply "bass," Atlantic striped bass is regularly referred to as America's greatest game fish on the U.S. Atlantic coast. High demand for this species among fishermen and consumers, coupled with the complexity of

its seasonal distribution along the coast, make sustainable management of the Atlantic striped bass population challenging.

The results of the 2018 Atlantic striped bass benchmark stock assessment brought these issues even more finely into focus, with the resource considered overfished and experiencing overfishing. Female SSB was estimated at 151 million pounds, below the SSB threshold of 202 million pounds. Despite recent declines in SSB, the assessment indicated the stock is still significantly above the SSB levels observed during the 1980s when some states implemented complete moratoria on striped bass fishing. Total fishing mortality was estimated at 0.31, above the fishing mortality threshold of 0.24. The benchmark assessment, including its single-stock statistical catch-at-age model, was endorsed by the Peer Review Panel and accepted by the Atlantic Striped Bass Management Board for management use.

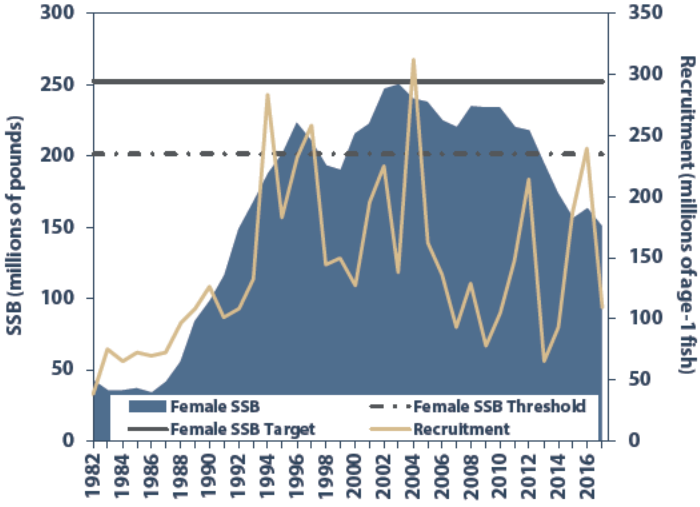
Recreational angler with a striped bass. Photo © John McMurray, www.nycflyfishing.com.

Atlantic Striped Bass Commercial Landings and Discards & Recreational Landings and Release Mortality
Source: Atlantic Striped Bass Benchmark Stock Assessment, 2018



*Recreational release mortality assumes that 9% of fish released alive die.

Atlantic Striped Bass Female Spawning Stock Biomass & Recruitment
Source: Atlantic Striped Bass Benchmark Stock Assessment, 2018



Based on the assessment findings and the tripping of Amendment 6's fishing mortality and SSB reference point management triggers, the Atlantic Striped Bass Board initiated and approved Addendum VI. Addendum VI reduces all state commercial quotas by 18%, and implements a 1 fish bag limit and a 28" to less than 35" recreational slot limit for ocean fisheries and a 1 fish bag limit and an 18" minimum size limit for Chesapeake Bay recreational fisheries. The measures are designed to achieve at least an 18% reduction in total removals at the coastwide level to end overfishing, and bring fishing mortality to the target level in 2020. States may submit alternative regulations through conservation equivalency to tailor their regulations to the meet the needs of their fisheries. All conservation equivalency proposals are subject to technical review and Board approval.

Since catch and release practices contribute significantly to overall fishing mortality, the Addendum mandates the use of circle hooks when recreationally fishing for striped bass with bait to reduce release mortality. Outreach and education will be a necessary element to garner support and compliance with this important conservation measure.

States must implement mandatory circle hook requirements by January 1, 2021. All other provisions of Addendum VI must be implemented by April 1, 2020.

BLACK SEA BASS

Jointly managed by the Commission and the Mid-Atlantic Fishery Management Council (MAFMC), black sea bass are an abundant and popular commercial and recreational species throughout Southern New England and the Mid-Atlantic region.

Scientist aboard the NEAMAP Southern New England/Mid-Atlantic Nearshore Trawl Survey with a dominant, male black sea bass as evidenced by the nuchal hump at the top of its head before its dorsal fin. Photo © NEAMAP.

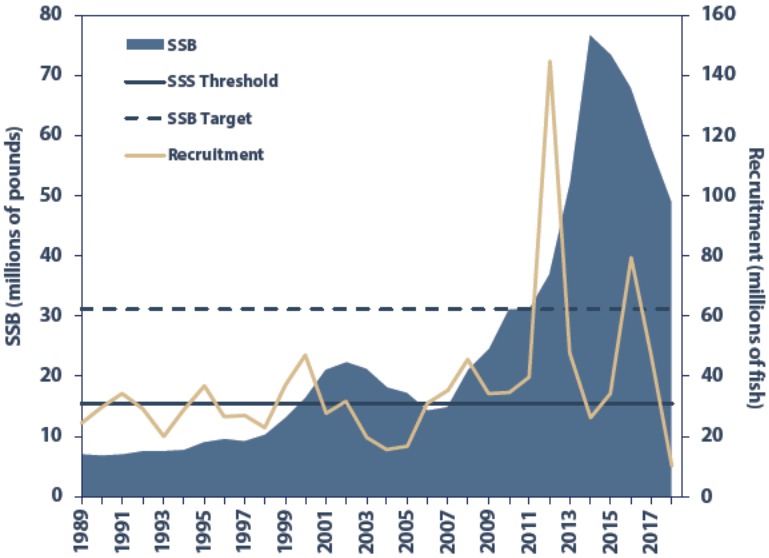
An operational assessment that incorporated new recreational harvest estimates provided by the Marine Recreational Information Program (MRIP) was peer-reviewed in August 2019. The assessment found the black sea bass stock north of Cape Hatteras, North Carolina is not overfished and overfishing is not occurring. Recruitment was above average in 2015 and below average during 2016-2018. Despite uncertainty associated with the most recent year estimates, exploitable biomass is expected to decrease in coming years due to poor recruitment of the 2017 year class and declining abundance of the 2015 year class.

Based on these findings, the Commission's Summer Flounder, Scup and Black Sea Bass Management Board and MAFMC adopted an acceptable biological catch (ABC) of 15.07 million pounds for 2020 and 2021. After accounting for discards, the ABC translates to a commercial quota of 5.58 million pounds and a recreational harvest limit (RHL) of 5.81 million pounds for both years.

In December, the Board and MAFMC released the Summer Flounder, Scup and Black Sea Bass Commercial/Recreational Allocation Amendment Scoping and Public Information Document (PID) for public comment. This is the first step in the development of a joint amendment that aims to reevaluate the FMP's commercial and recreational allocations based on changes to catch and landings data, in particular, revised recreational estimates. The PID solicits stakeholder input on current and emerging fishery issues/concerns and recommendations for potential fisheries management actions for the Board and MAFMC to consider.

Additionally, the Board initiated an addendum to consider changes to black sea bass commercial state allocations. This action will consider the current distribution and abundance of black sea bass as one of several adjustment factors to achieve more balanced access to the resource. MAFMC is also developing an amendment complementary to this action to consider including state allocations in the federal FMP. A draft addendum for public comment will be presented to the Board in mid-2020.

Black Sea Bass Spawning Stock Biomass and Recruitment
Source: NEFSC Operational Assessment Prepublication Report, 2019



BLUEFISH

Bluefish are one of the most popular sport fish along the Atlantic coast. A highly mobile species, they are renowned for their predatory instinct, razor sharp teeth, and aggressive behavior. In the late 1970s, anglers petitioned MAFMC to develop an FMP for bluefish to address concerns over population declines. The Bluefish FMP, passed in 1989, was the first management plan

Recreationally-caught bluefish (left) and bluefish close-up with baitfish in its mouth (right). Photos © Toni Kerns and John McMurray, www.nycflyfishing.com, respectively.

developed jointly by an interstate commission and a regional fishery management council.

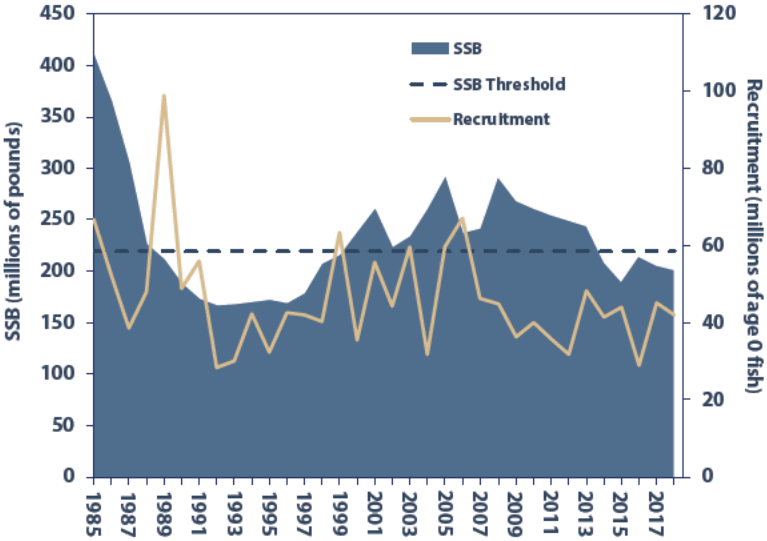
Roughly a decade later, concern about the decline in bluefish abundance once again necessitated joint management action. Amendment 1 (1998) marked the start of a long-term plan to restore bluefish through progressive harvest restrictions. In 2009, stock biomass exceeded its target level, and the stock was declared rebuilt a year earlier than planned.

