

ASMFC

FISHERIES FOCUS

Vision: Sustainable and Cooperative Management of Atlantic Coastal Fisheries

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Douglas Grout and Jason McNamee Named Captain David H. Hart Award Recipients for 2020 & 2022

At its 80th Annual Meeting in Long Branch, New Jersey, the Atlantic States Marine Fisheries Commission presented Douglas Grout, New Hampshire's Governor Appointee, and Dr. Jason McNamee, Rhode Island

Administrative Commissioner, the Captain David H. Hart Award for 2020 and 2022, respectively. 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.

"Having just returned to in-person meetings this May, we have a lot of catching up to do when it comes to acknowledging the achievements of those who have contributed to the success of the Commission and fisheries management along the Atlantic coast," stated ASMFC Awards Committee Chair Jim Gilmore from New York. "This week we have the privilege of honoring two outstanding recipients for the Captain David H. Hart Award – Douglas Grout as the 2020 recipient and Dr. Jason McNamee as the 2022 recipient. I cannot think of a better way for us to celebrate our first Annual Meeting together since 2019 by honoring these two worthy individuals."



Douglas Grout, New Hampshire Governor Appointee to the Commission

For nearly four decades, Douglas Grout has worked across all levels of government in the fields of marine fisheries science, management, and policy. A longstanding Commission participant, Doug has played a role in nearly all aspects of the Commission's science and management programs – from his early work as a member of the Management and Science Committee and numerous technical and stock assessment committees, to his involvement and leadership on several species management boards including northern shrimp, striped bass, and American lobster. As Commission Chair from 2015-2017, Doug oversaw the development of the Commission's Stock Assessment and Peer Review Process, leading the way for external peer reviews of benchmark stock assessments for Atlantic sturgeon, American shad, horseshoe crab, and many more since.

he Atlantic States Marine Fisheries Commission was formed by the 15 Atlantic coastal states in 1942 for the promotion and protection of coastal fishery resources. The Commission serves as the deliberative body of the Atlantic coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell and diadromous species. The fifteen member states of the Commission are: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and Florida.

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Upcoming Meetings

December 12 (1 - 3)

Atlantic Menhaden Ageing Webinar; visit http://www.asmfc.org/calendar/12/2022/Atlantic-Menhaden-Ageing-Webinar/2043 for more information

December 12 - 15

Mid-Atlantic Fishery Management Council, The Westin Annapolis 100 Westgate Circle Annapolis, MD; visit https://www.mafmc.org/council-events/2022/december-2022-council-meeting for more information

January 24 - 26

New England Fishery Management Council, The Venue at Portwalk Place, Portsmouth, NH; visit https://www.nefmc.org/calendar/january-2023-council-meeting for more information

January 31 - February 2

ASMFC Winter Meeting, The Westin Crystal City, 1800 Richmond Highway, Arlington, VA

February 7 - 9

Mid-Atlantic Fishery Management Council, Hotel Washington, 515 15th Street NW, Washington, DC; visit https://www.mafmc.org/council-events/2023/february-council-meeting for more information

February 15 - 16

East Coast Climate Change Scenario Planning Summit, location to be determined

March 6 - 8

South Atlantic Fishery Management Council, Westin Jekyll Island, 110 Ocean Way, Jekyll Island GA; visit https://safmc.net/council-meetings/ for more information

April 4 - 6

Mid-Atlantic Fishery Management Council, Hyatt Place Durham Southpoint, 7840 NC-751 Highway, Durham, NC; visit https://www.mafmc.org/council-events/2023/april-council-meeting

April 18 - 20

New England Fishery Management Council, Hilton Hotel, Mystic, CT; visit https://www.nefmc.org/calendar/april-2023-council-meeting for more information

May 1 - 4

ASMFC Spring Meeting, The Westin Crystal City, 1800 Richmond Highway, Arlington, VA

June 6 - 8

Mid-Atlantic Fishery Management Council, Hilton Virginia Beach Oceanfront, 3001 Atlantic Avenue, Virginia Beach, VA; visit https://www.mafmc.org/council-events/2023/june-council-meeting for more information

June 12 - 16

South Atlantic Fishery Management Council, World Golf Village Renaissance, 500 South Legacy Trail, St. Augustine, FL; visit https://safmc.net/council-meetings/ for more information

June 27 - 29

New England Fishery Management Council, Hilton Garden Inn, Freeport, ME; visit https://www.nefmc.org/calendar/june-2023-council-meeting for more information

From the Executive Director's Desk

ASMFC 80th Annual Meeting in Review

In November, Commissioners, proxies, federal partners, and stakeholders gathered at our 80th Annual Meeting in Long Branch, New Jersey, for the first time since the beginning of the pandemic. The meeting gave us the opportunity to make important decisions regarding the management of several key species, as well as celebrate the accomplishments of a great many individuals.

Atlantic Striped Bass

The Atlantic Striped Bass Management Board received the results of the 2022 Stock Assessment Update, which finds that management measures put in place through Addendum VI and Amendment 7 are beginning to take effect with the stock no longer experiencing overfishing. While the species is still overfished, spawning stock biomass (SSB) is slowly increasing due to a number of above average year-classes that continue to grow, mature, and contribute to SSB. The update also included short-term projections to determine the probability of SSB being at or above the SSB target by 2029, which is the stock rebuilding deadline. Under the current fishing mortality rate, there is a 78.6% chance the stock will be rebuilt by 2029. Given this, the Board decided a reduction in catch was not necessary at this time.

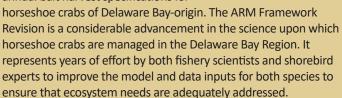
Atlantic Menhaden

Given the positive results of 2022 Atlantic Menhaden Stock Assessment Update, which found the resource is not overfished nor experiencing overfishing relative to the current ecological reference points (ERPs), the Atlantic Menhaden Management Board set the 2023-2025 total allowable catch (TAC) at 233,550 mt, an approximate 20% increase from the 2021-2022 TAC. This modest increase in TAC provides the states with additional fishing opportunities, while maintaining a conservative risk level within the bounds of the ERPs. Additionally, the Board approved Addendum I to Amendment 3 to the Interstate Fishery Management Plan. The Addendum makes a number of changes to the management program to balance historical landings with an increased demand for bait given the recent expansion of the species into the Northeast.

