Updated 5-30-2026

2026 Chesapeake Community Research Symposium
DAY 1 (June 1)

	Arundel A	Arundel B	Arundel C	Queen Anne Ballroom
9:00 AM	Introduction Raleigh Hood, UMCES Horn Point Laboratory and CCMP Program Coordinator			
9:15 AM	Plenary Speaker (9:15-10:00) Lauren Bridges, University of Virginia, Assistant Professor of Media Studies			
10:00 AM	Break (10:00-10:15)			
10:15 AM	Plenary Speaker (10:15-11:00) Josh Kurtz, Maryland Secretary of Natural Resources			
11:00 AM	Plenary Speaker (11:00-11:45) Brandon Jones, AGU President			
12:00 PM	Lunch (12:00-1:00)			
	Session 14: *Low-Cost Physical Environmental Monitoring Systems* Michael Maddox and Taryn Sudol	***Session 2:*** *Advancing Chesapeake Bay Water-quality Science and Management: I. Innovative monitoring techniques and modeling tools* Qian Zhang, Kaylyn Gootman, Peter Tango, and Breck Sullivan	***Session 19:*** *Advanced Data Analytics for Water Quality and Public Health* Jianyong Wu, Dongmei Alvi, and Efeturi Oghenekaro	***Session 1:*** *Estuarine Carbon Dynamics and Acidification in the Chesapeake Bay: Monitoring, Impacts, and Emerging Solutions* Emma Venarde, Raymond Najjar, Janet Reimer, Cassie Gurbisz, Whitman Miller, and Amanda Knobloch
1:00 PM	**Drew Powell, Matthew Baker, Dillon Mahmoudi**: Understanding Spatiotemporalal Variation in Air Quality Using Purple Air Sensors	**Richard Zimmerman, Victoria Hill, David Ruble, et al.**: A Low-Cost Spectroradiometer for Aquatic Sciences and Water Quality Monitoring	**Emily H. Majcher**: Status of PFAS in surface waters of the Chesapeake Bay Watershed and associations with sources and landscape characteristics	**Lisa Haber, Paul Bukaveckas, Ed Crawford, et al.**: Vertical, Lateral, Tidal: Towards a comprehensive net ecosystem carbon budget for a tidal freshwater marsh in Virginia
1:15 PM	**Tiberias Okanga**: Advancing Community Air Quality Monitoring Through Low-Cost Sensors in the Baltimore–Washington Corridor	**Victoria Hill, Richard Zimmerman, Jacob Gallagher, et al.**: Mapping Seasonality in Submerged Aquatic Vegetation growth in the Chesapeake Bay Using Planet Satellite Imagery	**Yanni Cao**: Environmental Indicators of PFAS in an Urban Watershed Revealed by Explainable Machine Learning	**Stephanie J. Wilson**: Long-term monitoring to calculate lateral carbon and alkalinity flux from a mesohaline tidal marsh
1:30 PM	**Katie Lehman, Ava Puschnigg**: Mesoterps: Building a Resilient Campus With High-Resolution Environmental Monitoring	**Maria Guardado, Victoria Hill, Richard Zimmerman**: Quantifying Seasonal Variability in Seagrass Extent and Density Using Physics-Based Remote Sensing Models	**Benjamin Schelling, Margaret Mulholland**: The Effects of Tidal Flooding on the Transport of Per- & Polyfluoroalkyl Substances (PFAS) into the Lafayette and Elizabeth Rivers	**Andrea Pain, Lorie Staver, Jeff Cornwell, et al.**: Rates and magnitudes of blue carbon sequestration in marshes created by dredged material placement in Chesapeake Bay
1:45 PM	**Tim Canty, Michael Maddox, Louis Uccellini, et al.**: Addressing Adaptation Challenges Facing the Chesapeake Bay Through Low-Cost Monitoring Supporting Impact-Based Decision Support Services	**Jacob Gallaher, Victoria Hill, Richard Zimmerman**: Using Satellite Imagery to Map Seasonal Variation of Seagrass Meadow Area and Blue Carbon in Chincoteague Bay	**Dongmei Alvi**: Explainable AI Illuminates Microbial Contributions in a Highly Urbanized Watershed	**Amanda Knobloch**: Comparing Carbon Concentrations and Composition in Tidal Marshes and Oyster Aquaculture
2:00 PM	**Tori Tomiczek, Liliana Velasquez Montoya, Jasmine Wilding, et al.**: Monitoring Local Coastal Backflow in Storm Drains Using Low-Cost Accelerometers: Flood Frequency and Duration in Annapolis, MD Using Low-Cost Accelerometers	**Max Ruehrmund, Jay Lazar**: Leveraging Collaborative Infrastructure for Monitoring Dissolved Oxygen in Chesapeake Bay	**Anna Van Dongen**: Public Health and Water Quality: Investigating the Relationship between Bacteria and Colored Dissolved Organic Matter	**Richard Hale, Richard Zimmerman, Victoria Hill, David Burdige**: Blue Carbon Sequestration by Submerged Aquatic Vegetation in Chesapeake Bay: Where's the Peat?
