

12th U.S. Symposium on Harmful Algae



October 27 - November 1, 2024
Holiday Inn by the Bay; Portland, ME

Welcome Reception

Sunday, October 27 @ 7:00-9:00pm

Welcome to the 11th U.S. Symposium on Harmful Algae! Appetizers and cash bar will be available in the Casco Bay Exhibit Hall to kick off the event.

Student-Hosted Bowling @ Bayside Bowl: \$25

Monday, October 28 @ 6:00-9:00pm

Ready... Set... Bowl! Join us for a student-hosted bowling night at Bayside Bowl. Admission includes light appetizers, shoe rentals, lounge area, and access to a cash bar.

Directions

Banquet, Awards Ceremony, & Halloween Party: \$55

Thursday, October 31 @ 6:30-10:30pm

Join us in the Casco Bay Exhibit Hall for a fun-filled night of tricks and treats at the Holiday Inn by the Bay. Eat, Drink, and Be Scary: buffet dinner, cash bar, and dancing will be available. Halloween costumes are strongly encouraged!

Meet the Funders: A Quick Tour of Federal Funding Programs for HAB Science and Management

Tuesday, October 29 @ 7:00-9:00pm

Sarah Pease, NOAA; Anika Dzierlenga, NIH/NIEHS; Mandy Michalsen, USACE; Whitney King, EPA; Jennifer Graham, USGS; Taylor Armstrong, USHCTI; Sarah Pease, HAB-ER; Maggie Broadwater, ECOHAB; Marc Suddleson, MERHAB; Felix Martinez, PCMHAB; Brittany King, SEAHAB; Tiffany Vance, IOOS; Betty Staugler, Sea Grant

TBD SPECIAL SESSION

Wednesday, October 30

Continental Breakfast (Monday - Friday) will be served from 7:30am-9:00am in the Casco Bay Exhibit Hall.

Lunch (Tuesday & Wednesday) will be provided to all attendees in the Casco Bay Exhibit Hall from 12:00noon-1:30pm. Please see the NEIW PCC Registration Desk for recommendations for lunch and things to do around Portland!

THANK YOU TO OUR EXHIBITORS & SPONSORS!



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SUNDAY, OCTOBER 27

	Session Room: TBD	Session Room: TBD	Session Room: TBD
10:30	<p>Workshop A: 10:30am - 11:30am</p> <p>Development of a Regional Poison Control Center and Medical Toxicology Guideline for Harmful Algal Bloom Sample Collection and Testing Pathways: A Pilot Study</p> <p>Brett Johnson, UMass Chan School of Medicine, UMass Medical Center</p> <p><i>Pre-Registration Required</i></p>	<p>Workshop B: 10:30am - 11:30am</p> <p>Data to Information: A Look at the HABs Data Housed in the Water Quality Portal and Served Through How's My Waterway</p> <p>Adam Griggs, US EPA</p> <p><i>Pre-Registration Required</i></p>	
11:30	<p>Break / Lunch <i>On Your Own</i></p>		
1:00	<p>Workshop C: 1:00pm - 3:00pm</p> <p>Demonstrating a Novel Molecular Toolbox for Rapid, Sensitive Detection of Toxic Pseudo-nitzschia Species</p> <p>Matthew Harke, GMGI; Kate Hubbard, FWC-FWRI; Pete Countway, Bigelow; Shelly Wanamaker, GMGI; Taylor Gibson, GMGI; Sydney Greenlee, Bigelow; Yida Gao, FWC-FWRI; Robin Sleith, Bigelow; Alex DeSmidt, FWC-FWRI; Camden Conte, FWC-FWRI; Julie Koester, FWC-FWRI</p> <p><i>Pre-Registration Required</i></p>	<p>Workshop D: 1:00pm - 4:00pm</p> <p>Track, Identify, Predict: An Introduction to 3 Complementary HAB Monitoring Systems</p> <p>Savannah Judge, Yokogawa Fluid Imaging Technologies, Inc.; Chris Lee, AquaRealTime; Greg Ford, Phytoxigene</p> <p><i>Pre-Registration Required</i></p>	
			<p>4:00pm - 6:00pm NHC - IWG Meeting</p>
6:30	<p>Break</p>		
7:00	<p>Welcome Reception <i>Casco Bay Exhibit Hall Downstairs</i></p>		

