

## **ATLANTIC MENHADEN**

(06/00 ARCHIVE - NCDMF)

**Stock Status:** *Viable* (from AMAC report, June 2000)

**Average Commercial Landings and Value 1990 - 1999**—68,956,929 lb/ \$3,571,634

**1999 Commercial Landings and Value**—42,799,012 lb/ \$2,680,626

**Average Recreational Landings 1990 - 1999** -- Not a recreational species, except as bait

**1999 Recreational Landings**-- Not applicable

**Average Number of Citations 1990 - 1999 and Current Number**-- Not a citation species

**Status of Fisheries Management Plan**-- No North Carolina FMP. Revised ASMFC FMP approved in 1992. Annual ASMFC review of stock and fishery relative to six defined biological measures, state management actions, and Internal Waters Processing requests. Amendment to FMP will be completed by mid-2001. Recruitment to age 1 declined to below trigger level for 1996 - 1998 year classes due to unknown environmental causes, not fishing. Recruitment improved in 1999. Recent fishing mortality on fully recruited fish is about  $F=1.06$ . Spawning stock is still quite large at over 73.2 million lb, although it has declined as poor year classes have matured. Atlantic coast fishing effort in 1999 fell by 13% because of fleet reduction in Virginia and loss of fishing time to hurricanes.

**Data/Research Needs**-- Develop coastwide juvenile abundance index; evaluate environmental factors affecting recruitment to age 1; data from bait fisheries (size, age, effort); evaluate bait demand, supply, and value.

**Current minimum size limit:** None

**Harvest Season:** Always open in ocean beyond one mile of beach (with some specific exceptions); various closures in estuaries and ocean within one mile of beach (see MFC Rule Book).

**Size and Age at Maturity:** 7-9 in FL; 2 + years old

**Historic and current maximum age:** 12 years old/ 8 years old

**Average and Current Juvenile Abundance Index (1990-1999):** Unknown. Research underway indicates that an index may be developed within the next few years.

**Habits/Habitat:** Atlantic menhaden are estuarine-dependent with a single stock along the Atlantic coast. They spawn during fall-winter in the ocean from the Virginia capes to south of Cape Lookout. Menhaden migrate north from unspecified south Atlantic wintering areas in the spring, with larger/older fish going farthest north. Menhaden are unique in their dependence as adults on phytoplankton for food that they strain from the water while swimming in schools near the surface. Recent research indicates that year-class strength is probably determined by environmental factors (currents, temperature, predation, others) acting on larvae as they approach and enter inlets and nursery areas.

**Use of menhaden:** About 85 - 90% of the annual Atlantic coast catch is processed into fish meal for animal feed, and oil as an industrial base and for food additives. The rest is used for bait in the crab and lobster pot fisheries, as well as for sport fishing bait.

For more information, see [DMF Species Leads page](#)