Summer QUARTERLY MEETING – August 21st, 2024

Chesapeake Bay Program

Submerged Aquatic Vegetation Workgroup Updates

Brooke Landry
Maryland DNR and
Chair, SAV Workgroup

Through the Chesapeake Bay Watershed Agreement*, the Chesapeake Bay Program has committed to…*

Goal: ***Vital Habitats***

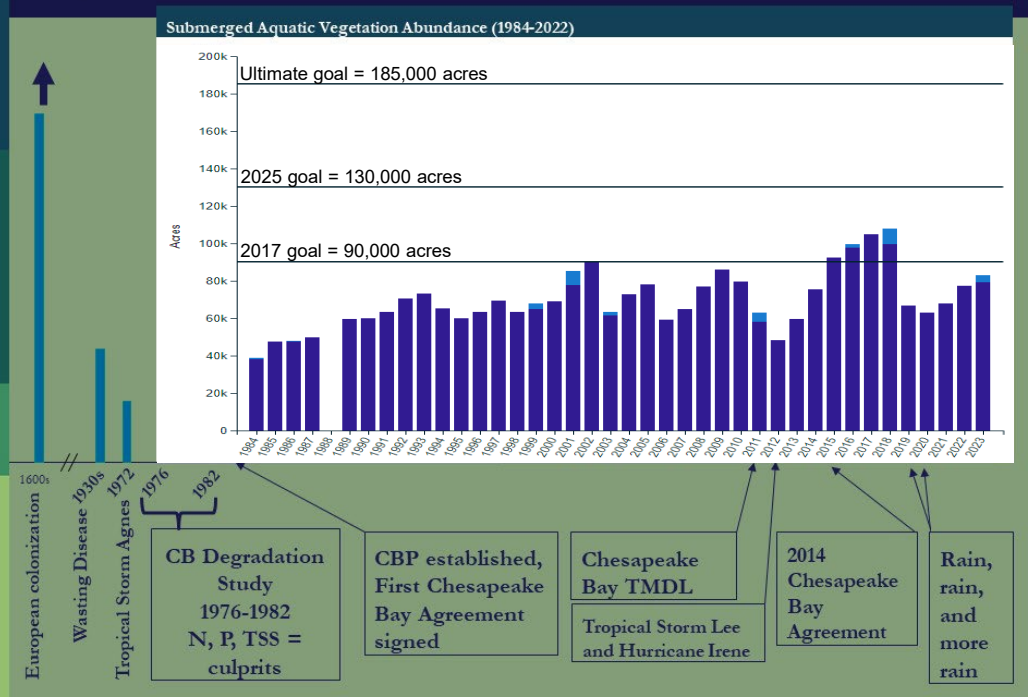
Outcome:

Sustain and increase the habitat benefits of SAV in the Chesapeake Bay. Achieve and sustain the ultimate outcome of 185,000 acres of SAV Bay-wide necessary for a restored Bay. Progress toward this ultimate outcome will be measured against a target of 90,000 acres by 2017 and 130,000 acres by 2025.

2023 #s are in!

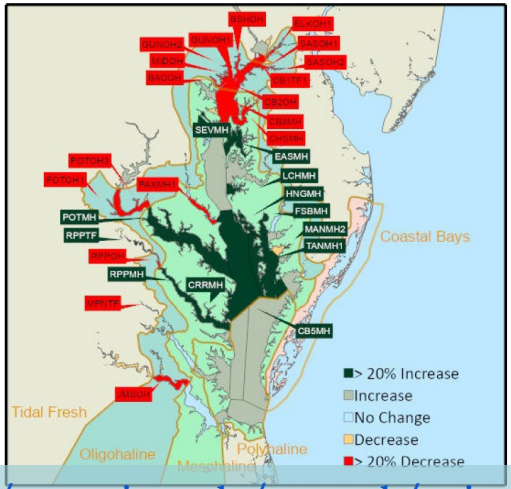
What is our Progress?