MONDAY, OCTOBER 28, 2024

7:30	Breakfast <i>Casco Bay Exhibit Hall Downstairs</i>	
	<i>Session Room: One Bloom</i>	
9:00	Welcome Words	
9:15	Blossoming Paradigms for <i>Karenia brevis</i> Bloom Initiation Katherine Hubbard, Fish & Wildlife Research Institute / Florida FWCC	Progression and Impacts of a 2022 HAB Event in San Francisco Bay David Senn, San Francisco Estuary Institute
10:00	Break	
	Engaging Communities & Stakeholders <i>Session Room: One Bloom</i> moderator: TBD	HAB Management, Mitigation, & Control I <i>Session Room: HAB</i> moderator: TBD
10:30	Harmful Algal Bloom Events: Transitioning the Bering Strait Region with Teamwork Gay Sheffield, UAF Marine Advisory Program / Alaska Sea Grant	In Situ Impacts of Modified Clay on <i>Karenia brevis</i> Cell Concentrations, Water Quality, and Microbial Communities John Kristoffer Andres, University of Central Florida
10:45	Interannual Variability in <i>Alexandrium catenella</i> Bloom Dynamics in Pacific Arctic Waters Evangeline Fachon, Woods Hole Oceanographic Institution	Flocculation and Sedimentation for Control of HABs Using Modified Biochar Vincent Lovko, Mote Marine Laboratory
11:00	<u>Speed Talks</u> Shannon Cellan, Sitka Tribe of Alaska Cameron Thompson, NERACOOS Savannah Mapes, Virginia Institute of Marine Science	Harnessing Nanobubble Technology for Efficient Ozone Treatment of Harmful Algal Blooms in Aquatic Environments Jesús Morón-López, NEWT Center / Arizona State University
11:15	All Hands on Deck: Collaborative Solutions to Recurring Cyanobacteria Blooms on Damariscotta Lake Robin Sleith, Bigelow Laboratory for Ocean Sciences	Unlocking the Potential for Ozone Nanobubble Technology to Control Harmful Algal Blooms Heather Raymond, The Ohio State University
11:30	A Stakeholder-Driven Communication and Engagement Strategy to Facilitate the Future Transition of a Biological HAB Control Technology to End-Users Alexandria Hounshell, NOAA NCCOS	Speed Talks Erin Peters, US ACE Jennifer Toyoda, Mote Marine Laboratory Lauren Gallagher, NYS Parks

MONDAY, OCTOBER 28, 2024

11:45	<p>Speed Talks</p> <p>Margaret Mulholland, Old Dominion University Barbara Kirkpatrick, NOAA GCOOS / TAMU Meiyan Wu, Montclair State University</p>	<p>Speed Talks</p> <p>Kelley Breeden, Mote Marine Laboratory Victoria Devillier, Mote Marine Laboratory Ernest Neafsey, LG Sonic US</p>
12:00	<p>Lunch <i>On Your Own</i></p>	
	<p>Emerging Toxins and Species <i>Session Room: One Bloom</i> moderator: TBD</p>	<p>Shellfish <i>Session Room: HAB</i> moderator: TBD</p>
1:30	<p>Saxitoxins in Lake Erie</p> <p>Justin Chaffin, The Ohio State University</p>	<p>Environmental Drivers of Cyanotoxin Accumulation in Louisiana Estuaries and Oysters</p> <p>Jennifer Raabe, University of Louisiana</p>
1:45	<p>The Chemical Biology and Biosynthesis of Highly Potent Microcystins Containing Homologated Amino Acid Residues</p> <p>Matthew Bertin, Case Western Reserve University</p>	<p>Shellfish as Sentinel Organisms for Monitoring Microcystins Across the Freshwater to Marine Continuum</p> <p>Ellen Preece, California Department of Water Resources</p>
2:00	<p>Degradation of Emerging Phycotoxins in Response to Environmental Variables and Implications for Management</p> <p>Joshua Garber, Virginia Institute of Marine Science</p>	<p>Microcystin and Domoic Acid Presence in <i>Crassostrea virginica</i> in North Carolina Coastal Waters</p> <p>Astrid Schnetzer, North Carolina State University</p>
2:15	<p>Speed Talks</p> <p>Leah Anne Gibala-Smith, Old Dominion University Jingrang Lu, US EPA Abby Webster, SUNY ESF</p>	<p>Speed Talks</p> <p>Marcella Kretz Wallace, Stony Brook University Kathryn Cahalane, USGS Julia Sweet, University of Louisiana</p>
2:30	<p>Break</p>	
	<p>Bloom Dynamics & Drivers I <i>Session Room: One Bloom</i> moderator: TBD</p>	<p>Application of Emerging Technologies I <i>Session Room: HAB</i> moderator: TBD</p>
3:00	<p>Alleviation of Phytoplankton Light Limitation by Salinity Intrusion in a CDOM Rich, Oligohaline Estuary</p> <p>Mingying Chuo, University of North Carolina</p>	<p>Underway Detection of Particulate Microcystins in Lake Erie by Surface Plasmon Resonance Sensor Onboard an Uncrewed Surface Vehicle</p> <p>Greg Doucette, NOAA NOS / NCCOS</p>

