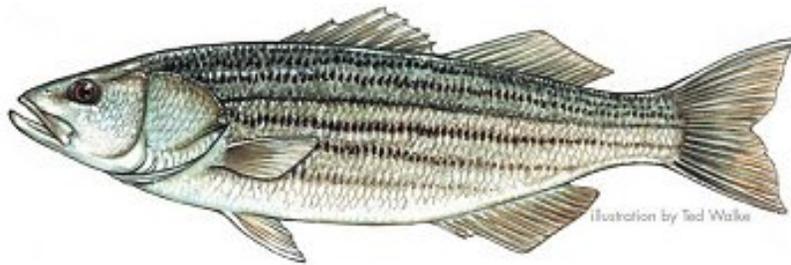


# **Delaware Estuary**

## **Delaware and Philadelphia Counties**

### **2016 Striped Bass Survey**

The Pennsylvania Fish and Boat Commission (PFBC) assessed the Striped Bass spawning stock in the Delaware Estuary between May 4 and 23, 2016. The survey was conducted at 21 index sites ranging from the mouth of Rancocas Creek, NJ (river mile 109) downriver to the mouth of Raccoon Creek, NJ (river mile 80). Each index site was sampled twice using an electrofishing boat during daylight hours.

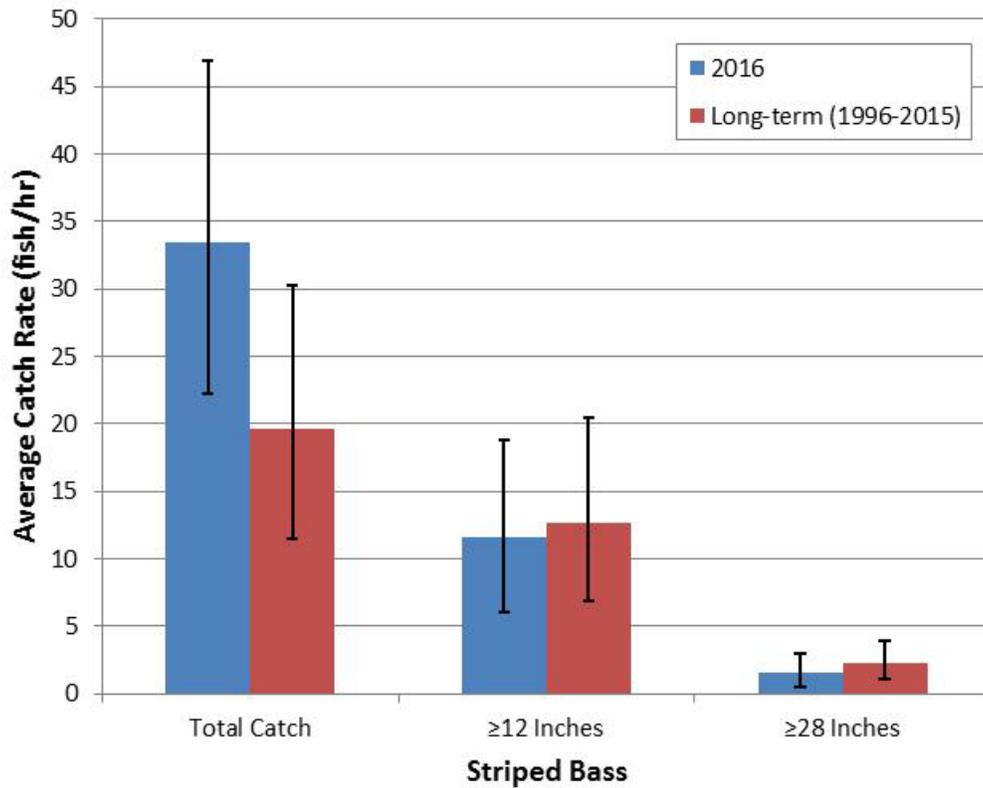


A total of 521 Striped Bass were captured in 2016. Males accounted for 54% of the total catch and ranged from 5 to 39 inches in length, while females accounted for 14% of the total catch and ranged from 18 to 49 inches in length. The number of females captured was the third highest of the time series from 1996 to 2016 and included a high number of fish between 18 and 28 inches in length. Sex could not be determined for the remaining 33% of fish, mainly because they were small, sexually immature juveniles. Those fish ranged from 4 to 16 inches in length.