Horseshoe Crab

The Horseshoe Crab Management Board met to set harvest specifications for horseshoe crabs of Delaware Bay-origin. Maintaining its conservative management program, the Board set a harvest limit of 475,000 male and zero female Delaware Bay horseshoe crabs for the 2023 season. In making its decision, the Board considered the recommendations of the recently revised Adaptive Resource Management (ARM) Framework and the extensive public comment it received regarding concern about the status of the red knot population in the region and the harvest of female horseshoe crabs. The Board also unanimously approved Addendum VIII, which adopts the changes to the ARM

Framework as recommended in the peer-reviewed 2021 ARM Framework Revision, and allows its use in setting annual bait harvest specifications for



Honoring Accomplishments

In addition to these positive assessment and management outcomes, we also were able to recognize the efforts and accomplishments of a great many people who help to improve the lives of fishing communities and contribute to our larger effort of sustainably managing the resources under our care. Over the past two years, CARES Act administrators in each state's marine fishery agencies distributed over \$200 million to thousands of people in the aquaculture, for-hire, and commercial fishing industries that suffered from the loss of opportunities and income during the pandemic. At the Annual Meeting, we were able to recognize all those involved in this effort that was made possible by funding provided by Congress and administrative assistance from NOAA Fisheries and the Commission's Finance Department.

Were also able to recognize the outstanding contributions of two of our Commissioners – Douglas Grout of New Hampshire and Dr. Jason McNamee of Rhode Island – to the conservation and management of Atlantic coast fisheries resources by presenting them the Captain David H. Hart Awards for 2020 and 2022, respectively. Their collective efforts represent decades of work to improve not only our management actions and policies but the science upon which we base our actions. It was a wonderful way for us to celebrate our first Annual Meeting together since 2019 by honoring these two worthy individuals.

Staff Transition

Over the past several months, the Commission has experienced a number of staff transitions as people have moved on to advance their careers and pursue new opportunities. We are grateful for all their hard work to better our management, science, and data collection efforts and wish them the very best in their new endeavors. While we are sad about their departures, we are excited about the new people who have come (and will come) to fill their positions, bringing new perspectives and energy to the Commission.

Lastly, I wish you all a very happy and healthy holiday season. Best wishes and thanks for the fishes.

Species Profile: Atlantic Menhaden

Using Ecosystem-Based Management to Maintain Stock Health and the Forage Needs of Key Predators

Introduction

Atlantic menhaden (*Brevoortia tyrannus*) are small, oily, schooling fish of historical, economic, and ecological importance. Historically, menhaden supported large-scale commercial reduction fisheries, bringing considerable growth to Atlantic coastal communities. The reduction fishery is so named because menhaden are processed (or reduced) into other products, such as agricultural fertilizer, fishmeal and fish oil, as well as livestock and aquaculture feeds. Today, the fishery is a fraction of what it once was, with one processing plant and several vessels operating on the Atlantic coast. Additionally, menhaden are becoming increasingly valuable for use as bait in many important fisheries, including American lobster, blue crab, and striped bass.

Ecologically, the species plays an important role in marine ecosystems as a forage fish (prey) for many fish, sea birds, and marine mammals. Since 2020, the Commission has been managing menhaden with the use of ecological reference points that take into account the forage needs of its key fish predators. Under this management program and based on the 2022 stock assessment update, the stock continues to be successfully managed with the species not overfished nor experiencing overfishing.

Life History

Atlantic menhaden occupy estuaries and coastal waters from northern Florida to Nova Scotia and are believed to consist of a single population. Adult and juvenile menhaden form large schools near the surface, primarily in estuaries and nearshore ocean waters from early spring through early winter. By summer, menhaden schools stratify by size and age along the coast, with older and larger menhaden migrating farther north. During fall-early winter, menhaden of all sizes and ages migrate south, with major spawning areas from New Jersey to the Carolinas. The majority of spawning occurs primarily offshore (20-30 miles). Buoyant eggs hatch at sea, and larvae are carried into estuarine nursery areas by ocean currents along the coast. Juveniles spend most of their first year in estuaries, migrating to the ocean in late fall.

Menhaden are very efficient filter feeders. Water is pushed through specialized gill rakers that are formed into a basket to allow them to capture plankton. Menhaden are an important component of the food chain, providing a link between primary producers and higher organisms by consuming plankton and providing forage for species such as striped bass, bluefish, and weakfish, to name just a few.

Species Snapshot



Atlantic Menhaden Brevoortia tyrannus

Species Range: Atlantic coast of North America from Nova Scotia to northern Florida

Management Unit: Maine through Florida

Common Names: menhaden, bunker, mossbunker, pogy, fatback, bugmouth, skipjack

Family: Clupeidae (includes herring, sardine, and shad species)

Interesting Facts:

- The modern record for the largest menhaden landed occurred in Reedville, VA, in 1996, measuring in at 19.4" and weighing 3.4 lbs.
- Pre-colonial Native Americans called menhaden 'munnawhatteaug,' which means fertilizer.
- In the 1850s, a scarcity of whale oil led to the production of menhaden oil for use as industrial lubricants and liquid fuel.
- A large crustacean parasite is commonly found in the mouth of Atlantic menhaden; hence its common name "bugmouth".
- Adults can filter 6-7 gallons of water/minute.

Stock Status

Not overfished and not experiencing overfishing

Commercial Reduction & Bait Fisheries

The Atlantic menhaden commercial fishery consists of a reduction fishery and a bait fishery. The reduction fishery grew with the advent of purse seine gear in the mid-1800s. Purse seine landings peaked in 1956 at 715,200 mt. At the time, over 20 menhaden reduction factories were in operation from southern Maine to northern Florida. In the 1960s, the stock contracted geographically, and many of the fish factories north of Chesapeake Bay closed because of a scarcity of fish. Reduction landings dropped to a low of 162,300 mt in 1969.

In the 1970s and 1980s, the menhaden population began to expand (primarily because of a series of large year classes entering the fishery), and reduction landings rose to around 300,000-400,000 mt. Adult menhaden were again abundant in the northern portion of its range and as a result reduction factories in New England and Canada began processing menhaden again. However, by 1989 all shore-side reduction plants in New England had closed, mainly because of odor abatement regulations.

During the 1990s, the stock contracted again, mostly due to a series of poor year classes. Over the next decade, several reduction plants consolidated or closed, resulting in a significant decrease in fleet size and fishing capacity. Since 2005, there has been one operational reduction factory processing Atlantic menhaden on the Atlantic coast. From 2010-2012, reduction landings averaged 172,600 mt. The first

coastwide total allowable catch (TAC) for Atlantic menhaden commercial landings was implemented in 2013. Reduction landings have been steady since the implementation of the TAC. For 2021, reduction landings were approximately 136,700 mt and comprised about 70% of the coastwide landings. Numerous portside samples are taken to obtain information about the weight, length, and age distribution of the fished population.

While reduction landings have declined since the mid-2000s, Atlantic menhaden bait landings have increased due to higher demand and increased availability in the northern part of the species' range. Commercial bait landings occur in almost every Atlantic coast state. A majority of bait landings are used commercially in crab, lobster, and hook-and-line fisheries. Recreational anglers also catch Atlantic menhaden as bait for various game fish. In 2021, bait and recreational landings, which are grouped together in the model, were approximately 61,000 mt and comprised 30% of coastwide landings. Recreational landings (menhaden caught by recreational anglers and used as bait on a single trip) typically only comprise 1% of the coastwide landings annually.

