

ShoreRivers Testimony HB807.docx.pdf

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Position: FAV



Testimony in Support of House Bill 807 Natural Resources – Submerged Aquatic Vegetation Surveys

February 19, 2024

Thank you for this opportunity to submit testimony in **SUPPORT** of **HB 807**.

This bill alters the definition of “aerial survey” for purposes of surveying submerged aquatic vegetation (SAV) to include any other survey that uses data that (1) pertains to SAV in the State and (2) is approved by the Department of Natural Resources (DNR). Conforming changes are made to incorporate the “SAV survey,” instead of the aerial survey. The bill also requires DNR to study and report on the implications and feasibility of using alternative methods other than an aerial survey to delineate SAV protection zones. By December 31, 2024, DNR must submit the report to the General Assembly.

Submerged aquatic vegetation plays a pivotal role in maintaining the health and balance of our watersheds by providing:

Biodiversity Preservation: SAV provides essential habitat and nursery grounds for a wide variety of aquatic species. By preserving these underwater meadows, we ensure the survival of valuable ecosystems, contributing to the overall biodiversity of Maryland's waters.

Water Quality Improvement: SAV serves as a natural filter, improving water quality by absorbing excess nutrients and pollutants. Their presence also **sequesters carbon, helping to mitigate the effects of climate change** and storm surge, and enhancing the resilience of coastal areas.

Economic Benefits: Preserving SAV contributes significantly to the economic well-being of our state. Healthy aquatic ecosystems support commercial fisheries as well as recreational activities such as fishing, boating, and bird watching, driving tourism while providing livelihoods for watermen and many local communities.

Additionally, as part of the 2014 Chesapeake Bay Watershed Agreement, **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 76,462 acres of underwater grasses in 2022, **53,538 acres short of the 2025 goal**.

Given the lack of progress toward the goal of 130,000 acres of restored SAV by 2025, protecting SAV beds and areas adjacent to existing SAV beds and their seed bank is imperative to meeting restoration goals. These areas likely have the most appropriate bottom type, and their proximity to extant SAV beds makes them, according to the Chesapeake Bay Program's SAV Restoration Guide, the number one “*high-priority site-selection measurement*,” stating “*site selection is one of the most important, if not the most important, elements to consider to facilitate SAV survival and expansion (Fonseca 2011). A fundamental rule of thumb is to plant in similar conditions from which the seeds or plants were harvested (Fonseca et al. 1998; Fonseca 2011). The planting site should also be one where SAV has grown previously or where nearby SAV beds are present. These basic guidelines help to ensure that conditions at the planting site can support SAV growth.*”

ShoreRivers

Isabel Hardesty, Executive Director
Annie Richards, Chester Riverkeeper | Matt Pluta, Choptank Riverkeeper
Ben Ford, Miles Wye Riverkeeper | Zack Kelleher, Sassafras Riverkeeper

The current regulatory language for determining protection zones specifies that the VIMS aerial flyover survey **is the only way data for the delineation of SAV Protection Zones can be collected**. New technologies like high-resolution or spectrographic imagery on satellites and machine-learning or AI image processing are not allowable under current regulations, even as the cost of the flyover continues to increase every year, and is dependent on weather and water clarity.

Giving the Department of Natural Resources the opportunity to determine which technologies are best for science-based and timely data-gathering increases the flexibility for DNR to evaluate and choose the best tool for the job. **Supporting changes to regulatory language to allow for modern data collection methods, such as satellite or drone imagery and machine learning-assisted processing, may improve the accuracy and responsiveness of SAV mapping.** This modernization would ensure that SAV Protection Zones remain up-to-date and reflective of current conditions.

Modernized data collection and processing may allow DNR to increase the frequency with which SAV Protection Zones are evaluated and delineated. **Advocating for yearly updates to SAV Protection Zones based on mapped data helps in addressing changes in SAV bed size, location, and shape.** This approach ensures that protection measures remain relevant and adaptable, mitigating issues like the proposed removal of protection areas despite reported increases in SAV Bay-wide.

Image processing and analysis are also very expensive and time-consuming. The lag time between when images are taken and when the GIS maps are produced can take up to a year, creating situations like this year, where **5,000 acres of SAV Protection Zones are being removed at the same time that SAV beds expanded by 12% Bay-wide.**

HB 807 presents an opportunity to modernize the approach to surveying submerged aquatic vegetation (SAV) in Maryland. By expanding the definition of "aerial survey" to encompass alternative methods approved by the Department of Natural Resources (DNR), such as satellite imagery and machine learning, this bill may not only enhance data collection accuracy and timeliness but also support the state's commitment to biodiversity preservation, water quality improvement, and economic resiliency. The proposed changes align with Maryland's goals for SAV habitat restoration, ensuring that protection measures remain adaptive and effective in the face of evolving environmental challenges. Therefore, I urge full support for HB 807 to advance science-based decision-making and safeguard the health of our aquatic ecosystems for generations to come.

