Winter QUARTERLY MEETING – February 24th, 2025

Chesapeake Bay Program

Submerged Aquatic Vegetation Workgroup Updates

Agenda

I. Welcome, Introductions, Housekeeping **1:00 – 1:15**

Around the Room and Zoom member introductions. Names and Affiliations and Answer to one of the following engagement questions (pick one):

1. What's one small thing that made you unexpectedly happy this week?
2. What's a habit or routine that quietly keeps you sane?
3. What's your go-to comfort food?

II. Welcome to New GIT and Workgroup Leadership` **1:15 – 1:45**

New GIT Chairs: Kevin Schabow (NOAA) and Becky Gwynn (Va DGIF) - Kevin will give a brief greeting and introduction

New SAV Workgroup Vice Chair: Erin Shields (CB NERR - VA, VIMS) - Erin will give a brief presentation to the Workgroup on her background and SAV research interests.

III. SAV Workgroup Updates **1:45 – 2:15**

SAV Workgroup updates will cover GIT-funded projects, the CB SAV Monitoring Program, SAV Workgroup News and Happenings, and Calendar reminders.

Requested Action: Non-decisional
Lead: Brooke Landry
Materials: SAV Workgroup Winter Quarterly Meeting Updates Presentation

IV. Current Funding Opportunities **2:15 - 2:45**

A summary of current funding opportunities that SAV Workgroup members may want to consider.

Requested Action: Non-decisional
Lead: Kristen Saacke Blunk, Headwaters LLC kristen@headwaters-llc.org
Materials: None

V. Member Updates **2:45 - 3:00**

Participants will have an opportunity to provide updates on their current work and/or have the opportunity to solicit feedback from the SAV Workgroup membership regarding their work, research, etc.

Requested Action: Non-decisional
Lead: Erin Shields
Materials: None

VI. Wrap-Up and Extra is Updates run over **3:00 - 3:15**

Lead: Brooke Landry/Erin Shields

VII. Adjourn **3:15**

Next Meeting: Tuesday, May 7th, 2026 1:00 PM - 5:00 PM

Around the Room Introductions

Give your Name, Affiliation, and answer ONE of the following:

1. What's one small thing that made you unexpectedly happy this week?
2. What's a habit or routine that quietly keeps you sane?
3. What's your go-to comfort food?

New GIT Leadership

Kevin Schabow
Director, NOAA Chesapeake Bay Office

Office: (240) 628-5360
Cell: (443) 223-3230

Email: kevin.schabow@noaa.gov

Becky Gwynn
Deputy Director, Virginia Department of Wildlife Resources

Office: (804) 593-2043

Email: Becky.Gwynn@dgif.virginia.gov

New SAV Workgroup Leadership

Erin Shields
Lead Scientists, Chesapeake Bay National Estuarine Research Reserve - VA

Office: (804) 684-7702

Email: eshields@vims.edu

GIT-funded Project UPDATES

Shallow Water Habitat Sentinel Site Program Development

Project Members

Steering Committee

Brooke Landry, MD DNR, CBP SAV Workgroup
Peter Tango, USGS
Kathy Boomer, Foundation for Food & Agriculture Research
Taryn Sudol, MD Sea Grant
Joel Carr, USGS
Jeremy Hanson, CRC
Kenneth Hyer, USGS
Gina Hunt, MD DNR
Denice Wardrop, CRC
David Parrish, VIMS
Chris Patrick, VIMS
Ryan Woodland, UMCES

Green Fin Studio

David Jasinski
Lauren Huey
Macon Thompson
Allison Burbach

Project Outcomes

This project will include developing a comprehensive Shallow Water Habitat Sentinel Site Program for the Chesapeake Bay. We will gather multi-parameter, detailed data on a scale that is accessible and relevant to decision-making and information gathering. This effort will include creating a protocol for the monitoring of multiple living resources and water quality measures, as well as climate impacts on the functional value of shallow water habitats in the Chesapeake Bay and its watershed. The goal of this effort is to also develop a protocol to monitor the effectiveness of measures taken by the Chesapeake Bay Program Partnership beyond 2025. Developing a Shallow Water Habitat Sentinel Site Program will fill identified data gaps and provide the data necessary to track changes in response to climate change and management actions, assess environmental conditions, provide early warning signals for potential issues, and enhance modeling and forecasting capabilities in shallow water habitats.

Key Tasks

1. Creation and approval of a Quality Assurance Project Plan (QAPP)
2. Literature and Existing Program Review
3. Scoping Workshop
4. Full Shallow Water Habitat Sentinel Site Program Development

Two Workshops.
Workshop 1: September 2025
Workshop 2: February 2026

Contracted to: Green Fin Studio

Project Overview

Develop a shallow water habitat sentinel site program which will provide a comprehensive understanding of shallow water habitat functionality and its response to environmental changes in the Chesapeake Bay and its watershed, including monitoring changing environmental conditions and evaluating the effectiveness of management measures implemented by the Chesapeake Bay Program partnership beyond 2025.

