

SAV Workgroup Meeting Minutes

March 14th, 2022 | 1:00 pm – 5:00 pm

Andy Howard (DE DNREC)	Angie Sowers (USACE)	*Becky Golden (MDNR)	Becky Swerida (MDNR)	Beth Zinecker (Underwood & Associates)
Bill Dennison (UMCES)	Bill Jenkins (EPA)	Bob Murphy (TetraTech)	*Brooke Landry (MDNR)	Carl Friedrichs (VIMS/CBNERR-VA)
*Cassie Gurbisz (St. Mary's)	Cathy Wazniak (MDNR)	Chris Guy (FWS)	Chris Patrick (VIMS)	Cindy Johnson (VA DEQ)
*Dave Jasinski (Green Fin Studio)	Dave Wilcox (VIMS)	Dave Riter (Baltimore County)	Deni Chambers (Northgate Env. Mgmt)	Elle Bassett (ShoreRivers)
Enie Hensel (VIMS)	Erin Reilly (JRA)	Erin Shields (VIMS)	Gabby Ross (Waterkeepers Chesapeake)	Gina Hunt (MDNR)
Greg Brennan (Spa Creek Conservancy)	Heather Hepburn (MDE)	Jack Beckham (Severn River Assoc.)	Jonathan Watson (NOAA)	*Judy O'Neil (UMCES)
Katia Engelhardt (UMCES)	Kelly Somers (EPA)	Ken Moore (VIMS)	Lori Brown (DE DNREC)	Lorie Staver (UMCES)
Maile Neel (UMD)	*Marc Hensel (VIMS)	Mark Lewandowski (MDNR)	Mark Luckenbach (VIMS)	Matt Robinson (DC DOEE)
Megan Fitzgerald (EPA)	Megan Ossmann (CRC)	Meredith Maloney (HdG MM Env. Center)	Mike Johnson (VMRC)	Mike Naylor (MD DNR)
Nancy Roth (TetraTech)	Nancy Rybicki (USGS)	Niffy Saji (Fairfax Water)	*Paige Hobbaugh (TetraTech)	Peter Tango (USGS)
Rebecca Thur (MDNR)	Rhianne Cofer (ODU)	Sally Hornor (AACC)	*Sam Merrill (Northgate Env. Mgmt)	Stuart Siegel (NG & SF Bay NERR)
Tish Robertson (VA DEQ)	Victoria Hill (ODU)			

* indicates Presenter. Contact Brooke (brooke.landry@maryland.gov) for presenter's contact info if needed.

Presentation slides are posted on the CBP calendar page:

https://www.chesapeakebay.net/what/event/sav_workgroup_meeting_march_2022

The following meeting notes complement the slides and highlight discussion points – they do not summarize the slides or information given during each presentation. Please refer to the slides themselves and contact the presenter directly with questions.

Welcome and introductions

- Going forward, we will be planning quarterly meetings that aren't as long, as well as an annual, all-day, all-hands meeting.

SAV Workgroup Effort Updates (Brooke Landry, MDNR)

- SAV Management Strategy and 2-Year Workplan
- SAV Nursery
- TS III
- STAC Workshops
- SWUC/Habitat Trade-off assessment
- ISBW14 and World Seagrass Conference 2022
- Infrastructure bill funding
- Other odds and ends

Presentation slides

Questions/comments:

Regarding the SAV Nursery:

- **Gabby Ross:** Doesn't the Nature Conservancy have a nursery? I remember visiting an eel grass facility years ago.
 - **Brooke Landry:** There are several spots around the Bay that have propagation facilities. What we are looking to do is create either a nursery network to involve those various facilities or create all new facilities specifically run by the Bay Program.
 - **Chris Patrick:** TNC has a facility by Oyster Harbor on the VA Eastern Shore where they hold eelgrass seeds collected by volunteers in May. Then we (VIMS) take them and bring them up to our facility to clean them up, count them, check seed quality, etc.
 - **Mark Luckenbach:** The Nature Conservancy facility in VA is a place where reproductive shoots are collected until the seeds drop off and can be collected. The SAV nursery facility you are talking about is about actually growing plants, correct?
 - **Brooke Landry:** Yes, that's what I'm talking about, whether that is feasible or not is the question.
 - **Mark Luckenbach:** Has there been consideration given to an SAV farm - beds that are established as a designated place to harvest seeds?
 - **Brooke Landry:** Yes, we talked about that during our scoping meeting a few weeks ago. That might be the direction it needs to go – various groups are thinking of different scales. The cost and whether it's worth it is something we will have to consider.
 - **Chris Patrick:** Regarding the scale and scope, one idea could be a hybrid – moderate scale nurseries for small stocks of different genotypes to get some cultivars and then move them out into the field (farms, sanctuaries, etc.).
 - **Mike Naylor:** We grew eelgrass indoors in Maryland for many years at the Piney Point Aquaculture Facility. It was very labor intensive and expensive, and the efforts were abandoned.
 - **Matt Robinson:** Seems like the existing SAV "nursery facilities" are more focused on meso to polyhaline species vs tidal fresh to oligohaline species, correct?

- **Ken Moore:** We have done grow out successfully in outdoor ponds we built at VIMS with several freshwater/oligohaline species such as Vallisneria.
 - **Chris Patrick:** Yeah, the freshwater species are very resilient to "pond" type conditions you can set up in tanks.
 - **Matt Robinson:** Chris, Ken, Brooke, anybody really - I'd be interested in talking more with folks about pond nurseries for FW SAV species.
- **Sally Hornor:** I thought that planting plants for SAV restoration was less desirable than planting seeds.
- **Matt Robinson:** Has anyone looked at large scale taylor float facilities, like oyster aquaculture?
 - **Mike Naylor:** Growing SAV in Taylor floats was performed by John Flood in the Severn River for many years. They worked well but the need to have trays of sediment in the floats seemed to make them susceptible to being disrupted. It was a lot of effort for a square meter of SAV.
 - **Ken Moore:** Fred Short had been successful in growing eelgrass in flow-through concrete tanks in Rhode Island for restoration and experimental uses. A nearby source of very clear, cool salt water is needed to keep epiphytes and other algal growth down. Scale was relatively small, but it did work OK. Actually, it was in New Hampshire in Great Bay.

Regarding Sentinel Sites:

- **Erin Reilly:** Are the sentinel sites determined by important location or by groups willing to adopt them?
 - **Brooke Landry:** A little bit of both – a few years ago we decided as a group on several locations that would be ideal to have sentinel sites, so those are listed in the protocol document we put together. We narrowed it down to about 20 – several of them are already existing sites that we've been monitoring in once capacity or another, some DNR sites, some VIMS sites, etc. If there is a group that wants to monitor a site in a tributary that is not identified as a priority area, that doesn't exclude them, so if you're interested in this please reach out.
- **Gabby Ross:** Curious if there will be any focus on coastal bays in MD/VA as well?
 - **Brooke Landry:** Incorporating our coverage into the coastal bays is always a challenge. VIMS does monitor the coastal bays as part of their monitoring effort. There are some restrictions on funding for areas outside of the Chesapeake Bay, but if we wanted to set up a sentinel site in the coastal bays too that would be great.

Regarding SAV Fact Sheets:

- **Elle Bassett:** Will they be updated? Looks like the last data on the fact sheets was from 2016?

Regarding ISBW:

- **Becky Swerida:** Contact me with field trip ideas for ISBW14! Rebecca.Swerida@maryland.gov

Ecological Effect of Sea Level Rise/SLAMM model results (Becky Golden, MDNR)

[Presentation slides](#)

Questions/comments:

- **Cathy Wazniak:** There is some volunteer water quality data for Blackwater.
 - **Becky Golden:** Thanks Cathy. I will follow up with you on getting that data.
- **Angie Sowers:** Does the model provide any further information on which aspects of water quality are driving the results/decrease in SAV under higher sea level elevations, or is it just water quality in general?
 - **Becky Golden:** The biggest factors are water clarity (TSS, Chl a), spring water temps and spring salinity.

SAV and Aquaculture Study Update (Cassie Gurbisz, SMCM)

Cassie's results are still preliminary and being interpreted. She requested that her slides not be shared. Please reach out to her with any questions.

