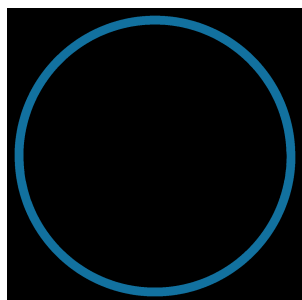


LAB LINES



Welcome to the new CBL Newsletter format! As you scroll through, you will see we have had a lot of great events and reasons to celebrate this past month. A big thank you to Renee Arnold for her Canva/Constant Contact skills - we are hoping this new version makes it easier to read, whether on your laptop or your phone. Let us know what you think, and Happy November!

Beth

In Case You Missed It!

Admiral of the Chesapeake

On Wednesday, October 1st, Tom Miller was invested as the 111th Admiral of the Chesapeake by Governor Wes Moore at a ceremony in the State House in Annapolis. For the first time, nominations for the award were open to the public, and a review committee selected candidates from the nominations. The final decision on the recipient was made by the Secretary of DNR, Josh Kurtz, and the Governor's Chief of Staff. The award recognizes Tom's career-long work to improve the management of blue crab and other species in the Bay.





In October, Solange Filoso participated in a five-day BEST-REST Workshop titled “The Biodiversity–Ecosystem Service–Climate Resilience Triangle: developing future restoration strategy for stream ecosystems.” The event took place in Leipzig, Germany, at the Helmholtz Centre for Environmental Research – UFZ.

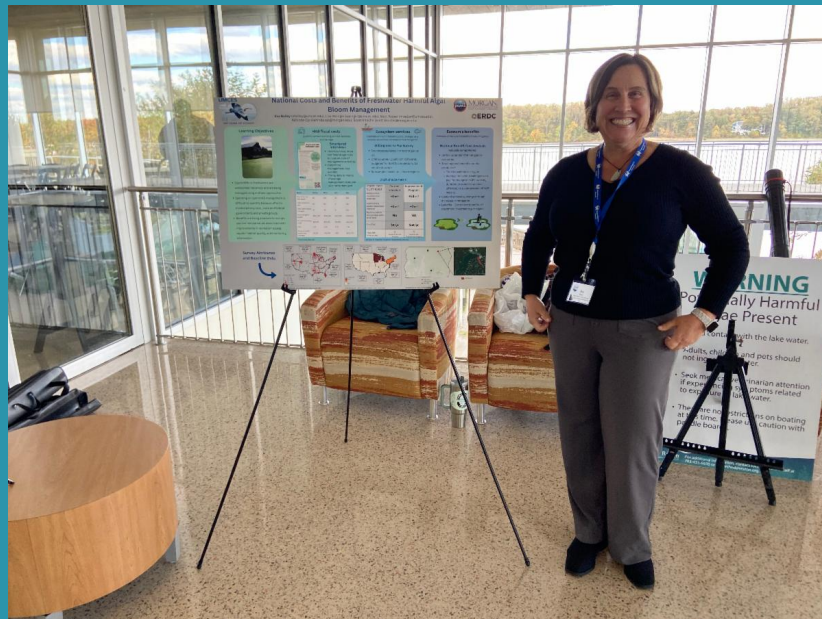
The workshop brought together stream restoration scientists from around the world to explore how biodiversity-oriented and ecosystem function-oriented restoration goals can help strengthen climate resilience in stream ecosystems. The group even had the opportunity to visit a restored river by kayak, experiencing firsthand how restoration efforts translate into real-world improvements, and having some fun along the way. It was an inspiring five days of exchange and collaboration among an engaged international community, and participants are now working together on a joint paper to further advance these ideas.



On October 11th CBL joined the many exhibitors and vendors at the annual Patuxent River Appreciation Day (**PRAD**), held at the Calvert Museum. Thankfully, the rain held off mostly until everyone was packing up! CBL had many visitors to its booth who were eager to learn about our 100 years history in water quality and oysters, and of course, the Dolphins are always a huge hit. CBL was also a part of the First Annual '**Shuck it! Solomons**' - a brand-new event celebrating the rich oyster heritage of the Chesapeake Bay. This was a huge success, which the Solomons business association will continue next year, stay tuned!

Thank you to the volunteers, Tom, Danielle, Anna, Amir, Beth and Raul, who,

without their help, would not have been possible, and apologies to the afternoon crew for failing to take pictures!



On October 22, Eva Bailey presented a poster at the **2025 Potomac River Conference: Integrating Science, Policy, and Communications to Combat Harmful Algal Blooms**. The conference expounded on the science, policy, management, and public communications of freshwater harmful algal blooms (HABs) in the Potomac River basin and beyond.