Stock status has changed once again following the 2019 operational stock assessment, which revealed the stock is overfished. This change in stock status is largely due to the revised estimates of recreational effort from MRIP, which transitioned from a phone-based survey to a mail-based survey to estimate the number of angler trips. The improved survey showed the number of trips taken across the time series was much higher than had been previously estimated and, as a result, estimates of recreational catch were much higher for bluefish.

Based on these findings, the Commission and MAFMC approved an ABC of 16.28 million pounds for the 2020 fishing season, an approximate 25% decrease from 2019 levels. After accounting for discards, the ABC translates to a commercial quota of 2.77 million pounds and an RHL of 9.48 million pounds.

Additionally, the Commission and MAFMC are working on the development of a rebuilding plan as part of the Bluefish Allocation and Rebuilding Amendment, which will consider revising the FMP goals and objectives, allocations between sectors and states, and the quota transfer process.

Bluefish Spawning Stock Biomass and Recruitment
Source: Bluefish Operational Stock Assessment, 2019



COBIA

Cobia are distributed worldwide in tropical, subtropical and warm-temperate waters. In the western Atlantic, they occur from Nova Scotia, Canada south to Argentina, including the Caribbean Sea. Based on genetic, tagging, and movement data, cobia north of the Georgia-Florida border are considered the Atlantic migratory group (also referred to as Atlantic cobia), while cobia found along the east coast of Florida and throughout the

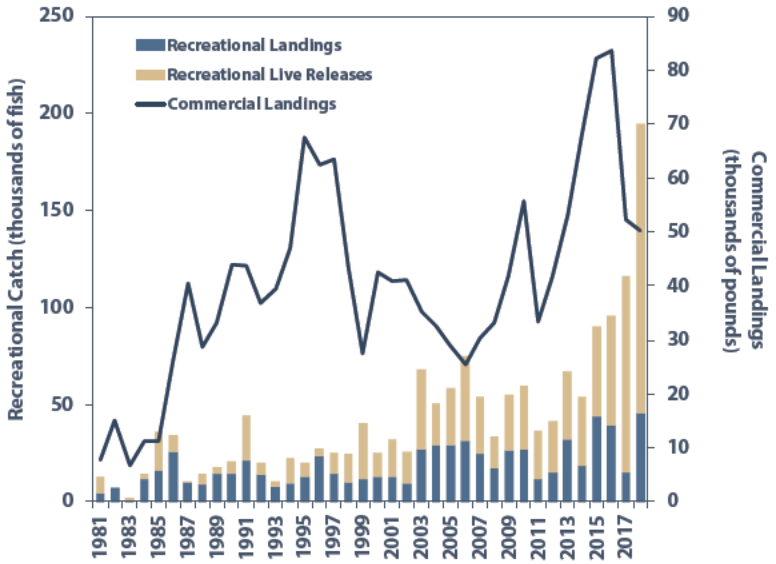
Gulf of Mexico are considered a separate Gulf stock.

In 2019, management of the Atlantic stock shifted from the South Atlantic and Gulf of Mexico Fishery Management Councils (SAFMC and GMFMC) to the Commission.

As part of that process, the Commission approved Amendment 1 to the Interstate FMP for Atlantic Migratory Group Cobia. Amendment 1 institutes a long-term strategy for managing cobia in the absence of a federal plan, including setting of harvest quotas and sector allocations, defining stock status criteria, and recommending management measures to be implemented by NOAA Fisheries in federal waters. Additionally, Amendment 1 transitions responsibilities of monitoring and closing (if necessary) commercial harvest to the Commission.

Amendment 1 establishes a harvest specification process, which allows the South Atlantic Board to specify a limited set of management measures for up to three years. One of the measures that may be set through this process is a coastwide harvest quota. However, until the first specification process occurs after completion of the benchmark stock assessment and peer review through the SEDAR process in early 2020, the current coastwide quota (670,000 pounds) remains in effect.

Cobia Recreational Catch and Commercial Landings
Source: NOAA Fisheries, Fisheries Statistics Division & ACCSP Data Warehouse, 2019



The Amendment also changes the units used to measure and evaluate the recreational fishery from pounds to numbers of fish. To accommodate this change, the recreational harvest quota in pounds (620,000) is converted to numbers (22,142 fish) and allocated among the states, resulting in the following state recreational harvest targets for the 2019 fishing season: Virginia: 8,724 fish; North Carolina: 8,436 fish; South Carolina: 2,679 fish; Georgia: 2,081 fish; and 1% *de minimis* set aside: 222 fish. States still may set their own seasons and vessel limits to achieve their respective targets.

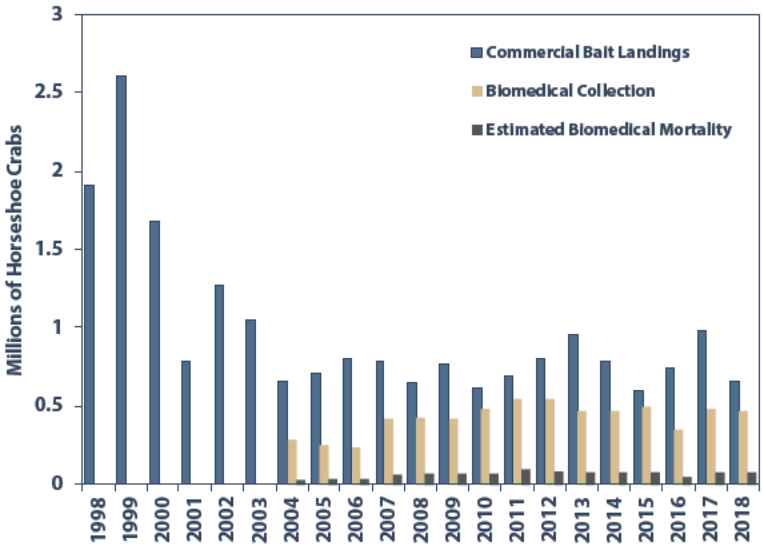
Finally, Amendment 1 establishes a *de minimis* status for the commercial sector, exempting states with small commercial harvests from in-season monitoring requirements. States are required to implement measures of Amendment 1 by July 1, 2020.

Atlantic cobia next in line to be filleted (left) and recreational angler with Atlantic cobia (right). Photos © Scott Smith, NC DMF and Rosemary White, respectively.

HORSESHOE CRAB

Horseshoe crab are an ecologically important species that provide a variety of human and environmental services. Horseshoe crab blood is used by the biomedical industry to produce Limulus Amoebocyte Lysate, an important tool in the detection of contaminants in patients, drugs, and medical supplies. A chemical in the horseshoe crab tissue also makes it an ideal bait to catch conch and American eel. The Delaware Bay not only supports the largest spawning population of horseshoe crabs in the world, but is also the largest staging area for shorebirds in the Atlantic Flyway, with an estimated 425,000 to one million migratory shorebirds converging on the Delaware Bay each year to feed on horseshoe crab eggs and rebuild energy reserves prior to completing their northward migration.

Horseshoe Crab Bait Landings and Biomedical Collection
Source: State Compliance Reports, 2019



Please note the following details regarding biomedical collection numbers:
* Biomedical collection numbers, which are annually reported to the Commission, include all horseshoe crabs brought to bleeding facilities except those that were harvested as bait and counted against state quotas.
* Most of the biomedical crabs collected are returned to the water after bleeding; a 15% mortality rate is estimated for all bled crabs.

The 2019 benchmark stock assessment evaluated the stock status of horseshoe crabs by region, finding populations within the Delaware Bay and Southeast regions remaining consistently neutral and good, respectively, through time. The Northeast region population has changed from poor to neutral, while the status of the New York region population has trended downward from good to poor. Coastwide, abundance has fluctuated through time with many surveys decreasing after 1998 but increasing in recent years. The coastwide status includes surveys from all regions and indicates a neutral trend, likely due to positive and negative trends being combined. The benchmark assessment was endorsed by the Peer Review Panel and accepted by the Horseshoe Crab Management Board for management use.

To date, no overfishing or overfished definitions have been adopted for management use. However, given the assessment results of low fishing mortality and relatively high abundance, overfishing and an overfished status are unlikely for female horseshoe crabs in the Delaware Bay region.

