

ATLANTIC MENHADEN

(06/01 ARCHIVE - NCDMF)

Stock Status: *Viable* (from draft Amendment 1, April 2001). Overall spawning stock biomass is high, however, recruitment has been declining over the last ten years.

Average Commercial Landings and Value 1991 - 2000—67,361,737 lb/ \$3,739,142

2000 Commercial Landings and Value—56,280,072 lb/ \$3,495,740

Average Recreational Landings 1991 - 2000 -- Not a recreational species, except as bait

2000 Recreational Landings-- Not applicable

Status of Fisheries Management Plan-- No North Carolina FMP. Revised ASMFC FMP approved in 1992; Amendment 1 (approved April 2001) includes overfishing definition and reorganization of management program. With the adoption of Amendment 1, the six triggers no longer serve as a management tool. Amendment 1 defines two benchmarks, fishing mortality rate (F) and spawning stock biomass (SSB) as the focus of the stock status as well as state management actions, and Internal Waters Processing requests. For the first time, the stock assessment includes both the bait fishery and the reduction fishery. Preliminary estimate for recruitment to age 1 in 2000 is 0.8 billion, the lowest on record. Recruitment is controlled by environmental conditions, not fishing. Recent fishing mortality on fully recruited fish is about $F=1.1$, well below the F-target. Spawning stock biomass is estimated at 66.4 million lb, well above the SSB-target, but it is beginning to decay in response to declining recruitment in recent years.

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

Current Juvenile Abundance Index (2000): 6.02 (number of individuals per unit effort).

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](#)