MONDAY, OCTOBER 28, 2024

	<p>Bloom Dynamics & Drivers I <i>(continued...)</i> Session Room: One Bloom moderator: TBD</p>	<p>Application of Emerging Technologies I <i>(continued...)</i> Session Room: HAB moderator: TBD</p>
3:15	<p>Intensification and Spread of Inshore Alexandrium catenella Blooms in Cape Cod, Massachusetts Michael Brosnahan, Woods Hole Oceanographic Institution</p>	<p>Advancement of Un-Crewed Systems to Improve Our Understanding of Cyanobacteria HABs: Development of the Surface Harmful Algae Research Craft (SHARC) Benjamin Downing, NOAA</p>
3:30	<p>New Insights into the Nature of Karenia brevis Blooms: Periodicity in Cell Concentration and How Red Tides are Different from Ordinary Blooms James Culter, Mote Marine Laboratory</p>	<p>Retrievable 3D Printed Structures for Advanced Photocatalysis to Degrade Microcystins Alan Kennedy, US ACE</p>
3:45	<p>Phased Mating and Division Dynamics of Dinophysis acuminata in Culture and in Salt Pond, MA Serena Sung-Clarke, Massachusetts Institute of Technology, Woods Hole Oceanographic Institution</p>	<p>Application of Solid Phase Adsorption Toxin Tracking (SPATT) for Tracking Karenia brevis-derived Brevetoxins in Southwest Florida Kelsey Marvin, Fish & Wildlife Research Institute / Florida FWCC</p>
4:00	<p>Seasonal Persistence of Low Levels of Pseudo-nitzschia australis on the Coast of Maine Eight Years After its First Appearance Sydney Greenlee, Bigelow Laboratory / University of Maine</p>	<p>Speed Talks Madison Bennett, Florida Atlantic University Gregory Boyer, SUNY ESF Peter Countway, Bigelow Laboratory for Ocean Sciences</p>
4:15	<p>Speed Talks James Larson, USGS Shounak Banerjee, Los Alamos National Laboratory Yizhen Li, NOAA NCCOS</p>	<p>Speed Talks William Sanderson, Los Alamos National Laboratory Aim'ee Henderson, US EPA Ashley Reaume, University of Central Florida</p>
4:30	<p>Break</p>	
6:00 - 9:00	<p>Student-Hosted Bowling @ Bayside Bowl <i>Pre-Registration Required</i></p>	

TUESDAY, OCTOBER 29, 2024

7:30	Breakfast <i>Casco Bay Exhibit Hall Downstairs</i>	
	<i>Session Room: One Bloom</i>	
9:00	HAB Town Hall	
10:30	Break	
	Predictive Modeling - Freshwater <i>Session Room: One Bloom</i> moderator: TBD	Remote Sensing <i>Session Room: HAB</i> moderator: TBD
11:00	Applying Paradigms to Paradoxes: Phytoplankton Community Analysis to Improve Prediction of Cyanobacterial Dynamics Michael J. Paul, US EPA	Using a Coupled Satellite Image-Numerical Model Framework to Simulate <i>Margalefidinium polykrikoides</i> in the York River Estuary Xin Yu, ORISE / NOAA
11:15	National Forecasting of Cyanobacterial Harmful Algal Bloom Events: a Bayesian Spatiotemporal Model Evaluation Kate Meyers, US EPA ORISE Fellow	A 20-year perspective of Lake Okeechobee (Florida, USA) Using Combined Satellite and Historical Data to Identify Critical Factors of CyanoHABs David Berthold, University of Florida
11:30	Speed Talks Ronaldo Lopez, Virginia Commonwealth University Jennifer Murphy, USGS Caroline Owens, CSS Inc.	Hyperspectral Discrimination of Cyanobacteria: Moving Towards Relevant Field Scales Kaytee Pokrzwinski, NOAA / NCCOS
11:45	Speed Talks Joel Allen, US EPA Keith Loftin, USGS Emily Summers, US ACE	Speed Talks Jessie Garrett, USGS Sachidanada Mishra, CSS Inc. Dana Keil, New York State Department of Health
12:00	Lunch <i>Casco Bay Exhibit Hall Downstairs</i>	