Progress towards the Bay-wide SAV goal



Final SAV #s were up in 2023:

- 79,234 acres were mapped in 2023.
- 3,703 additional acres of SAV are estimated for a portion of the Potomac that was not mapped.
- 82,937 total acres of SAV estimated for 2023(+7%).
- This is 61% of the 2025 target and 45% of the ultimate 185,000-acre outcome.



https://www.vims.edu/research/units/programs/sav/access/maps/index.php

https://www.chesapeakeprogress.com/abundant-life/sav

Shallow Water Habitat Sentinel Site Program

Request to Management Board: "We ask that the MB endorse the necessity of **establishing a Shallow Water Habitat Sentinel Site Program** and guide the CBP to take the necessary steps to do so."

This tier-3 monitoring effort would not only monitor the impacts of climate change on the functional value of shallow water habitats throughout the Bay but also track the effectiveness of measures taken beyond 2025.

Management Board: Go forth and Explore the Possibilities

UPDATE: Development of the SWHSS Program was selected for FUNDING through the CBP Goal Implementation Team Project Initiative!!

Project Schedule:

Proposed EPA GIT Path Forward and Draft Schedule:

- Mid-August to Mid-September 2024: Trust work with GIT Leads and coordinate with QA coordinator; Trust to receive EPA Award for Year 4 of GIT projects.
- Mid-September 2024: Release RFP with seven Scopes of Work
- Mid-October 2024: close RFP (RFP open for 30 days).
- November 2024: Review applications and make recommendations for awards
- December 2024: Write and send Contract Awards
- January 2025: Contractors begin work!

2022 GIT-Funded Project Lead: SAV Workgroup

UPDATE: Tetra Tech will present near fishing project at FALL meeting

Protecting Chesapeake Bay SAV Given Changing Hydrologic Conditions: Priority SAV Area Identification and Solutions Development – progress moving along..

Project Objective

This project will identify high-priority SAV areas within the Chesapeake Bay Watershed and determine which BMPs could be most effective in protecting those areas from loss during high-flow events/years using GIS spatial analysis/modeling and existing SAV, flow, land-use, and water quality data. With this information, steps can be taken to target high-priority SAV areas for implementation of BMPs and land management policies that will protect or restore those priority SAV habitats.

Contracted to: Tetra Tech

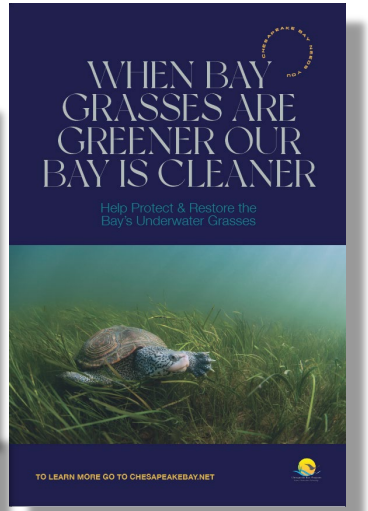
- **Steering committee has been identified and had their first meeting**
- **Bob Murphy, Tetra Tech, will present on project and progress later this morning**

2022 GIT-Funded Project Lead: Comms Workgroup

Advancing Social Marketing Through Two Pilot Programs – Steve told us about their progress on this earlier….

Proposed Project Outcomes

This project will develop pilot programs for existing community-based social marketing (CBSM) campaigns that have been developed over the past few years, SAV being one.



Contracted to: OpinionWorks

No new updates since OW presented at last meeting…

Chesapeake Bay SAV Watchers Program

FOUR SAV Watcher Trainer Certification Events in 2024:
Accokeek Foundation at Port Tobacco,
Havre de Grace Maritime Museum Environmental Center,
The Nature Conservancy Virginia Chapter at VCU's Rice Rivers Center
Maryland Conservation Corps at Gunpowder Falls State Park

Chesapeake Bay SAV Watchers – Tier 2 Participation

ShoreRivers

Havre de Grace Maritime Museum and Environmental Center

James River Association

Severn River Association – America's Oldest River Group

Magothy River Association – Saving our river for future generations

Baltimore County Public Schools – Raising the bar. Closing gaps. Preparing for our future.

Marshy Point Nature Center

The Gunston School – Centreville, MD – 1911

Arundel Rivers Federation

Chesapeake Bay National Estuarine Research Reserve Maryland – Using Sound Science...Finding Solutions...Promoting Wise Decisions

Accokeek Foundation at Piscataway Park

Chesapeake Bay SAV Watchers

Chesapeake Bay SAV Watchers is a program to provide volunteer scientists with an engaging and educational experience with submerged aquatic vegetation (SAV) while also generating useful data for Bay scientists and managers.