Stock Assessments & Status

A stock assessment update was completed in 2022 and determined that Atlantic menhaden are not overfished nor experiencing overfishing. Since 2020, the stock status of Atlantic menhaden is determined using ecological reference points (ERPs). The reference points for menhaden evaluate the health of the stock in an ecosystem context and account for its role as a forage fish.

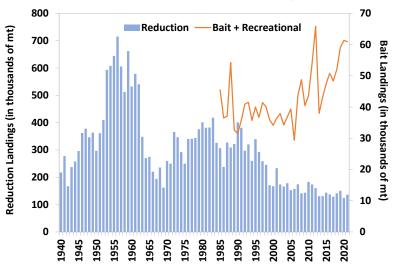
ERPs were developed as part of the Atlantic Menhaden Single-Species and ERP Assessments and Peer Review Reports in 2020. The single-species assessment acts as a traditional stock assessment using the Beaufort Assessment Model (BAM) to estimate population characteristics such as biomass, fishing mortality (F), recruitment, and fecundity. The ERP assessment used the Northwest Atlantic Coastal Shelf Model of Intermediate Complexity for Ecosystems (NWACS-MICE) to develop Atlantic menhaden ERPs. NWACS-MICE is an ecosystem model that focuses on four key predator species (striped bass, bluefish, weakfish, and spiny dogfish) and three key prey species (Atlantic menhaden, Atlantic herring, and bay anchovy). These species were chosen because diet data indicate they are top predators of Atlantic menhaden or are key alternate prey species for those predators. This tool allows managers to evaluate the trade-offs between Atlantic menhaden harvest and predator abundance to set reference points that take into account menhaden's role as a forage fish. A more detailed overview of the stock assessments is available here.

The following ERPs are used in the management of Atlantic menhaden:

ERP target: the maximum fishing mortality rate (*F*) on Atlantic menhaden that sustains Atlantic striped bass at their biomass target when striped bass are fished at their *F* target.

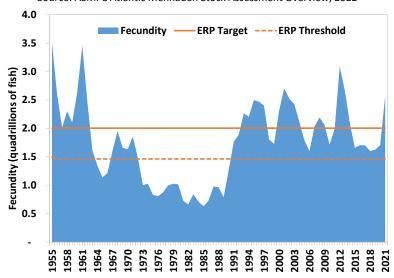
Atlantic Menhaden Bait and Reduction Landings





Atlantic Menhaden Fecundity

Source: ASMFC Atlantic Menhaden Stock Assessment Overview, 2022



ERP threshold: the maximum *F* on Atlantic menhaden that keeps Atlantic striped bass at their biomass threshold when striped bass are fished at their *F* target.

ERP fecundity target and threshold: the long-term equilibrium fecundity that results when the population is fished at the ERP *F* target and threshold, respectively.

Atlantic striped bass was the focal species for the ERP definitions because it was the most sensitive predator fish species to Atlantic menhaden harvest in the model, so an ERP target and threshold that sustained striped bass would likely provide sufficient forage for other predators under current ecosystem conditions. For

the development of the ERPs, all other focal species in the model (bluefish, weakfish, spiny dogfish, and Atlantic herring) were assumed to be fished at 2017 levels.

For more information about our efforts to develop and implement ERPs for Atlantic menhaden, check out our story map.

During the 2022 stock assessment update, the single-species assessment was re-run but not the ERP assessment. The ERPs, as developed by the NWACS-MICE model, reflect long-term equilibrium conditions and are not suitable for tracking short-term inter-annual variability in species abundance and fishing mortality, so updating them

frequently will not provide improved management advice. The output of the single-species assessment was compared to the ERPs for the update to determine stock status. In 2021, population fecundity (*FEC*), a measure of reproductive capacity of the population, was above the ERP threshold and target, and *F* was below the ERP overfishing threshold and target. Therefore, overfishing is not occurring and the stock is not overfished. A more detailed overview of the stock assessment update can be found here.

The next single-species and ERP benchmark stock assessments and peer review are scheduled for 2025, which will inform the setting of TACs for 2026 and beyond.

Atlantic Coastal Management

Atlantic menhaden are currently managed under Amendment 3 to the FMP and Addendum I. Adopted in 2017, Amendment 3 established commercial quota allocations to strike a balance between gear types and jurisdictions, and to facilitate future growth in the fisheries. The Amendment allocated a baseline quota to each jurisdiction, and then allocated the rest of the annual TAC based on average landings from a specified certain timeframe. The Amendment prohibited the rollover of unused quota, maintained the 6,000 pounds trip limit for applicable gear types following the closure of a directed fishery, and set aside 1% of the TAC for episodic events in the states of Maine through New York. In recognition of the importance of the Chesapeake Bay as nursery grounds for many species, the Amendment also reduced the Chesapeake Bay cap, which was first implemented in 2006 to limit the amount of reduction harvest within the Bay, to 51,000 mt.

Addendum I, approved in November 2022, changes the allocations for the commercial fishery, originally established under Amendment

Atlantic Menhaden Base Allocations by State for 2023 (in pounds)
Base annual pounds after set aside but before relinquishments/overages

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State	Final Annual Percentage	Base Annual Pounds	
ME	4.80%	24,464,561	
NH	1.19%	6,045,231	
MA	2.12%	10,821,631	
RI	0.81%	4,144,550	
СТ	0.33%	1,692,598	
NY	0.84%	4,294,572	
NJ	11.00%	56,061,175	
PA	0.01%	50,974	
DE	0.27%	1,375,998	
MD	1.17%	5,940,886	
PRFC	1.09%	5,541,196	
VA	75.21%	383,377,514	
NC	0.37%	1,890,858	
SC	0.25%	1,274,601	
GA	0.25%	1,274,352	
FL	0.29%	1,490,014	
Total	100.00%	509,740,712	

Total allowable catch (TAC) = 233,550 MT or 514,889,608 pounds TAC after Set Aside = 509,740,712 pounds

3. The Addendum creates a three-tiered system for minimum allocations to the states, with Pennsylvania receiving 0.01%; South Carolina, Georgia, Connecticut, Delaware, North Carolina, and Florida receiving 0.25%; and the remaining states continuing to receive a minimum of 0.5% (see accompanying table). Furthermore, the Addendum allocates the remainder of the TAC, excluding the 1% reserved for the episodic event set aside (EESA) program, on a state-by-state basis based on landings history of the fishery from 2018, 2019, and 2021.