TUESDAY, OCTOBER 29, 2024

	Microbial Interactions <i>Session Room: One Bloom</i> moderator: TBD	HAB Management, Mitigation, & Control II <i>Session Room: HAB</i> moderator: TBD
1:30	The Effects of Long-Term Laboratory Cultivation on Cyanobacteria and Their Associated Phycosphere Katelyn McKindles, Baylor University	Investigating Solar-Powered Humic Acid Dispersion Equipment (SHADE) for prevention and mitigation of harmful algal blooms Andy Krieter, US ACE CERL
1:45	Karenia brevis and Its Interaction with Viruses, Bacteria and Other Phytoplankton at Different Temperatures: Finding the Sweet Spot for Growth in Challenging Environments Pat Glibert, University of Maryland	Algal Separation Using Recoverable Magnetic Particles Under a Tunable Magnetic Field Lili Li, New Jersey Institute of Technology
2:00	A Metagenomic Search for Marine Viruses that Influence the Harmful Bloom Former Karenia brevis Anne Booker, Bigelow Laboratory	Effects of Cyanobacteria Bloom Treatment by Hydrogen Peroxide on Short and Long-Term Light Penetration in a Shallow, Eutrophic Lake Nathan Hall, University of North Carolina
2:15	Speed Talks Kasey Benesh, US EPA ORISE Fellow Forrest Lefler, University of Florida Lilly Blume, Virginia Institute of Marine Science	Speed Talks Mary Kate Rinderle, University of North Carolina Yihan Zhang, New Jersey Institute of Technology Victoria Vossler, Mote Marine Laboratory
2:30	Break	
	Predictive Modeling - Marine <i>Session Room: One Bloom</i> moderator: TBD	Bloom Dynamics & Drivers II - Cyanobacteria <i>Session Room: HAB</i> moderator: TBD
3:00	Controls on Alexandrium catenella variability in the Gulf of Maine from a 25-year hindcast David Ralston, Woods Hole Oceanographic Institute	Making the Watershed Connection: the Influence of Cyanobacteria, Sediment, and Nutrient Loading and Hydrology on Cyanobacterial Bloom Initiation in the Nearshore Environment Carrie Givens, USGS
3:15	The Value of Harmful Algal Bloom Forecasts in the Pacific Northwest Di Jin, Woods Hole Oceanographic Institute	Dynamics and Drivers of Two Cyanotoxin-Producing Blooms in the Largest Drinking Water Reservoir in Southern California Margaret Spoo-Chupka, Metropolitan Water District of Southern California

TUESDAY, OCTOBER 29, 2024

3:30	<p>Short-Term Forecast of <i>Karenia brevis</i> Trajectory on the West Florida Shelf</p> <p>Yonggang Liu, University of South Florida</p>	<p>Effects of Nutrient Manipulations on Lake Erie Microbial Community Composition and Cyanobacterial Toxigenicity</p> <p>Riley Ralph, Bowling Green State University</p>
3:45	<p>Spatial and Temporal Analysis of Algal Bloom Occurrence in the Chesapeake and Delaware Bays using Historical Remote Sensing Data</p> <p>Natalie Hall, USGS</p>	<p>Nitrogen Fixation within <i>Microcystis</i> Colonies Supports Harmful Cyanobacterial Blooms in North American Lakes</p> <p>Christopher Gobler, Stony Brook University</p>
4:00	<p>Evolution of Sargassum Forecasting Products for Puerto Rico and the Virgin Islands: From Regional Tracking to High-Resolution Modeling</p> <p>Haibo Xu, University of South Florida</p>	<p>Exploration of Short-Term, High-Intensity Disturbances on Cyanobacteria HABs in Lake Erie</p> <p>Reagan Errera, NOAA GLERL</p>
4:15	<p style="text-align: center;">Speed Talks</p> <p>Kari St. Laurent, NOAA / NOS / NCCOS Nicholas Record, Bigelow Laboratory Marco Sandoval Belmar, UCLA</p>	<p>Uncovering Environmental Drivers that Influence the Colony Size of the Cyanobacteria, <i>Microcystis</i></p> <p>Ronojoy Hem, Stony Brook University</p>
4:30	<p>Poster Session <i>Casco Bay Exhibit Hall Downstairs</i></p>	
7:00 - 9:00	<p>Special Session: Meet the Funders: A Quick Tour of Federal Funding Programs for HAB Science and Management <i>Somerset Upstairs</i></p>	

