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## ATLANTIC MENHADEN: FACTS AND UNSUBSTANTIATED CLAIMS

Given the controversial nature of menhaden fishery management on the East Coast and in the Chesapeake Bay, Delmarva Fisheries Association has compiled this list, which juxtaposes some commonly held claims and beliefs surrounding Atlantic Menhaden with the facts that our research revealed\*. Where appropriate, the facts are documented in the end notes. Maryland's menhaden uniquely qualify as an estuarine based stationary fishery.

**CLAIM:** *The larger a menhaden population, the greater its chances for successful recruitment of juveniles and for future generations.*

**FACT:** The success of menhaden recruitment is far more dependent on environmental conditions — weather, water quality and atmospheric pressure – than on anything else, including restrictions on commercial fishing [1]. Furthermore, stocks are routinely determined to be healthy because menhaden are a very renewable resource; one female menhaden can produce as many as 350,000 eggs.

**CLAIM:** *A 2010 Atlantic States Marine Fisheries Commission (ASMFC) analysis concluded that the population of Atlantic menhaden has fallen to historically low levels, having been overfished routinely for decades.*

**FACT:** The 2010 ASMFC assessment uses data only through 2008, with data from this last year showing that fishing mortality level barely above the overfishing limit (by 0.4%). In the nine years prior (1999 – 2007), scientists concluded that overfishing did not occur at all.

**CLAIM:** *As prodigious 'filter feeders' menhaden help maintain water quality because they clean up unwanted algae blooms by eating phytoplankton.*

**FACT:** Recent scientific evaluations of the ecological role of menhaden have indicated that these fish may not be as important for improving water quality as originally thought. Menhaden primarily eat zooplankton, not phytoplankton [2], and science has shown that menhaden do not provide any benefit whatsoever to water quality. While the fish do consume phytoplankton as young-of-the-year juveniles, they do not “filter” the water as alleged [3]; it is important to note that Omega Protein does not target juvenile fish.

**CLAIM:** *The menhaden industry threatens other species that rely on menhaden because, as forage fish, menhaden are uniquely essential to the survival of other fish, bird and mammal species. They are also essential prey for recreationally and economically important species such as striped bass.*

**FACT:** Menhaden are forage fish, but represent only a portion of other forage species; and the menhaden industry harvests only a small fraction of the total population. Also, the Virginia Institute of Marine Science recently found that menhaden represented only about 8 percent of striped bass food in the Chesapeake Bay, with a variety of other species accounting for the balance.

**CLAIM:** *By-catch from menhaden fishing jeopardizes other fishing sectors and threatens other fish populations.*

**FACT:** The menhaden fishery is known to be among the “cleanest” in the world in terms of the amount and rate of by-catch. All studies have concluded the by-catch in the menhaden fishery is insignificant. Studies show that in both the Atlantic and Gulf menhaden fisheries, by-catch is less than one percent by weight of the total catch [4]. Of that one percent, more than 90 percent of by-catch is non-recreationally-important species like mullet and croaker [5].

**CLAIM:** *The menhaden industry has consolidated because fish populations have declined so much as to reduce profitability.*

**FACT:** Plant consolidations have been a result of economic pressures of rising operating costs and the influences of radical environmental groups, not of an overfished resource.

#### **END NOTES:**

[1] Wood, R.J. and H.M. Austin, 2009. Synchronous multidecadal fish recruitment patterns in Chesapeake Bay, USA. *Canadian Journal of Fisheries and Aquatic Sciences*, 66: 496-508pp.

[2] Smith, N.G. and C.M. Jones, 2007. What is the cause of menhaden recruitment failure: Quantifying the role of striped bass predation. Final report, project RF 05-01, Virginia Marine Resources Commission.

[3] Friedland, K.D., D. W. Ahrenholz, J. W. Smith, M. Manning, AND J. Ryan. 2006. Sieving Functional Morphology of the Gill Raker Feeding Apparatus of Atlantic Menhaden. *Journal of Experimental Zoology* 305A: 974–985pp; Lynch, P.D., M.J. Brush, E.D. Condon, and R.J. LaTour, 2010. Net removal of nitrogen through ingestion of phytoplankton by Atlantic menhaden *Brevoortia tyrannus* in Chesapeake Bay. *Marine Ecology Progress Series*, Vol. 401: 195–209, 2010.

[4] Austin, H.M., J.E. Kirkley, and J. Lucy, 1994. By-catch and the fishery for Atlantic menhaden, *Brevoortia tyrannus* in the Mid-Atlantic Bight: An assessment of the nature and extent of by-catch. Virginia Sea Grant Marine Advisory Program, #103-260-955.

[5] Condrey, R. 1994. Bycatch in the U.S. Gulf of Mexico Menhaden Fishery: Results of Onboard Sampling in the 1992 Fishing Season. Louisiana State University. Baton Rouge, LA.

\* <http://www.savingseafood.org/science/atlantic-menhaden-facts-and-unsubstantiated-claims/>