This is the first official SAV monitoring program for volunteer scientists developed by the Chesapeake Bay Program.

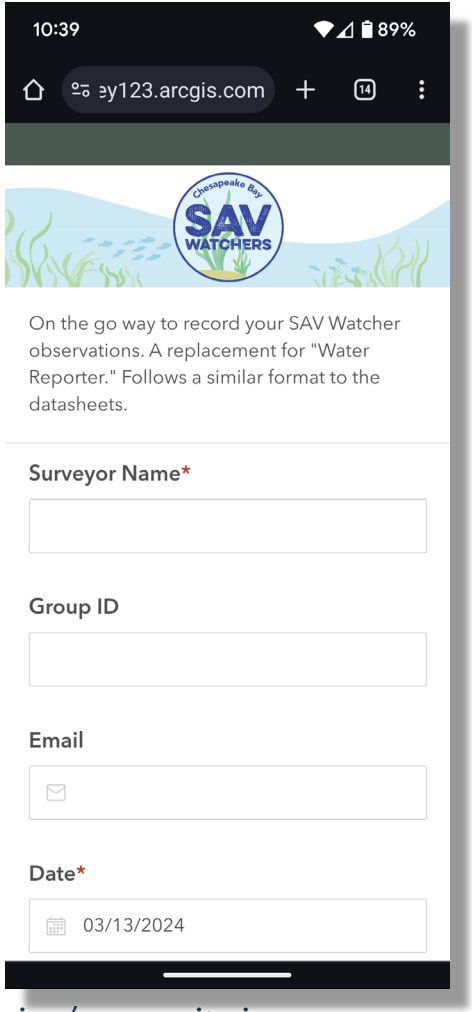
www.chesapeakebaysavwatchers.com

"Train the trainer" certification events offered each summer

www.chesapeakebaysavwatchers.com OR https://www.chesapeakebay.net/what/programs/monitoring/sav-monitoring-program

New app: ArcGIS Survey123

We would LOVE SAV Workgroup members to participate using ArcGIS Survey123!!!



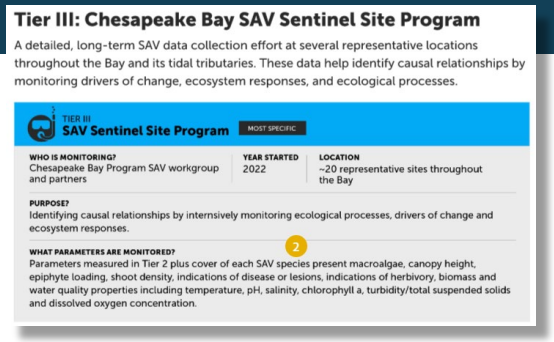
www.chesapeakebaysavwatchers.com OR https://www.chesapeakebay.net/what/programs/monitoring/sav-monitoring-program

SAV Watchers Newsletter

Subscribe to our Newsletter here:
https://forms.gle/yYwkDPShvBjFCiby5

www.chesapeakebaysavwatchers.com OR https://www.chesapeakebay.net/what/programs/monitoring/sav-monitoring-program

SAV Sentinel Site Program – continuing in 2024!



Tier III: Chesapeake Bay SAV Sentinel Site Program

A detailed, long-term SAV data collection effort at several representative locations throughout the Bay and its tidal tributaries. These data help identify causal relationships by monitoring drivers of change, ecosystem responses, and ecological processes.

TIER III
SAV Sentinel Site Program MOST SPECIFIC

WHO IS MONITORING?
Chesapeake Bay Program SAV workgroup and partners

YEAR STARTED
2022

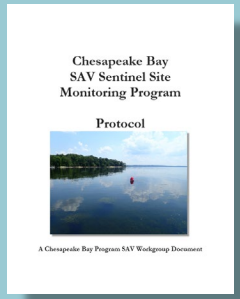
LOCATION
~20 representative sites throughout the Bay

PURPOSE?
Identifying causal relationships by intensively monitoring ecological processes, drivers of change and ecosystem responses.