WEDNESDAY, OCTOBER 30, 2024

Session Room: One Bloom

9:00	<p>Tracking of Heterotrophic Feeding by the Dinoflagellate, Dinophysis, Reveals the Role of Differing Mesodinium Populations in Shaping Harmful Algal Bloom Dynamics.</p> <p>Megan Ladds, Stony Brook University</p>	&	<p>Increasing Harmful Algal Bloom Toxin Presence in a Warming Arctic: A Synthesis of Five Years (2019-2023) of Sampling</p> <p>Kathi Lefebvre, NOAA / Northwest Fisheries Science Center</p>
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10:00	Break		
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	<p>Public Health <i>Session Room: One Bloom</i> moderator: TBD</p>	<p>Benthic HABs I <i>Session Room: HAB</i> moderator: TBD</p>
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10:30	<p>Companion Animal Mortality from Oral Exposure to Palytoxin with First Confirmation of Exposure in Clinical Samples</p> <p>Jonathan Deeds, US FDA</p>	<p>Benthic Cyanobacteria Proliferations Drive Anatoxin Production Throughout the Klamath River Watershed, California, USA</p> <p>Laurel Genzoli, University of Nevada</p>
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10:45	<p>Exploring Connections Between Social Context and Ciguatera Fish Poisoning in Kiribati</p> <p>Christopher Knight, Stanford University</p>	<p>Microcoleus as Toxic Benthic Mats on Different Bottom Substrates: Ecophysiology and Distribution</p> <p>Abeer Sohrab, The University of Utah</p>
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11:00	<p style="text-align: center;">Speed Talks</p> <p>Christopher Loeffler, German Federal Institute for Risk Assessment Lauren Cortez French, University of Washington Megan Fleming, Mississippi Department of Marine Resources</p>	<p>An Intensive Monitoring Program to Understand and Forecast Toxigenic Cyanobacterial Blooms and Non-Toxigenic, Nuisance Algal Blooms in the Upper Shenandoah River Basin, Virginia...</p> <p>Gordon Selckmann, River Basin Commission</p>
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11:15	<p>Cyanotoxins in Upper Klamath Lake, OR</p> <p>Megan Skinner, US FWS</p>	<p>Identification of Toxigenic Benthic Cyanobacteria in the California Sierra Nevada Mountains</p> <p>Keith Bouma-Gregson, USGS</p>
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11:30	<p>The Measurement and Quantification of CHAB Toxins in Lake Spray Aerosols</p> <p>Jacob Flanzenbaum, Stony Brook University</p>	<p>Temporal and Spatial Variation in Community Structure of Ciguatoxin Producing Microalgae</p> <p>Sabrina Heiser, University of Texas</p>
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11:45	<p style="text-align: center;">Speed Talks</p> <p>Daniela Maizel, University of Miami Laila Abdullah, Roskamp Institute Robyn Espinosa, CDC</p>	<p style="text-align: center;">Speed Talks</p> <p>David Beaudoin, Woods Hole Oceanographic Institute Clayton Bennett, University of South Alabama Lydia Davis, University of North Carolina</p>
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WEDNESDAY, OCTOBER 30, 2024