The 2016 electrofishing catch rates indicated that the abundance of larger Striped Bass in the estuary should improve in the coming years based on the high number of small, young fish and high number of small females captured. The 2016 total catch rate was 33.4 fish/hr and was the third highest catch rate of the time series from 1996 to 2016 (see Figure 1). The total catch was heavily influenced by the high number of small, young fish <12 inches in length, mainly males and sexually immature juveniles, which

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accounted for 55% of the total catch. These fish were primarily from the 2014 and 2015 year classes. The 2016 catch rate for fish  $\geq 12$  inches was 11.5 fish/hr and was very similar to the long-term average of 12.7 fish/hr. The catch rate for fish  $\geq 28$  inches was 1.5 fish/hr and was the third lowest catch rate of the time series from 1996 to 2016; however, as noted above, the abundance of fish  $\geq 28$  inches should improve in the coming years based on the high number of small, young fish and high number of small females captured combined with the more restrictive recreational and commercial fishing regulations implemented coastwide in 2015.



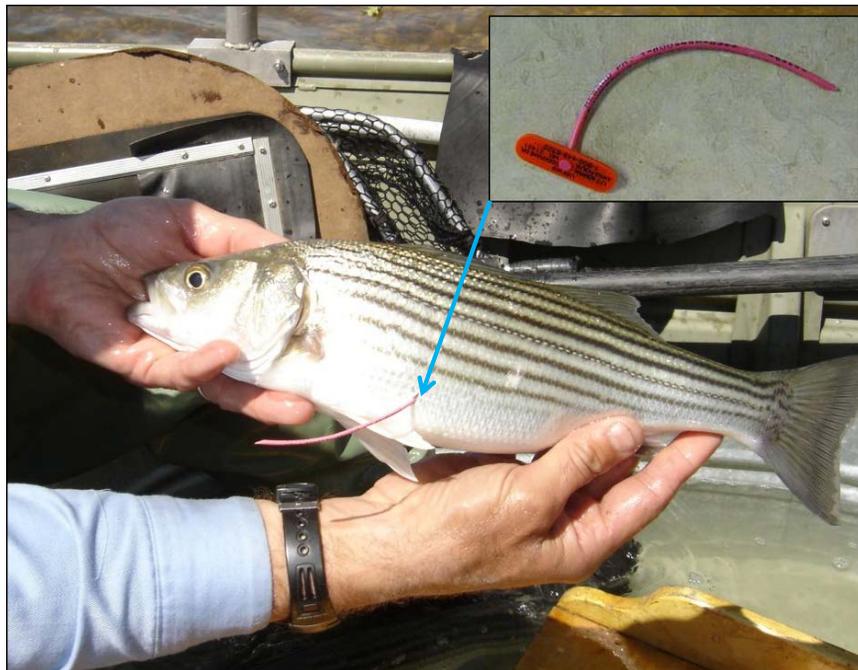
**Figure 1.** Electrofishing catch rates for Striped Bass captured in the Delaware Estuary between May 4 and 23, 2016 compared to corresponding long-term averages (1996 to 2015). Vertical black bars depict the 95% confidence intervals.

A total of 255 Striped Bass  $\geq 16$  inches in length were tagged with a pink colored U.S. Fish and Wildlife Service reward tag in 2016 (see photo), as part of a multi-state, coastwide effort. Information gathered from tagging programs is dependent on angler

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reports. Tag reports allow fisheries biologists to monitor coastal movement patterns, determine where fish are harvested, estimate annual fishing mortality, and document angler release rates.

Between 1995 and 2015, the PFBC tagged a total of 4,591 Striped Bass in the Delaware Estuary. As of December 31, 2015, 17% of the 4,591 tagged fish were reported as caught. Recreational and commercial fishermen accounted for 90% and 7% of the tagged fish caught, respectively, while 3% were credited to other collectors, such as scientific researchers. Although underreporting by commercial fishermen is a known problem, the tag return ratio was generally consistent with coastwide trends in harvest. For instance, in 2015, recreational anglers accounted for nearly 80% of the Striped Bass harvest by weight and 70% of the harvest by number along the coast.