The revised incidental catch/ small-scale fishery (IC/SSF) provision in Addendum I formalizes the ability of states to

divide their quotas into sectors, enabling individual sectors to enter into the provision at different times. Additionally, the Addendum removes purse seines as a permitted small-scale directed gear, thereby prohibiting them from harvesting under the IC/SSF provision. Finally, the Addendum counts IC/SSF landings against the TAC and if IC/SSF landings cause the TAC to be exceeded, then the Board must take action to modify one or both of permitted gear types and trip limits under the provision.

Total Allowable Catch

The Atlantic menhaden commercial fishery has been managed via a TAC and quota system since the implementation of Amendment 2 in 2013. The first TAC was set at 170,800 mt (representing a 20% reduction from average landings between 2009-2011) for 2013-2014. Since then, the TAC has fluctuated between 187,866 mt (2015-2016) and 216,000 mt (2018-2019).

Based on the positive results of the 2022 update and guided by the menhaden-specific ERPs, the TAC for the 2023-2025 fishing seasons was set at 233,550 mt, an approximate 20% increase from the 2021-2022 TAC level of 194,400 mt. Under the new TAC level, the probability of exceeding the ERP target is 2% in 2023, 22% in 2024, and 28.5% in 2025. It has a zero percent chance of being above the ERP threshold in those years. This increase provides additional fishing opportunities, while maintaining a conservative risk level of exceeding the ERP target.

For more information, please contact James Boyle, Fishery Management Plan Coordinator, at jboyle@asmfc.org.

HART AWARD RECIPIENTS, continued from page 1

Through his extensive involvement with the New England Fishery Management Council, Doug led the Council in the development of an amendment to improve catch monitoring and bycatch caps for shad and river herring. He also served in a leadership role on the Council's Habitat Committee as it developed new protection measures, including those contained in the Omnibus Deep Sea Coral amendment.

Back in his home state, Doug devoted 36 years working for the New Hampshire Fish and Game Department, starting as a fish culturist and ultimately serving as Chief of Marine Fisheries from 2008-2020. During his time as Chief, he oversaw programs that included marine and anadromous resource management, monitoring, and education. He was also actively involved with the Great Bay National Estuarine Research Reserve and the Piscataqua Region Estuaries Partnership, with the goal of protecting and

enhancing these nationally significant estuarine resources.

Doug's full body of work clearly highlights his commitment to fisheries science, management, and environmental policy. Throughout it all, he has maintained a steadfast manner, collaborative nature, and relentless work ethic which make him a treasured colleague and a cherished member of the fisheries science and management community.

Dr. Jason McNamee, Deputy Director of the Marine Fisheries Division for the Rhode Island Department of Environmental Management

Dr. Jason McNamee is being recognized for his longstanding technical contributions, exceptional leadership, and commitment to sound fisheries management along the Eastern Seaboard. Since joining the RI DEM over two decades ago, Jason has advanced the quality of stock assessments and promoted the use of sound fisheries science in the management decision-making process. Jason



has served in several positions within his agency and the Commission, and has been a contributing member, often in leadership positions, on numerous Commission species technical committees, stock assessment subcommittees, science advisory committees, and, more recently, species management boards.

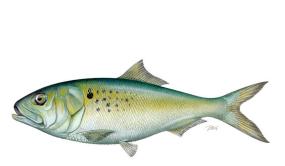
Jason played a key role in a number of benchmark stock assessments, including those for Atlantic menhaden, summer flounder, tautog, and black sea bass.

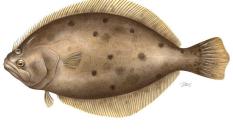
Notably, he led the Tautog Stock Assessment Subcommittee in developing an assessment that incorporated regional structure to address management board concerns. Further, he helped develop and implement a novel model approach to provide a method to assess this data-poor stock and further corroborate assessment results. As Atlantic Menhaden Technical Committee Chair, Jason took a leadership role in the development

of modeling approaches and ecosystem-based reference points. He also played a lead role in the development of management strategy evaluation, now being used by the Mid-Atlantic Fishery Management Council for summer flounder, as well as the Commission's risk and uncertainty policy.

In all the groups Jason has been a part of, he has consistently provided thoughtful and unbiased insights during committee discussions and has gone above and beyond to apply his technical knowledge and analytical skills to address challenging issues. Jason's leadership in developing new models and reference points for stock assessments has made him an enormous asset to the Commission and to science-based fisheries management in general.

In addition to his leadership and analytical support, Jason is an outstanding colleague, who is enthusiastic about his work, considerate of others' viewpoints, and able to maintain a calm demeanor even under the most adversarial conditions.







Fishery Management Actions

Atlantic Striped Bass

The Atlantic Striped Bass Management Board reviewed the results of the 2022 Atlantic Striped Bass Stock Assessment Update, which indicates the resource is no longer experiencing overfishing but remains overfished relative to the updated biological reference points. Female spawning stock biomass (SSB) in 2021 was estimated at 143 million pounds, which is below the SSB threshold of 188 million pounds and below the SSB target of 235 million pounds. Total fishing mortality in 2021 was estimated at 0.14, which is below the updated fishing mortality threshold of 0.20 and below the updated fishing mortality target of 0.17.

The 2022 Assessment Update used the same model from the approved peer-reviewed 2018 Benchmark Stock Assessment. Data through 2021 were added to the model, and the model structure was adjusted for 2020-2021 to account for the regulation changes implemented through Addendum VI to Amendment 6. While the assessment model was able to handle missing data due to COVID-19, the data gaps caused COVID-19 increased uncertainty in the 2020 and 2021 data.

The 2022 Assessment Update also included short-term projections to determine the probability of SSB being at or above the SSB target by 2029, which is the stock rebuilding deadline. Under the current fishing mortality rate, there is a 78.6% chance the stock will be rebuilt by 2029, indicating a reduction in catch is not necessary at this time. The projections and the updated fishing mortality reference points took into account the period of low recruitment the stock has experienced in recent years.

"This 2022 assessment was the first check-in point for progress toward stock rebuilding by 2029," said Board Chair Marty Gary with the Potomac River Fisheries Commission. "It is extremely important that we continue to monitor fishery removals and conduct regular stock assessments to keep evaluating rebuilding progress and stay on track."

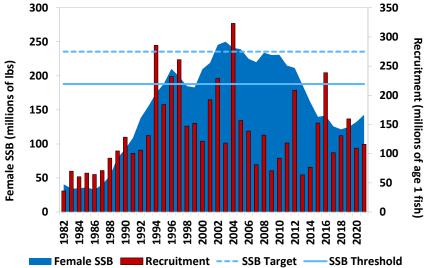
The next stock assessment update is scheduled for 2024, and the Board will review the 2022 removals as soon as the data are available to evaluate whether catch remains at sustainable levels. The Assessment Update is available at http://www.asmfc. org/uploads/file/6373c866AtlStripedBassAssessmentUpdate Nov2022.pdf while the assessment overview is available at http://www.asmfc.org/uploads/ file/636967f9AtlStripedBassStockAssessmentOverview 2022.pdf.