12:00	Lunch <i>Casco Bay Exhibit Hall Downstairs</i>	
	Bloom Dynamics & Drivers III <i>Session Room: One Bloom</i> moderator: TBD	Biotoxins & Impacts on Organisms I <i>Session Room: HAB</i> moderator: TBD
1:30	Implementing Imaging FlowCytobots Within Florida's Harmful Algal Bloom Observation Network to Evaluate <i>Karenia brevis</i> Bloom Dynamics and Estimate In Situ Growth Rates in Highly Dynamic Nearshore Environments Eric Muhlbach, Florida FWCC	Comparison of Two Invertebrates Sensitivity to Algaecide and Cyanotoxin at Elevated Surface Water Temperatures Sarah Goodrich, University of Cincinnati
1:45	Dissolved Metabolite Biomarkers as Predictors of Harmful Algal Bloom Initiation Gabriella Chebli, Georgia Institute of Technology	The Effects of Harmful Algae and Ocean Acidification on Larval Bivalve Survival Adrienne Tracy, Stony Brook University
2:00	Investigating Phytoplankton Community Dynamics During the August 2022 <i>Heterosigma akashiwo</i> Bloom in San Francisco Bay, California Schuyler Nardelli, USGS	Uncovering Patterns and Mechanisms of Paralytic Shellfish Toxicity in Alaska's Geoduck Clam Fishery Courtney Hart, Port Gamble S'Klallam Tribe
2:15	Speed Talks Tessa Rock, University of Louisiana Stephanie Anderson, US EPA Kasia Kenitz, Scripps Institution of Oceanography / University of California	Speed Talks Chelsea Kovalcsik, University of Alaska Patrick Charapata, NOAA Northwest Fisheries Science Center Johnathan Evanilla, Bigelow Laboratory for Ocean Sciences
2:30	Break	
	Method Validation & Reference Materials <i>Session Room: One Bloom</i> moderator: TBD	Biotoxins & Impacts on Organisms II <i>Session Room: HAB</i> moderator: TBD
3:00	Combining Nanopore Sequencing with qPCR for Accurate and Site-Specific Monitoring of Harmful Cyanobacterial Genera in Freshwater Field Samples Ping Gong, US ACE ERDC	Targeted Toxin Analysis in Recreational Water Sources... The More You Look, the More You May Find Stuart Oehrle, Northern Kentucky University

WEDNESDAY, OCTOBER 30, 2024

3:15	<p>Beyond Microcystins: Development of Analytical Standards for Major Classes of Bioactive Cyanobacterial Peptides Using Quantitative NMR, 15N Labeling, and LC-UV- MS/MS</p> <p>Wendy Strangman, University of North Carolina</p>	<p>Speed Talks</p> <p>Marta Sanderson, Virginia Institute of Marine Science Nour Ayache, Virginia Institute of Marine Science Ami Krasner, Florida Institute of Technology</p>
3:30	<p>The Development and Challenges of Developing a qPCR assay for the Detection of Anatoxin and Guanitoxin Producing Cyanobacteria in Environmental Samples</p> <p>Mark Van Asten, Phytoxigene, Inc.</p>	<p>Biomarker Discovery in Red Tide (<i>Karenia brevis</i>) exposed Florida Manatees (<i>Trichechus manatus latirostris</i>) for definitive diagnoses by Bottom Up, Quantitative, MS Based Proteomics</p> <p>Kelly Rein, Florida Gulf Coast University</p>
3:45	<p>What Nucleic Acid Molecules Does a Sandwich Hybridization Assay Measure in Cyanobacterial Cell Homogenates?</p> <p>Anna Antrim, US ACE ERDC</p>	<p>The Potential Role of Dissolved Domoic Acid in Chronic Toxicity of Bivalves: Implications for Human and Wildlife Health</p> <p>Raphael Kudela, University of California</p>
4:00	<p>Regional and Seasonal Analysis of <i>Alexandrium catenella</i> rDNA Copy Number Content for qPCR Assay Quantification of Cysts</p> <p>Mark Vandersea, NOAA / NCCOS</p>	<p>Drivers of Small Scale Variability in Paralytic Shellfish Toxin Concentrations in Butter Clams (<i>Saxidomus gigantea</i>) in Southeast Alaska</p> <p>John Harley, University of Alaska</p>
4:15	<p>Speed Talks</p> <p>Andrea Jaegge, USGS Christina Mikulski, NOAA / NOS / NCCOS Jingping Xie, Beacon Analytical Systems Inc.</p>	<p>HABs and Ocean Acidification in Long Island Waters: Determining the Relationship and Impact</p> <p>Mairead Farrell, Stony Brook University</p>
4:30	<p>Poster Session <i>Casco Bay Exhibit Hall Downstairs</i></p>	
7:00	<p>Special Session TBD <i>Room TBD</i></p>	