WHAT PARAMETERS ARE MONITORED?
Parameters measured in Tier 2 plus cover of each SAV species present macroalgae, canopy height, epiphyte loading, shoot density, indications of disease or lesions, indications of herbivory, biomass and water quality properties including temperature, pH, salinity, chlorophyll a, turbidity/total suspended solids and dissolved oxygen concentration.

Sites that will be installed and monitored in 2024:

- Severn River ✓
- Susquehanna Flats ✓
- Smith Island ✗
- Marshy Creek ✓
- Dundee Creek ✓
- St. Mary's ✗
- VIMS sites ✓
- CB- NERR sites ✓



Chesapeake Bay
SAV Sentinel Site
Monitoring Program

Protocol

A Chesapeake Bay Program SAV Workgroup Document

Tier III: SAV Sentinel Site Program

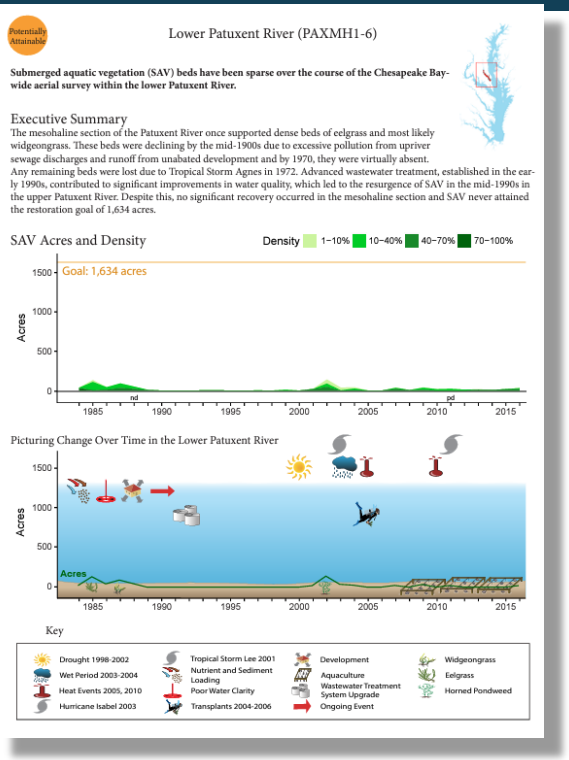
The SAV Sentinel Site Program is a monitoring effort conducted by Bay scientists

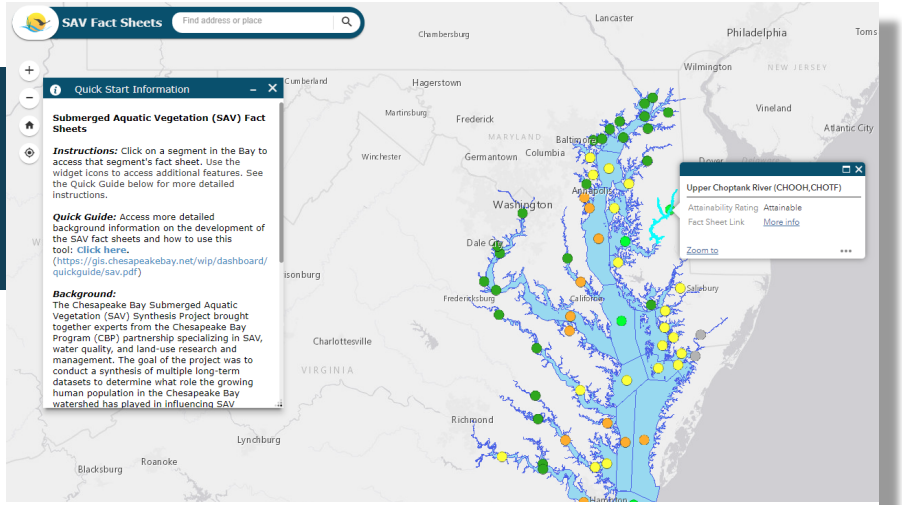
What is the Chesapeake Bay SAV Sentinel Site Program?