Bloom Management

Eva Bailey (ebailey@umces.edu), Lisa Wainger (wainger@umces.edu), Matt Weber (mweber@umces.edu), Kehinde Ojo (kehinde.ojo@morgan.edu), Scott Knoche (scott.knoche@morgan.edu)

Learning Objectives



- CyanoHABs in freshwaters are widespread nationally and are being managed using multiple approaches
- Spending on cyanoHAB management is difficult to quantify because effort is divided among local, state and federal governments and private groups
- Benefits are being assessed to include use and nonuse values associated with improvements in recreation access, aquatic habitat quality, and monitoring information

HAB fiscal costs

Quantify current spending on HAB response and damage

Structured Interviews

- Interview local, state and federal agencies to capture cost of management activities
- Determine management cost avoided
- Fitting data to model of average management costs per lake / area managed

Metric	Median	Mean	Min	Max
Cost of service (HAB response)	211	205	42	365
Total lake area / year	40	98	0	208
Total water bodies managed	71	43	3	81
Revenue program budget	\$302,000	\$180,395	\$42,600	\$320,000
Average total salary costs	\$43,272	\$182,046	\$5,906	\$224,131
Research costs / water body managed	129	129	0.20	2.34
	\$1,276	\$21,959	\$201	\$250,000

Preliminary Results

Ecosystem services

Estimate economic benefit/utility changes at a national scale from increases in HAB mitigation

Willingness to Pay Survey

- Encompasses lakes in the contiguous US
- Online survey (Qualtrics® software), budgeted for 8,000 completions, 15 minute duration
- Subsamples based on climate regions

Draft choice matrix

Program Region:	Current Situation	Improvement Program
NORTHEAST		
Additional lake recreation areas made safe	+0 mi ²	+50 mi ²
Additional lake aquatic habitat area improved	+0 mi ²	+0 mi ²
Real-time website harmful algal status for all lakes	No	Yes
Cost (\$/yr)	\$0/yr	\$68/yr
Your Vote (choose one)	☐ I vote for Current situation	☐ I vote for the Improvement Program

Example of potential program respondents at 1 lake

Economic benefits

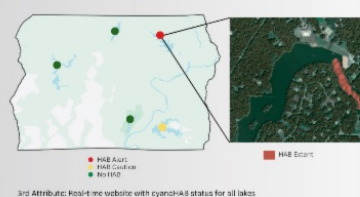
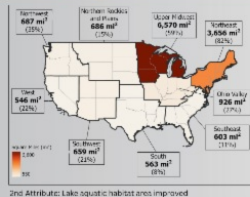
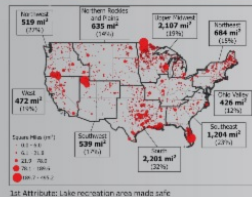
Estimate of the public benefits of HAB mitigation

National Benefit Cost Analysis

- Analysis components
- Define potential HAB mitigation scenarios
- Total regional benefits are the product of
 - Total households in region
 - Average household willingness to pay for change in HAB intensity, duration or extent (lake area affected) or a combination of HAB metrics
- Costs of achieving change through increases in mitigation
- Benefits - Costs = net benefits of treatment investments per region