Graham Creek in Calvert County, Maryland - Carlin Stehl/Chesapeake Bay Program

Shallow Water Definition (for the purposes of this monitoring program):

Tidal edges and waters of the Chesapeake Bay and its tributaries to a depth up to 5 meters.

Graham Creek in Calvert County, Maryland - Carlin Stehl/Chesapeake Bay Program

Updated Management questions this program will aim to answer:

1. How are changing environmental conditions impacting shallow water habitats?
2. How are management actions impacting shallow water habitats?
3. To what extent are shallow water areas fishable, swimmable, and supportive of quality of life?
4. What are the issues in shallow water areas that are preventing the Bay Program Partnership from reaching its goals?
5. Are tidal shallow water systems maintaining or recovering ecosystem functionality?

Graham Creek in Calvert County, Maryland - Carlin Stehl/Chesapeake Bay Program

With management questions in mind, parameters considered for inclusion:

Survey Results – Water Quality

WQ	Votes	How is climate change impacting shallow water habitats?	How are management actions impacting shallow water habitats?	Are shallow water areas fishable and swimmable?	Are there emerging issues in shallow water areas that will prevent the Bay Program from reaching its goals?	Management score	Cost/Effort*	Total Score
Salinity	28	1			1	2	1	33
Temperature	27	1		1	1	3	1	33
DO (bottom)	26	1	1	1	1	4	1	33
DO (surface)	21	1	1	1	1	4	1	28
Turbidity	18	1	1	1	1	4	2	24
Chlorophyll	17	1	1	1	1	4	2	23
pH	17	1		1	1	3	1	23
Nitrogen	12	1	1	1	1	4	2	18
Phosphorus	12	1	1	1	1	4	2	18
Light attenuation	11	1	1		1	3	2	16
Specific conductance	11	1				1	1	15
Total suspended solids	10	1	1	1	1	4	2	16
Satellite reflectance	5	1				1	3	7
CDOM	3	1				1	2	6
acidification parameters	3	1	1		1	3	2	8
Clarity (Secchi depth)	1	1	1	1	1	4	1	8
Emerging contaminants	1	1	1	1	1	4	3	6
Toxics	1	1	1	1	1	4	3	6
nutrient limitation	1	1				1	3	3

Survey Results – Living Resources

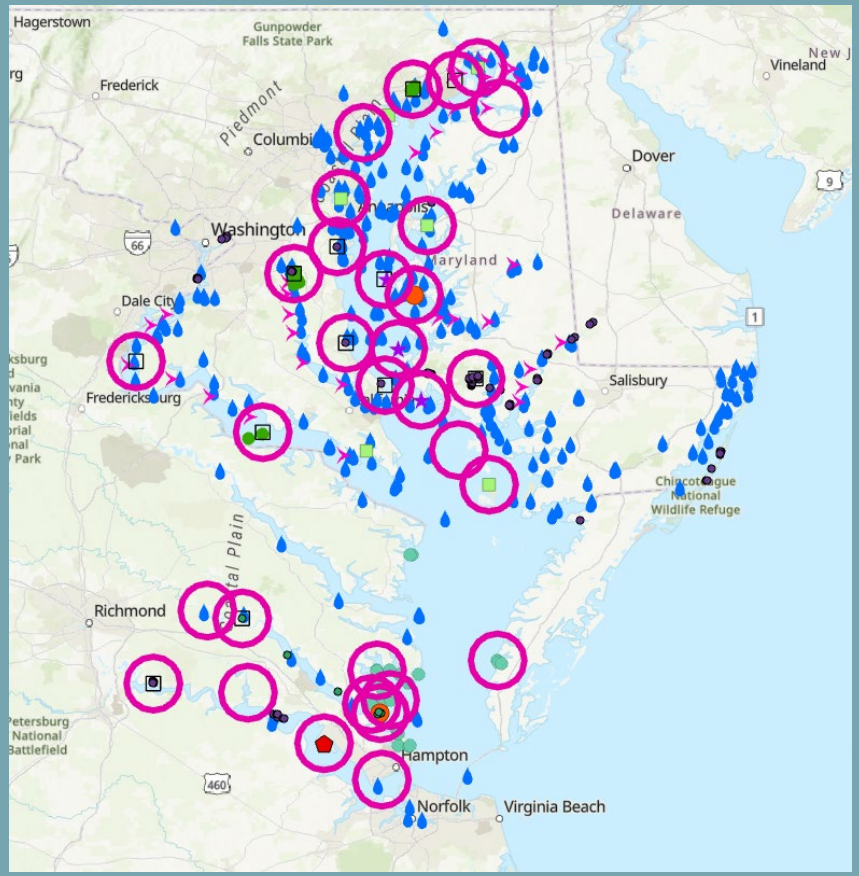
Living Resources	Votes	How is climate change impacting shallow water habitats?	How are management actions impacting shallow water habitats?	Are shallow water areas fishable and swimmable?	Are there emerging issues in shallow water areas that will prevent the Bay Program from reaching its goals?	Management score	Cost/Effort*	Total Score
SAV	21	1	1	1	1	4	2	27
Presence/absence of species of interest**	18	1	1		1	3	3	22
Oysters	18	1	1	1	1	4	2	24
Fish diversity/species richness	13	1	1	1	1	4	3	18
Macroinvertebrate assemblage and abundance	10	1	1	1	1	4	2	16
Macroalgae	6	1	1		1	3	2	11
Sediment cores (below ground SAV biomass)	6	1	1			2	2	10
Charismatic macrofauna	5	1				1	1	9
Habitat shift and migration	5	1		1	1	3	2	10
Phytoplankton	5	1	1	1	1	4	2	11
Waterbirds	5	1	1			2	1	10
Benthic epifauna	4	1	1	1	1	4	2	10
Benthic infauna	4	1	1	1	1	4	2	10
Microseira / Lyngbya	4	1				1	2	7
Benthic algae	3	1	1		1	3	2	8
Nudibranch abundance and species composition	2	1				1	2	5
Fish relative abundance	1	1		1	1	3	2	6
Fishing pressure	1		1	1	1	3	3	5
SAV presence/absence (too hard to capture all those metrics)	1	1	1		1	3	1	7
Benthic chlorophyll is something the CBP modeling committee wants	1	1	1		1	3	2	6
Night fish communities as well as day	1	1		1	1	3	3	5