Sincerely,

Benjamin Ford, Miles-Wye Riverkeeper, on behalf of ShoreRivers

Stein Testimony HB 807 - Senate.pdf

Uploaded by: Dana Stein

Position: FAV

DANA M. STEIN
Legislative District 11B
Baltimore County

—
SPEAKER PRO TEM
—

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Delegate Dana Stein Testimony in Support of HB 807
Natural Resources - Submerged Aquatic Vegetation Surveys

Chairman Feldman, Vice Chairwoman Kagan, and Members of the Education, Energy, and the Environment Committee:

Submerged Aquatic Vegetation (SAV) are grasses, algae, and other plants that are rooted and grow completely underwater. They provide many benefits to Bay ecosystems, particularly by providing habitat for crabs, fish, and other aquatic organisms. SAV also help prevent erosion, remove sediments, and absorb nutrients in the Bay.

The 2014 Chesapeake Bay Watershed Agreement set a goal of restoring 185,000 total acres of SAV Bay-wide, with 130,000 acres to be restored by 2025. We're only 60% of the way there. 76,462 acres have been restored to date, leaving the Bay 53,538 acres short of the 2025 goal.

This makes it important to protect existing SAV beds and their seed banks. Since 2001, DNR has mapped SAV Protection Zones in the Bay using the Virginia Institute of Marine Sciences (VIMS) annual aerial flyover survey to delineate the zones. However, the cost of these surveys is increasing, and results are dependent on weather and water clarity. It can also take up to a year for images to be processed and GIS maps produced.

This bill, with DNR's amendment, enables DNR to use any DNR-approved survey that meets certain criteria related to the survey's geographic scope and methodology, in addition to the VIMS surveys. These could include satellite or drone imagery and machine-learning-assisted processing.

Also, under the bill, DNR is to study and report on the implications and feasibility of using alternative methods other than an aerial survey to delineate SAV protection zones.

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Uploaded by: Dylan Behler

Position: FAV



Wes Moore, Governor
Aruna Miller, Lt. Governor
Josh Kurtz, Secretary
David Goshorn, Deputy Secretary

March 26, 2024

BILL NUMBER: House Bill 807 – Third Reader

SHORT TITLE: Natural Resources - Submerged Aquatic Vegetation Surveys

DEPARTMENT’S POSITION: SUPPORT

EXPLANATION OF DEPARTMENT’S POSITION

The Department supports the intent of this bill, which suggests modifying the definition of “aerial survey” for surveying submerged aquatic vegetation (SAV) for SAV protection zone delineation. The Department is open to considering alternative survey methods once they have been thoroughly vetted, approved, and made available for management use, given the rapid advancement in survey technologies.

We appreciate the sponsors’ inclusion of our amendments, which lessen the fiscal and operational impact on the Department. These amendments include clarifying the definition of “SAV survey” and ensuring that an SAV survey and updated delineation continue to be mapped and cannot be “observed”.

The Department also supports the study on the potential implications and feasibility of using alternative survey methods to delineate SAV protection zones. We appreciate the deadline extension for the SAV report from December 31, 2024 to December 1, 2025 through the House amendments.

BACKGROUND INFORMATION

The Department has contracted the Virginia Institute of Marine Sciences (VIMS) to conduct annual surveys to determine the abundance and distribution of submerged aquatic vegetation (SAV) in Maryland waters of the Chesapeake Bay, its tidal tributaries, and the Atlantic Coastal Bays. Currently, VIMS uses both aerial and satellite imagery in its annual SAV survey. This survey is the oldest and most comprehensive SAV survey in the Chesapeake and Atlantic Coastal Bays and is utilized by the State of Maryland, the Commonwealth of Virginia, and many federal agencies such as the Environmental Protection Agency Chesapeake Bay Program. The survey is used to assess SAV and water clarity criteria assessments, track restoration goals, and assess impacts on SAV habitat. By contracting with VIMS, the Department ensures consistent standard operating procedures and guidelines for the acquisition of aerial and satellite imagery, photo interpretation, SAV bed delineation, bed density estimates, and quality assurance and quality control compliance.

BILL EXPLANATION

The proposed bill aims to modify the definition of "aerial survey" for the purpose of surveying submerged aquatic vegetation (SAV) to include other forms of survey methodologies that encompass certain geographic areas. Additionally, the bill mandates the Department to conduct a study and submit a report on the feasibility and implications of using alternative methods, apart from aerial surveys, to delineate SAV protection zones on or before a certain date.

