

Atlantic Herring Fishery Management Plan

Species Managed Under Fishery Management Plan (FMP)

Atlantic herring (*Clupea harengus*) are distributed along the Atlantic coast from North Carolina to the Canadian Maritime provinces. Schooling, or the formation of large aggregations for feeding and migration, is characteristic of herring species. This behavior begins as early as the onset of metamorphosis during larval development. Although herring schools are sometimes visible at the water's surface during the day, they typically undertake diurnal vertical migrations, sinking to the seafloor during the day and rising to the surface after dusk. Schools of adult herring make extensive migrations to areas where they feed, spawn and overwinter.

While herring is managed as one stock throughout its range in New England waters, evidence that biologically distinct stocks may exist in the Gulf of Maine region is derived from discrete larval distribution patterns, differences in spawning time and locations, and distinct biological characteristics. Atlantic herring are believed to return to natal spawning grounds throughout their lifetime. Spawning occurs in depths of 10-100 meters on coastal banks such as Jeffreys Ledge and depending on their size and age, female herring can produce from 55,000 to 210,000 eggs. Herring eggs, larvae and juveniles are preyed upon heavily by other fish such as flounder, cod and skates.

Management Plan Overview

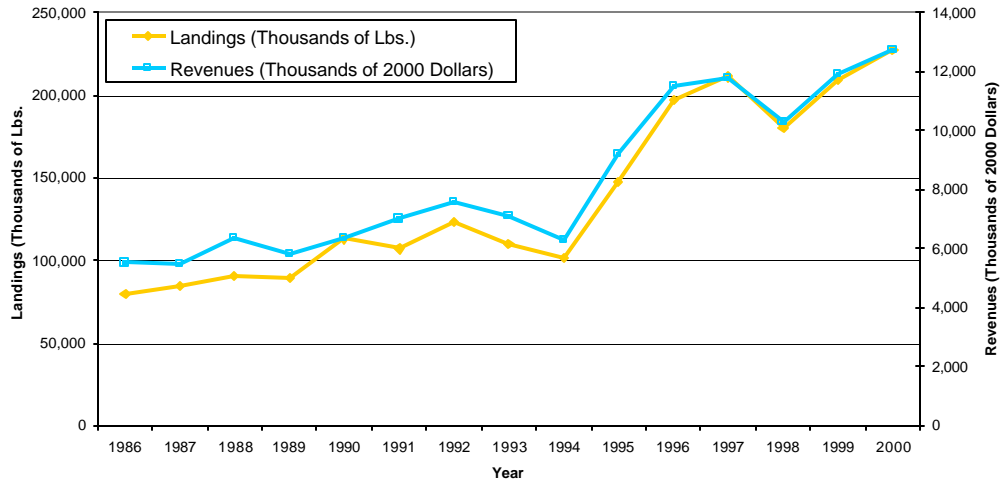
The Atlantic herring fishery was managed by the International Commission for the Northwest Atlantic Fisheries (ICNAF) from 1972 until 1976, when the United States withdrew from the organization and began developing its own herring FMP. The goals of the FMP, adopted in 1978, were to manage herring stocks on Georges Bank and in the Gulf of Maine to achieve higher levels of spawning biomass and stable recruitment, and to rebuild the juvenile herring resource and sardine fishery in the Gulf of Maine. During the interim period (1976-1978) foreign fishing for herring in U.S. waters was regulated through a preliminary management plan prepared by the National Marine Fisheries Service.

The original 1978 Herring FMP was rescinded by NMFS in 1982 because of conflicts between state and federal regulations. After several changes in the way herring was managed by both state and federal agencies, the current FMP was implemented in 1999. Herring is managed by the New England Fishery Management Council through the use of a quota system ["hard" Total Allowable Catches]. When 95% of the annual quota is caught within one of the herring management areas, that area is closed to fishing until the start of the next fishing year.

History of the Fishery

An international fishery for Atlantic herring in the Gulf of Maine began in 1967. Its principle participants were the United States and Canada with minor catches by Germany from 1969 to 1975. The stock was heavily fished using otter trawls and purse seines between 1969 and 1972, with annual catch averaging 38,000 metric tons (nearly 84 million lbs.). During the 1970s the majority of the catch was taken in state waters, reflecting the predominance of the fixed gear fishery. In recent years the increased use of mobile gear to target herring has resulted in an effort shift into federal waters. Landings of Atlantic herring reached about 227 million pounds in 2000.

Landings and Revenues in the Atlantic Herring Fishery



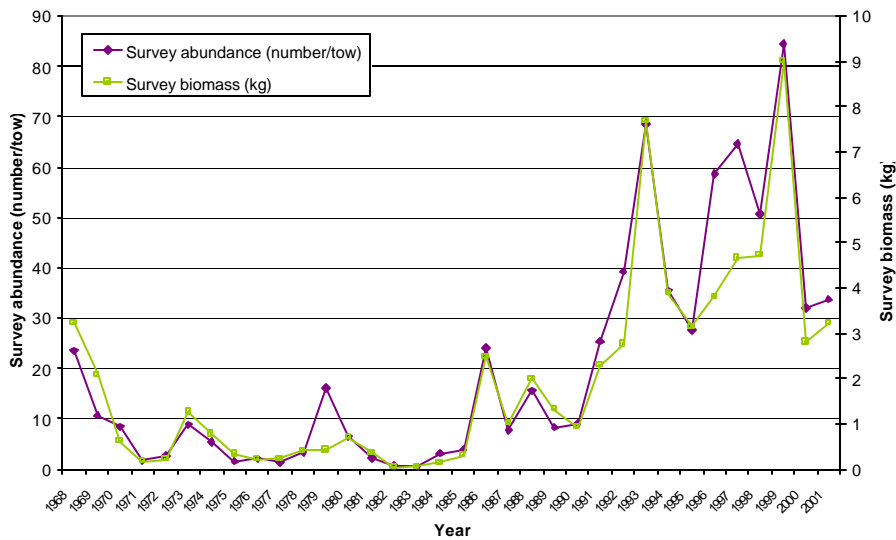
source: Herring FMP and 2001 SAFE report

NOTE: Revenues for 1998-2000 are estimates based on avg. price per lb. from 1986-1997

Fishery Status

Herring biomass began to increase substantially during the mid-80s after more than a decade of extremely low abundance, increasing an average of 0.292 kg between 1983 and 2001. The biomass of Atlantic herring reached the highest ever observed in the NMFS spring bottom trawl survey in 1999 (9 kg), a level significantly higher than that necessary to achieve maximum sustainable yield. Projections at that time, based on the latest assessment in 1998, indicated that fishing mortality continued to be low. A new herring assessment is currently under way and its results will be reported to the Council in early 2003.

Atlantic Herring Abundance Spring bottom trawl survey indices, 1968-2001



source: Atlantic Herring Stock Assessment and Fishery Evaluation Report (2001)