



The Abstract Quarterly : January 2022

Happy New Year, STAC. Thank you for a second year of virtual collaboration and team science. Despite not being able to safely convene since March 2019, STAC Members have remained persistent in their quest to provide the best possible science and technical guidance to the Chesapeake Bay Program. Currently, the Committee is wrapping up the Comprehensive Evaluation of System Response (CESR) document, a monumental effort completed almost entirely during the pandemic. FY21 saw an additional workshop added and there are now five steering committees planning spring STAC-workshops. Last spring, select STAC Members hosted a virtual series of conversations on COVID-19 and examining the effects on nutrient dynamics, fisheries, and local government, while others more recently led the charge to foster a connection across the Bay and the Baltics. Additionally, late last year, the Committee welcomed three new Members and in 2022, another seven at-large vacancies will be filled.

[Visit STAC Website](#)

STAC FY22 Request for Proposals: Closes February 4, 2022

The FY2022 [STAC-Sponsored Workshop Request for Proposals \(RFP\)](#) is now released and due to STAC Coordinator, [Annabelle Harvey](#) by early next month. Please see the [STAC Workshop Overview document](#) for further information on STAC-sponsored workshops.

Deadline: February 4, 2022.

2022 PFAS STAC Workshop and Request for Information

As part of the STAC FY21 workshop on PFAS, the Steering Committee has released an online [inventory on PFAS](#). The purpose of this inventory is to identify current efforts and approaches in order to inform the exposure to and potential effect of PFAS on fish and wildlife, and human health within the Chesapeake Bay region. You are welcome to share the inventory with your relevant networks. **Deadline: January 31, 2022.**

Around the Watershed | Partnership Resources

Shared Webinar Resources:

USGS, [Integrated science for the study of perfluoroalkyl and polyfluoroalkyl substances \(PFAS\) in the environment](#)

PA DEP,

- [Bureau of Safe Drinking Water Sampling Plan](#)

PFAS in the Chesapeake Bay Region

MODERATORS:
 KELLY SMALLING
 USGS
 SCOTT PHILLIPS
 USGS

SPEAKERS:
 AMY WILLIAMS
 Water Program Specialist, Bureau of Clean Water,
 PA DEP
 LEE CURREY
 Director, Water and Science Administration, MDE
 BETSY BEHL
 Director, Health and Ecological Criteria Division, EPA

- [Bureau of Safe Drinking Results](#)
- [Neshaminy basin fish tissue advisory](#)
- [Emerging Contaminant Page](#)
- [PA DEP Data](#)

MDE, [Maryland](#) and PFAS

EPA,

- [EPA and PFAS](#)
- [CWA Analytical Methods for Per- and Polyfluorinated Alkyl Substances \(PFAS\)](#)

The STAC FY21 workshop on PFAS Steering Committee hosted the **Chesapeake Research Consortium (CRC) Roundtable** last month. Three speakers were invited to discuss what we currently know about PFAS, what we need to know, and how the Bay states and EPA are tackling the issue:

- Amy Williams, Water Program Specialist (PA DEP)
- Lee Currey, Director, Water and Science Administration, (MDE)
- Betsy Behl, Director, Health and Ecological Criteria Division, (EPA)

New Virus Identified in Melanistic Skin Lesions on Smallmouth Bass from the Chesapeake Bay Watershed

By Environmental Health Program January 27, 2021

USGS Science Provides an Understanding of Fish Viruses

USGS Chesapeake Accomplishments for 2021

An overview of U.S. Geological Survey highlights from 2021. Included accomplishments are based on Chesapeake-related journal articles and reports produced by USGS and a complete list can be found at [Bibliography of USGS Publications](#).

Habitat Vulnerability Assessment for Wintering American Black Ducks

The USGS developed a habitat vulnerability tool that projects the effects of sea level rise on black duck habitat. The map also has a Projected Development Pressure tab that shows areas where future residential and commercial development is expected to take away even more habitat for waterfowl.