Draft Addendum I

The Board also approved Draft Addendum I to Amendment 7 to the Interstate Fishery Management Plan for Atlantic Striped Bass for public comment. The Draft Addendum considers allowing for the voluntary transfer of striped bass commercial quota in the ocean region between states that have ocean quota.

Atlantic Striped Bass Female Spawning Stock Biomass and Recruitment

Source: Atlantic Striped Bass Stock Assessment Update, 2022



The Board initiated Draft Addendum I in August 2021 after deciding that changes to the striped bass commercial quota system would not be considered during the ongoing development of Amendment 7. With the adoption of Amendment earlier this year, the Board re-initiated discussions on, and ultimately approved, Draft Addendum I for public comment to consider voluntary quota transfers which could provide some relief to states seeking additional quota. The Draft Addendum proposes a range of options that would permit voluntary transfers of commercial quota, including options based on stock status and options allowing the Board to set criteria for transfers on a regular basis.

The Draft Addendum is available at http://www.asmfc.org/files/ PublicInput/AtlStripedBass DraftAddenduml PublicComment Nov2022.pdf or via the Commission's website at http://www. asmfc.org/about-us/public-input. All those interested in the management of Atlantic striped bass are encouraged to provide input either by participating in public hearings, which may be conducted via webinar, or providing written comment (see table on the next page or go here for hearing information). Public comment will be accepted until 11:59 PM (EST) on January 13, 2023, and should be sent to Emilie Franke, FMP Coordinator, at 1050 N. Highland St., Suite 200 A-N, Arlington, Virginia 22201; or at comments@asmfc.org (Subject line: Striped Bass Draft Addendum I). For more information, please contact Emilie Franke, Fishery Management Plan Coordinator, at efranke@ asmfc.org.

Horseshoe Crab

The Horseshoe Crab Management Board approved harvest specifications for horseshoe crabs of Delaware Bay-origin. Taking into consideration the recommendations of the Adaptative

Resource Management (ARM) Framework Revision, the Board set a 2023 harvest limit of 475,000 male and zero female horseshoe crabs for the region.

"The ARM Framework Revision represents a considerable advancement in the science upon which we manage horseshoe crabs in the Delaware Bay Region," stated Board Chair John Clark of Delaware. "ASMFC is very proud of this effort and the improvements that have been made to the model and data inputs for both horseshoe crabs and red knots. The Board's action today is consistent with the goal of balancing ecosystem and fishery needs."

Acknowledging public concern about the status of the red knot population in the Delaware Bay, the Board elected to implement a zero female horseshoe crab harvest for the 2023 season as a conservative measure. To make up for the lost harvest of larger female crabs, the Board agreed to increase Maryland and Virginia's male harvest quotas with an offset ratio of 2:1 males to females. Using the allocation methodology established in Addendum VIII, the following quotas were set for New Jersey, Delaware, Maryland, and Virginia:



Photo (c) Gregory Breese, USFWS

2022, after accepting the 2021 Revision of the ARM Framework and Peer Review Report for management use. The 2021 Revision includes improvements to the ARM Framework's population models for horseshoe crabs and red knots and incorporates more sources of horseshoe crab removal data, including mortality due to the biomedical industry and commercial discards from other fisheries. Given these improvements, which address previous peer review critiques, the ARM Revision was endorsed by the independent peer review panel as the best scientific information for the management of horseshoe crabs in the Delaware Bay Region that accounts for the forage needs of migratory shorebirds.

Under Addendum VIII, the 2021 ARM Revision will be used to annually produce bait harvest recommendations for male

	Delaware Bay Origin Horseshoe Crab Quota (no. of crabs)	Total Quota**
State	Male Only	Male Only
Delaware	164,364	164,364
New Jersey	164,364	164,364
Maryland	126,221	255,980
Virginia*	20,052	81,331

^{*}Virginia harvest refers to harvest east of the COLREGS line only

The Board also approved Addendum VIII to the Interstate Fishery Management Plan (FMP) for Horseshoe Crab. Addendum VIII adopts the changes to the ARM Framework as recommended in the peerreviewed 2021 ARM Framework Revision, and allows its use in setting annual bait harvest specifications for horseshoe crabs of Delaware Bay-origin. The Board initiated Draft Addendum VIII in January

and female horseshoe crabs of Delaware Bay-origin, based on the abundance of horseshoe crabs and red knots. The maximum number of male and female horseshoe crabs the ARM Revision can recommend is 500,000 males and 210,000 females. The conceptual model of horseshoe crab abundance influencing red knot survival and reproduction remain unchanged, with the objective of ensuring

horseshoe crab abundance does not become a limiting factor for the population growth of red knots. While the methodology for allocating the overall quota among the four Delaware Bay states is also unchanged, the state allocations have been updated to reflect the most current genetic information on the proportion of each state's harvest that is of Delaware Bay-origin.

The Addendum is available here. A more detailed overview of the 2021 ARM Revision can be found here and the final ARM Revision and Peer Review Report is available here. The U.S. Geological Survey released the software code for the ARM Framework models on November 3, which is posted on GitLab at https://code.usgs.gov/cooperativeresearchunits/hsc-adp/-/releases. A description of the software release can be found in a Readme summary at https://code.usgs.gov/cooperativeresearchunits/hsc-adp/-/tree/main.

For more information, please contact Caitlin Starks, Senior Fishery Management Coordinator, at cstarks@asmfc.org.

New FAQ for Red Knots and Horseshoe Crabs in Delaware Bay

New Jersey Department of Environmental Protection Fish and Wildlife, Delaware Division of Fish and Wildlife, and U.S. Fish & Wildlife Service have collaboratively developed frequently asked questions regarding the conservation efforts to protect red knots and horseshoe crabs in the Delaware Bay.

To view the new document, please click on the link below.

<u>Delaware Bay Rufa Red Knot and</u> <u>Horseshoe Crab FAQ</u> (pdf)

^{**}Total harvest quotas for Maryland and Virginia include crabs which are not of Delaware Bay origin.