Survey Results – Physical

Parameters in ORANGE are potentially initial site assessment parameters

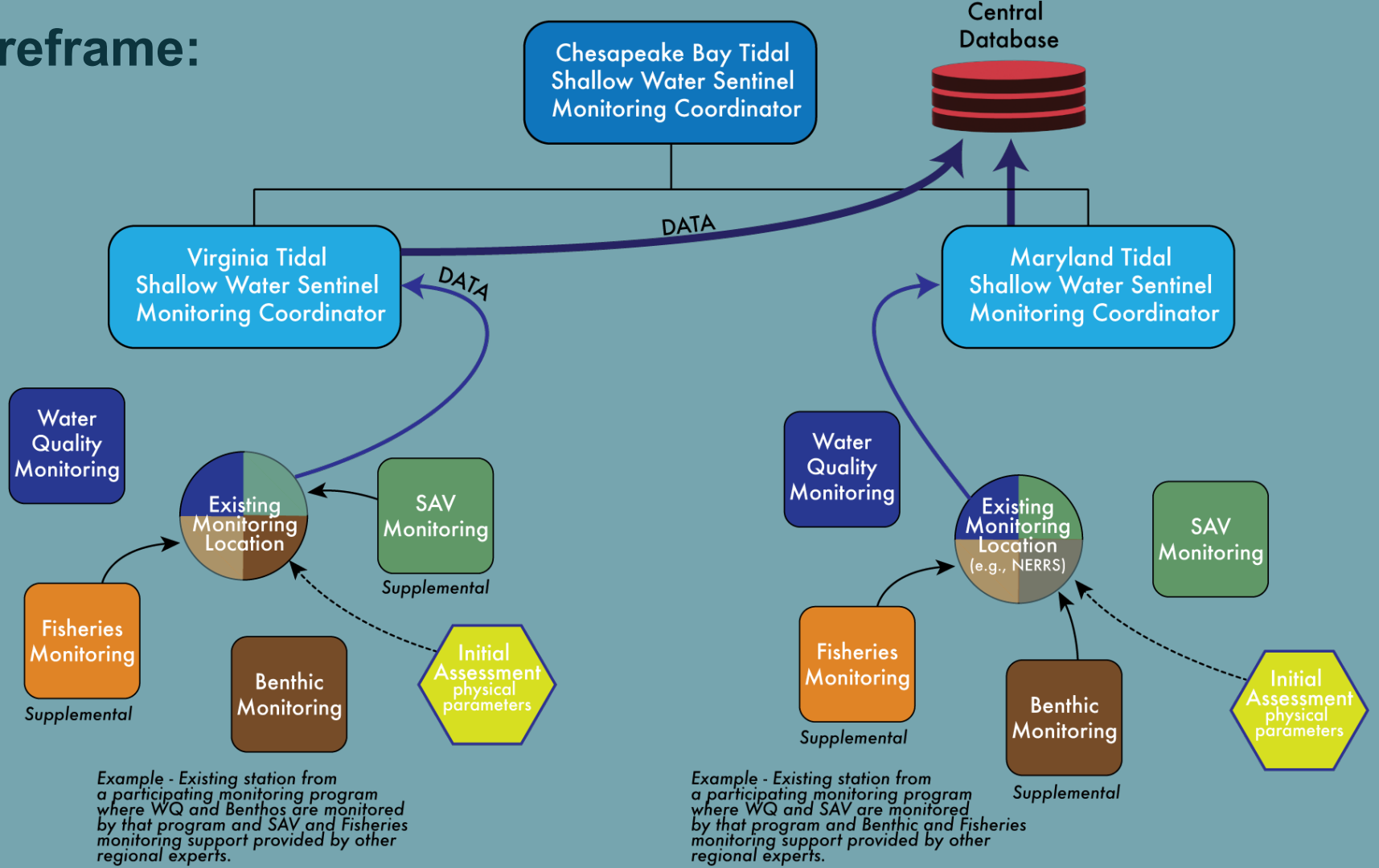
Physical	Votes	How is climate change impacting shallow water habitats?	How are management actions impacting shallow water habitats?	Are shallow water areas fishable and swimmable?	Are there emerging issues in shallow water areas that will prevent the Bay Program from reaching its goals?	Management Score	Cost/Effort*	Total Score
Substrate/bottom type	20	1				1	1	24
Shoreline type	19					0	1	22
Land use	16					0	1	19
Fish and shellfish habitat	15	1	1	1		3	3	19
Grain size	8					0	1	11
Continuous water depth	6					0	1	9
Erosion	6	1			1	2	1	11
Habitat heterogeneity	5					0	2	7
Flow	2	1				1	1	6
Air temp	1	1				1	1	5
Microplastics	1					0	3	2
Water Level (different from depth!)	1					0	1	4
Wave attenuation	1					0	2	3
any outfalls at the site	1					0	1	4
commercial fishing/aquaculture	1		1			1	1	5
hunting pressure	1		1			1	1	5
precipitation	1	1				1	1	5
recreational activity intensity	1					0	1	4
seamless topobathy	1					0	3	2
wind	1	1				1	1	5