[The Chesapeake's Stand-out Stories of 2021](#) | CBP

[Sediment and Nutrient StoryMap](#) | Susquehanna River Basin Commission

[Chesapeake Capacity Survey](#) | The Alliance

[Out of the Ballast Tank & Into the Waters](#) | SERC

Chesapeake Bay & Baltic Sea Collaborations | An Opportunity for Learning Together

The Chesapeake Bay and the Baltic Sea are often compared as two ecosystems with many commonalities (and some notable differences). Learning from these commonalities has long been a theme for research and outreach. As stakeholder in each system work to address critical issues, the opportunity for further collaboration has never been greater.

From August 2019 to May 2020, STAC Executive Board member Lara Fowler lived in Sweden as a visiting scholar at Uppsala University on a Fulbright Scholarship. As part of this, she [focused on how people were finding success on both water quality and quantity goals](#), including in the Baltic. After attending the 2019 Baltic Sea Science Congress meeting hosted by [Stockholm University's Baltic Sea](#)

2021 Baltic Sea Science Congress

While eventually rescheduled to October 2021, the [Baltic Sea Science Congress](#) included a joint discussion about Baltic and Chesapeake Bay related issues. There were four areas of focus, listed below, with a speaker providing a brief overview with both the Baltic and the Chesapeake. One of the keynotes was Ann Swanson, presenting on "*Lessons Learned in Chesapeake Bay Using the Past to Inform the Future.*"

Nutrient dynamics:

- [Bo Gustafsson](#), Stockholm University
- [Jeremy Testa](#), University of Maryland Center for Environmental Science

Impacts of climate change:

- [Markus Meier](#), Leibniz Institute of Oceanography, Warnemünde
- [Mark Bennett](#), U.S. Geological Survey, Chesapeake Bay Program

Living resources/fisheries:

- [Alf Norkko](#), University of Helsinki
- [Kenny Rose](#), University of Maryland Center for Environmental Science

Governance:

- [Jesper Andersen](#), NIVA Denmark
- [Ann Swanson](#), Chesapeake Bay Commission



More than 70 people joined in person in Denmark and remotely to listen, discuss challenges, and identify potential next steps. After a lively discussion on each topic, the conversation turned to how to have more systematic exchange. Potential ideas included writing joint research grants, having student or faculty exchanges, or co-presenting at conferences.

As one follow up, Lora Harris, who will be doing a Fulbright in Finland during 2022, and Jeremy Testa took the lead on putting together a Chesapeake-Baltic session for the 2022 Chesapeake Community Research Symposium. We are continuing to explore potential joint opportunities; if you are interested, feel free to reach out to Lara Fowler, Penn State, lbf10@psu.edu.

For more research topics that may be of interest, please see the [Baltic and North Sea Coordination and Support Action](#) site.

Save the Date | Upcoming STAC Workshops

Spring STAC-funded workshops are tentatively planned to be in-person but subject to change based on COVID-19 travel restrictions. For the *most updated information* on workshops, please visit the [STAC website](#).



Evaluating a Systems Approach to BMP Crediting

March 22-23, 9 am EST

This [two-day workshop](#) will explore specific management actions for improvements to the current [National Environmental Information Exchange Network](#) (NEIEN) system to better account for habitat-based data and co benefits, and for incorporation of landscape consideration and application of a systems approach to maximizing benefits from multi-habitat projects to improve restoration outcomes.

Improve the Understanding and Coordination of Science Activities for PFAS in the Chesapeake Watershed

May 17-18, 9 am EST

This [two-day workshop](#) will gather state, federal, and academic partners to better understand the state of the science and improve

science coordination for in order to:

- Summarize the current understanding and analyses of the sources, occurrence, and fate of PFAS
- Identify current efforts and approaches to inform the potential effects on fish and wildlife, and their consumption.
- Consider study designs, and comparable sampling and analysis methods, for a more coordinated PFAS science effort.



Newly Published Research by STAC Members

"Laboratory media test comparisons to long-term performance of biofilter and media filter treatment-train stormwater controls." Published in the [Journal of Sustainable Water in the Built Environment](#) and co-authored by Shirley Clark.