Atlantic Striped Bass Draft Addendum I Public Hearing Schedule

Date and Hearing Format	State/Agency	Contact
Wednesday, December 7 In-person Hearing 6:00 – 8:00 p.m.	New York State Dept. of Environmental Conservation Hearing Location: NYSDEC Division of Marine Resources 123 Kings Park Blvd (inside Nissequogue River State Park), Kings Park, NY 11754 Note: NYSDEC will provide a listen-only livestream link to be posted on the NYSDEC calendar.	John Maniscalco, 631.444.0437
Thursday, December 8 Webinar Hearing 6:00 – 8:00 p.m.	North Carolina Division of Marine Fisheries	Chris Batsavage, 252.808.8009
Wednesday, December 14 Webinar Hearing 6:00 – 8:00 p.m.	Rhode Island Dept. of Environmental Management	<u>Jason McNamee</u> , 401.222.4700 x2772414
Thursday, December 15 Hybrid Hearing 6:00 – 8:00 p.m.	Delaware Division of Fish and Wildlife Note: This is a hybrid meeting (both in-person and virtual). Please visit the Delaware website to register for virtual webinar participation. In-person Hearing location: Kent County Conservation District 1679 S. Dupont Hwy, Dover, DE 19901	John Clark, 302.739.9108
Monday, December 19 Webinar Hearing 6:00 – 8:00 p.m.	Massachusetts Division of Marine Fisheries	Michael Armstrong, 978.619.0012
Tuesday, December 20 Webinar Hearing 6:00 – 8:00 p.m.	New Jersey Dept. of Environmental Protection	Joe Cimino, 609.748.2063
Thursday, January 5 Webinar Hearing 6:00 – 8:00 p.m.	Maryland Dept. of Natural Resources, Virginia Marine Resources Commission, Potomac River Fisheries Commission & District of Columbia Dept. of Energy and Environment	Michael Luisi (MD), 443.758.6547 Pat Geer (VA), 757.247.2236 Martin Gary (PRFC), 804.224.7148 Daniel Ryan (DC), 202.597.1244
Monday, January 9 Hybrid Hearing 6:00 – 8:00 p.m.	Maine Dept. of Marine Resources, New Hampshire Fish and Game Dept. Note: This is a hybrid meeting (both in-person and virtual). Please follow the below webinar registration instructions to attend virtually. In-person Hearing location: Urban Forestry Center 45 Elwyn Road, Portsmouth, NH 03801	Megan Ware (ME), 207.446.0932 Cheri Patterson (NH), 603.868.1095

In 2022, staff, partners, and stakeholders dedicated to the Atlantic Coastal Coopertaive Statistics program (ACCSP) worked on a variety of projects and initiatives in four major categories that addressed the mission and vision of the ACCSP: funded projects, SAFIS applications, recreational fisheries data collection, and data warehousing. Committee members and partner staff collaborated with ACCSP staff to advance the objectives outlined in the ASMFC 2019-2023 Five-Year Strategic Plan and 2022 Action Plan by supporting the needs of partners through funded projects; building software applications that are free to users and flexible enough to meet requirements of multiple jurisdictions in a single report; and collecting, standardizing, and disseminating data in an accessible and timely fashion while still maintaining the necessary levels of confidentiality and integrity. As the end of the year approaches, ACCSP staff would like to thank all those involved for helping us achieve the 2022 successes highlighted below and much more.

Funded Projects

 The Coordinating Council, with rankings and recommendations provided by the Operations Committee and Advisory Panel, selected nine partner projects to support with approximately \$1.3 million of FY2023 funds at its November 2022.

Fiscal Year 2022 Project Highlights

- The Potomac River Fisheries Commission (PRFC) and ACCSP staff collaborated to update all ACCSP lookup lists as necessary to accommodate PRFC codes, set up the eTRIPS switchboard, and conduct training sessions with early adopters.
- ACCSP staff worked with Massachusetts Department of Marine Fisheries and Rhode Island Department of Environmental Management
 on the ACCSP funded project to develop an application that allows administrators to view vessel location tracks, associated trips,
 compliance reports on trips without locations and locations without trips, and set the annual opt-in and device status for a permit.

Standard Atlantic Fisheries Information System (SAFIS) Applications

- e-1Ticket was released in 2011 and designed specifically for South Carolina and Georgia permitted dealers, who may also have
 federal dealer permits. It creates a commercial trip ticket for the fisherman selected, and a dealer report for the dealer. ACCSP staff
 worked with the states and NOAA Fisheries Division of Highly Migratory Species to improve e-1Ticket into eTRIPS/online interface and
 functionality, provide increased future flexibility, and standardize data collection across jurisdictions. This will be deployed in 2023 in
 conjunction with state outreach to dealers.
- Created new eTRips features that improve the submission of commercial, party/charter, or recreational trip reports via a web browser

Recreational Fisheries Data Collection

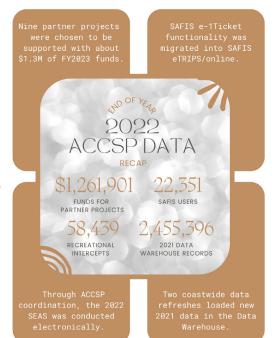
- The Recreational Team supported the collection of data for the Socioeconomic Add-on Survey (SEAS) portion of the Marine
 Recreational Fishing Expenditure Survey in cooperation with NOAA Fisheries, Atlantic state partners, and the Gulf States Marine
 Fisheries Commission. Every five years, SEAS is conducted in conjunction with the annual Access Point Angler Intercept Survey. Through
 ACCSP coordination, the 2022 SEAS was conducted electronically, streamlining the survey to reduce angler burden.
- The Recreational Technical Committee and Coordinating Council completed the Atlantic Recreational Implementation Plan 2023-2027. The plan was submitted to NOAA Fisheries.

Data Warehousing and Standards

- The Data Team performed two coastwide data refreshes in the Data Warehouse to load new data from 2021. They also reloaded historical data from Maine from 2008-2020 in order to include the legacy data field for DISPOSITION_CODE. ACCSP also performed a data refresh for North Carolina data from 2017-2020.
- ACCSP technical committees (Biological Review Panel, Bycatch Prioritization Committee, Commercial Technical Committee, and Recreational Technical Committee) and staff worked together to update the Atlantic Coast Standards and set specific sections as dynamic, which will allow more frequent updates. These changes are currently being incorporated into a new page on the ACCSP website that will improve accessibility and be more responsive to partner needs.



ACCSP is a cooperative state-federal program focused on the design, implementation, and conduct of marine fisheries statistics data collection programs and the integration of those data into a single data management system that will meet the needs of fishery managers, scientists, and fishermen. For further information please visit www.accsp.org.



An Inside Look at State-Run Multispecies Angler Tagging Programs

Most state marine fishery agencies along the Atlantic coast conduct fish tagging programs that work with anglers in the collection of important fish tagging information. This information is in turn used by stock assessment scientists and fisheries managers to better understand the catch, growth, survival, and movement of fish stocks. These programs vary from state to state; some are species-specific while others target multiple recreationally important species through a centralized state-run cooperative tagging program. This article focuses on the latter with a particular emphasis on cooperative tagging programs conducted by state marine agencies from Virginia through Florida.

For these multispecies state agency tagging programs, fish are tagged with a small tag is attached to the fish and must be reported when recaptured in order to collect data. During the initial tagging, the tagger records biological data such as the species tagged, length, and location caught. Then, when a tagged fish is recaptured, anglers report the same data again to show how the fish has grown and moved over time. The tag consists of a coffee-straw-thin streamer that has an individual sequence number generally written twice on the tag and contact information for reporting the capture. Often the color of the tag is

symbolic of the location of its initial tagging and the type of tagging program.