2:15 PM	**Megan Curtiss**: Cities as climate labs: Measuring tree growth responses across urban stress gradients with dendrometer bands	**Weston M. Slaughter**: Sensor networks reveal salinity-dependent controls on hypoxia, diel extremes, and productivity–alkalinity coupling in a Chesapeake Bay tidal tributary	**Veronica Manka'a Tangiri**: Analysis of the Health and Population of Benthic Macroinvertebrates with Increasing development: Quantico Creek Watershed, Prince William County, Virginia	**David J Burdige, Richard Zimmerman, Rip Hale, et al.**: Alkalinity production and pyrite burial in seagrass sediments as a mechanism of Blue Carbon sequestration
2:30 PM	Break (2:30-2:45)			

	DAY 1 Continued			
	Session 24 *Phytoplankton Dynamics in Chesapeake Bay: Analysis, Methods and Models* Emily Brownlee, Greg Silsbe, and Catherine Wazniak	***Session 2*** *Continued*	***Session 4:*** *Data Centers and Water, Air, and Environmental Impacts and Solution Options in the Chesapeake Watershed* Kevin Sellner and Charles Bott	***Session 1*** *Continued*
2:45 PM	**Michelle C. Tomlinson, Kirstin Wakefield**: From lab to space: Co-developing a regional prototype for a National HAB Observation Network (NHABON) in Chesapeake Bay	**Claire Welty, Mary McWilliams, Andy Miller, et al.**: Evaluation of pollutant removal effectiveness of stormwater facilities using high-frequency water quality sensors	**Kevin Sellner**: Data Centers and Water, Air, and Environmental Impacts and Solutions	**Cassie Gurbisz, Theresa Murphy, Hunter Walker, et al.**: Submersed aquatic vegetation modifies estuarine inorganic carbon and alkalinity dynamics
3:00 PM	**Khari Crommarty**: Mapping the Risk of High Chlorophyll & HAB events in the Chesapeake Bay	**Alexander Soroka**: Large sediment yield after mitigation projects, then development: The story of Foster Branch	**Lauren Barbir**: Data Centers: the water-energy nexus	**Anamika Das Kona, Victoria Hill, Richard Zimmerman**: Impact of Climate Change on Seagrass Dynamics in the Chesapeake Bay: Comparative Metabolic Responses of Widgeon Grass (Ruppia Maritima) and Eelgrass (Zostera Marina)
3:15 PM	**Xin Yu, Michelle C. Tomlinson**: A short-term harmful algal bloom (HAB) forecasting system for the lower Chesapeake Bay	**Shuyu Y. Chang, Robert C. Walter, Mia Aaronson, et al.**: Cooler Waters, Reconnected Valleys: Restoration Gains from Milldam Legacy Sediment Removal	**Michael College, P.E.**: From Megawatts to Megabytes: Advancing Dry Cooling Success in the Susquehanna River Basin	**Madison Griffin**: Saturated with Data: Modeling Carbonate Chemistry Saturation State Thresholds in Mid-Atlantic Shellfish
3:30 PM	**Dante M. L. Horemans, Pierre St-Laurent, Marjorie A. M. Friedrichs, et al.**: Environmental controls on interannual Margalefidinium polykrikoides blooms in the Lafayette River	**Greg Noe**: Watershed controls and Chesapeake-wide predictions of streambank erosion rates	**Charles Bott, Alexandria Gagnon, Kevin Sellner**: Understanding the Impact of Discharges from Data Centers on Wastewater Treatment Plants: Fundamentals and Potential Impacts	**Amin Boukari, Tahera Attarwala, Gulnihal Ozbay**: Aragonite Saturation State as an Indicator for Oyster Habitat Health in the Delaware Inland Bays