Initial list of suggestions for Sentinel site locations:



Graham Creek in Calvert County, Maryland - Carlin Stehl/Chesapeake Bay Program

Wireframe:


Chesapeake Bay Tidal Shallow Water Sentinel Monitoring Coordinator
Central Database
DATA
DATA
Virginia Tidal Shallow Water Sentinel Monitoring Coordinator
Maryland Tidal Shallow Water Sentinel Monitoring Coordinator
Water Quality Monitoring
Existing Monitoring Location
SAV Monitoring
Supplemental
Fisheries Monitoring
Supplemental
Benthic Monitoring
Initial Assessment physical parameters
Example - Existing station from a participating monitoring program where WQ and Benthos are monitored by that program and SAV and Fisheries monitoring support provided by other regional experts.
Water Quality Monitoring
Existing Monitoring Location (e.g., NERRS)
SAV Monitoring
Fisheries Monitoring
Supplemental
Benthic Monitoring
Supplemental
Initial Assessment physical parameters
Example - Existing station from a participating monitoring program where WQ and SAV are monitored by that program and Benthic and Fisheries monitoring support provided by other regional experts.

Guidance Document:

A comprehensive guidance document to be referenced by internal and external stakeholders and monitoring program partners that includes site locations, parameters to be measured, protocols for each parameter, and data sheets.