Survey Attributes and Baseline Data



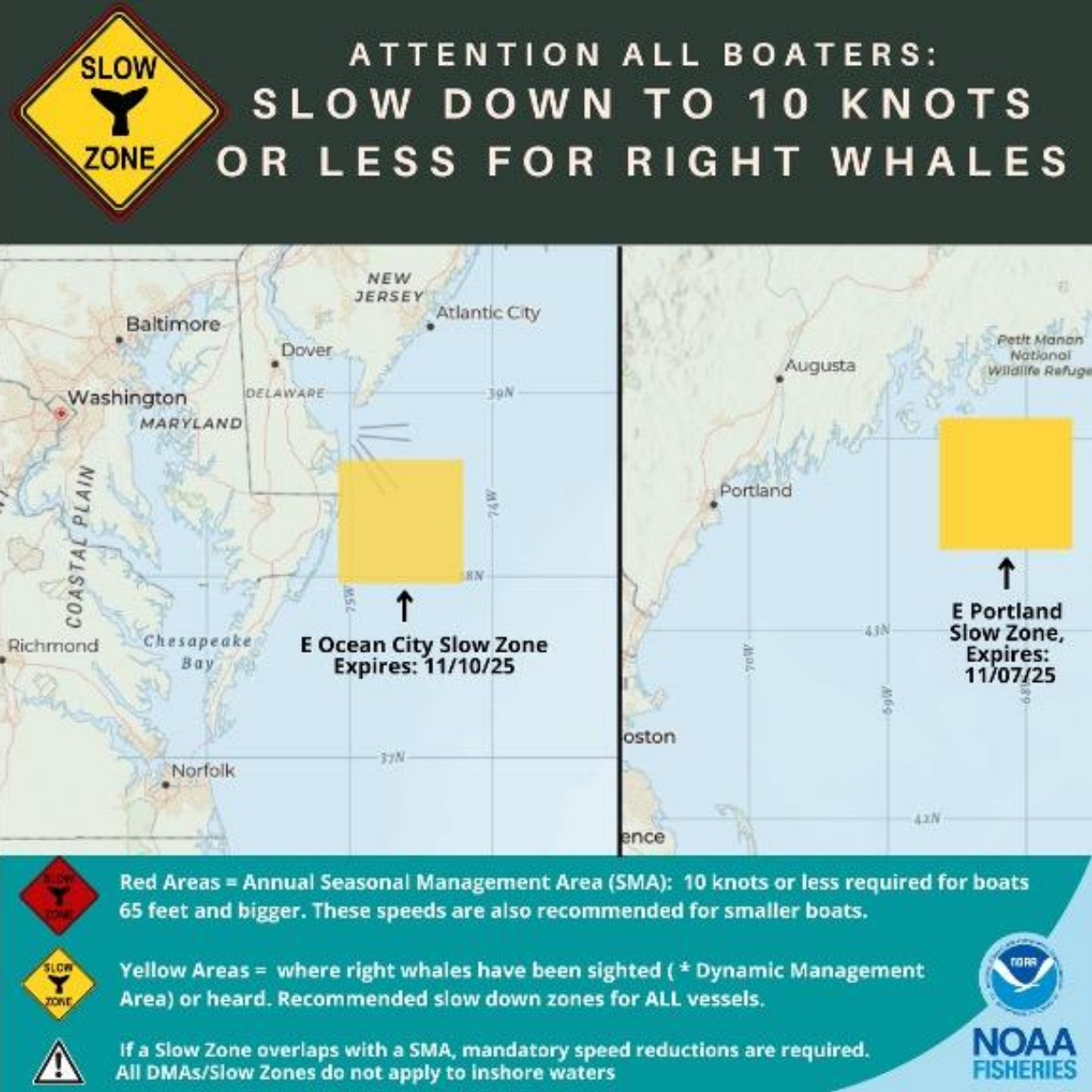
Tail Winds

- General [TailWinds](#) updates
 - Kirsten Silva, Caroline Tribble, and Helen Bailey (from left to right in the image) attended the North Atlantic Right Whale Consortium on October 22-23, 2025 in New Bedford Massachusetts, pictured in front of a model of a 100 ft blue whale heart.
 - Kirsten and Caroline presented a full live talk at the meeting in the acoustics session on "Observed spatial and temporal trends of North Atlantic Right Whale occurrence over the past decade offshore Maryland, U.S.A."



- **Real-Time Whale Monitoring**

- The [Ocean City real-time whale buoy](#) had its first detection of North Atlantic right whale sounds on October 26th, triggering the first NOAA Slow Zone for the E Ocean City area, effective through November 10th.
- Whale season has begun, with frequent detections of fin whales, and the first detection of humpback whales!
- Baleen whale sounds can generally be observed offshore Maryland from August through April. They have a decreased presence during the summer months, June and July.



- **Mid Atlantic Marine Biodiversity Observation Network**

- The acoustic telemetry array off Ocean City MD recorded 22,826 detections of 629 fish transmitters during the initial November 2024 - April 2025 deployment period.
- Detected species included Atlantic sturgeon; great white, sand tiger, sandbar, spinner, dusky, angel, thresher, Atlantic sharpnose, and blacktip sharks; green and leatherback sea turtles; striped bass; bluefin tuna; swordfish; false albacore; cobia; manta and cownose rays; alewife and blueback herring.

FRA Palooza 2025

On October 23rd, FRAs from all around UMCES attended the first ever FRA Palooza at the UMCES Annapolis location. The day was filled with thoughtful conversation, team

building, learning, great company and laughter. And - sensational food to boot! We were joined by President Fernando for opening remarks to kick-off the day.



The UMCES FRA Council coordinated the event after widespread interest and Fernando's commitment to collaboration and team building. The FRA Council intends to make this an annual event, so please keep an eye out for future updates.

On behalf of the FRA Council, THANK YOU to everyone who attended, contributed and supported this event in anyway. And, to Fernando for his great idea and encouragement!

Any suggestions or questions for the council? Please contact your CBL FRA Council representative Theresa M. @ tmurphy@umces.edu



CBL FRAs Jamie Testa, Jerry Frank, Theresa Murphy, Ceana Hoburn, Amber DeMarr, Kaitlin Beasley-Polko, Maddy Raimondi, and Casey Hodgkins attended the inaugural FRA Paloozza at the new UMCES Annapolis office. This was a great opportunity for FRAs from all units to get to know each other with ice breakers,

lightning talks, storytelling, and an aluminum foil boat challenge! CBL's own, Ceana Hoburn took first place in boat building!