3:45 PM	**Allen R. Place**: Karlodinium veneficum - The little dinoflagellate with a big bite is missing?	**Andrew Sekellick, Alexander Soroka**: Modeling Nutrient Sources, Fate, and Transport in the Chesapeake Bay Watershed Using an Updated SPARROW Framework to Support Stakeholder Decision-Making	**Kendra Sveum**: Data Center Effluent Case Study: Operations Impacts on a Wastewater Treatment Plant	**Gabriel Duran, Paul A. del Giorgio, Candice Aulard, et al.**: Quantifying the aquatic carbon budget of two Canadian boreal watersheds: a tale of two lakes
4:00 PM	**Danyang Zhai, Jian Shen**: Primary production in Chesapeake Bay: Spatial and Temporal Patterns Using Open Water Method	**Qian Zhang, Gopal Bhatt, Kaylyn Gootman**: Are we on track? Integrating monitoring and models to track load reduction progress in the Chesapeake Bay watershed	**Larry Band, Rouyu Zhang, Tejendra Kandel, et al.**: Watersheds and Data Center Development Impacts	**Raymond G. Najjar, Riley Westman, Devon Kerins, et al.**: The carbonate chemistry of rivers draining to the Chesapeake Bay viewed through a new simplifying metric: Excess dissolved inorganic carbon
4:15 PM	**Margaret R. Mulholland, Eileen Hofmann, Peter Bernhardt, et al.**: Enhanced surveillance to improve HAB monitoring and detection: toward an early warning system for HABs in the lower Chesapeake Bay	**Thomas Fisher, Judith O'Neil, Anne B. Gustafson, et al.**: Assessment of phytoplankton nutrient and light limitation in Chesapeake Bay in response to nutrient management strategies over the last 25 years	**Allison Welch, Daniel Koval**: Global Data, Local Impacts: How data center development is changing your local landscape	**Whitman Miller, Amanda Reynolds**: Continuous but contrasting multi-year comparisons of measured carbonate parameters in the mesohaline Rhode River, MD
4:30 PM	**Kami Lentzsch, Amy Hamilton, Catherine Wazniak, et al.**: Evaluating FlowCam Precision for Reliable Phytoplankton Assessment in the Chesapeake Bay	**Kelly Kosiarski**: Evaluating Riparian Buffer Zone Effectiveness at Mitigating PFAS from Surface Runoff of Biosolids Amended Fields	**Julia Davis, Landon Marston, Majid Shafiee-Jood**: A Review of Data Center Water Use, Methodological Gaps, and Policy Implications	**Novia Mann, Hunter Walker, Quinn Roberts, et al.**: A Comparative Analysis of Carbonate System Dynamics of the York River and Potomac River Estuaries
4:45 PM	**Catherine Wazniak, Jeremy Testa**: Benthic Microalgae in the Chesapeake Bay	**Kathryn Dixon, Claire Barlow**: Rapid Water Quality Evaluation of the Potomac River Sewage Overflow	**Lauren Barbir**: Data Centers: Trends and innovation for water use for a circular economy	**Zhendong Ji, Wei-jun Cai, Jeremy Testa, et al.**: Quantifying the Efficacy of Wastewater Alkalinity Enhancement on Carbon Emission and Uptake in Chesapeake Bay
5:00 PM				**Alexa Labossiere, Pierre St-Laurent, Kyle Hinson, et al.**: Efficiency of ocean alkalinity enhancement in the Chesapeake Bay
5:15 PM				**Kyle Hinson**: A Data-Driven Ocean Alkalinity Enhancement Module for the Chesapeake Bay
5:00 PM 7:00 PM	Poster Session, Reception, Guardian Award *Light refreshments provided and cash bar available*			

	DAY 2 (June 2)			
	Arundel A	Arundel B	Arundel C	Queen Anne Ballroom
9:00 AM	Panel Discussion (9:00-10:15) **Big Data to Better Decisions: Leveraging AI and Machine Learning for Chesapeake Bay Research and Management**			