Contact: Dylan Behler, Director, Legislative and Constituent Services
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Arundel Rivers Testimony crossover FAV HB807 SAV S

Uploaded by: Elle Bassett

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Testimony in SUPPORT of House Bill 807 – Natural Resources – Submerged Aquatic Vegetation Surveys

Education, Energy, and the Environment
March 26, 2024

Dear Chair Feldman and members of the Committee,

Thank you for the opportunity to submit testimony in **SUPPORT OF HB807**, on behalf of Arundel Rivers Federation. Arundel Rivers is a non-profit organization dedicated to the protection, preservation, and restoration of the South, West and Rhode Rivers with over 3,500 supporters. Our mission is to work with local communities to achieve clean, fishable, and swimmable waterways for present and future generations.

Submerged aquatic vegetation, or “SAV,” 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.

To assist in reaching and understanding our progress towards 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. These Zones are delineated using data collected annually by the Virginia Institute of Marine Science (VIMS), which relies on cooperative weather, funding, and seasonably appropriate timing for all native SAV species.

HB807 will broaden the accepted measures of identifying SAV Protection Zones by including Chesapeake Bay Program approved survey methods. **Expanding the definition of “survey” to include new methods will allow for species that are traditionally missed by VIMS annual fly-overs, such as horned pondweed, to be considered in SAV Protection Zones and to count towards our restoration habitat goals.**

The South, West, and Rhode Rivers have reportedly had little to no SAV growth in the past decade according to the VIMS aerial survey. However, Arundel Rivers coordinates the SAV Watcher Volunteer program, which has resulted in multiple beds of horned pondweed identified, yet not counted towards our restoration goals by the state, in these waterways. This program is designed to train volunteers and nonprofit organizations to survey SAV beds as a way to ground-truth the VIMS data. Beds of horned pondweed are often missed during VIMS aerial flyovers because it is an early season blooming grass and it is not in peak biomass during the fly-overs. It would be logical and beneficial to utilize the robust set of data collected by trained citizen scientists as an additional method of surveying for SAV.

Arundel Rivers Federation encourages the protection of SAV to improve local water quality, fisheries economy, and meet our restoration goals, and respectfully requests a **FAVORABLE REPORT on HB807**.

Sincerely,

A handwritten signature in cursive script that reads "Elle Bassett".

Elle Bassett
South, West and Rhode Riverkeeper
Arundel Rivers Federation

HB 807 - CBF - FAV - EEE.pdf

Uploaded by: Matt Stegman

Position: FAV



CHESAPEAKE BAY FOUNDATION

*Environmental Protection and Restoration
Environmental Education*

House Bill 807

Natural Resources – Submerged Aquatic Vegetation Surveys

Date: March 26, 2024

Position: **Favorable**

To: Education, Energy, and the Environment Committee

From: Doug Myers
Maryland Senior Scientist

Chesapeake Bay Foundation (CBF) **SUPPORTS** HB 807 which acknowledges that there are additional survey methods such as satellite and Remotely Operated Vehicles (ROV) surveys for SAV that can augment the Virginia Institute of Marine Science (VIMS) aerial survey currently required by multiple regulatory programs as the primary mechanism for determining potential impact to Submerged Aquatic Vegetation (SAV) from permitted activities in SAV Protection Zones.

As technology improves, new platforms allow for a much more geographically defined mapping of seagrasses than the aerial surveys allow. In fact, some of these methods are used to “ground truth” the aerial surveys because they can refine SAV polygons mapped by VIMS and verify seagrass species, especially in mixed-species beds. However, several regulatory programs require the use of the VIMS surveys for a 3-year period to identify the risk that a development project would impact SAV.

HB 807 gives Department of Natural Resources the authority to approve the use of these new methods to be used in conjunction with the aerial surveys as a more accurate method to identify and protect SAV in Maryland’s waters narrowly for the SAV Protection Zones. In time, and informed by the implementation of this bill, it is expected that these techniques, coupled with improving satellite data collection, could replace the current VIMS survey methodology. At that time, other regulatory programs that require the VIMS aerial survey method may need to be amended to require the new methods.

CBF urges the Committee’s FAVORABLE report on HB 807.

For more information, please contact Matt Stegman, Maryland Staff Attorney, at mstegman@cbf.org.

Maryland Office • Philip Merrill Environmental Center • 6 Herndon Avenue • Annapolis • Maryland • 21403

The Chesapeake Bay Foundation (CBF) is a non-profit environmental education and advocacy organization dedicated to the restoration and protection of the Chesapeake Bay. With over 200,000 members and e-subscribers, including 71,000 in Maryland alone, CBF works to educate the public and to protect the interest of the Chesapeake and its resources.