Spawning horseshoe crabs on Delaware beach and a handful of juvenile horseshoe crabs (~ 2 years old). Photos © Dr Rob Robinson, British Trust for Ornithology and Derek Perry, MA DMF, respectively.

With their eggs playing an important ecological role in the food web of migrating shorebirds, horseshoe crabs are the first Commission-managed species to incorporate ecosystem principles into its management program. To address this food web dynamic, the species is managed using an Adaptive Resource Management (ARM) Framework, which incorporates both shorebird and horseshoe crab abundance levels into the horseshoe crab specifications for the Delaware Bay states. Red knots, the shorebird that most relies on horseshoe crab eggs for food, were listed as threatened under the Endangered Species Act in 2014. The ARM Framework was cited as one of the main reasons the species was not listed as endangered (due to adequate management in place).

Commercial fishing for summer flounder. Photo © Marla Trollan.

The ARM Framework's performance continues to be evaluated and improved. The horseshoe crab abundance estimate is based on data from the Benthic Trawl Survey conducted by Virginia Tech. This survey, which is the primary data source for assessing Delaware Bay horseshoe crab abundance in the ARM Framework and the benchmark stock assessment, does not have a consistent funding source. However, due to the efforts of three Senators and six Representatives – namely, Senators Chris Coons (D-DE), Tom Carper (D-DE), Cory Booker (D-NJ); and Representatives Frank Pallone (D-NJ), Frank LoBiondo (R-NJ), Lisa Blunt-Rochester (D-DE), Donald Norcross (D-NJ), Chris Smith (R-NJ), and Bill Pascrell (D-NJ) – and the support of NOAA Fisheries, annual funding for the survey has been provided since 2016. They have also requested that NOAA Fisheries incorporate the survey into the agency's annual budget.

For the 2016-2020 fishing seasons, harvest in the Delaware Bay was set at 500,000 male horseshoe crabs. Reported coastwide bait landings in 2018 remained well below the coastwide quota (1.59 million crabs) at approximately 658,590 crabs. Some crabs, accounted for in the bait landings, are harvested as bait and bled for biomedical use prior to entering the market. Crabs collected solely for biomedical use in 2018 were reported at about 464,480 crabs. Mortality observed during the collection and bleeding process is reported annually. Additionally, 15% of crabs that are bled are assumed to die due to this process. As required by the FMP, crabs processed by the biomedical industry that are not sourced from the bait fishery are returned to the water from where they were harvested.

SUMMER FLOUNDER

One of the most important commercially and recreationally targeted flatfish species along the U.S. Atlantic coast, summer flounder have been jointly managed by the Commission and MAFMC for nearly four decades. The 2018 benchmark stock assessment and peer review indicate summer flounder are not overfished nor experiencing overfishing. SSB is estimated at 98 million pounds, approximately 78% of the SSB target of 126 million pounds. Fishing mortality is estimated to be 0.334, below the fishing mortality threshold of 0.448. Recruitment has been below average since 2011, with recruitment of age 0 fish was estimated at 42 million fish in 2017, below the time series average of 53 million fish.

Data analyzed by the Northeast Fisheries Science Center for the assessment indicate increasing relative

abundance of older fish and an expanding age structure. However, the data also indicate a decrease in relative total abundance since the late 2000s, as well as decreasing trends in average lengths and weights at age for both sexes, suggesting slower growth and delayed maturity which impacts the biological reference points. The assessment shows current mortality from all sources is greater than recent recruitment to the stock, which has resulted in a declining stock trend. Additionally, the assessment found the spatial distribution of the resource is continuing to shift northward and eastward.

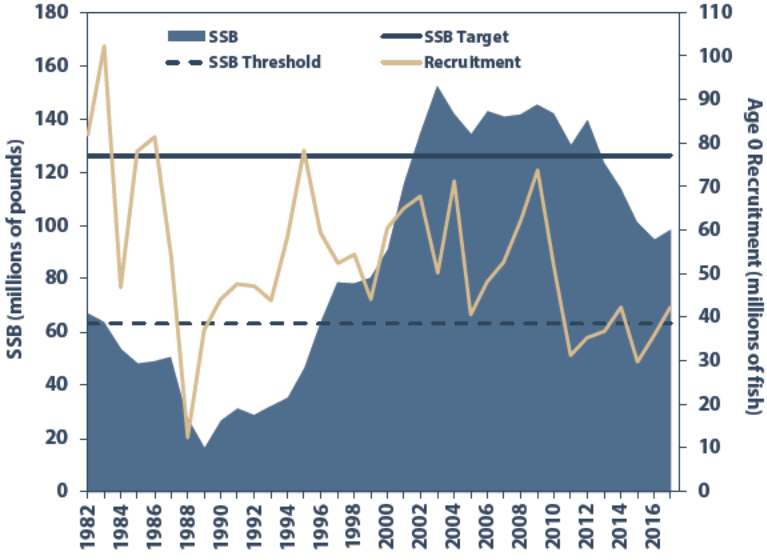
Kirby Rootes-Murdy, ASMFC Senior FMP Coordinator, with a jumbo summer flounder collected for sampling as part of the RI DEM Seasonal Trawl Survey. Photo © Kirby Rootes-Murdy.

A key attribute of the assessment is the incorporation of revised recreational catch data from MRIP. For comparison with the previous estimates, the revised estimates of 2017 recreational landings and discards are over three times the previous estimates. The revised recreational catch estimates increased the 1982-2017 total annual catch by an average of 29%, ranging from 11% increase in 1989 to 43% increase in 2017. The increase in estimated removals resulted in an increased population estimate compared to previous assessments.

In March 2019, the Commission's Summer Flounder, Scup, and Black Sea Bass Management Board approved and MAFMC recommended approval of the Summer Flounder Commercial Issues Amendment. The Amendment revises summer flounder's management program's goals and objectives and implements new state-specific commercial allocations. The revised management program's goals and objectives focus on ensuring biological sustainability of the resource, supporting and enhancing development of effective management measures, and optimizing social and economic benefits from the resource. These revisions were made to reflect current priorities in sustainably managing the resource.

In December, the Board and MAFMC released the Summer Flounder, Scup and Black Sea Bass Commercial/Recreational Allocation Amendment Scoping and Public Information Document (PID) for public comment. This is the first step in the development of a joint amendment that aims to reevaluate the FMP's commercial and recreational allocations based on changes to catch and landings data provided by MRIP. The PID solicits stakeholder input on current and emerging fishery issues/concerns and recommendations for potential fisheries management actions for the Board and MAFMC to consider.

Summer Flounder Spawning Stock Biomass and Recruitment
Source: 66th Northeast Stock Assessment Workshop, 2019



MANAGEMENT OF SUSTAINABLE FISHERIES relies on accurate and timely scientific advice. The Commission strives to produce sound, actionable science through a technically rigorous, independently peer-reviewed stock assessment process. Assessments are developed using a broad suite of fishery-independent surveys and fishery-dependent monitoring, as well as research products developed by a network of fisheries scientists at state, federal and academic institutions along the coast. The Commission's scientific goals include the development of innovative scientific research and methodology, and enhancement of the states' stock assessment capabilities. Achieving the goals ensures sound science is available as the foundation for the Commission's evaluation of stock status and adaptive fisheries management actions.

FISHERY-INDEPENDENT DATA COLLECTION

Fishery-independent surveys provide insight into the status of fish stocks without the biases inherent to commercial and recreational fisheries catch information. Data collection by numerous survey programs is a fundamental component of the Commission's stock assessment and fisheries management processes. The Commission coordinates two regional fishery-independent data collection programs on the Atlantic coast – the South Atlantic component of the Southeast Area Monitoring and Assessment Program (SEAMAP) and the Northeast Area Monitoring and Assessment Program (NEAMAP).

SEAMAP

SEAMAP is a cooperative program among state and federal agencies, and universities to carry out the collection, management, and dissemination of fishery-independent data in the South Atlantic. Since 1982, SEAMAP has conducted long-term standardized surveys that provide the scientific basis for fisheries and habitat management in the region. SEAMAP conducts surveys and disseminates data in close collaboration with NOAA Fisheries' Southeast Fisheries Science Center and Regional Office.

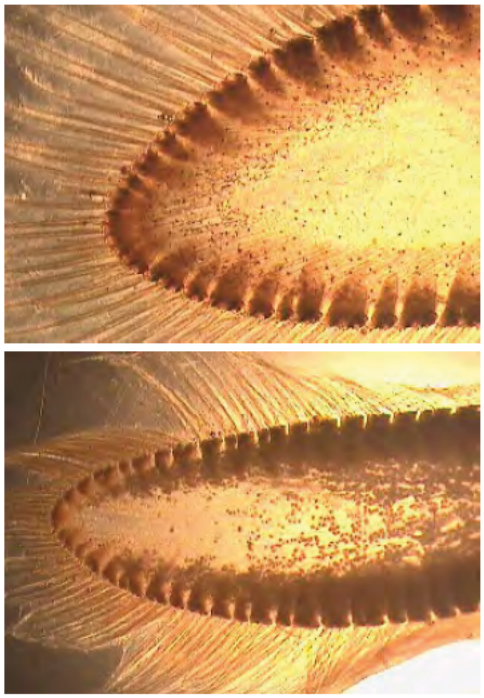
Spot collected for sampling as part of the SEAMAP Spring Survey. Photo © NC DMF.