The Chesapeake Bay SAV Sentinel Site Program forms the third tier of the Chesapeake Bay SAV Monitoring effort. SAV sentinel sites are located in each of the Bay's four salinity zones (tidal fresh, oligohaline, mesohaline and polyhaline) and are monitored using a standardized, in-depth data collection protocol. These sentinel sites are a combination of existing, long-term sites and new sites where Bay scientists monitor changes in SAV habitat characteristics and resilience indicators. This program is coordinated by the Bay Program's SAV Workgroup. If you are interested in adopting and managing an SAV Sentinel Site, contact the program coordinator at brooke.landry@maryland.gov.

https://www.chesapeakebay.net/what/programs/monitoring/sav-monitoring-program

SAV Data Dashboard is getting updated!





The SAV Data Dashboard will:

- Combine current module and factsheets in one Dashboard
- Go back to 92 Segment scheme instead of 64
- Pin the 64 Fact sheets to appropriate segment
- Link to historical data where available
- Link to contributing landuse/drainage areas (NPSS); land river segments that directly drain that TMDL segment
- Include a loads layer and visualization of loading increases and SAV
- Link to 3 Tiers of SAV Monitoring efforts

Data Dashboard: https://gis.chesapeakebay.net/wdd

NOAA Funding Opportunity

UPDATE: Neither SAV proposal was funded ☹

Proposal 1:

RESTORE AMERICA'S ESTUARIES

Infrastructure and Capacity Building for Transformational Submerged Aquatic Vegetation Restoration in the Mid-Atlantic United States

Funding Stream: NOAA Transformational Habitat Restoration and Coastal Resilience Grants

Budget Requested: $13,874,547 over 5 years

Submerged aquatic vegetation (SAV) habitat is in crisis globally due to pressure from human development along our coasts and degraded water quality. Due to the ecosystem services that SAV provides, however, its recovery is a priority and steps must be taken to accelerate SAV recovery both locally and nationally.

Restore America's Estuaries (RAE) and its partners propose to enhance SAV restoration capacity throughout the Mid-Atlantic by leveraging substantial existing infrastructure to develop SAV nurseries and seed processing facilities, forge strategic partnerships with the aquaculture industry, conduct direct SAV restoration, develop and implement an SAV restoration training and certification program, and develop accessible SAV lesson plans and community outreach products. Together these project components will significantly enhance the capacity for SAV restoration throughout the mid-Atlantic and serve as an example for SAV restoration efforts nationally.

Key Benefits	Program Partners	
	Primary	**Supporting**
• Build SAV Nurseries and Seed Processing Centers throughout the Mid-Atlantic • Expand SAV Restoration Capacity through Aquaculture Industry Partnership • Conduct Direct, Transformative SAV Restoration to Enhance Coastal Climate Resiliency • Establish an SAV Restoration Training and Certification Program • Develop K-12 Lesson Plans and Community Outreach Product	• Tetra Tech • Maryland Department of Natural Resources	• Delaware Center for Inland Bays • Delaware State University • Ferry Cove Oyster Hatchery • Green Fin Studios • Maryland Coastal Bays Program • Mattaponi Indian Tribe and Reservation • Old Dominion University • Smithsonian Environmental Research Center • St. Mary's College of Maryland • Stockton University • University of Delaware and Delaware Sea Grant • University of North Carolina Wilmington • Virginia Institute of Marine Science • Virginia Institute of Marine Science CB NERR • Waterkeepers Chesapeake

Restore America's Estuaries (RAE) is a national leader in the protection and restoration of our nation's estuaries and bays. RAE has over 25 years of experience managing complex programs on behalf of federal agencies, public/private partnerships, corporations and foundations.

Proposal 2: HEAT Helping Eelgrass Adapt to Temperature – this project will conduct common garden experiments with eelgrass from NC to ME, facilitating the migration of more heat tolerant plants northward.

STAC – Science Synthesis Project RFP

All proposals are DUE to STAC by **Monday, December 2, 2024**. If you have any questions, please contact STAC Coordinator, Meg Cole (colem@chesapeake.org) or STAC Chair Larry Sanford (lsanford@umces.edu).