Graham Creek in Calvert County, Maryland - Carlin Stehl/Chesapeake Bay Program

Chesapeake Bay Shallow Water Habitat Sentinel Site Monitoring Program

Guidance Document

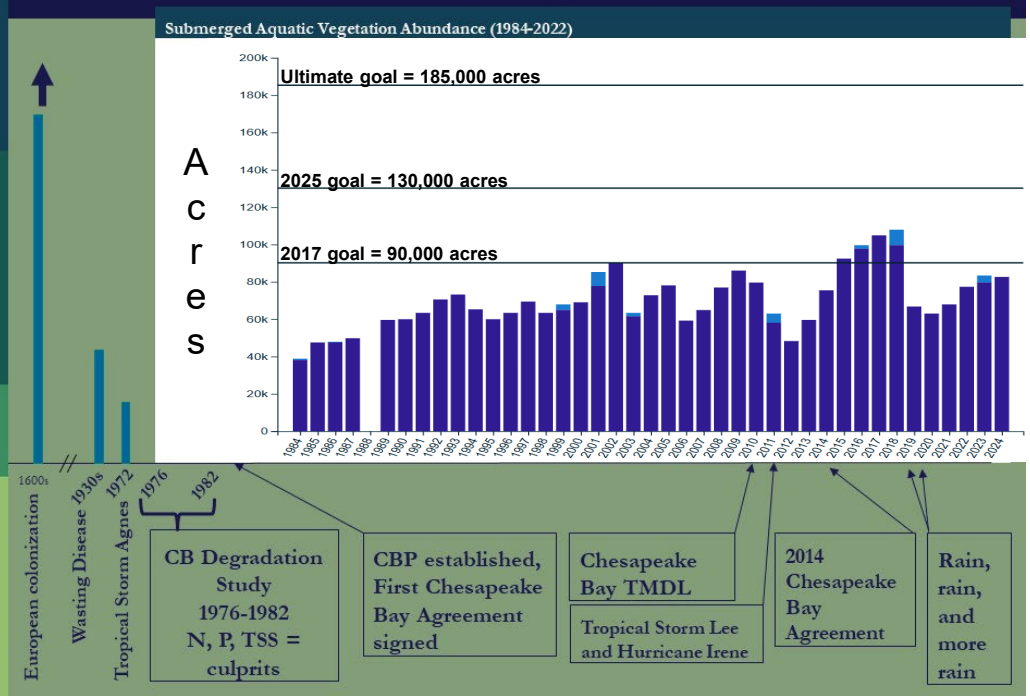
SAV Monitoring in Chesapeake Bay

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

Tier 1

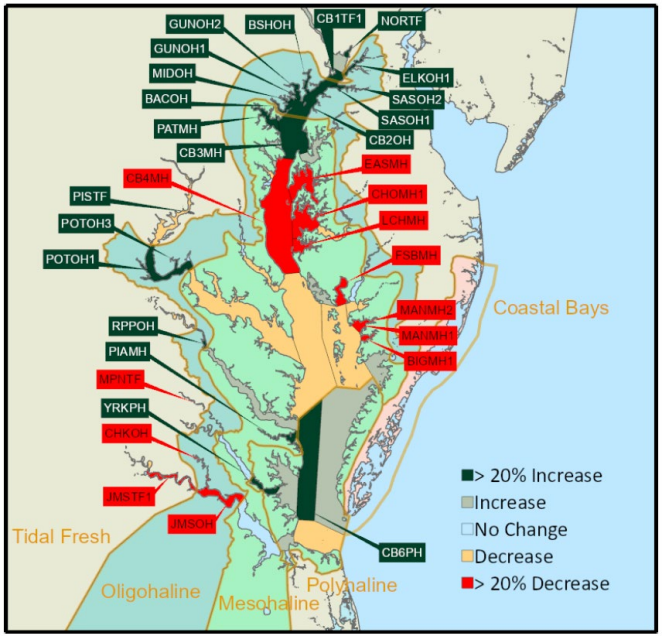
VIMS Bay-wide Aerial Survey

Progress towards the Bay-wide SAV goal



FINAL SAV #s were slightly down in 2024:

- 83,250 acres were mapped in 2024.
- 83,419 total acres of SAV estimated for 2023.
- This is 64% of the Chesapeake Bay Program's 130,000-acre restoration target and 45% of its 185,000-acre goal.
- It is a 114% increase from the 38,958 acres observed during the first underwater grass survey in 1984, but a 0.2% decrease from the 83,419 acres reported in 2023.



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

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

Tier 2

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

Chesapeake Bay SAV Watchers Program

SAV Watchers Trainer Events to be on the lookout for in 2026:

- Havre de Grace Maritime Museum Env. Center
- Washington College
- Virginia Institute of Marine Science - ESL
- Virginia Commonwealth University/TNC
- Coastal Bays
- Mallows Bay

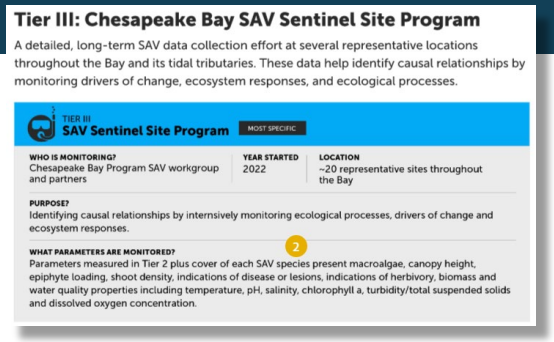
2025 Stats:

- 70+ New Trainers in 2025!
- 110+ new data points, 2,747 points total
- Held both 2-day and 1-day trainings

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

Tier 3

SAV Sentinel Site Program – continuing in 2026!



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

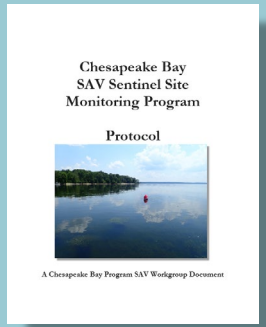
WHO IS MONITORING?	YEAR STARTED	LOCATION
Chesapeake Bay Program SAV workgroup and partners	2022	~20 representative sites throughout the Bay

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.

SAV Sentinel Sites to be monitored in 2026:

- Severn River
- Susquehanna Flats
- Smith Island
- Marshy Creek Eastern Bay
- 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.

SAV Workgroup
News and Happenings

CBP Workforce Workgroup (Engaged Communities GIT)

Purpose

The Workforce Workgroup exists to strengthen and align efforts that build a skilled, informed, and connected workforce supporting the health and sustainability of the Chesapeake Bay watershed. We bring together educators, employers, training providers, and community partners to identify and remove barriers, elevate best practices, and coordinate strategies that expand access to environmental and watershed-related career pathways for all job seekers.

Outcome and Targets

Increase the ability of all job seekers in the watershed to understand, participate in and succeed in career pathways that positively support the Chesapeake Bay watershed.