In 2019, SEAMAP-South Atlantic surveys (trawl, longline, and trap) continued to collect data on the distribution and abundance of a variety of important commercial and recreational species from North Carolina to Florida (e.g., red drum, Spanish mackerel, snapper, grouper, shrimp). Data collected from all SEAMAP-South Atlantic surveys provide long-term population metrics such as abundance trends, feeding habits, and population age structure for use in state, interstate, and federal stock assessments of fish and crustaceans. SEAMAP survey data are readily available online at *www.seamap.org*. Fisheries scientists, managers, and the public can search the SEAMAP database to examine population trends, inform annual fishing regulations, and evaluate management strategies for numerous commercial and recreational species that migrate between the states' coastal waters and estuaries. Additionally, maps of SEAMAP and other South Atlantic fishery-independent data are available through an extensive geographic information system at *http://ocean.floridamarine.org/safmc_atlas/*.

NEAMAP

NEAMAP is a cooperative state-federal fishery-independent research and data collection program for coastal waters from Maine to North Carolina. Its mission is to carry out the collection and distribution of fishery-independent data obtained in the Northeast for use by state and federal fisheries management agencies, commercial and recreational fishermen, and researchers. Since 2007, the Mid-Atlantic Nearshore Trawl Survey has completed spring and fall surveys, sampling inshore waters from Cape Hatteras, North Carolina northward to Martha's Vineyard, Massachusetts. In addition, NEAMAP includes the Massachusetts Inshore Trawl Survey and the Maine-New Hampshire Inshore Trawl Survey. Survey data are used to complement data from NOAA Fisheries' NEFSC Trawl Survey, that samples in deeper, offshore waters of the Mid-Atlantic and New England.

Data collected by all three surveys include information on length, sex and maturity, age, and food habits for dozens of fish and crustacean species, as well as ocean bottom temperatures. Data are used in stock assessments and are vital to improving our ability to track annual changes in population sizes and demographics. For further information about NEAMAP and its partner surveys, please visit *www.neamap.net*.



Pleopod (swimmeret) from the tail of an American lobster examined to determine molting stage (top) and a cement gland from the pleopod (swimmeret) of a lobster tail examined to assist in determining maturity stage. (bottom) Photo © Aubrey Ellertson, Commercial Fisheries Research Foundation.

RESEARCH INITIATIVES

The Commission worked on several fisheries research initiatives in 2019 to address high priority issues for the Atlantic states and their fisheries stakeholders. Information gathered from the initiatives improved the scientific basis for Commission stock assessments and is fundamental to advising fisheries managers on the health of fish and crustacean populations.

AMERICAN LOBSTER

American lobster supports one of the most valuable commercial fisheries in North America. In 2018, 147.6 million pounds of lobster were landed coastwide, representing $630 million in ex-vessel value. Despite the economic and cultural importance of the lobster fishery, managers, research scientists, and industry members agree the datasets being used to assess lobster stocks lack sufficient spatial and temporal coverage, particularly in Southern New England. Complicating the issue is the potential impact on the resource resulting from changing environmental factors, such as rising water temperatures.

The maturity datasets used in the most recent lobster stock assessment are more than 20 years old, making it probable that changes have occurred since these data were collected. As a result, the Commercial Fisheries Research Foundation, in partnership with the Commission, the Massachusetts Division of Marine Fisheries, and the Maine Department of Marine Resources, conducted an American lobster maturity study in the summer of 2019 to provide updated maturity information for the Southern New England and Gulf of Maine/ Georges Bank stocks. The study provided high quality biological datasets, including detailed female lobster size at maturity information for two offshore areas. A comparison of this work to historical studies supports the notion that size at maturity decreased over time. Results will be used by the Commission's American Lobster Technical Committee to update key parameters in the stock assessment model related to female growth, egg production, and stock status determination.

Atlantic striped bass captured and tagged as part of the Striped Bass Hook and Line Tagging Survey. Photo © Kate Taylor.

ATLANTIC STRIPED BASS

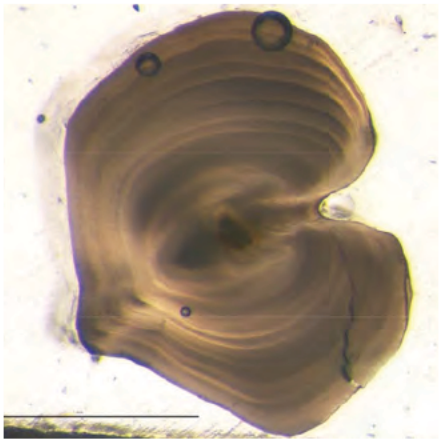
A long-term research question in the assessment and management of coastal striped bass is how to determine the rates of migration and residency for striped bass originating from major nursery areas in Chesapeake Bay, Delaware Bay, and the Hudson River. Atlantic striped bass are currently managed as a single coastwide stock because of the lack of data on age- and sex-specific migration from these primary nursery areas. An assessment model that captures the stock-specific population dynamics of the coastal population

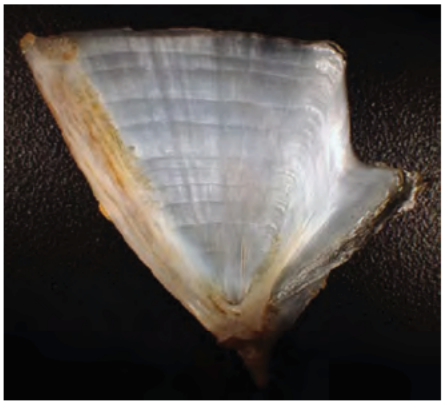
would provide better management advice and reduce the risk of over exploiting each stock.

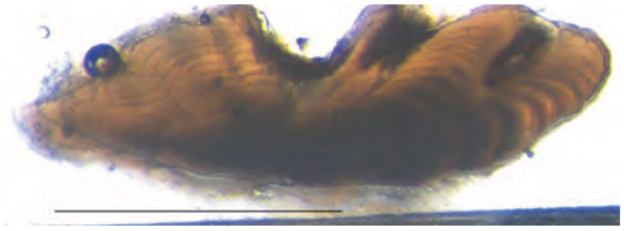
In 2019, the Commission supported striped bass hook and line tagging trips in partnership with the U.S. Fish and Wildlife Service (USFWS), Maryland Department of Natural Resources, Virginia Marine Resources Commission, and North Carolina Division of Marine Fisheries. The Commission and additional state partners from Massachusetts to North Carolina have conducted striped bass tagging programs for over 20 years. Recapture results are used in stock assessment models to evaluate the migratory patterns and relative contributions of major coastal estuaries to the coastal population.

FISH AGEING

Fish age and growth information are key components of stock assessments that improve our understanding of species' population dynamics. With age samples being collected, processed, and read by scientists at several institutions every year, it is important to ensure all ageing labs follow consistent protocols. In 2019, the Commission facilitated fish ageing consistency and data sharing among various Atlantic coast laboratories through the development of standardized ageing protocols, the exchange of ageing samples, and a tautog fish ageing workshop. The Commission also continued a black drum age sample collection program among the Mid-Atlantic states to obtain more age data on larger, older fish in order to develop an age-based stock assessment model. Workshop results and ageing protocols can be found on the Commission website at *www.asmfc.org/fisheries-science/research*.







Three ageing structures from one tautog collected and processed by S. Elzey (MA DMF): pelvic spine (top), opercle (middle), and sectioned otolith (bottom). Approximate age based on multiple readers was 10 years. Currently, agers along the coast are exchanging a collection of these three structures to determine which is the best for providing ages to the stock assessment. Photos (c) J. Carroll, FL FWC

CHANGING OCEAN CONDITIONS

Changing ocean conditions can have significant impacts on the behavior and geographic distribution of fishery resources. With warming waters, the availability of habitat for fish stocks may change and species may shift their range to find more suitable conditions. For stocks that are on the move, there is a need to reassess current management plans and fishery allocations. However, it is important to first fully evaluate the environmental drivers that control stock distributions before revising management strategies.

In anticipation of the impacts of changing ocean conditions on fish and crustacean stocks, a Commission Workgroup, comprised of fishery managers and scientists, prepared and adopted policies on how to adaptively manage stocks impacted by changing ocean conditions. Recommendations from the Workgroup included evaluations of shifts in distribution and productivity for new stock assessments. The Commission is also incorporating the latest science and analytical tools to evaluate the impacts of changing ocean conditions on fish habitat through its Habitat Program and the Atlantic Coastal Fish Habitat Partnership (ACFHP). The Commission will continue to participate in the development of new scientific tools and management issues related to changing ocean conditions and fisheries, including fish stock vulnerability tools developed by NOAA Fisheries (*www.st.nmfs.noaa.gov/ecosystems/climate/activities/assessing-vulnerability-of-fish-stocks*).