While only some programs, like those in Virginia, South Carolina and Georgia, allow anglers to participate in the initial tagging process, all the programs incentivize anglers reporting tagged fish. In return for reporting, anglers may be given a short catch history report summarizing the growth and movement of their individual fish between its initial tagging and recapture event. For programs in Virginia and Georgia, the original tagger is also sent a short catch report detailing the recapture. Additionally, programs often offer some type of free swag such as a t-shirt or hat, and potentially a monetary reward depending on the species and type of tag.

Program (https://www.mrc.virginia.gov/vswft/vsft2.shtm) since 1995, in which anglers volunteer to tag a variety of saltwater fish. The target species for this program include: black drum, black sea bass, cobia, summer flounder, red drum, sheepshead, Atlantic spadefish, speckled trout, tautog, and gray triggerfish. In order to participate, anglers are required to attend a hands-on training workshop where they learn the proper techniques for handling and tagging fish, and procedures for recording data. One unique aspect of this program is that it tracks a tagger's effort throughout the year to award conservation certificates to anglers who tag at least 25 fish and tagging trophies to the anglers who tag the most fish overall. The American Fisheries Society' Fisheries Magazine recently published an article about the Virginia Game Fish Tagging Program in its special issue on Citizen Science; the article can be found https://www.mrc.virginia.gov/vswft/vsft2.shtm) saltwater fish.

The North Carolina Department of Environmental Quality Division of Marine Fisheries (DMF) Fish Tagging Program (https://deq.nc.gov/about/divisions/marine-fisheries/science-and-statistics/fish-tagging-program) began in 2014 to incentivize the reporting of tagged fish. The program operates by having state agency biologists do the initial tagging, then encourages anglers to report the capture

of any tagged fish. The main target species for this program are striped bass, red drum, spotted seatrout, southern flounder, and cobia. However, additional tagging studies have been added to collect data

on dolphinfish, yellow perch, and white perch. When anglers catch a tagged fish, they are requested to cut off the tag to return it along with catch information such as species, length, location, gear used, and fate of the fish. In return, anglers are also eligible to receive a catch certificate, and a monetary reward depending on the tag color.

The South Carolina Department of Natural Resources Office of Fisheries Management has been operating the Marine Game Fish Tagging Program (MGFTP; https://www.dnr.sc.gov/marine/tagfish/index.html) since 1974, during

which time, nearly 4,000 anglers have participated. At the time of inception, the project was the first state-sponsored public tagging



Tagged Atlantic Cobia (c) Seth Levine

Example of two tags. Photo (c) http://www.fishtag.info/

State Agency Cooperative Tagging Programs

The Virginia Marine Resources Commission and the Virginia Institute of Marine Science have been running the Virginia Game Fish Tagging

program on the Atlantic coast. To date, anglers have released more than 175,000 fish, of which, over 18,000 have been reported as recaptured. Approximately 50% of the total fish tagged and released have been red drum. However, other species have been included through the years, which has allowed the program to tag 149 different marine fish species. Currently, the target species are: red drum, sheepshead, black drum, striped bass, tripletail, tarpon, southern flounder, Atlantic spadefish, grouper (all species), snapper (all species), dolphinfish, cobia, jacks (all species), king mackerel, and billfish.

pepending on the size of the fish, anglers use either a T-bar anchor tag (for smaller fish) or dart tags (for larger fish). If a tagged fish is recaptured, the state requests anglers report the necessary catch information and, if possible, a photo of the tag number for quality control.

The Georgia Department of Natural Resources Coastal Resources Division has supported a multispecies Cooperative Angler Tagging Program (https://coastalgadnr.org/CooperativeTagging) since 1988, through which over 190 anglers have taken part in tagging saltwater fish. In order to participate, anglers are first trained in proper fish handling skills and tagging techniques. To date, the program has tagged over 7,800 fish and recorded over 500 recaptures. Currently, the program includes the tagging of black drum, red drum, and tripletail. However, the target species for this program have changed across the years as management goals have shifted, with a total of eight different species being tagged since the program's inception. For this program, since the tag number is printed twice on the tag, if anglers are unable to record the tag number before releasing a fish, they can cut off the tag number closest to the end of the tag, thus leaving the rest of the tag intact and allowing the tagged fish to be reported if caught again.

Biologists at the Florida Fish and Wildlife Conservation Commission have been carrying out various short- and long-term tagging programs since the 1980s. In 2004, an agency-wide reorganization created the Florida Fish and Wildlife Research Institute (FWRI), which allowed all departments tagging programs to operate through sub-divisions of the Institute. Since then, FWRI has been managing the Angler Tag Return Program (https://myfwc.com/research/saltwater/fishtags/), with state biologists conducting the tagging and anglers reporting the recapture of any tagged fish. The target species have changed throughout the years, allowing biologists to tag a variety of wild-caught and hatchery fish including cobia, snook, grey triggerfish, greater amberjack, and some species of snappers and groupers such as red snapper and goliath grouper. In addition to the regular reward for anglers reporting a tagged



Tagged red drum (c) Robert Wiggers, SC DNR

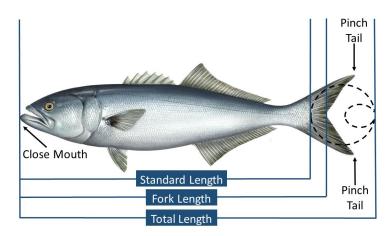
fish, anglers also have the chance of receiving a monetary reward depending on the species caught and type of tag used.

Best Practices

Anglers can increase release survival and support long-term project goals by employing best fishing practices such as using proper tagging techniques and correctly handling fish during both the tagging and recapture of tagged fish. When new volunteer taggers get started, they are encouraged to practice tagging on dead fish prior to tagging live fish. This will ensure tags are applied at the

correct location and angle so they will stay on the fish. Additionally, efforts such as gently handling a fish with wet hands or wet gloves during the tagging and measuring process greatly increases the likelihood of release survival, which is essential for the success of these programs and the conservation of the species.

Another important thing to remember during both the tagging process and the reporting of recaptures is to get a careful length measurement for each fish. It is recommended that fish are set on a flat measuring board or on top of a tape measure on a flat surface to get the most accurate measurement. Programs vary in whether they want fork length or total length, so its always helpful to note which length is collected.



For the recapture of tagged fish, the protocols for release with the tag intact or the retention of the tag varies among programs so always verify the proper method before going fishing. For catch-and-release of previously tagged fish, if the tag is supposed to remain on the fish, anglers are encouraged to take a close-up

continued, see TAGGING, on next page

Employee of the Quarter

For the fourth quarter of 2022, Jeff Kipp, Senior Stock Assessment Scientist, was recognized as Employee of the Quarter (EOQ) for his contributions to the Commission and its Fisheries Science Program. Since joining the Commission in June 2012, Jeff has consistently provided leadership, innovative problem solving, and a can-do attitude in all that he does.

