



TESTIMONY IN SUPPORT OF SENATE BILL 629 - SAV PROTECTION ZONES AND HYDRAULIC CLAM DREDGES (AQUATIC HABITAT PROTECTION ACT)

To be heard by Chairman Pinsky and Members of the Education, Health, and Environmental Affairs Committee on 2/25/20

ShoreRivers and the undersigned organizations and individuals respectfully request a **favorable report on Senate Bill 629**.

Submerged Aquatic Vegetation (SAV) as defined by the Department of Natural Resources are rooted vascular plants that generally grow beneath the water surface, but may have leaves that extend to and grow on the surface of the water. They are a critical part of the Chesapeake ecosystem, providing food, habitat and oxygen, while also absorbing nutrients, trapping sediment, and preventing erosion. SAV contributes to better water quality, benefiting the economy, society, and ecology of the Bay. As part of the Chesapeake Bay Watershed Agreement, signed in 2014, Maryland has committed to increasing SAV habitat to 185,000 acres of underwater grasses in the Bay, with a measured target of 130,000 acres by 2025. Progress reached an estimated 108,000 acres of underwater grasses in 2018.

To assist in reaching Maryland's SAV habitat goals and protecting SAV beds, SAV Protection Zones are delineated by the Department to protect SAV beds from the impacts of clam harvesting, specifically the hydraulic escalator clam dredge. According to the Department of Natural Resources, the hydraulic escalator clam dredge uproots plants, suppresses seed germination, and greatly restricts or completely inhibits recovery¹. To avoid this, the Department delineates the SAV Protection Zones using data collected annually by the Virginia Institute of Marine Science (VIMS). **SB629 will help Maryland reach their SAV habitat goals, help watermen avoid potential impacts to their gear, and modernize the SAV Protection Zone process.**

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Reaching our habitat goal:

This bill will require the Department of Natural Resources to increase the frequency of the SAV Protection Zone updates from every three years to annually. Three-year updates do not account for new bed establishment or bed expansion. For example, if a new SAV bed were to grow in 2020 and 2021, the bed would be vulnerable to the hydraulic escalator clam dredge until the 2022 update. While this bed may be included in Protection Zones in the future, the bed may already be damaged beyond repair. Comparatively, Virginia's criteria for delineating SAV restoration areas includes annual updates and publication of the most recent year survey conducted by VIMS.ⁱⁱ Considering the Department receives the VIMS data annually, we urge the Department to consider protecting grass beds at the earliest sign of growth which would require annual updates.

This legislation will further increase protection for existing SAV beds and promote growth and expansion by including 150ft buffers around each SAV Protection Zone. The hydraulic escalator clam dredge is designed to "liquefy" the bottom sediment, blasting water jets into the substrate, resuspending it in the water column. According to studies by the Department of Natural Resources, sediment suspended in the water column caused by the hydraulic clam dredge causes 100% mortality to oysters within 75ft, resulting in the Department implementing 150ft setback regulations from all oyster beds and sanctuaries. Similarly, studies show that sediment suspended from the hydraulic clam dredge also negatively impacts nearby SAV by smothering the leaves and tubers, blocking sunlight from reaching the vegetation, and causes structurally weaker plants.ⁱⁱⁱ Implementing the same 150ft buffers to SAV Protection Zones as those required to oyster beds will result in healthier, stronger, and expanded SAV beds. Comparatively, the Maryland Department of the Environment may include special conditions for a dredging permits or licenses if there is potential SAV impact such as prohibiting dredging to occur within 500 yards of an SAV bed.^{iv}

Benefit watermen:

Fortunately, clamming watermen avoid entering grass beds as it can damage and clog their harvest equipment, the hydraulic escalator clam dredge. Updating SAV Protection Zones annually will provide watermen with the latest available data as to where there may or may not be SAV. This legislation will require the Department to provide online accessible maps of the SAV Protection Zones, giving watermen better access to real-time data in a visual format.