ECOSYSTEM MODELS AND ASSESSMENTS

Ecosystem interactions, such as predator-prey relationships, are important for understanding the population dynamics of fishery resources managed by the Commission. The ERP Workgroup, comprised of state, federal, and university scientists, is responsible for evaluating relationships among species using multispecies predator-prey models. In 2019, the Workgroup completed the development of an ecosystem model to provide ERPs for Atlantic menhaden. The ERP are based on the feeding needs of menhaden's primary predators (e.g., striped bass, weakfish, bluefish, spiny dogfish).

HABITAT PROTECTION, RESTORATION, AND ENHANCEMENT

The Commission recognizes protection, restoration, and enhancement of fish habitats are essential to promoting the sustainability of fisheries along the Atlantic coast. The Habitat Committee's charge is to identify, enhance, and cooperatively manage vital fish habitat for conservation, restoration, and protection, and to support cooperative management of fisheries activities.

The Habitat Committee released its annual issue of the *Habitat Hotline Atlantic*. The issue focused on aquaculture, featuring articles on how aquaculture impacts local fish habitats through nutrient extraction, species interactions, and facility design along the Atlantic coast and beyond. Individual state updates are focused on aquaculture activities.

In 2019, the Commission's Interstate Fisheries Management Program Policy Board approved the Habitat Committee's Habitat Management Series publication, Aquaculture Impacts to Fish Habitat along the Atlantic Coast. The publication will be available on the Commission website in early 2020. The Habitat Committee worked on two additional products: a Habitat Management Series document focusing on acoustic impacts to fish habitat, and a document designating Fish Habitats of Concern for Commission-managed species. Both documents are expected to be finalized in 2020.

ATLANTIC COASTAL FISH HABITAT PARTNERSHIP

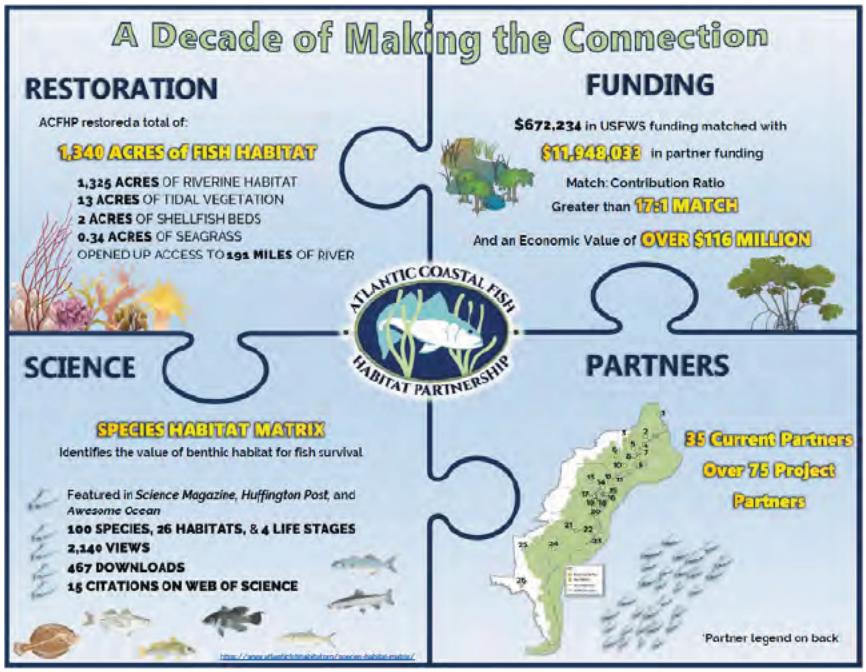
As an ACFHP partner, the Commission addresses habitat threats with a broad and coordinated approach, leveraging resources from many agencies, organizations, and corporations to make a difference for Atlantic fish habitat. ACFHP operates under the purview of the National Fish Habitat Partnership (NFHP).

On the Ground Projects

ACFHP partnered with USFWS to fund five new on-the-ground restoration projects in 2019. The Whitford Pond Dam & River Restoration Design project, will open 1.2 river miles for diadromous fish like shad and river herring, resulting in 26.4 acres of improved habitat. Restoration of Submerged Aquatic Vegetation (SAV) in the Freshwater and Mesohaline Region of the Chesapeake Bay will restore 10-20 acres of SAV through seed harvest and dispersal. The project will contribute to the Chesapeake Bay Program's goal of restoring

River herring in Town Brook stream in Plymouth, MA. Photo © Keith Ellenbogen.

185,000 acres of SAV in the Bay. The Outlet Dam and Box Mill Dam projects on Outlet Stream in Maine will provide access to 4,000 acres of nursery habitat for over 800,000 alewives through the construction of Denil fishways. There are currently six dams on Outlet Stream and they will all either be removed or have fish ladders constructed by 2021. Finally, the Wreck Pond Brook and Old Mill Pond Dam Fish Passage project in New Jersey will result in the construction of a 60' long Alaska steep pass fishway to open 0.9 miles of spawning habitat for a declining alewife population. For more information on all ACFHP-USFWS funded projects, please visit: *http://www.atlanticfishhabitat.org/on-the-ground-projects/.*



Infographic of ACFHP's 10-year accomplishments.

Science and Data Projects

ACFHP completed its research project with the University of Maryland Eastern Shore to improve our understanding of the relationship between habitat characteristics and black sea bass abundance in the Mid-Atlantic region. The work was funded by MAFMC through Beyond the Pond. To date, the project has resulted in presentations to MAFMC and the Commission, and one peer-reviewed publication. For more information go to *https://www.atlanticfishhabitat.org/wp-content/uploads/2019/12/ACFHP-Final-Report.pdf.*

ACFHP also continues to characterize fish habitat conservation areas through geographic information system (GIS) mapping and analysis for the entire U.S. Atlantic coast. The Southeast region from North Carolina to Florida has been analyzed through a collaboration with the Southeast Aquatic Resources Partnership with funding from the NOAA Fisheries Southeast Regional Office. The Northeast region from Maine through Virginia was completed at the end of 2019 through a partnership with The Nature Conservancy and funded by the NOAA Greater Atlantic Regional Office. Resulting maps will support ACFHP and partners with identifying where to invest future restoration efforts. To learn more about ACFHP's science and data initiatives, visit: *https://www.atlanticfishhabitat.org/science-and-data-projects/.*

Outreach and Communication Projects

ACFHP celebrated its 10-year anniversary as a Fish Habitat Partnership this year, and released a factsheet to share major accomplishments over the past decade. ACFHP also finalized a Business Plan that describes the Partnership's mission, objectives, and past accomplishments, as well as how we can work with donors to achieve their conservation goals. The Plan details our structure, governance, and financial management capacity, and encourages potential donors to partner with ACFHP to improve fish habitat conservation along the Atlantic coast. The Business Plan will support ACFHP's future fundraising initiatives.

ACFHP recently finalized a new Action Plan covering the 2020-2021 timeframe. It is a subset of the 2017-2021 Conservation Strategic Plan, and contains a set of objectives, strategies, and actions that can be accomplished over the course of a two-year period. The new Action Plan is available here: *https://www.atlanticfishhabitat.org/wp-content/uploads/2019/12/ACFHP-Action-Plan-2020-2021.pdf.*

Support ACFHP

There are many ways you can support ACFHP, including donating directly to our cause, indirectly via AmazonSmile, and by purchasing RepYourWaters outdoor apparel. To learn more, visit *http://www.atlanticfishhabitat.org/donate/.*

EFFECTIVE MANAGEMENT depends on quality fishery-dependent data (e.g., information collected from recreational and commercial fisheries, such as landings, effort, or discards) and fishery-independent data (e.g., information collected through monitoring programs and research surveys) to inform stock assessments and fisheries management decisions. However, just as fisheries management responsibilities are divided among agencies, so too are fisheries data collection efforts. Developed by different agencies with different data needs, these fisheries data collection programs are inconsistent in their temporal and spatial coverage, the data elements they collect, and in the codes used to enter and store the data.

Recognizing the need for consistency across Atlantic coast fishery-dependent data collection efforts, the 23 agencies responsible for fisheries management on the Atlantic coast established the Atlantic Coastal Cooperative Statistics Program (ACCSP). Using a committee-based approach, ACCSP works with its partners to increase data utility by:

- Developing and implementing coastwide data standards
- Providing electronic applications that improve partner data collection
- Integrating and sharing partner data via a coastwide repository
- Facilitating fisheries data access while protecting confidentiality
- Supporting further technological innovation

IMPROVING DATA COLLECTION AND INTEGRATION ACROSS JURISDICTIONS

COMMERCIAL FISHERIES - SAFIS

The Standard Atlantic Fisheries Information System (SAFIS) is a coastwide fisheries data collection system developed to meet the needs of scientists, managers, and industry. The suite of SAFIS applications features web- and mobile-based applications for dealers and commercial and for-hire harvesters. These data can be accessed by the Program Partners for use in quota monitoring and in-season management.