Over the past two years, he led the completion of the innovative Red Drum Simulation Assessment, a first for the Commission. He also constructed a new model (JABBA-Select) for black drum management advice and completed the benchmark stock assessment, which recently underwent peer review. Both efforts represent major milestones on the Sciaenid Board's stock assessment road map. Jeff guided a new assessment team in its work on the first range-wide benchmark stock assessment for Jonah crab. He also provided quantitative support to the American Lobster Technical Committee to update stock indicators and summarize data for the Draft Addendum XXVII, which seeks to increase protection of spawning stock biomass of the Gulf of Maine/Georges Bank stock.

Jeff has forged new partnerships with the U.S. Geological Survey and the states to establish the shad and river herring genetics repository. He has maintained a diverse portfolio of additional projects to support spot and Atlantic croaker traffic light analyses, summer flounder and Jonah crab management strategy evaluations, and the activities of the Fish Passage Work Group. Jeff's unique combination of impressive



analytical skills and his strong rapport with Commission assessment committees, and fisheries management and data collection staff, make him the perfect recipient for Employee of the Quarter. As EOQ recipient, Jeff received a cash award and a letter of appreciation to be placed in his personal record. In addition, his name is on the EOQ plaque displayed in the Commission's lobby. Congratulations, Jeff!

TAGGING, continued from page 13

picture of the tag's unique sequence number to ensure accurate reporting. If necessary, any algae growth on the tag can be wiped off so the writing is legible. Alternatively, if the program requests that anglers retain the full tag then the tag should be cut off the fish as close to the body as possible.

Other noteworthy best practices include choice of hook type and release method. It's recommended to use circle hooks instead of j-hooks to encourage release survival. Circle hooks should be non-stainless steel and non-offset since these are more easily removed and less likely to injure the fish. Anglers can also use a dehooking device to minimize injury to the fish and reduce handling time. Before release, any bottom fish exhibiting external signs of barotrauma such as bulging eyes or a swollen abdomen should be vented or released with a descending device to ensure the fish can swim back down to its preferred depth. Regardless of barotrauma, if anglers are releasing a fish at the surface, it is best to set the fish in the water head first as this forces water through the mouth and over the gills.

Employing all these best practices during the tagging and recapture process are a great way for anglers to participate in research efforts while supporting long-term conservation and management goals. The Commission encourages anglers to get involved and participate in their respective areas tagging programs. In addition to these state-run multispecies programs, there are many other tagging efforts administered by other organizations. A complete list of programs as well as additional information on fish tagging can be found at the Commission's fish tagging website (www.fishtag.info).



Virginia angler Ken Neill with a tagged tautog (c) Ken Neill



STAFF

KAREN HOLMES

After nearly 20 years working with the Atlantic Coastal Cooperative Statistics Program (ACCSP) as a software developer, Karen Holmes is moving on from the Commission to pursue other endeavors. She officially retired at the end of July, but has stayed on through the end of 2022 as a contractor to transfer as much of her institutional knowledge as possible. Karen joined the ACCSP Information Systems staff in March 2004 to launch federal electronic dealer reporting through SAFIS. She also developed several other Oracle-based data collection systems for the ACCSP. She was appointed as the Software Team Lead in 2007 when the team was formed. Over the past 15 years, Karen worked with state and federal partners to customize and expand SAFIS to include an entire suite of dealer and fisher reporting applications. She was integral in the creation of eTRIPS/online, eDR/mobile, eDR/online, and the recent eTRIPS redesign for both mobile and online use. While we will miss Karen, we are deeply grateful for her dedication over the years and wish her and her husband all of the best.



ALEXANDER LAW

In November, Commission staff welcomed Alexander Law as its new Legislative Program Coordinator. In his position, Alexander will be coordinating the Commission's Legislative Committee, appropriations requests/follow-ups, Capitol Hill relations, and legislation tracking and advocacy. Alexander comes to us from Senator Amy Klobuchar's office where he worked on a number of environmental and economic issues. He has a Bachelor's Degree in Biology from Kenyon University. Welcome aboard, Alexander!



DUSTIN COLSON LEANING

In November, after three and a half years as Fishery Management Plan Coordinator, Dustin Colson Leaning has left the Commission to work for the Environmental Defense Fund as the Senior Fisheries Innovations and Policy Specialist. In his new role, Dustin will be advancing solutions for climate-resilient fisheries through the application of cutting-edge tools and technologies, and the advancement of policies that create the necessary conditions for innovation. He will be working with communities in many countries including: US, China, Indonesia, Peru, Belize, Cuba, Japan, Philippines, Chile, Europe, and Mexico.

During his time at the Commission, Dustin was a huge asset to the fisheries management program covering species such as northern shrimp, winter flounder, coastal sharks, bluefish, scup, and summer flounder. While he contributed to all of these species programs, his most significant accomplishments include his work with

staff from the Mid-Atlantic Fishery Management Council on a number of amendments and an addendum/framework. These include Amendment 2 to the Bluefish FMP, which initiates a seven-year rebuilding program for the species; Amendment 21 to the Summer Flounder FMP, which revises state commercial allocations and updates the FMP goals and objectives; and Amendment 22 to the Summer Flounder, Scup and Black Sea Bass FMP, which modifies commercial and recreational allocations for all three species. Lastly, he and Tracey



Bauer worked closely with Council staff on the Harvest Control Rule Addendum/Framework, which is the first step in the Commission's and Council's efforts to explore ways to reform recreational fisheries management in order to provide greater stability and predictability in recreational measures from year-to-year while accounting for uncertainty in recreational catch estimates. We wish Dustin the very best in his new position.

SARAH MURRAY

In late October, Sarah Murray left the Commission in her role as Science Committee Coordinator to explore new opportunities. During her four and a half years with the Commission, Sarah coordinated the activities of the Management and Science Committee and Assessment Science Committee on a number of projects, including the development of the Commission's Risk and Uncertainty Policy and piloting the use of a Management Strategy Evaluation. Notably, Sarah also played a key role in advancing the development of Atlantic menhaden ecological reference points. We wish Sarah the very best in her future endeavors.



KRANTHI PALLA

In December, Kranthi Palla joined the Commission staff as an ACCSP software developer. He will be helping update the ACCSP database programs and web-based applications such as SAFIS dealer reporting, online trip reporting, and many other software projects including the Commission's meeting and contracts management. Kranthi comes to the Commission with over 15 years working on data systems and Oracle software for the Environmental Protection Agency. He has a Bachelor's in Computer Science and Information Technology from Jawaharlal Nehru Technological University in India. Welcome aboard, Kranthi!



HAPPY HOLIDAYS!

