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MENHADEN CRUCIAL TO STRIPED BASS HEALTH & CHESAPEAKE BAY ECOSYSTEM

Presented to Forage Action Team – Sept. 2016 Quarterly Meeting

Chesapeake Bay Ecological Foundation conducted the only long-term, year-round, nutritional and food habit study (2005-2015), examining over 15,000 adult striped bass and major forage consumed – primarily Atlantic menhaden. Study areas included Choptank River, Chesapeake Bay & Atlantic Ocean from Montauk, NY to Oregon Inlet, NC.

Chesapeake Bay is the largest nursery and production area for striped bass and menhaden. Menhaden reproduction since the early 1990s has annually resulted in low numbers of young menhaden in the Chesapeake Bay, increasing the imbalance between forage supply and demand while threatening the nutritional health of adult striped bass. Striped bass health issues in the Bay were not documented until after the Atlantic States Marine Fisheries Commission (ASMFC) increased forage demand by raising the striped bass minimum size in MD's portion of the Bay from 14" to 18" in 1990. In MD's portion of the Bay, prevalence of mycobacteriosis in striped bass increased to 60% in 2014 compared to its previous high of 52% in 2008 (MD DNR Data). In the Chesapeake Bay, menhaden are crucial forage species for striped bass over 12" and a primary component of the food web. Menhaden are essential to the ecosystem as filter feeders and key forage for many predatory fish and birds.

Our research enhances knowledge of Chesapeake Bay & mid-Atlantic ecosystems and the life cycle of striped bass & menhaden. Menhaden ecological services have not been fully exploited because ASMFC has failed to protect small menhaden - critical forage for non-migratory adult striped bass. Menhaden populations should be managed based on size limits and quotas. Study analysis determined that lowering the striped bass size limit and establishing a menhaden minimum size for the purse seine fishery would be essential for healthy Chesapeake Bay adult striped bass and maintenance of the ecosystem.