MODERNIZING SAFIS

ACCSP has been collaboratively working on a major redesign of SAFIS to create more dynamic and flexible software applications. The objective of this effort is to meet partner needs of better, more accurate data available in real-time, while reducing the overall reporting burden on fishermen and dealers.

In 2018, ACCSP invited partner representatives to provide input to the design. Staff used the input gathered from these workshops to develop a general systems specification document that outlined the proposed database design. In 2019, ACCSP focused on developing these new data structures and incorporating them into more adaptable software interfaces that are capable of adjusting reports to various partners, permits, species, gears, etc. In the future, the redesigned SAFIS will be able to integrate with vessel location and electronic monitoring systems, two areas of growing interest to fisheries managers.

ADAPTING SOFTWARE TO PARTNER NEEDS

The ACCSP software team continues to make modifications to existing software in response to partners' evolving needs. In 2019, these modifications included:

- Creation of the SAFIS management system switchboard that incorporates vertically designed management of fields so partners can customize data collection forms
- Reworking of the SAFIS eTRIPS location Application Programming Interface to accommodate new needs for partners piloting VMS/location data collection with or without a trip report

- Creation of a help desk application to allow SAFIS helpdesk staff to view data logs for all attempted trips submitted to SAFIS along with associated errors
- Completion of the MyFishCount Project, a SAFMC and elemental methods recreational application that feeds data into SAFIS

RECREATIONAL FISHERIES

ACCSP is also continuing to improve recreational fisheries data collection. The cooperative approach among ACCSP, the Atlantic states, and NOAA Fisheries' MRIP is helping move the entire coast to a consistent recreational data collection design with unified catch and effort estimates across state and federal jurisdictions.

APAIS IMPROVEMENTS

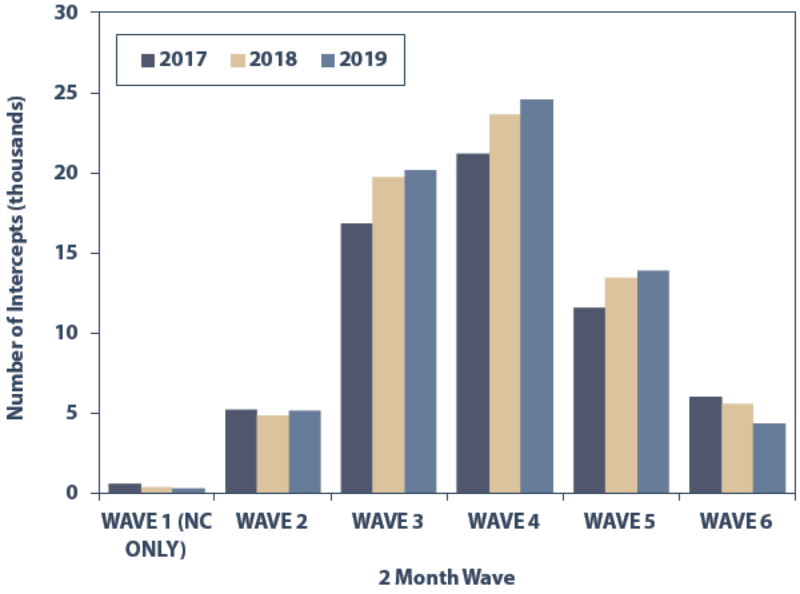
Since 2016, ACCSP has coordinated state conduct of the Access Point Angler Intercept Survey (APAIS), the dockside intercept component of MRIP, from Maine to Georgia. It has helped foster collaborative survey improvements to attain more angler intercepts, including better site selection/pressure estimation, building rapport with local fishermen, and modifications to the vessel directory.

The collaborative efforts are paying off, as total intercepts in 2019 increased by 25% since 2017 (as shown in the accompanying figure), including an increase of nearly 50% in the charter mode. These increases help provide catch information that is more representative of recreational fishing trips on the Atlantic coast.

Recreational angler being interviewed by APAIS staff. Photo © NC DMF.

ACCSP introduced a tablet-based version of the APAIS in 2019 to move the survey to electronic data collection. Identified as a priority item in the ACCSP Recreational Technical Committee's Atlantic Coast Recreational Implementation Plan, electronic data collection and transmission reduced ACCSP's processing time from weeks to days. The tablet application also features built-in logic that hinders introduction of errors during data entry minimizing data editing. This provides state partners with additional time to perform data checks before the data are submitted to NOAA Fisheries at the end of each month.

RECREATIONAL INTERCEPTS BY YEAR AND WAVE



EFFORT ESTIMATION

In 2018, MRIP completed its three-year transition to a new mail-based Fishing Effort Survey (FES) for private anglers. Effort information from the for-hire sector continues to be gathered via the For-Hire

Telephone Survey (FHTS). ACCSP's Recreational Technical Committee recommended moving to state conduct of the FHTS on the Atlantic coast to provide states with more direct contact with captains, allowing state staff to learn captains' preferences and tailor approaches accordingly.

ACCSP developed a Computer Assisted Telephone Interviewing system (CATI) to support state conduct of FHTS interviews. Responses from each call are recorded directly into the ACCSP database with reports to review calls completed each week. In 2019, the FHTS CATI was implemented by three Atlantic states that already conduct the FHTS: Georgia, North Carolina, and Maine, including the Large Pelagic Telephone Survey (LPTS) add-on. The Commission and NOAA Fisheries supported the transition to coastwide state conduct of FHTS in 2020.

STREAMLINING FOR-HIRE DATA COLLECTION

Over the past few years, there has been growing interest in the use of electronic logbooks to collect trip data from the for-hire sector. In 2018, MAFMC mandated electronic trip reporting for for-hire vessels with MAFMC species permits. A similar rule for the South Atlantic and Gulf of Mexico Fishery Management Councils is expected to begin in 2020. ACCSP was selected by NOAA Fisheries Greater Atlantic Regional Fisheries Office and the Southeast For-Hire Integrated Electronic Reporting system as the repository for the for-hire reports.

Currently, for-hire logbook data are only incorporated into MRIP effort estimations along with data collected from the FHTS, although stakeholders have expressed interest in using the logbook data to generate MRIP catch estimates as well. The Recreational Technical Committee is working on a plan to integrate for-hire data collection from three sources - APAIS, FHTS, and logbooks - for both state and federal vessels on the Atlantic coast. The Committee continues to refine the plan, aiming to submit a final version for peer review in 2020.

For-hire boats docked at the Whale Harbor Marina in Islamorada, FL. Photo (c) Kim Iverson, SAFMC.

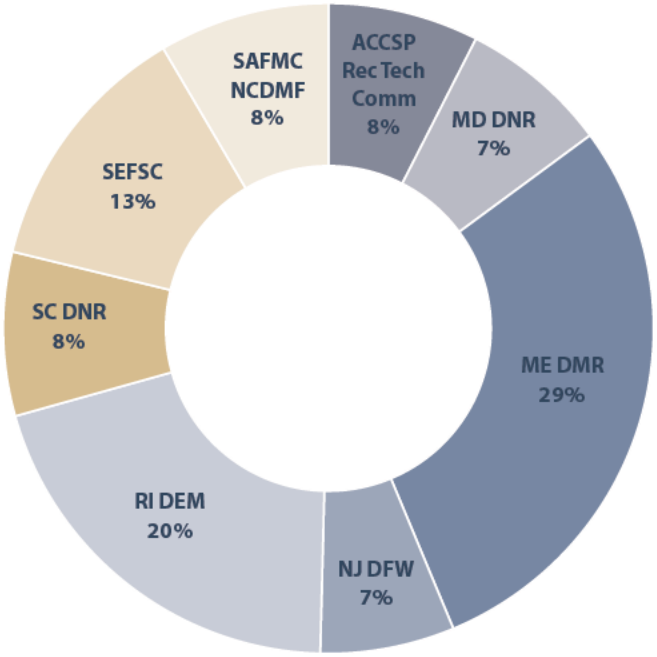
This year, the Data Team provided data to multiple projects on offshore windfarms, to the Coast Guard for a project related to marine debris, and to the World Bank/UN FAO Hidden Harvest Report.

FACILITATING DATA ACCESS AND USE

ACCSP increases the utility of partner data by:

- Integrating all of the commercial data received into one set of codes for variables such as species, gear, and fishing area, making it possible to combine datasets from different sources for larger scale analyses
- Sharing the most complete set of fishery-dependent data for the entire Atlantic coast data through the online ACCSP Data Warehouse that facilitates data access while also preserving confidentiality
- Presenting recreational data supplied by MRIP via the Data Warehouse.