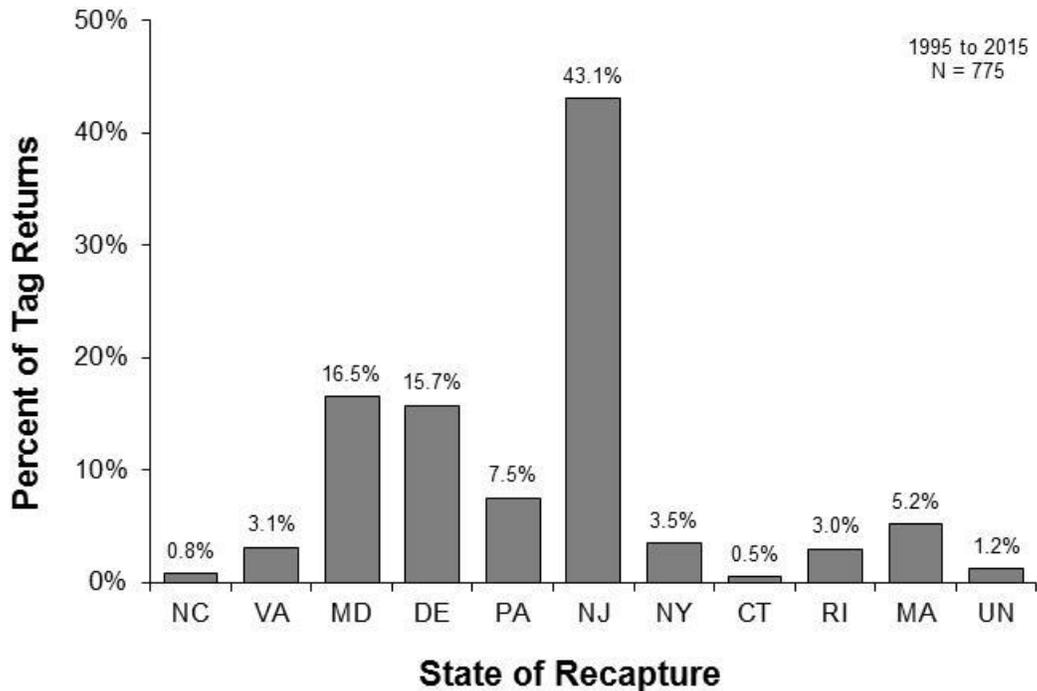


*Note the three inch pink spaghetti-like tag near the tip of the left pectoral fin. Please report reward tags to the U.S. Fish and Wildlife Service by calling 1-800-448-8322.*

Striped Bass tagged by the PFBC in the Delaware Estuary were caught by anglers fishing waters ranging from North Carolina to Massachusetts. Since 1995,

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approximately 75% of the tagged Striped Bass were caught in New Jersey, Maryland, and Delaware, while the remaining 25% were caught in Pennsylvania, Massachusetts, New York, Virginia, Rhode Island, North Carolina, and Connecticut. See Figure 2 for the state-by-state breakdown. Fifty percent of the tagged fish caught were released; 48% were harvested; and 2% were found dead, dying, or have been used for scientific research. Recreational and commercial fishermen harvested 48% and 78% of their Striped Bass catches, respectively. The ratio of female to male Striped Bass in the harvest was 1.5 to 1, indicating substantially more harvest pressure on the female segment of the population. This ratio was likely influenced by the large number of tagged males that were smaller than legal length in many fisheries along the Atlantic Coast, which prohibited their harvest.



**Figure 2.** Percent of tag returns by state of recapture for Striped Bass tagged by the Pennsylvania Fish and Boat Commission in the Delaware Estuary between 1995 and 2015. UN = unknown recapture location.

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Fishing regulations in the Delaware River and Estuary vary by state, location (tidal vs. non-tidal), and month. If you plan to fish for Striped Bass in the Delaware River and Estuary, it is recommended that you review the [Pennsylvania Summary of Fishing Regulations and Laws for the Delaware River and Estuary](#). Be advised that New Jersey regulations apply if you cross the PA/NJ boundary line, which is in the Estuary/River. In addition to a valid Pennsylvania fishing license, anglers targeting Striped Bass in the Delaware River and Estuary below Trenton Falls are required to register through the PFBC's free on-line system, the [Pennsylvania Saltwater Angler Registry \(PA-SARP\)](#). Likewise, if fishing across the state line in New Jersey, Pennsylvania anglers must also register in the free [New Jersey Saltwater Recreational Registry Program](#).

Anglers wishing to consume Striped Bass are advised to consult the fish consumption advisory information provided in the rear of the Pennsylvania Fishing Summary. There is currently a one meal per month advisory for Striped Bass over 28 inches in length. Slot size Striped Bass (21 to 25 inches in length) are covered by the general, statewide advisory for recreationally caught sportfish of one meal per week.

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