10:15 AM	Break (10:15-10:30)			
10:30 AM	Panel Discussion (10:30-11:45) **Hail CESR? Weighing the Benefits of Deep and Shallow Restoration**			
12:00 PM	Lunch (12:00-1:00)			
	Session 8: *Advancing the Development and Management Applications of Next-generation Airshed, Land-use, Watershed, and Estuarine Models* Zhengui Wang, Gopal Bhatt, Joseph Delesantro, and Wenfan Wu	***Session 3:*** *Advancing Chesapeake Bay Water-quality Science and Management: II. Novel analysis and scientific communication approaches to inform management* Qian Zhang, James Webber, Rebecca Murphy, and Kaylyn Gootman	***Session 15:*** *Next Generation Tools and Team Science for Chesapeake Bay Living Resource Assessment and Management* Bruce Vogt and Christina Garvey	***Session 11:*** *Geospatial Targeting of Restoration and Conservation Actions* Peter Claggett, John Wolf
1:00 PM	**Lewis C. Linker, Gopal Bhatt, Joseph Zhang, et al.:** Phase 7 Models of the Chesapeake Watershed, Estuary, and Airshed – Exploring Future Challenges of Changing Environmental Conditions and Growth	**Ashok Jacob, Raj Cibin:** A Deep Learning Framework for Continuous Stream Nitrate Estimation across the Chesapeake Bay Watersheds	**Hongsheng Bi, Cailian Liu:** High-Frequency Imaging of Phytoplankton and Zooplankton Dynamics in the Chesapeake Bay	*I. High-Resolution Geospatial Data and Technical Advances* **Labeeb Ahmed:** Seamless Elevation Data in the Chesapeake Bay watershed
1:15 PM	**Joseph Delesantro, Isabella Bertani, Gopal Bhatt, et al.:** Characterizing annual streamflow, nutrient, and sediment loading and drivers in the Chesapeake Bay watershed through data-driven models	**Quinn Domanski:** Investigating Bidirectional Dynamics in Chesapeake Bay Tributaries Using Long-Term Monitoring Data and Machine Learning	**Alexandria Rhodes, Victoria Hill, PhD & Richard Zimmerman, PhD:** Mapping Submerged Aquatic Vegetation Around the Tangier-Smith Archipelago Using Satellite Imagery	**Michelle Katoski, Peter Claggett, Joseph Delesantro, et al.:** Characterizing hydrologic connectivity for water quality modeling and BMP targeting in the Chesapeake Bay Watershed
1:30 PM	**Joseph Delesantro, Conor Keitzer, Gopal Bhatt, et al.:** Closing the phosphorus modeling gap in the Chesapeake Bay watershed	**Xueting Pu:** Toward Generalizable and Interpretable Sediment Modeling with AI-Augmented HSPF	**Matthew Ogburn, Allison Blanchette:** Leveraging Underwater Video, High-Resolution Sonar, eDNA, and Animal Telemetry for Fisheries and Fish Habitat Monitoring	**Jackie Pickford:** Mapping Sewer Service Areas and Septic Systems to Inform Management Decisions
1:45 PM	**Gopal Bhatt, Joseph Delesantro, Lewis Linker, et al.:** Progress in the development and linkage of fine-scale Phase 7 Chesapeake Bay Watershed Model	**Abigal Percich, Admin Husic, Allen Gellis, et al.:** Watershed-scale sediment source prediction using machine learning	**Julie Reichert-Nguyen, Julia Fucci, Ron Vogel, et al.:** From Buoys, Satellites, and Models: Data Comparisons to Inform Marine Heatwave Forecasting for Fisheries Management Application	**Sarah McDonald:** Four Decades of Land Use Change in the Chesapeake Bay Watershed: Integrating High Spatial and Temporal Resolution Datasets