ACCSP PARTNER FUNDING FY2019



ENHANCING THE DATA WAREHOUSE USER EXPERIENCE

ACCSP continues to make modifications to the Warehouse in order to enhance user experience. In 2019, staff worked with the Commercial Technical Committee and NOAA Fisheries to standardize an approach for displaying non-confidential data in the Warehouse's public reports. This approach allows ACCSP to show the most data possible while preserving confidentiality and clearly indicating where data have been redacted. Additionally, queries from the ACCSP Data Warehouse will exactly match those on the NOAA Fisheries Landings website.

CONTRIBUTION TO STOCK ASSESSMENTS AND PEER REVIEWS

ACCSP continues to compile Atlantic coast data for Fisheries of the United States and the online federal commercial data query system. The data are also used in many stock assessments and peer reviews. In 2019, ACCSP's data team participated in the following stock assessment, peer review, and data compilation processes:

- Atlantic Herring (FMP review)
- Black Sea Bass (Commercial landings for PDT)
- Atlantic Greater Amberjack (SEDAR 59)
- Atlantic Red Porgy (SEDAR 60)
- Bluefish (stock assessment update)
- Coastal Sharks (FMP Review)
- Cobia (Quota monitoring for new management measures) (SEDAR 58)
- Horseshoe Crab (FMP Review)
- King Mackerel (SEDAR 38 update)
- Spiny Dogfish (quota monitoring)
- Striped Bass (FMP review)
- Weakfish (discard information for Board)
- Winter Flounder (FMP review)

CUSTOM DATA REQUESTS

ACCSP's data team also fulfills custom data requests from a variety of stakeholders including NGOs, students, and international bodies. The number of requests continues to grow; the team completed over 100 custom data requests in 2019.

ENCOURAGING FURTHER INNOVATION

ACCSP issues a request for proposals annually to fund program partner projects based on their potential to achieve collaboratively derived Program goals. This encourages further innovation in fishery-dependent data collection and management. In FY2019, roughly $1.6 million was distributed to partners (see above figure). Details of each project can be found at *https://www.accsp.org/what-we-do/partner-project-funding.*

The Commission presented Thomas P. Fote, New Jersey's Governor Appointee to the Commission, the Captain David H. Hart Award, its highest annual award, at the Commission's 78th Annual Meeting in New Castle. Mr. Fote has admirably served the State of New Jersey and the Commission since 1991 when he replaced Captain David Hart as New Jersey's Governor Appointee to the Commission.

Mr. Fote's longstanding service to marine conservation and management is notable. His history is one of dedicated volunteerism on a continuous basis. After volunteering to serve in Vietnam, Mr. Fote was medically retired from the US Army as an Army Captain in 1970. Upon his return, Tom began to carve out a critical spot for himself in the world of marine conservation through diligent study, hard work, the willingness to ask penetrating questions, and engagement into a wide spectrum of conservation and fisheries management roles, all as a full time volunteer. In the process, he has become a knowledgeable and staunch fishery advocate, acting locally on behalf of his fellow New Jersey anglers, while also considering the needs of other states.

A strong proponent of habitat protection and enhancement, Mr. Fote recognizes the critical role healthy habitat plays in fisheries management. As the founding member and first chair of the Habitat Committee, Mr. Fote was instrumental in the development of the Commission's Habitat Program. Throughout his life, he's become increasingly active in environmental issues and has been a powerful voice in opposition to those who would degrade the marine environment. Having seen firsthand the devastation of "Agent Orange" in Vietnam, Mr. Fote found that this same Agent Orange had been made in New Jersey and dumped into Newark Bay. Mr. Fote worked with numerous conservation agencies to rid New Jersey's waters of a whole spectrum of contaminants.

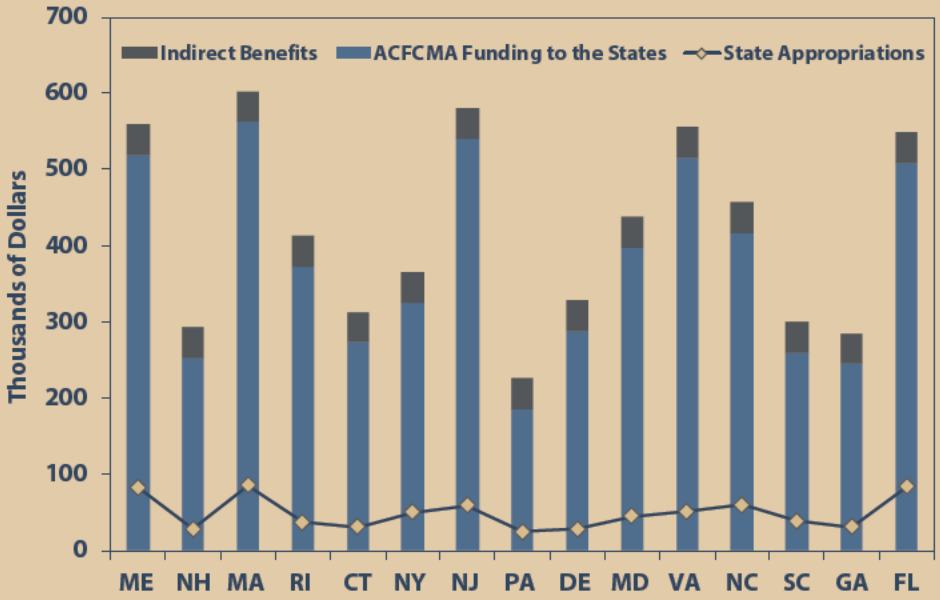
With his service to the Commission dating back to 1991, Mr. Fote's has become the onsite "functional historian" for the Commission. His long range perspective puts difficult decisions into context and brings clarity to confusing dilemmas. Understanding how important it is to bring new members up to speed so they can quickly and constructively engage in the Commission process, Mr. Fote goes out of his way to help new Commissioners understand the complexities of the organization and how to work through the sometimes confusing maze of options.

Mr. Fote firmly believes in the inherent strength of partnerships and collaboration. He frequently communicates with others to develop a compromise and/or coalition for the common good. His extensive knowledge, reputation, and impassioned viewpoint are key catalysts in bringing divergent groups together for a common cause. This is exemplified through his work as a volunteer with numerous organizations including the New Jersey Environmental Federation and the New Jersey Coast Anglers Association. Throughout his life, Mr. Fote has demonstrated that a conservation ethic and spirit of volunteerism can be lifelong passions. Atlantic coast fisheries management is better because of his involvement.

The Commission instituted the Hart Award in 1991 to recognize individuals who have made outstanding efforts to improve Atlantic coast marine fisheries. The Hart Award is named for one of the Commission's longest serving members, who dedicated himself to the advancement and protection of marine fishery resources, Captain David H. Hart, from the State of New Jersey.

2020 RETURN ON STATE INVESTMENTS TO THE COMMISSION

Source: FY20 ASMFC Appropriations and FY19 ACFCMA & IFA Allocations



* Indirect Benefits include travel and per diem for 6 people from each state to participate in Commission meetings. Please note that this figure does not include the collective benefits derived from the work of the FMP Coordinators and Science Staff.

The Commission's FY2020 budget was $16.6 million. The base funding ($733,444) is provided by the member states' annual appropriations, which are determined by the value of commercial fishing landings and saltwater recreational trips within each state. The bulk of the Commission's funding is received through federal cooperative agreements funded by line-item appropriations in the NOAA budget to implement the Atlantic Coastal Fisheries Cooperative Management Act (Atlantic Coastal Act) and ACCSP, as well as provide oversight and management for state conduct of APAIS, the survey component of MRIP.

The Commission also receives funds from NOAA Fisheries to carry out the provisions of the Interjurisdictional Fisheries Act (IFA) (P.L. 99-659). The accompanying graph illustrates the benefits states receive from the Atlantic Coastal Act and IFA, the majority of our budget goes directly to support the fisheries management, monitoring and science activities of the states.

USFWS also provides funding to the Commission through its Federal Aid in Sport Fish Restoration Program (Wallop/Breaux).

The following two pages provide a financial snapshot of the Commission's assets and expenses for the years ended June 30, 2019 and 2018.