THURSDAY, OCTOBER 31, 2024

7:30	Breakfast <i>Casco Bay Exhibit Hall Downstairs</i>	
	Session Room: One Bloom	
9:00	U.S. EPA Applied Research on Methods for Harmful Benthic Cyanobacteria Risk Assessment Christopher Nietch, US EPA / ORD	Benthic Macroinvertebrate Community Composition Within and Surrounding Benthic Anatoxin-Producing Cyanobacterial (Microcoelus) Mats in a Northern California River, USA Joanna Blaszcak, University of Nevada
10:00	Break	
	Ecophysiology & Biogeochemistry <i>Session Room: One Bloom</i> moderator: TBD	HAB Management, Mitigation, & Control III <i>Session Room: HAB</i> moderator: TBD
10:30	CO2 Deprivation Delayed the Production of Cyanophages and Lysis of Infected Cyanobacteria Syed Lal Badshah, Indiana University	A Synthetic and Transparent Clay Removes Microcystis aeruginosa Efficiently Yuan Li, University of Minnesota
10:45	Extracellular Polymeric Substances: A Physiological Response to a Variety of Stress Barry Rosen, Florida Gulf Coast University	Targeted and Controlled Release of Algaecide to Harmful Algal Blooms Vijay John, Tulane University
11:00	A Dinoflagellate Exploits Toxins to Accumulate Guanine Allen Place, UMCES @ IMET	Mesocosm Study Evaluating DinoSHIELD: A Novel Biocontrol Approach for Managing Harmful Dinoflagellate Blooms Yanfei Wang, University of Delaware
11:15	Karenia brevis and Pyrodinium bahamense Utilization of Dissolved Organic Matter in Urban Stormwater Runoff and Rainfall Entering Tampa Bay, Florida Amanda Muni-Morgan, University of South Florida	CyanoHAB Remediation of Two New Hampshire Lakes Using Aluminum Compounds David Neils, New Hampshire Department of Environmental Services
11:30	Nutrient and Carbonate Chemistry Patterns Associated with Karenia brevis Blooms in Three West Florida Estuaries 2020-2023 Jessica Frankle, Mote Marine Laboratory	The Monitoring and Management of Cyanobacteria Over the Winter and Early Spring Seasons Fred Lubnow, Princeton Hydro LLC

THURSDAY, OCTOBER 31, 2024

11:45	<p>Growth-Limiting Ammonium Concentrations in Productive North Carolina USA Estuaries: Implications for HAB Ecology</p> <p>Wayne Litaker, CSS Inc.</p>	<p>HAB Management and Control in Dredged Material Containment Facilities and Beneficial Use ecosystem restoration sites in the Chesapeake Bay Region</p> <p>Colleen McMullen, Maryland Environmental Service</p>
12:00	<p>Lunch <i>On Your Own</i></p>	
	<p>Cellular & Molecular Technology <i>Session Room: One Bloom</i> moderator: TBD</p>	<p>Socioeconomic Impacts <i>Session Room: HAB</i> moderator: TBD</p>
1:30	<p>Microcystin in Maine Lakes</p> <p>Linda Bacon, Maine Department of Environmental Protection</p>	<p>Mapping HAB Exposure Risk in Recreational and Source Waters in Communities with EJ Concerns at a National Scale</p> <p>Brenna Friday, US EPA</p>
1:45	<p>Genetic Community Composition and Cyanotoxin Analysis in Coastal Lakes of New Jersey</p> <p>Diederik Boonman Morales, Monmouth University</p>	<p>Composite Red Tide Vulnerability Index (CRTVI): Assessing and Communicating Vulnerability of Coastal Communities to Red Tide in Florida</p> <p>Roberto Koeneke, University of Florida</p>
2:00	<p>Single Nuclei RNA-Sequencing Reveals Microcystin-LR Induces Liver Cell Type-Specific Effects in Healthy Versus Metabolic Dysfunction-Associated Steatotic Liver Disease Mice</p> <p>John Clarke, Washington State University</p>	<p>Estimating Economic Damages of Water Quality Warnings in the Great Lakes</p> <p>Frank Lupi, Michigan State University</p>
2:15	<p>Genetic Diagnostics for Rapid Detection of Domoic Acid-Producing Pseudo-nitzschia Species</p> <p>Taylor Gibson, Gloucester Marine Genomics Institute</p>	<p>Economics of Mitigation Strategies for Harmful Algal Blooms in the U.S. West Coast Dungeness Crab Fishery</p> <p>David Kling, Oregon State University</p>
2:30	<p>Break</p>	