2:00 PM	**Zhengui Wang, Yinglong J. Zhang, Jian Shen, et al.:** Status of The Phase-7 Chesapeake Bay Water Quality Model	**Diver Marin Palacio, Chuqiang Chen, Stanley Grant, et al.:** Capturing Event-Driven Salinity Pulses and Nonlinear SC Dynamics in Chesapeake Bay Tributaries using a Deep Learning Model	**Genny Nesslage, Vyacheslav Lyubchich, Glenn Davis, et al.:** Quantifying linked rare events in fish and environmental Chesapeake Bay time series	**Peter Claggett:** Simulating future development in the Chesapeake Bay Watershed
2:15 PM	**Richard Tian, Nicole Cai:** Simulation of benthic microalgae impacts on water quality in shallow water systems, Corsica River, Chesapeake Bay	**Lindsey Boyle, Kelly Maloney, Rosemary Fanelli:** Watershed wide predictions of specific conductance show increasing salinity across half of the Chesapeake Bay watershed	**Robert Daniels, Ava Ellett:** Chesapeake Bay Vibrio Seasonal Outlook	**Amy Freitag, Katherine Auerswald, Seann Regan:** A Community Risk Assessment of Flooding and Heat Hazards in the Baltimore Metropolitan Area
2:30 PM	**Amir Reza Azarnivand, Jeremy Mark Testa:** Modeling climate-driven flow increases on stratification in the Patuxent River Estuary: Implications for oxygen depletion	**Marina Metes, Matthew Cashman, Zachary Clifton:** Predicting Aquatic Physical Habitat Over a 38-Year Period Using Machine Learning	**Allison Dreiss, Ryan E. Langendorf, Ryan Woodland, et al.:** Modeling benthic biomass responses to climate change in the Chesapeake Bay	*II. Audience-Driven Design for Conservation and Restoration Tools, Maps, and Data* **Sophie Waterman:** Turning User Insights into Action: Redesigning Geospatial Tools for Conservation and Restoration
2:45 PM	**Wenfan Wu, Zhengui Wang, Jian Shen, et al.:** Disentangling Drought-induced Algal Blooms in Tidal Freshwater Zones with an Interpretable Bloom Risk Index	**Chuqiang Chen, Admin Husic:** Increasing event water fraction across the Chesapeake Bay Watershed under climatic and anthropogenic change	**Theresa Davenport, Kenny Rose, Limin Sun, et al.:** Coupling hydrodynamic, water quality, and habitat suitability models to assess the habitat co-benefits from living shorelines	**John Wolf:** Modernizing the Chesapeake Targeting Portal: Aligning Data, Maps, Tools, and Outcomes through User-Driven Feedback
3:00 PM	Break (3:00-3:15)			

	DAY 2 Continued			
	***Session 8** Continued*	***Session 3** Continued*	***Session 15** Continued*	***Session 11** Continued*
3:15 PM	**Anand Gnanadesikan, Rui Jin, Marie-Aude Pradal, et al.:** CDOM Absorption by Phytoplankton Modulates the distribution of Hypoxia in Chesapeake Bay	**Lorena Pinheiro-Silva, Xiaoxu Guo, Matthew Houser, et al.:** Tracking Nutrient Pollution and Best Management Practice Effectiveness in the Choptank River Using Explainable Machine Learning and Satellite Data	**Emi McGeady:** Evaluating Localized Food Web Response to Oyster Restoration using a 3D Multispecies Individual-Based Model	**Zhaoying Wei:** Designing Outcome-Centered Interactive Maps for the Chesapeake Targeting Portal 2.0