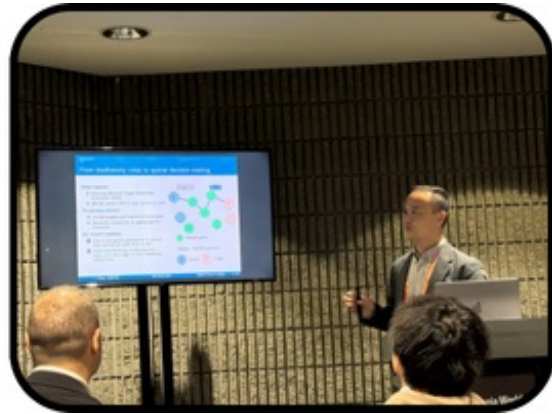
MEES Colloquium

The Annual MEES Graduate Colloquium was hosted October 24-25 by UMCES AL and MEES. Below is a sub-set of the CBL contingent at the MEES colloquium, taken after dinner Friday evening.



Spatial Decision-Making under Markovian Dynamics: A Mixed-Integer Programming Approach

October 27, Postdoctoral researcher Chao Wang presented his lab's research at the **2025 INFORMS Annual Meeting** in Atlanta - the leading international conference on operations research and analytics. His talk, "Spatial Decision-Making under Markovian Dynamics: A Mixed-Integer Programming Approach," examined how to allocate limited conservation resources to best promote species dispersal connectivity. While corridor geometry has long served as a template for conservation planning, this work highlights that functional connectivity can itself induce corridor-like structures in nature—suggesting that geometry should follow function, not precede it.



Postdoctoral researcher Chao Wang presented research at the 2025 INFORMS Annual Meeting in Atlanta. His talk examined how to allocate limited conservation resources to best promote species dispersal connectivity. While corridor geometry has long been used as a template for conservation planning, this work highlights that functional connectivity can itself induce corridor-like structures in nature—suggesting that geometry should follow function, not precede it. The study reframes corridor design as a function-first, not geometry-first, decision problem.

Chao Wang at the 2025 INFORMS Annual Meeting (Atlanta, GA), the leading international conference on operations research and analytics, representing the University of Maryland Center for Environmental Science.



CBL Chili Cook-Off & Costume Contest

On October 29, CBLers showcased their culinary skills and creativity by wearing their chef hats and most imaginative costumes! The flavors and flair were truly exceptional!

- Best Chili: Julia Smeltzer
- 2nd Place Chili: Kim Blodnikar
- Best Costume: Nina Santos
- Most Creative Costume: Amy Griffin



Recent Publications

- Corrêa, T.R.; Matricardi, E.A.T.; Filoso, S.; Santos, J.A.d.; Scariot, A.O.; Torres, C.M.M.E.; Martorano, L.G.; Pereira, E.M. Sustainability Under Deforestation and Climate Variability in Tropical Savannas: Water Yield in the Urucuia River Basin, Brazil. Sustainability 2025, 17, 8169. <https://doi.org/10.3390/>

su17188169

- Kilbourne, K. H., Weil-Accardo, J., Feuillet, N., Deschamps, P., Xu, Y.-y., Shen, C.-C., et al. (2025). Dating a medieval tsunami with uranium-series techniques on Caribbean corals. *Geophysical Research Letters*, 52, e2024GL114448. <https://doi.org/10.1029/2024GL114448>
- Stefanak, M.P., Schott, E.J. & Woodland, R.J. Observations on the population distribution and ecology of *Branchiostoma* (Cephalochordata) lancelets from the Virginia inner continental shelf region, United States. *Mar Biol* 172, 161 (2025). <https://doi.org/10.1007/s00227-025-04736-y> (with parital funding from our local Cove Point Natural Heritage Trust)
- Weiss, K. C. B., Larson, R. N., Sterner, B., Wierzbowska, I., VandeWoude, S., Crooks, K., Schipper, J., & Lewis, J. S. (2025). Prey selection of a widespread carnivore relative to predator–prey co-occurrence in space and time. *Journal of Animal Ecology*, 00, 1–23. <https://doi.org/10.1111/13652656.70146>

CBL Newsletter Archives



University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE
CHESAPEAKE BIOLOGICAL LABORATORY

www.umces.edu/cbl | 410-326-4281

P.O. Box 38 | 146 Williams Street | Solomons, MD 20688-0038

Chesapeake Biological Laboratory | PO Box 38 146 Williams Street | Solomons, MD 20688 US

[Unsubscribe](#) | [Update Profile](#) | [Constant Contact Data Notice](#)



Try email & social marketing for free!