Questions/comments:

- **Gina Hunt:** Did you verify the lease was 'active'... meaning harvest was reported?
 - **Cassie Gurbisz:** Maryland has a "use it or lose it" policy where you can't keep a lease if you are not actively using it. Virginia doesn't have this policy so you can't do this analysis unless you can confirm that there is aquaculture occurring in the lease.
- **Mike Naylor:** The reason aquaculture increased after 2010 was because new leases were effectively impossible to establish in most waters until the lease law changed in 2010. The explosion in lease acreage started well before any incentive programs began.
 - **Rebecca Thur:** Remember, too Mike, that we cancelled several existing leases in 2009-2010 that were no longer active, so total area under lease actually declined quite a bit at first when those were cleared off the books. It's only recently that we've reached and now surpassed the total historical lease acreage. The difference now is the annual usage requirement, which means a much higher percentage of leases are being actively used as compared to prior to the 2009 lease law changes. The usage requirement pertains to planting, and not necessarily harvest.

SAV Restoration Guide and Outreach Materials (Dave Jasinski, Green Fin Studios)

[Presentation slides](#)

Questions/comments:

- **Brooke Landry:** A lot of people from the workgroup and beyond have requested physical copies, and I have not forgotten those requests – I will hopefully be able to pick them up from the office in the next few weeks.
- **Brooke Landry:** The guide is on the SAV Workgroup webpage. Instead of linking to the document directly, I share this main page so you can access the outreach materials as well... https://www.chesapeakebay.net/who/group/submerged_aquatic_vegetation_workgroup
- **Jonathon Watson:** Thank you for producing the guide! It is already proving useful in the regulatory world.

- **Brooke Landry:** Great to hear, Jon! I know I've cited it a few times myself already.

SAV Workgroup Input Request: Evaluating Re-use Options for Conowingo Reservoir Sediment (Sam Merrill and Stuart Siegel (filling in for Deni Chambers), Northgate Environmental Management)

Slides were not presented for this discussion. Rather, Sam and Colleagues at Northgate requested SAV Workgroup member input.

Questions/comments:

- **Sam Merrill:** Northgate became the primary contractor to characterize the sediment behind Conowingo Dam. We dredged 1000 cubic yards and studied it to determine potential use and we published a technical report last May. We were wondering about the possibility of supporting SAV restoration efforts – can these projects benefit from a large supply of sediment? Can thin-layer placement efforts help address restoration goals?
- **Matt Robinson:** Can you provide any examples of using beneficial reuse for SAV restoration? Has this been done in saltier or fresher environments, or both?
 - **Stuart Siegel:** In San Francisco Bay, it has been done more for tidal marsh restoration than SAV beds, though some of these areas get colonized by SAV early on and then convert to emergent marsh vegetation. A lot of the work in the Chesapeake Bay has been working with existing elevations and substrates and trying to create sheltered environments for SAV to establish.
- **Matt Robinson:** Do you think dredged sediments will need to be amended with anything to help with growth or sediment stabilization? A lot of this stuff is what is affectionately known as black mayo- are you concerned about sulfur concentrations?
 - **Stuart Siegel:** We have had acid sulfate issues with deeper excavated muds from marsh vegetation – typically more of a problem with deeper materials rather than shallower.
 - **Sam Merrill:** In the technical report, you'll find that there's not a lot of sulfur. It's consistent with what's coming down the river and bedrock accumulations.
- **Lorie Staver:** Currently, shallow water placement of dredged material is not allowed in Maryland. I think it would require a legislative change.
 - **Chris Guy:** There's not a regulatory problem in MD for beneficial reuse of material. You need to prove the water quality issues, and demonstration projects/small-scale pilot studies are helpful. Slope is an important factor- marshes in the Chesapeake are sinking, so we need sediment. In most projects we've seen, the slope is poor. So, there is a need to technically take a look at this and see if it's been done, at a small scale.
- **Jonathon Watson:** The only study that I am aware of (Seal Beach, CA) examining the influence of thin layer placement on SAV showed that placed sediments negatively affected Zostera, at least initially. I would be interested to hear if others are aware of other examples.
 - <https://pubs.er.usgs.gov/publication/70204478>
- **Becky Swerida:** I've been interested in influences on near shore sediments from sand placements on living shorelines/shoreline restoration projects. The sand placed in the marsh area is often very coarse and could potentially change/improve the sediment in the nearshore for SAV. I'm hoping to see examples of this through current shoreline restoration monitoring projects. Have you seen similar effects of shoreline addition of sand having the same type of effect that direct TLP of sand for SAV?

