



Atlantic States Marine Fisheries Commission

NEWS RELEASE

Sustainable and Cooperative Management of Atlantic Coastal Fisheries

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PRESS CONTACT: Tina Berger
703.842.0740

American Shad Benchmark Stock Assessment and Peer Review Find Coastwide Abundance Remains Depleted

Arlington, VA – The 2020 American Shad Benchmark Stock Assessment and Peer Review Report indicate American shad remain depleted on a coastwide basis. Multiple factors, such as overfishing, inadequate fish passage at dams, predation, pollution, water withdrawals, channelization of rivers, changing ocean conditions, and climate change are likely responsible for shad decline from historic abundance levels. Additionally, the assessment finds that shad recovery is limited by restricted access to spawning habitat. Current barriers partly or completely block 40% of historic shad spawning habitat, which may equate to a loss of more than a third of spawning adults. The “depleted” determination was used instead of “overfished” because the impact of fishing on American shad stocks cannot be separated from the impacts of all other factors responsible for changes in abundance. The benchmark assessment was endorsed by the Peer Review Panel and accepted by the Shad & River Herring Management Board (Board) for management use.

“On behalf of the Board, I want to commend the members of the Shad Technical Committee and Stock Assessment Subcommittee for their outstanding work on the 2020 Benchmark Stock Assessment Report,” stated Board Chair Dr. Michael Armstrong from Massachusetts. “This is a considerable body of work that substantially advances our understanding of the challenges facing American shad stocks along the Atlantic coast. It certainly has given the Board a lot to think about regarding next steps in management to improve population resiliency. Given the stock-specific nature of shad management, the Board has tasked the Technical Committee with identifying potential paths forward to improve shad stocks along the coast considering the assessment results.”

Coastwide adult mortality is unknown, but was determined to be unsustainable for some system-specific stocks, indicating the continued need for management action to reduce adult mortality. Specifically, adult mortality was determined to be unsustainable for three stocks – Connecticut, Delaware, and Potomac – and sustainable for five stocks – Hudson, Rappahannock, York, Albemarle Sound, and Neuse (see table on page 2 for information by system). The terms “sustainable” and “unsustainable” were used instead of “not overfishing” and “overfishing” because fishing mortality cannot be separated from other components contributing to total mortality. Though adult mortality was determined to be sustainable for some system-specific stocks, it is important to note that maintaining sustainable adult mortality will not result in favorable abundance status if juvenile mortality is unsustainable. Unfortunately, juvenile mortality status cannot be determined due to insufficient data collection in all systems; without these determinations, significant uncertainty remains in assessment advice for management of American shad. Thus, the recovery of American shad will need to address multiple factors including anthropogenic (human-caused) habitat alterations, predation by non-native predators, and exploitation by fisheries.

The 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 a deliberative body of the Atlantic coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell and diadromous species.

The assessment also highlights the need for stock composition monitoring data in order to separate the impacts of fishing from other factors driving American shad population dynamics in future stock assessments.

In evaluating the stock assessment, the Peer Review Panel stated, “It is noteworthy that the amount of new data, particularly following recommendations of the last benchmark assessment, and the level of new analyses takes the assessment up a significant level from prior benchmarks, and reflects a culmination of understanding of the species and attempts to manage it.” Further, the Panel noted two systems (Potomac and Albemarle Sound) had sufficient data for use in data-rich statistical catch-at-age models and, for the first time, a coastwide habitat assessment of continental waters was undertaken, with specific reference to dams and passage as impediments to sustainable stocks. Finally, the Panel stated, “there is growing recognition that the suite of in-river predators on juvenile shad is shifting, due to introductions/invasions of non-native species such as various catfishes, pike, black bass, snakeheads, etc. Predators can have a disproportionately large impact on year class success when fish populations are at such low levels, as is currently the case, threatening resilience.”

A more detailed overview of the stock assessment, as well as the Benchmark Stock Assessment and Peer Review Report will be available on the Commission website, www.asmfc.org, on the Shad and River Herring webpage under stock assessment reports. For more information, please contact Caitlin Starks, Fishery Management Coordinator, at cstarks@asmfc.org or 703.842.0740.

Summary of American Shad Stock & Habitat Conditions				
System	Historic Riverine Habitat Currently Unobstructed	Abundance Trends (2005-2017)	Adult Status*	
			Total Mortality Rate	Abundance
Merrymeeting Bay	50.02%	YOY: No trend Adults: No data	Unknown	Unknown
Merrimack	17.83%	YOY: No data Adults: Increasing trend	Unknown	Unknown
Pawcatuck	19.21%	YOY: No data Adults: Increasing trend	Unknown	Unknown
Connecticut	45.19%	YOY: No trend Adults: Conflicting trends between indices (1 increasing, 1 no trend)	Unsustainable	Unknown
Hudson	89.24%	YOY: No trend Adults: No trend	Sustainable	Depleted
Delaware	72.05%	YOY: No trends (2 indices) Adults: Conflicting trends between indices (1 increasing, 1 no trend)	Unsustainable	Unknown
Nanticoke	100%	YOY: Declining trend Adults: No trends (2 indices)	Unknown	Unknown
Susquehanna & Upper Chesapeake	4.38%	YOY: No trend Adults: No trends (2 indices)	Unknown	Unknown
Patuxent	100%	YOY: No data Adults: No trend	Unknown	Unknown
Potomac	90.02%	YOY: No trend Adults: No trends (2 indices)	Unsustainable	Unknown
Rappahannock	95.98%	YOY: Increasing trend Adults: No trends (2 indices)	Sustainable	Unknown
York	87.42%	YOY: Conflicting trends between indices (1 increasing, 2 no trends) Adults: No trend	Sustainable	Unknown
James	72.77%	YOY: No trend Adults: No trends (2 indices)	Unknown	Unknown
Albemarle Sound	58.92%	YOY: Increasing trend Adults: Conflicting trends between indices (2 no trends, 1 increasing)	Sustainable	Not overfished
Tar-Pamlico	75.68%	YOY: No data Adults: No trend	Unknown	Unknown
Neuse	90.05%	YOY: No data Adults: Conflicting trends between indices (1 increasing, 1 no trend)	Sustainable	Unknown
Cape Fear	46.59%	YOY: No data Adults: Increasing trends (2 indices)	Unknown	Unknown
Winyah Bay	73.13%	YOY: No data Adults: Conflicting trends (1 increasing, 2 no trend)	Unknown	Unknown
Santee-Cooper	20.95%	YOY: No data Adults: Conflicting trends between indices (1 increasing, 2 no trend)	Unknown	Unknown
ACE Basin	82.28%	YOY: No data Adults: No trend	Unknown	Unknown
Savannah	59.19%	YOY: No data Adults: No trends (2 indices)	Unknown	Unknown
Altamaha	82.24%	YOY: No data Adults: Conflicting trends between indices (1 increasing, 1 no trend)	Unknown	Unknown
St Johns	90.04%	YOY: No trend Adults: Increasing trend	Unknown	Unknown
Coastwide	55.42%	YOY: NA Adult: Conflicting trends between indices	Unknown	Depleted

* The status determinations identified in the table for total mortality and abundance are for adults only. System-specific data on juvenile American shad as they transition from young-of-the-year (YOY) to mature spawning adults are unavailable, which can impact overall status determinations.

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