THURSDAY, OCTOBER 31, 2024

	Bloom Dynamics & Drivers IV <i>Session Room: One Bloom</i> moderator: TBD	Agency Program Applications <i>Session Room: HAB</i> moderator: TBD
3:00	Winter Inflow of Toxigenic Pseudo-nitzschia Species from Continental Shelf Waters to an Estuary in the Northeast U.S. Bethany Jenkins, University of Rhode Island	National Assessment of Freshwater Harmful Algal Blooms Brannon Walsh, US EPA
3:15	The Complex Ecology and Omnipresence of Dinophysis spp. in Puget Sound, WA Stephanie Moore, NOAA	Incorporating Harmful Cyanobacteria Blooms (HCBs) and Cyanotoxins into Clean Water Act Programs: a National Review of Criteria and Assessment Methods Micah Bennett, US EPA
3:30	ENDS-Multiple Perspectives in One Shot to Understand HAB Drivers Senjie Lin, University of Connecticut	Cyanobacteria Nutrient Stressor-Response Relationships in Agricultural Watersheds of the U.S. Richard Lizotte, USDA-ARS
3:45	Toxicity and Underlying Transcriptional Dynamics Among Populations of the Bioluminescent HAB species Pyrodinium bahamense from the Indian River Lagoon, FL Kathleen Cusick, University of Maryland	Interagency Working Group on HABs and Hypoxia: Addressing Regional Blooms with a National HAB and Hypoxia Strategy Josie Galloway, NOAA / NCCOS
4:00	Break	
6:30 - 10:30	Banquet, Awards Ceremony, & Halloween Party <i>Pre-Registration Required</i> Casco Bay Exhibit Hall Downstairs	

FRIDAY, NOVEMBER 1, 2024

7:30	Breakfast <i>Casco Bay Exhibit Hall Downstairs</i>		
	Applications of Emerging Technologies II <i>Session Room: One Bloom</i> moderator: TBD	Climate Change <i>Session Room: HAB</i> moderator: TBD	
9:00	The Harmful Algal Bloom Data Assembly Center: A National Cyberinfrastructure Framework for Plankton Imagery Clarissa Anderson, Scripps Institution of Oceanography	Impacts of a Warming Gulf of Mexico on <i>Karenia brevis</i> Blooms Cynthia Heil, Mote Marine Laboratory	
9:15	Validating the Aqusens Imaging Platform to Expand Networked Cell Detection Capabilities Holly Bowers, Moss Landing Marine Labs	Marine Mammal Stranding Events Caused by Domoic Acid: the Role of Bloom Timing, Longevity, and Geographic Extent on Ecosystem Impacts in Southern California Jayme Smith, Southern California Coastal Water Research Project	
9:30	Enhancing HABscope's AI Capabilities Through Interdisciplinary Collaboration Robert Currier, GCOOS / TAMU	Developing an Imaging FlowCytoBot Monitoring Program for HABs in Alaska Thomas Farrugia, Alaska Ocean Observing System	
10:00	CyanoSCOPE: an Open-Source, Deep-Learning Approach to Automate Cyanobacteria Identification and Enumeration from Microscopy Imaging Tyler Harman, CSS Inc.	Changes in Western Lake Erie Cyanobacterial Bloom Phenology Over the Past Two Decades Richard Stumpf, NOAA	
	<i>Session Room: One Bloom</i>		
10:30	Mystery in the Florida Keys - the 2023/2024 Abnormal Fish Behavior Event Caroline Gorga, Fish & Wildlife Research Institute / Florida FWCC	Detection of Benthic Algal Toxins in Water, Algae, and Fish Associated with Unusual Fish Behavioral Anomalies in the Florida Keys Alison Robertson, University of South Alabama / Dauphin Island Sea Lab	A "Benthic Bloom" of <i>Gambierdiscus</i>: Potential Causes and Possible Consequences Michael Parsons, Florida Gulf Coast University
11:30	Closing Remarks		

POSTER PRESENTATIONS

Poster Presenters will be added to the agenda upon acceptance. Please accept or decline by July 19, 2024.