- **Brooke Landry:** We can facilitate a smaller follow-up discussion with a few SAV WG member to keep the conversation going.

SAV/Climate Modeling HGIT Project Update *(Marc Hensel, VIMS)*

[Presentation slides](#)

Questions/comments:

- **Erin Shields:** Are there plans to add sediment loading to this at all?
 - **Marc Hensel:** TSS is one thing we don't have in the climate projection data.
 - **Chris Patrick:** It's also a problematic variable for the historic data because of the method changes and holes in the data. We played around with TSS but didn't include it in the final cut because it tended to be fairly uninformative.

CBP SAV Monitoring Webpages *(Paige Hobaugh, Tetra Tech)*

[Presentation slides](#)

Questions/comments:

- **Dave Wilcox:** How will this interface with our existing page given there are a lot of commonalities?
 - **Paige Hobaugh:** We're linking to a lot of stuff that exists on the VIMS website. We give a background on the how the survey came to be and what resources are available for volunteer monitors or anyone using the website, so we have a link to the segmentation scheme.
 - **Dave Wilcox:** Are you building a new web map? And we should probably combine efforts on the bibliography.
 - **Paige Hobaugh:** We are not building a new web map. We started linking the bibliography and taking information from that but don't have it entirely built out yet.
 - **Brooke Landry:** I think we ditched the idea of including the bibliography on this since it already exists on the VIMS website.
 - **Brooke Landry:** The Bay Program has done a lot of editing on the wireframes, such as taking out some explanatory information and streamlining the information. It should be up within the next month, and once it is available I'll send an email out to everyone.

Management and Stakeholder Input Request: Causes of benthic cyanobacteria overgrowth in SAV beds in Chesapeake Bay: Potential consequences for ecosystem resilience *(Judy O'Neil, UMCES)*

[Presentation slides](#)

Questions/comments:

- **Sally Hornor:** Will you be looking at local DIN levels inside SAV beds? Maybe low DIN is encouraging Cyanobacteria in the center of beds?
 - **Cathy Wazniak:** Yes, the bioassays will hopefully help answer that question Sally.
- **Nancy Rybicki:** I have a presentation about SAV in Susquehanna reservoirs and found dense large beds with Lyngbya, let me know if you'd like more info (nrybicki@usgs.gov).

- **Ken Moore:** We see that in our nursery tanks or nursery areas lyngbya will develop more so than out in the open areas. If we reduce light, then it doesn't develop as much so there are some light limitations.
- **Cathy Wazniak:** It's gotten so bad in the upper Bay that it breaks off into massive floating algae and messes with fishing gear. Last year we saw lyngbya balls in the lower Potomac.
 - **Judy O'Neil:** When I worked on this in Brisbane, Australia, it was brought to our attention by fishermen who were getting dermatitis from their fishing gear.
 - **Cathy Wazniak:** We have limited data that shows some toxin production in the Sassafrass, Susquehanna, and the Potomac.
- **Chris Guy:** For nearly 20 years I did continuous SAV monitoring around Poplar Island, and we consistently saw filamentous algae in the ruppia beds, but it was really only in the late season. We also found it much more abundant if there was bad water quality.
- **Brooke Landry:** I want to put out the request to you all, to please keep an eye on your tributaries and if you see an overgrowth of what appears to be lyngbya or other filamentous algae in your rivers, please let us know or grab a sample (put it in a Ziploc in water and Judy will come get it).
- **Elle Bassett:** We're giving our training at the end of this month so if there is something we should share with volunteers please let me know. I've seen it on the Miles and the Wye.

Workgroup business

- The Spring Habitat Goal Team meeting is May 4th (afternoon) and 5th (morning).
- The Spring SAV WG meeting will be sometime in June.
- We did not put in a request for a STAC workshop this year, but they are continuing to accept proposals on a rolling basis. If you want to propose a workshop please let me know and we can discuss submitting a proposal.
- There are no GIT funding projects for the SAV WG this year.

Adjourn