By 2040, inform and grow implementation of strategies that help students, educators and job seekers to become aware of and understand environmental careers, in-demand skills, and pathways to access these opportunities. By 2040, increase the number of post-secondary institutions and training providers offering industry-recognized credentials that support Chesapeake Bay Watershed Agreement Goals and Outcomes.

By 2040, engage employers to support greater hiring and retention of workers trained in fields necessary to support Chesapeake Bay Watershed Agreement Goals and Outcomes.

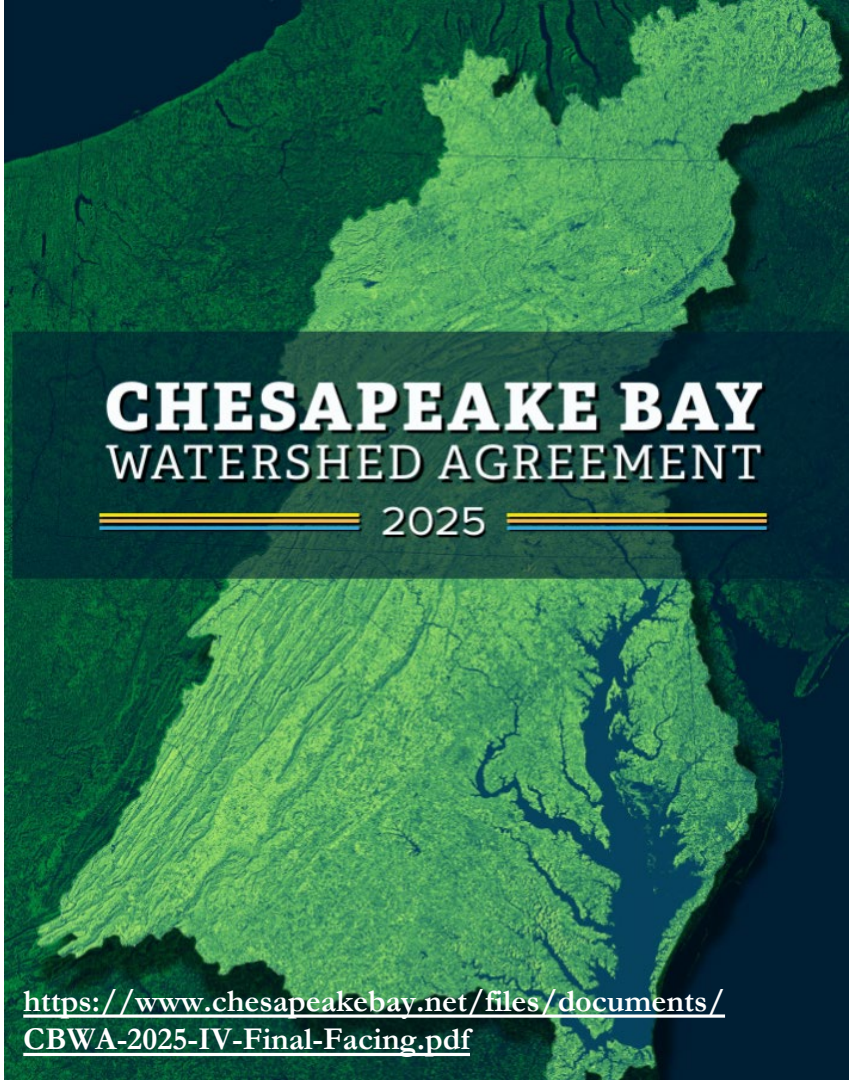
SAV Workgroup Involvement

- Serve in Workforce Workgroup development and technical assistance cohort
- Provide insight on workforce needs as they relate to SAV conservation and restoration
- Participate in monthly networking coaching sessions with Local Concepts
- Dedicate time each month to apply and practice tools and strategies
- Share knowledge and lessons learned with your workgroup and with CBP partners

Beyond 2025 and the Updated Chesapeake Bay Agreement

Vision

We envision a Chesapeake Bay region where clean water flows, wildlife thrives and farms, forests and fisheries are healthy and productive. It is a place where people from all walks of life feel connected to the land, to the Bay and local waterways, to their communities and to the rich cultural heritage that makes this watershed unique. Together, we are building a future that is environmentally and economically sustainable, resilient and full of possibility—where everyone can enjoy and help conserve the natural beauty of the Bay, and the lands and waters that surround it, today and for generations to come.



https://www.chesapeakebay.net/files/documents/CBWA-2025-IV-Final-Facing.pdf

Beyond 2025 and the Updated Chesapeake Bay Agreement

Principles

The Chesapeake Bay Program commits to operate under the following principles, which reflect the partners' collective, core values. The principles guide the work of the partnership in our governance and as we develop policy and take action to achieve the Chesapeake Bay Watershed Agreement's *Goals and Outcomes. The partnership will:*

Science

- Use place-based approaches, where appropriate, to target specific geographic areas and produce recognizable benefits to local communities while contributing to larger ecosystem goals.
- Maintain and enhance a coordinated watershed-wide monitoring, modeling and research program to support decision-making, track progress and assess the effectiveness of management actions.
- Integrate social science holistically throughout the partnership to support adaptive management, more effectively engage with communities and incentivize individual and collective behaviors that support partnership goals.
- Adaptively manage at all levels of the partnership to foster continuous improvement informed by the best available science and strong working relationships.
- Use science-based decision-making, consider Indigenous and local knowledge, and seek out innovative technologies and approaches to support sound management decisions in a changing system.