ATLANTIC STATES MARINE FISHERIES COMMISSION
CONDENSED STATEMENT OF FINANCIAL POSITION INFORMATION
FOR THE YEARS ENDED JUNE 30, 2019 AND 2018

ASSETS

	2019	2018
CURRENT ASSETS:		
Cash and cash equivalents	$ 208,992	$ 512,317
Grants and accounts receivable	2,509,718	2,639,344
Prepaid expenses	83,052	83,265
Total Current Assets	2,801,762	3,234,926
Investments	853,922	842,812
Property and Equipment, Net	3,293,088	3,424,638
TOTAL ASSETS	$ 6,948,772	$ 7,502,376

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES:		
Accounts payable and accrued expenses	$ 1,585,020	$ 1,483,956
Deferred revenue and contract advances	235,147	302,626
Current maturities of long term debt	180,000	180,000
Total Current Liabilities	2,000,167	1,966,582
OTHER LIABILITIES:		
Long term debt	71,152	250,912
Obligation under interest rate swap	1,283	1,696
Total Other Liabilities	72,435	252,608
TOTAL LIABILITIES	2,072,602	2,219,190
NET ASSETS WITHOUT DONOR RESTRICTIONS	4,876,170	5,283,186
TOTAL LIABILITIES AND NET ASSETS	$ 6,948,772	$ 7,502,376

ATLANTIC STATES MARINE FISHERIES COMMISSION
CONDENSED STATEMENT OF ACTIVITIES INFORMATION
FOR THE YEARS ENDED JUNE 30, 2019 AND 2018

	2019	2018
REVENUE:		
Contract reimbursements	$ 13,709,042	$ 14,140,269
Contributions from member states	733,446	698,519
Other	28,961	27,521
Total Revenue	14,471,449	14,866,309
EXPENSES:		
Salaries and fringe benefits	6,113,359	5,993,209
Subcontracts	6,728,520	5,502,547
Travel	1,064,201	1,368,771
Other	972,798	1,453,257
Total Expenses	14,878,878	14,317,784
OTHER INCOME (EXPENSES):		
Interest rate swap obligation adjustment	413	8,448
Gain (loss) on disposal of property	-	-
Total Other Income (Expenses)	413	8,448
CHANGE IN NET ASSETS	(407,016)	556,973
NET ASSETS, BEGINNING OF YEAR	5,283,186	4,726,213
NET ASSETS, END OF YEAR	$ 4,876,170	$ 5,283,186

MAINE
Patrick C. Keliher, Vice-Chair
Sen. David Miramant
Stephen R. Train

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Douglas E. Grout
Sen. David H. Watters
G. Ritchie White

MASSACHUSETTS
David Pierce, Ph.D.
Rep. Sarah K. Peake
Raymond W. Kane

RHODE ISLAND
Jason McNamee, Ph.D.
Sen. Susan Sosnowski
David V.D. Borden

CONNECTICUT
Justin Davis, Ph.D.
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William Hyatt

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Asm. Sgt. Robert Andrzejczak
Thomas P. Fote

PENNSYLVANIA
Timothy D. Schaeffer, Ph.D.
Loren W. Lustig

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MARYLAND
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Del. Dana Stein
H. Russel Dize

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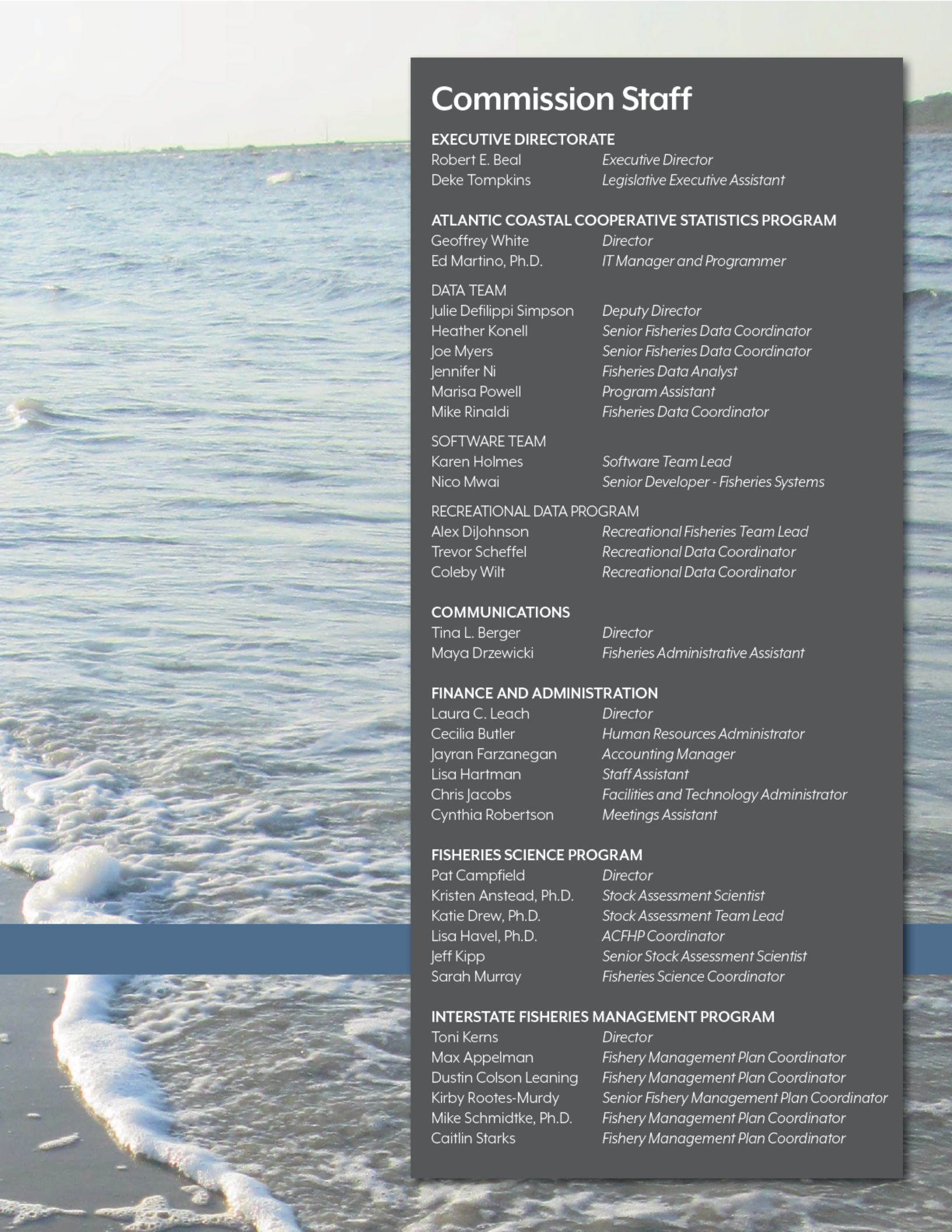
Sen. Ronnie W. Cromer
Dr. Malcolm Rhodes

GEORGIA
Doug Haymans
Rep. Chad Nimmer
A.G. "Spud" Woodward

FLORIDA
Jessica McCawley
Rep. Thad Altman
William R. Orndorf

COMMISSIONERS AS OF THE 2019 ANNUAL MEETING



Commission Staff

EXECUTIVE DIRECTORATE

Robert E. Beal	*Executive Director*
Deke Tompkins	*Legislative Executive Assistant*

ATLANTIC COASTAL COOPERATIVE STATISTICS PROGRAM

Geoffrey White	*Director*
Ed Martino, Ph.D.	*IT Manager and Programmer*

DATA TEAM

Julie Defilippi Simpson	*Deputy Director*
Heather Konell	*Senior Fisheries Data Coordinator*
Joe Myers	*Senior Fisheries Data Coordinator*
Jennifer Ni	*Fisheries Data Analyst*
Marisa Powell	*Program Assistant*
Mike Rinaldi	*Fisheries Data Coordinator*

SOFTWARE TEAM

Karen Holmes	*Software Team Lead*
Nico Mwai	*Senior Developer - Fisheries Systems*

RECREATIONAL DATA PROGRAM

Alex DiJohnson	*Recreational Fisheries Team Lead*
Trevor Scheffel	*Recreational Data Coordinator*
Coleby Wilt	*Recreational Data Coordinator*

COMMUNICATIONS

Tina L. Berger	*Director*
Maya Drzewicki	*Fisheries Administrative Assistant*

FINANCE AND ADMINISTRATION

Laura C. Leach	*Director*
Cecilia Butler	*Human Resources Administrator*
Jayran Farzanegan	*Accounting Manager*
Lisa Hartman	*Staff Assistant*
Chris Jacobs	*Facilities and Technology Administrator*
Cynthia Robertson	*Meetings Assistant*

FISHERIES SCIENCE PROGRAM

Pat Campfield	*Director*
Kristen Anstead, Ph.D.	*Stock Assessment Scientist*
Katie Drew, Ph.D.	*Stock Assessment Team Lead*
Lisa Havel, Ph.D.	*ACFHP Coordinator*
Jeff Kipp	*Senior Stock Assessment Scientist*
Sarah Murray	*Fisheries Science Coordinator*

INTERSTATE FISHERIES MANAGEMENT PROGRAM

Toni Kerns	*Director*
Max Appelman	*Fishery Management Plan Coordinator*
Dustin Colson Leaning	*Fishery Management Plan Coordinator*
Kirby Rootes-Murdy	*Senior Fishery Management Plan Coordinator*
Mike Schmidtke, Ph.D.	*Fishery Management Plan Coordinator*
Caitlin Starks	*Fishery Management Plan Coordinator*

1050 North Highland Street
Suite 200 A-N
Arlington, Virginia 22201

703.842.0740

www.asmfc.org