

ASSESSING & ENHANCING VIRGINIA'S OYSTER STOCK

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EXECUTIVE SUMMARY

The native oyster is one of the Chesapeake Bay's keystone species and of great ecological, economic, and historical importance in the Commonwealth. Fortunately, during the 2019 legislative session the General Assembly authorized an increased investment in efforts to improve the pace of ecological and fishery restoration efforts. These efforts support maintenance of the states' commercial fishery and the wide array of ecosystem services provided by healthy oyster habitat. With additional enhancement activities taking place and growth in the wild population of oysters throughout the state, now is the time to further investigate the success of these efforts and plan for the successful management of this resource in the future.

CHALLENGE

The Chesapeake (meaning "great shellfish bay" in Algonquin) Bay once boasted oyster reefs so expansive they posed navigation hazards to explorers and watermen. Today, oyster populations in the Chesapeake Bay and its tributaries remain a fraction of their historical numbers. Overfishing, disease, and pollution have all taken their toll on this keystone species. There was a time when the oyster population in the Bay was so vast, the entire 19 trillion gallons of water could be filtered in less than a week. Today, our current population takes a whole year to filter the Bay.

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With their three-dimensional structure and ability of each adult oyster to filter up to 50 gallons of water per day, they provide numerous ecolog-

ical benefits including habitat for fish and other shellfish, pollution reductions, and increased water clarity. In addition, oysters are becoming more and more important to coastal resiliency efforts as they help effectively protect both intertidal and upland habitats.

While Virginia and its partners have invested significant funding and efforts into oyster restoration and replenishment, there is still much work to do. Because of the conservation successes we have experienced, wild oyster growth is now occurring and successful restoration projects abound. Now, our historical assessments need to be updated in order to ensure we direct our future efforts most efficiently in order to maximize ecological and economic benefits to the Commonwealth.

SOLUTION

Restoring Virginia's oyster population will require broad partnerships, wise management of the existing oyster resource, and adequate resources. Fortunately, targeted successful restoration efforts are being implemented by a host of federal, state, and nongovernmental organizations to increase the oyster population and meet the oyster goal for the Chesapeake Bay Watershed Agreement.¹ At the same time, the Virginia Marine Resources Commission (VMRC) has strived to implement a fishery management plan that ensures the overall health of the oyster population while allowing for the culturally significant fishery to remain active.

These efforts have led to the successful restoration of oyster habitat in two Virginia rivers, the Lafayette and the Eastern Branch of the Elizabeth. Habitat restoration efforts are expected to be completed in the Great Wicomico in 2021 and restoration efforts are nearing completion in the Lynnhaven and Piankatank Rivers.

In addition, due to wise management by VMRC, oyster harvests have surged from a low of approximately 22,000 bushels in the early 2000's to an average of approximately 550,000 bushels over the past several harvest seasons.²

More robust monitoring and bringing additional resources and expertise to VMRC help better gauge our success and better manage this resource in the future. Although current monitoring efforts provide beneficial information for a variety of areas across the state's shellfish growing water, completing a more robust survey of the state's oyster population would help to target restoration efforts, provide additional information for fishery managers, and help ensure

limited restoration funds are spent as efficiently as possible. In addition, stock assessments are critical to successful fishery management efforts and VMRC does not currently employ a person with such specific expertise.

CONCLUSION

The Commonwealth should invest the resources necessary to supplement our current understanding of oyster populations in state waters while also planning for improved management and successful restoration activities in the future. To accomplish these goals the Commonwealth should invest the necessary resources to accomplish our policy recommendations.

POLICY RECOMMENDATIONS

Direct the Virginia Marine Resources Commission and the Virginia Institute of Marine Science to comprehensively map and sample all oyster growing areas in the waters of the Commonwealth.

Appropriate approximately \$112,000 to hire a stock assessment scientist (1 FTE) in order to supplement the VMRC's management of this important resource and other species that are biologically connected to oyster habitat in Virginia's waters.

American Oystercatchers (*Haematopus palliatus*) Amid Atlantic Oyster (*Crassostrea virginica*) Reef - Eastern Shore, Va

Image credit: Tori Kennedy