3:30 PM	**Jiangtao Xu, Lixia Wang, Aijun Zhang, et al.:** Update on NOAA's New Operational Forecast System for the Northeast US	**Nivedita Priyadarshini Kamaraj, Sundarabalan V. Balasubramanian, Manoochehr Shirzaei, et al.:** Multi-Sensor Nutrient Mapping in the Chesapeake Bay	**Vaskar Nepal, Mary C Fabrizio, Troy D. Tuckey, et al.:** Mechanistic Habitat Modeling for Chesapeake Bay Fish and Shellfish: From Individual Physiology to Management Tool	**Andrew Fitch, Catherine Krikstan:** Building With, Not For: Developing ChesapeakeData Through Audience Engagement
3:45 PM	**Robin Glas:** When Is "Typical" Typical? Re-evaluating Hydrologic Base and Critical Periods for Chesapeake Bay Program Models	**Breck Sullivan, Jon Harcum, Elgin Perry, et al.:** Filling the Gaps: A space-time interpolation tool for Chesapeake Bay dissolved oxygen	**Colin A. Hawes, Marjorie A.M. Friedrichs, Pierre St-Laurent, et al.:** Modeling Juvenile Atlantic Croaker Habitat Suitability: Impacts of Future Climate and Nutrient Management	**Alex Gunnerson:** Integrating User Research Principles into Phase 7 Watershed Model Planning Tools
4:00 PM	**Gopal Bhatt, Lewis Linker, Richard Tian, et al.:** Initial assessment of future energy scenarios in Chesapeake airshed, watershed, and tidal bay nitrogen loads	**Jeremy Testa, Amir Azarnivand, Damian Brady, et al.:** The diversity of patterns and controls on oxygen depletion in Chesapeake Bay tribletse	**Aaron Bever, Colin Hawes, Marjorie A.M. Friedrichs, et al.:** Realtime Forecasting and Seasonal Summaries of Habitat for Fishes in Chesapeake Bay	*III. Stakeholder-Driven Targeting Applications* **Rebecca K. Ransom, John Wolf:** Geographic Targeting and Source Water Protection
4:15 PM	**Garett Pignotti, Stephanie Nummer, Carlington Wallace:** Modeling Water Quality Response of Urban Watersheds to Future Management Scenarios	**Gabriel Duran, Jon Harcum, Elgin Perry, et al.:** Utilizing Cluster Analysis to Assess Water Quality Trends in the Chesapeake Bay	**Matthew Gray, Theresa Daven, William Nardin, et al.:** Designing Oyster Restoration for Today's Bay: Leveraging Next-Generation Models to Maximize and Manage Ecosystem Services	**Coral Howe:** Toward a Capacity-Informed Targeting Framework for Chesapeake Bay Restoration
4:30 PM	**Lewis C. Linker, Gopal Bhatt, Richard Tian, et al.:** Estimated Impacts of Environmental Change on Water Quality in the Chesapeake Bay Beyond Midcentury	**David Parrish, Carl Friedrichs, William Reay, et al.:** Recent Shifts in Water Clarity Across Virginia's Lower Chesapeake Tributaries: Evidence from Four Decades of Kd Observations	**Kenneth Rose, Mark Monaco, Thomas Ihde, et al.:** CESR: moving forward with assessing living resource responses for prioritizing projects and restoration plan formulation	**David Strong, John Wolf:** Recognizing Organizational Service Areas to Strengthen Geospatial Targeting in Sentinel Landscapes
4:45 PM		**Peichen Huang, Dante M.L. Horemans, Marjorie A.M. Friedrichs:** The Importance of Mixotrophy for Phytoplankton Production and Nutrient Management		**Michael Evans, David Saavedra:** Automatically identifying wetland conservation and restoration opportunities with AI
5:00 PM				**Rosemary Fanelli:** Taking the pulse of Chesapeake Bay Watershed stream ecosystems: A synthesis of observational data for six indicators of freshwater stream health, 2018-2023
5:00 PM	Poster Session, Reception *Cash bar*			
7:00 PM				

	DAY 3 (June 3)			
	Arundel A	Arundel B	Arundel C	Queen Anne Ballroom