Restoration & Conservation

- Achieve Goals and Outcomes in a measurable and timely way and at the least possible cost to the public.
- Conserve working lands and support economically viable forests and farms to best position landowners to help protect the Chesapeake Bay.
- Acknowledge, support and engage local governments and other local entities in watershed restoration, conservation and protection activities.
- Anticipate and respond to changes in the landscape and environmental conditions, including long-term trends in sea level, temperature, precipitation, land use and other variables.

Partnership

- Represent the interests of all communities throughout the watershed fairly and effectively.
- Meaningfully engage the public to foster collaboration and grow the partnership to support and carry out the restoration, conservation and protection activities necessary to achieve the Goals and Outcomes of this *Chesapeake Bay Watershed Agreement*.
- Facilitate outreach to and welcome participation by all communities regarding the partnership's activities, decisions and implementation.
- Collaborate to achieve the Goals and Outcomes of this *Chesapeake Bay Watershed Agreement*.
- Operate with transparency and accountability in program decisions, policies, actions and reporting on progress to strengthen public trust and confidence in our efforts.
- Strive for consensus across the partnership when making decisions.
- Include tribal nations in the partnership in a manner that appropriately considers their unique status as independent sovereign nations and as original stewards of the land.

Beyond 2025 and the Updated Chesapeake Bay Agreement

Program Leadership

- Chesapeake Executive Council
- Policy Steering Committee

Program Implementation

Goal Teams

- Healthy Landscapes
- Clean Water
- Habitats, Fisheries and Wildlife
- Engaged Communities

Program Support

- Operations and Management
- Strategic Engagement Team
- Scientific, Technical Assessment & Reporting

Advisory Committees

- Stakeholders'
- Scientific & Technical
- Local Government
- Agricultural

Information in Slide Subject to Change

Beyond 2025 and the Updated Chesapeake Bay Agreement

Thriving Habitat, Fisheries & Wildlife Goal Team Purpose

The fisheries and wildlife of the Chesapeake Bay watershed are the backbone of the region's ecology, economy and heritage. However, impaired water quality, invasive species and habitat loss place pressure on fish and wildlife populations across the region. Our increasing use of natural resources can fragment and degrade the habitats on which they depend. Maintaining sustainable fisheries and restoring habitat for native and migratory species, while adapting to the challenges of changing environmental conditions, will support a strong economy, recreation and a resilient ecosystem.

Goal

Protect, restore and sustain fisheries and wildlife, as well as the network of land and water habitats they depend on, to promote a balanced and resilient ecosystem and support local economies and recreational opportunities.

Mummichogs thrive in Maryland's Severn River Sanctuary. Underwater grasses are the foundation of the Chesapeake Bay food web, supporting a range of forage species and predators.

Beyond 2025 and the Updated Chesapeake Bay Agreement

Thriving Habitat, Fisheries & Wildlife Goal Team Workgroups

1. Blue Crabs
2. Brook Trout
3. Fish Habitat
4. Fish Passage
5. Oysters
6. Stream Health
7. **Submerged Aquatic Vegetation**
8. Wetlands

Restoring headwater streams in places like Pendleton County, West Virginia, expands cold-water habitat for brook trout.

Blue crabs support commercial and recreational fisheries and are managed across state lines.

The oyster aquaculture industry supports local economies and contributes to clean water.

A wetland preserve in upstate New York connects visitors with wildlife and native plants.

Climbers Run flows through Pennsylvania to join the Susquehanna River.

Information in Slide Subject to Change

Beyond 2025 and the Updated Chesapeake Bay Agreement

Submerged Aquatic Vegetation (SAV) Outcome

Sustain and increase the habitat and ecosystem benefits of SAV in the Chesapeake Bay. Achieve and sustain the outcome of 196,600 acres of SAV Bay-wide necessary for a restored Bay.

- Measure progress against the following targets for each salinity zone:
    - Tidal Fresh: 21,700 acres.
    - Low Salinity: 13,100 acres.
    - Medium Salinity: 126,000 acres.
    - High Salinity: 35,800 acres.

- Measure progress toward this Outcome against interim targets of 90,000 acres by 2030, 95,000 acres by 2035 and 100,000 acres by 2040.