The Chesapeake Bay Program's Scientific and Technical Advisory Committee (STAC) and the Chesapeake Research Consortium (CRC) are **now accepting proposals to support a science synthesis project** related to effectively managing for climate change at the intersection of impacts to water quality, people, and living resources within the Chesapeake Bay Watershed and Estuary. Appropriate topics for a STAC-sponsored science synthesis project are those where a thoughtful analysis and synthesis of available data and/or previously published results would identify, characterize, and suggest means of addressing important knowledge gaps, inform additional research, and place scientific information into a management-relevant context.

Proposals submitted under this RFP may request funding up to $125,000 in total costs, including any indirect or overhead. Allowable expenses may include salary (post-doc and/or PI), domestic travel (post-doc and Steering Committee/Advisory Committee), supplies, and page charges.

The project must be completed by May 31, 2027 and duration must be aligned with availability of funds. Funding will be available in three phases:

- Phase 1 funds of $73,285 become available on 6/1/2024;
- Phase 2 funds of $29,800 become available on 6/1/2025;
- Phase 3 funds of $22,642 become available on 6/1/2026.

https://estuaries.org/2024-rae-summit/

SAV Session @ 8:30 - 10 am on Wednesday, October 9th, 2024

This dedicated session aims to explore and discuss the significance, challenges, and innovative approaches related to SAV restoration and management within the broader context of many of the Coastal and Estuarine Summit's focus areas and will explore how management and restoration communities within the Chesapeake Bay and beyond work to protect and restore SAV, offering transferable lessons for coastal communities nationwide.

Becky Golden, Marine Habitat Resource Specialist at NOAA Fisheries, and Vice-Chair of the Chesapeake Bay Program's SAV Workgroup will serve as the session lead.

Speakers:

- Brooke Landry will discuss the decades-long effort to restore Chesapeake Bay SAV, progress made, and continuing challenges.
- Victoria Hill will present the use of high-resolution satellite imagery for SAV and carbon storage assessments and the potential of automation and workflows to streamline the process.
- Bob Murphy will discuss best management practices (BMPs) and solutions development for protecting SAV locally given changing hydrologic conditions.
- Elle Bassett will discuss the role of community volunteers in SAV monitoring and restoration as a means of impactful outreach, stewardship development, and data collection.
- Elizabeth Lacey will discuss communities of practice and the importance of collaboration in SAV protection and restoration from the regional to global scale.

East Coast SAV Collaborative

~

Co-chairs:
Brooke Landry, Md DNR
Jessie Jarvis, UNCW
Elizabeth Lacey, Stockton U.

The goal for this collaborative is to bring together experts in SAV research and management from each of the U.S. East Coast states from NC to ME to share ideas and information, provide training and resources, and collaborate on efforts that bring actionable science to the forefront of our SAV management strategies.

Upcoming East Coast SAV Collaborative Meetings:

- **SAV and Living Shorelines:** October 30th, 9am-Noon
- www.eastcoastsavcollaborative.com

2024 Science and Research Needs Update –

Please rank additional SAV science needs here: https://forms.gle/4Uo8YN46KoUCE4DQ9

Legislative SAV Updates

Number/ Chapter (Cross File) Total: 5	Title	Primary Sponsor	Status	Original House Committee(s) and Hearing Dates	Opposite House Committee(s) and Hearing Dates
HB0109 / CH0083 (SB0281 / CH0084)	Natural Resources - Submerged Aquatic Vegetation - Alteration or Removal Requirements	Chair, Environment and Transportation Committee	Approved by the Governor - Chapter 83	Environment and Transportation 1/31/2024 - 2:30 p.m.	Education, Energy, and the Environment
HB0807 / CH0512 (SB1140)	Natural Resources – Submerged Aquatic Vegetation Surveys	Delegate Stein	Approved by the Governor - Chapter 512	Environment and Transportation 2/21/2024 - 1:00 p.m.	Education, Energy, and the Environment 3/26/2024 - 1:00 p.m.

HB0109 in a nutshell: amends COMAR 4-213. Reduces allowable width of removal for navigation at piers and docks from 60’ to 20’ and requires notification to DNR. Effective Oct. 1, 2024.

HB0807 in a nutshell: SAV surveys besides the VIMS aerial survey can now be used to inform SAV protection zone placement AT THE DISCRETION OF DNR.
Effective June 1, 2024.

Questions?