



Chesapeake Bay Finfish Investigations Summary of 2011 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.

The spring, 2011 spawning stock survey indicated that there were 17 age-classes of striped bass present on the Potomac River and Upper Bay spawning grounds. These fish ranged in age from 2 to 16 years old. Male striped bass ranged in age from 2 to 16 years old, with age 8 fish (2003 year-class) being the most abundant component of the male striped bass spawning stock. The majority of females were ages 8 to 13, with equal numbers of females collected at ages 8 (2003 year-class), 10 (2001 year-class), and 13 (1998 year-class). In 2011, age 8 and older females comprised 70% of the female spawning stock.

The 2011 striped bass juvenile index, the annual measure of striped bass spawning success in Chesapeake Bay, was 34.6. This is significantly higher than the long-term average of 11.9 and the fourth highest measured in survey's 58 year history. A total of 4,565 juvenile striped bass were collected at permanent stations in 2011. Highly variable spawning success is a hallmark of striped bass populations. Typically, several years of average reproduction are interspersed with occasional large and small year-classes. Spawning success is heavily influenced by environmental conditions such as spring flow rates and water temperature. The strong 2011 year-class shows that the spawning stock is capable of producing a large year-class when conditions are favorable. During the 2011 survey, biologists identified and counted more than 59,000 fish of 47 different species. The survey also documented an increase in the abundance of juvenile blueback herring and near-record white perch reproduction. DNR biologists have monitored the reproductive success of striped bass and other species in Maryland's portion of the Chesapeake Bay annually since 1954

During the 2011 trophy season, biologists intercepted 362 fishing trips, interviewed 824 anglers, and examined 234 striped bass. The average total length of striped bass sampled was 890 mm total length (mm TL) (35.0 inches), which was significantly smaller than that observed from 2008-2010, but was similar to 2002-2005. The average weight was 7.3 kg (16.1 lbs). Most fish sampled from the trophy fishery were between six and sixteen years old. The 2003 year-class (age 8) and 2001 year-class (age 10) were the most frequently observed cohorts, each constituting 29% of the sampled harvest. Average catch rate based on angler interviews was 0.3 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. The ASMFC and MD DNR scientists conducted the bi-annual Atlantic striped bass assessment in 2011, utilizing data provided by MD DNR. The 2011 ASMFC striped bass coast-wide assessment indicated that the Atlantic coast striped bass resource is not overfished and that overfishing is not occurring, relative to reference points defined in the assessment.