"Evaluating the joint effects of climate and land use change on runoff and pollutant loading in a rapidly developing watershed." Published in the [Journal of Cleaner Production](#) and co-authored by Zach Easton.

"Lost in Learning: Mapping the position of teacher in the classroom and beyond." Published by the [National Collegiate Honors Council](#) at DigitalCommons@University of Nebraska - Lincoln and co-authored by Alix Dowling Fink.

"Nursery habitat use by juvenile blue crabs in created and natural fringing marshes." Published in [Ecological Engineering](#) and co-authored by Kirk Havens.

"Integrated assessment of nitrogen runoff to the Gulf of Mexico." Published in [Resource and Energy Economics](#) and co-authored by Jason Hubbart.

"Descriptions of two new shell-dwelling species of Metriaclima (Cichlidae) from Lake Malai, Africa." Published in [Zootaxa](#) and coauthored by Jay Stauffer.

"The statistical power to detect regional temporal trends in riverine contaminants in the Chesapeake Bay Watershed, USA." Published in [Science of the Total Environment](#) and co-authored by Greg Noe.

"Experimental evidence of common pool resource use in the presence of uncertainty." Published in the [Journal of Economic Behavior & Organization](#) and co-authored by Leah Palm-Forster.

"Simulating fish population responses to elevated CO2: a case study using winter flounder." Published in [Marine Ecology Progress Series](#) and co-authored by Kenny Rose.

"An introduction to decision science for conservation." Published in [Conservation Biology](#) and co-authored by Mike Runge.

"Modeling impacts of submersed aquatic vegetation on sediment dynamics under storm conditions in Upper Chesapeake Bay." Published in [Estuaries and Coasts](#) and co-authored by Larry Sanford.

"Comparison of erodibility parameters for cohesive streambank soils between In Situ Jet Test Device and Laboratory Conduit Flume." Published in the [Journal of Hydraulic Engineering](#) and co-authored by Tess Thompson.

"Differential retention of deposited ammonium and nitrate affects the global forest carbon sink." Published in [Nature Communications](#) and co-authored by Weixing Zhu.

At a Glance | CBP Meetings this Month

For information on upcoming meetings for CBP workgroups, GITs, Action Teams, and more, please visit the [Chesapeake Bay Program Calendar of Events](#). A selection of meetings this month are listed below.

Thursday, February 3

- [Watershed Technical Workgroup](#)
- Friday, February 4**
- [Hypoxia Collaborative Team](#)
- Wednesday, February 9**
- [Conowingo WIP Steering Committee](#)
 - [Toxic Contaminants Workgroup](#)
- Friday, February 11**
- [BMP Verification Ad-Hoc Action Team](#)
- Monday, February 14**
- [WQGIT Discussion of CAST 2021](#)
- Thursday, February 17**
- [Management Board](#)
 - [Agriculture Workgroup](#)
- Wednesday, February 23**
- [Integrated Trends Analysis Team](#)
- Thursday, February 24**
- [STAR](#)
 - [Citizens Advisory Committee Quarterly Meeting](#)
- Monday, February 28**
- [Water Quality Goal Implementation Team](#)

February 2022

S	M	T	W	T	F	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	1	2	3	4	5
6	7	8	9	10	11	12

<< [Previous Month](#) | [Next Month](#) >>

Regional Events and Webinars

Collaborative Activities on Blue Carbon in Maryland



Living Shorelines in Practice - Enhancing Coastal Resilience

Feb 10, 1 pm

Part 3 of 3 in a webinar series from Maryland Commission on Climate Change and its workgroups. [Click](#) for Zoom registration and more info available on the event flyer [here](#).



Chesapeake Bay Webinar Series, Plan Integration for Resilience And Equity

Feb 17, 12 pm

Virtual webinar hosted by the Mid-Atlantic Planning Collaboration. Learn more [here](#).



Pennsylvania Land Conservation Conference

March 16-18, 2022 | Wyndham Hotel Gettysburg

2022 Sustainable Agriculture Conference

Mar 16-18

The Conference will be held March 16-18 at the Wyndham Hotel in Gettysburg, registration link [here](#).