

Juvenile striped bass abundance remains steady in Virginia waters

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Field Assistants Ethan Dewald and Justin Mitchell haul a seine net on the York River. Credit: Jack Buchanan/VIMS

Preliminary results from an ongoing long-term survey conducted by researchers at William & Mary's Virginia Institute of Marine Science

suggest another average year class of young-of-year striped bass was produced in Virginia tributaries of the Chesapeake Bay in 2022.

The 2022 year class represents the group of fish hatched this spring that will grow to fishable sizes in three to four years.

The [VIMS Juvenile Striped Bass Seine Survey](#) recorded a mean value of 7.95 fish per seine haul in the Virginia portion of the Chesapeake Bay; this value is called a recruitment index by scientists.

The 2022 value is similar to the historic average of 7.77 fish per seine haul and represents the 10th consecutive year of average or above-average recruitment in Virginia waters. Although there can be [considerable variation](#) in striped bass recruitment among years, the indices observed in recent years suggest that abundance of juvenile striped bass in Virginia has been relatively stable.

Striped bass play an important role as a top predator in the Chesapeake Bay ecosystem and are a valuable resource for commercial and recreational anglers. Professor Mary Fabrizio, who directs the Juvenile Striped Bass Seine Survey at VIMS, notes that the economic and ecological value of striped bass lends significant interest to the year-to-year status of their population.

"By estimating the relative number of young-of-year striped bass," she says, "our [survey](#) provides an important measure of annual and long-term trends in the bay's striped bass population."

The VIMS survey samples 18 index sites in the Rappahannock, York and James River watersheds. Biologists sample each site five times from mid-June to mid-August, deploying a 100-foot seine net from the shore. Each fish captured in the net is counted, measured and returned to the river. These young striped bass usually measure between 1.5 and 4 inches.

Survey scientists in Virginia measured 2,236 juvenile striped bass at these stations in 2022. VIMS has been conducting the survey annually since 1967 for the Virginia Marine Resources Commission (VMRC).

The striped bass population in Chesapeake Bay has rebounded from historic lows in the late 1970s and early 1980s after fishing bans were enacted in Delaware, Maryland, and Virginia in the mid- to late-1980s. Since then, the population increased to the point that striped bass in the bay and elsewhere were considered recovered.

In 2019, scientists determined that the striped bass population was overfished and that mortality due to fishing was higher than what the [population](#) can withstand in the long term. Monitoring of juvenile striped bass recruitment will continue next year to provide managers with crucial information to sustainably manage this important species.

The Maryland Department of Natural Resources (MDNR) conducts a similar survey within Maryland's portion of the Chesapeake Bay. In 2022, MDNR recorded a below-average year class. Differences between Maryland and Virginia indices are not uncommon. For example, in 2013, 2016, 2019, 2020 and 2021 MDNR recorded below-average year classes in Maryland, while VIMS recorded average or above-average year classes in Virginia. The causes of such differences vary annually and can be difficult to determine. Striped [bass](#) populations, however, are supported by strong year classes which can mitigate the impact of less productive years.

Provided by The College of William & Mary

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