



**Chesapeake Bay Finfish and Habitat Investigations
Summary of 2009 Maryland Striped Bass Stock Assessment Surveys
Natural Resources Article § 4-746**

The primary objective of the Striped Bass Program of the Maryland Department of Natural Resources (MD DNR) was to monitor and biologically characterize the striped bass population in the Maryland portion of the Chesapeake Bay and to assess the status of Maryland's striped bass spawning stock. Striped Bass Program surveys provide information regarding: recruitment, relative abundance, harvest, age structure and growth, mortality, and migration. The data generated are utilized in both intrastate and interstate management processes and provides a reference point for future Atlantic coast striped bass management considerations.

Resident / premigratory striped bass harvested in the Chesapeake Bay during the summer – fall 2008 pound net and hook and line commercial fisheries ranged from 1 to 14 years of age. Four and five year old striped bass from the 2003 and 2004 year-classes dominated samples taken from pound nets, comprising 68% of the sample. Check station sampling determined that the majority of the pound net and hook-and-line fishery harvest was also composed of four and five year old individuals from the 2003 and 2004 year-classes.

The 2008-2009 commercial striped bass drift gill net fishery harvest was comprised primarily of fish between 4 and 6 years old from the 2003, 2004 and 2005 year-classes. Striped bass from the 2004 year-class comprised 46% of the total drift gill net harvest. The 2005 and 2003 (ages 4, and 6) cohorts accounted for an additional 51% of the total harvest while age 8 to 13 year-old fish contributed only 2% to the total. Striped bass present in commercial drift gill net samples collected from check stations ranged in age from age 3 to 13 (1996 – 2006 year-classes).

The spring, 2009 spawning stock survey indicated that there were 15 age-classes of striped bass present on the Potomac River and upper Bay spawning grounds. These fish ranged in age from 2 to 15 years old. Age 6 striped bass from the 2003 year-class were the most abundant component of the male spawning stock. Age 13 (1996 year-class) and age 9 (2000 year-class) females were the major contributors to 2009 total female abundance and CPUE. Age 8 and older females comprised 88% of the female spawning stock in 2009. Females younger than age 7 have been uncommon in the spawning stock since 1996; however, several females ages 4, 5, and 6 were sampled on the spawning grounds in 2009. The Chesapeake Bay striped bass spawning stock remains healthy and is closely monitored by MD DNR biologists in partnership with other coastal states and the ASMFC.

The 2009 striped bass juvenile index, the annual measure of striped bass spawning success in Chesapeake Bay, was 7.9. This was slightly below the long-term average of 11.7, but more than twice the 2008 value. During this survey, which monitors the four major spawning systems in Maryland, biologists identified and counted more than 35,000 fish of 49 species, including over 1,000 young-of-year striped bass. Variable reproductive success is a normal condition of striped bass populations. Typically, several years of average

reproduction are interspersed with occasional large and small year-classes. Large year-classes in successful spawning years like 2001, 2003 and 2005 bolster the population by offsetting less successful years. The largest year-class ever measured occurred in 1996.

During the 2009 spring trophy season, biologists intercepted 322 fishing trips, interviewed 747 anglers, and examined a total of 216 striped bass. The average total length of striped bass sampled was 913 mm TL (35.9 inches), and the average weight was 7.9 kg (17.4 lbs). Most fish sampled from the trophy fishery were between eight and thirteen years old. The 2000 year-class (age 9) was the most frequently observed year-class, constituting 29% of the sampled harvest. Average CPAH based on recreational angler interviews was 0.4 fish per hour.

In summary, Maryland commercial and recreational striped bass fisheries have been concurrently managed by the MD DNR as part of the Atlantic coastal stock under the auspices of the Atlantic States Marine Fisheries Commission (ASMFC). Data collected by MD DNR biologists are used in the management of both the recreational and commercial fisheries.