Beyond 2025 and the Updated Chesapeake Bay Agreement

Goal Team and Workgroup Leadership and Support

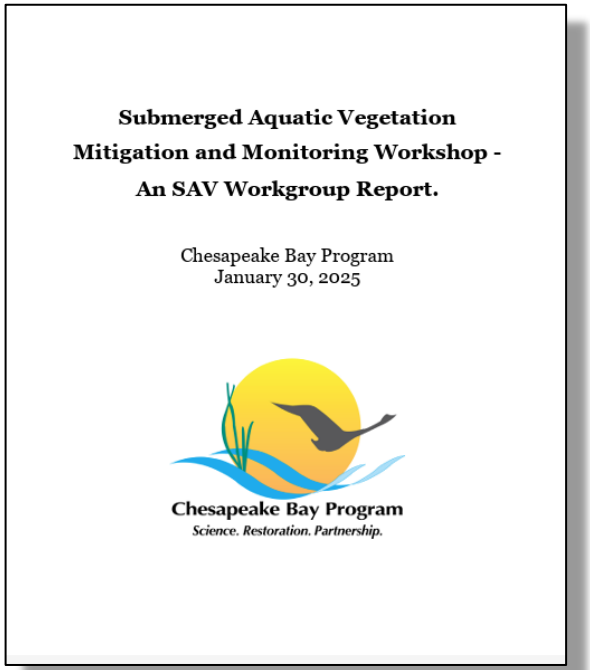
Chair: Brooke Landry (brooke.landry@maryland.gov)
Vice-chair: Erin Shields (eshields@vims.edu)

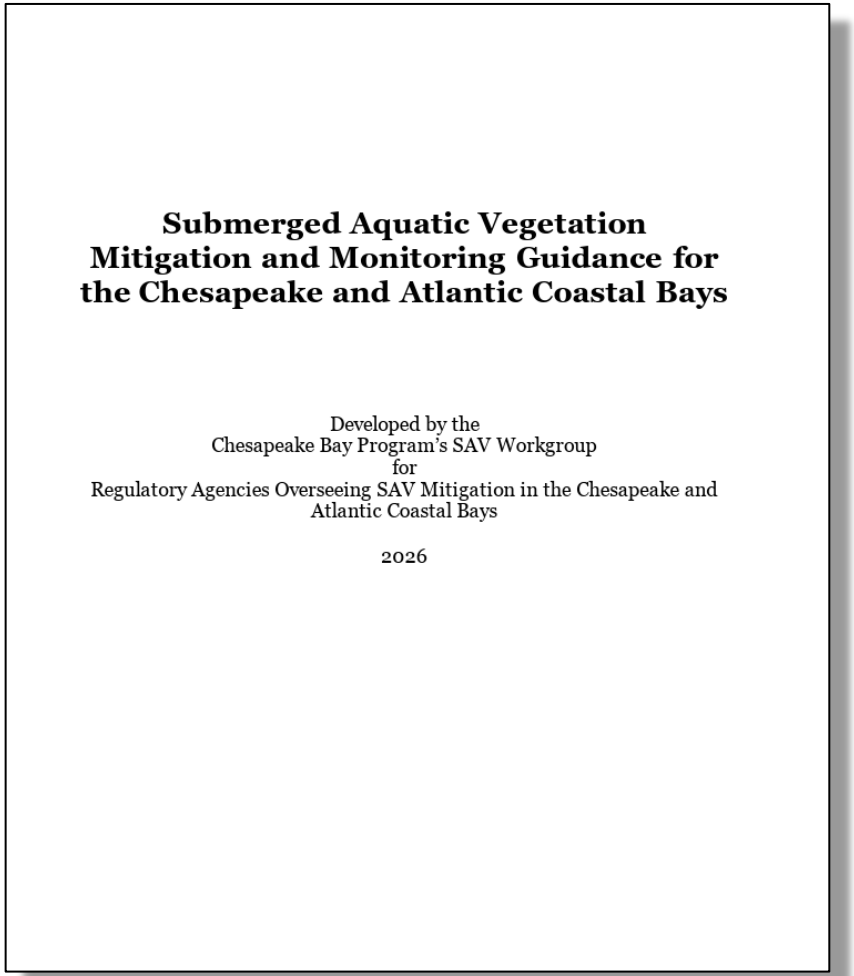
SAV Workgroup Staffer: Nick Staten (statenn@chesapeake.org)
Goal Team Staffers: TBD

Goal Team Coordinator: Chris Guy (chris_guy@fws.gov)

Goal Team Chairs: Kevin Schabow (NOAA) and Becky Gwynn (VDWR)

SAV Mitigation and Monitoring Guidance Document – now online





https://www.chesapeakebay.net/projects/sav-mitigation-and-monitoring-guidance-for-the-chesapeake-and-atlantic-coastal-bays

2026 Meeting Schedule

Mark Your Calendars

Winter Meeting:

Tuesday Feb 24 (1-5 pm)

Zosterapalooza

March 25th (all day)
email colarusso.phil@epa.gov to register and receive agenda/login info

Spring Meeting:

Tuesday May 7 (1-5 pm)

Summer Fieldtrip to Susquehanna Flats:

July sometime, TBD – will send a poll in coming months

Summer Meeting:

Thursday August 13 (1-5 pm)

Fall Meeting:

Wednesday November 4 (9 am – 5 pm)

Questions?