Annual updates will not only identify new areas of new SAV growth that need to be included in SAV Protection Zones, but also identify existing SAV Protection Zones that may no longer qualify as SAV Protection Zones. If a SAV bed is mapped with a density of 10% or less over six consecutive years, that Protection Zone will then be reopened to the hydraulic escalator dredge for clam harvest. Annual updates to SAV Protection Zones may result in more harvestable clam bottom opened annually as opposed to every three years.

Modernize SAV Protection Zones:

This bill will require the Department of Natural Resources to publish maps of SAV Protection Zones online, assisting both watermen and enforcement and modernizing the zones. Additionally, this bill will update the original legislation, passed in the early 2000's. Updating SAV Protection Zones annually will not result in a significant cost for the Department of Natural Resources as the grass beds are mapped annually regardless by the Virginia Institute of Marine



Science. These annual fly-overs produce the data that the Department then uses to identify and delineate the SAV Protection Zones. Considering the Department must include SAV beds that have been mapped from the previous 5 years, there is no need for ground truthing data once it is received from VIMS. Additionally, this legislation will assist Maryland Natural Resource Police by removing the requirement to place buoys at each SAV Protection Zone. Many locations are not suitable for buoys due to water depth and boat traffic and as such are not all currently marked with buoys.

Finally, this legislation will request the Department to complete an updated study of the indirect and direct impacts of the hydraulic escalator dredge on SAV. The last study performed by the Department on the hydraulic escalator dredge was completed in 1955, only a few years after the dredge was first invented. While this study focused on the impacts of the dredge on nearby oyster beds, it did note that the dredge was damaging to SAV directly. The Department completed a literature review of the hydraulic escalator dredge in the Coastal Bays in 2006, which again found that the dredge was directly catastrophic to SAV. Neither of these studies explored the impact of suspended sediment on nearby SAV beds or explored alternatives and or recommendations for how to limit environmental impacts. Considering evolved technology and understanding of the Chesapeake Bay, which is characteristically different from the Coastal Bays, we support an updated study by the Department to be presented to Maryland legislators.

The Chesapeake Bay once had more than 600,000 acres of SAV. Knowing how important SAV is to our environment and economy, our state has set a goal of reaching 185,000 acres of SAV, a significant amount of more acres than our current 108,000 acres mapped. SB629 will assist Maryland in reaching this habitat goal by strengthening SAV Protection Zones through annual updates, buffers, accessible maps, and further studying how our state can support a robust clam industry that does not result in destroyed SAV beds.

We respectfully request a favorable review of SB629.

Sincerely,

Blue Water Baltimore

League of Women Voters
of Maryland

Maryland Sierra Club

Chesapeake Legal Alliance

League of Women Voters
of Queen Anne's County

Potomac River Network

Chesapeake Wildlife
Heritage

Maryland Conservation
Council

Queen Anne's
Conservation Association

Clean Water Action

Maryland League of
Conservation Voters

ShoreRivers

Cleanwater Linganore

Maryland Legislative
Coalition

St. Mary's River
Watershed Association

Corsica River Conservancy

Waterkeepers Chesapeake

ⁱ Tarnowski, M. 2006. A Literature Review of the Ecological Effects of Hydraulic Escalator Dredging. MD DNR Fisheries Technical Report 48. 30pp.

ⁱⁱ Virginia marine Resources Commission. Submerged Aquatic Vegetation (SAV) Guidance: Criteria Defining SAV Beds and Delineating Areas Where There is Potential for SAV Restoration.

ⁱⁱⁱ Ruffin, K. K. 1998. The Persistence of Anthropogenic Turbidity Plumes in a Shallow Water Estuary. *Estuarine, Coastal and Shelf Science*. 47, 579-592.

^{iv} Chesapeake Legal Alliance. 2019. Existing Chesapeake Bay Watershed Statutes and Regulations Affecting Submerged Aquatic Vegetation. 39pp.