	Session 25 (Panel): *Supporting the Next Generation: Career Development for Emerging Chesapeake Bay Scientists* Gabriel Duran and Melissa Fagan	***Session 23:*** *Molecular Approaches for Chesapeake Bay Ecology and Biogeochemical Functions: from Genes to Insights* Sairah Malkin and Isabel Baker	***Session 5:*** *Balancing agricultural and ecological goals of Chesapeake Bay restoration: Insights from interdisciplinary team science* Lisa Wainger and Caitlin Grady	***Session 21:*** *General: Estuarine and Watershed Processes and Coupled Human-Natural Systems in Chesapeake Bay* Raleigh Hood
9:00 AM	Panelists: **1. Curtis Bennett** Director of Equity & Community Engagement, National Aquarium **2. Kyle Hinson** Postdoctoral Research Fellow, Pacific Northwest Laboratory **3. Julie Kiang** Deputy Regional Director, Northeast, USGS	**Feng Chen, Changfei He, Judith M. O'Neil, et al.:** Chesapeake Bay metagenomes across broad organisms and spatio-temporal scales	**Lisa A. Wainger, Dave Abler, Caitlin Grady:** Co-developing Resilient Futures: Integrating Agricultural and Ecological Goals Through Interdisciplinary Scenario Modeling	**Matthew Gray, Jeffrey Cornwell, Cindy Palinkas, et al.:** Balancing Interests: improved understanding of shellfish aquaculture production and submerged aquatic vegetation through studies and synthesis
9:15 AM		**Clara A. Fuchsman, Michael E. Kalinowski, Jacob A. Cram, et al.:** Examining Metagenomics Across Particle Size and Redox Gradients in Chesapeake Bay	**Raj Cibin, Jesna Ismail:** Can dietary transition improve water quality in the Susquehanna River Basin?	**Gulnihal Ozbay:** Assessing Interactions Between Shellfish and Seagrass Beds and Macroalgae to Promote Sustainable Aquaculture in the Delaware Inland Bays
9:30 AM		**Isabel Baker, Kalev Hantsoo, Anna Hildebrand, et al.:** Microbial methane sinks are insufficient under continued eutrophication in the Chesapeake Bay	**Caitlin Grady:** Identifying Leverage Points for Nitrogen Reduction With a Production-Chain Approach	**Elka T. Porter, Lawrence P. Sanford, Jeffrey C. Cornwell:** Denitrification in the STURM Resuspension Mesocosms, Part 1: Particle Dynamics
9:45 AM		**Michael E. Kalinowski, Clara A. Fuchsman, Carol Kim, et al.:** The Bottom Water Oxygen Impacts on Downcore Sulfur Cycling in Chesapeake Bay Sediments Inferred using Metagenomics	**Kristin Fisher, Matthew Houser:** Leveraging natural and social science to maximize impact of agricultural stakeholder driven conservation in the Chesapeake Bay watershed.	**Amy Hamilton, Catherine Wazniak:** Hidden Neurotoxins in Cyanobacterial Harmful Algal Mats in Maryland
10:00 AM		**Anand Gnanadesikan, Rui Jin:** How does including heterotrophic bacteria in a biogeochemical model change the simulation of biogeochemical cycling?	**Lora Harris, Cathlyn Davis, Sarah Garvey, et al.:** Emerging Nitrogen Technology And Sustainability Challenges From Farm To Fork : An International, Transdisciplinary Course.	**Qubin Qin, Xun Cai, Jian Shen, et al.:** Quantifying Inter-Tributary Freshwater Connectivity and Its Implications for Flushing Time in Chesapeake Bay
10:15 AM		**Anne Baldino, Dr. Tsvetan Bachvaroff:** Deciphering the Functional Capacity of Chesapeake Bay Microbes through Long-Read Sequencing		**Kehinde Bosikun, Joel Moore, Claire Welty:** Quantifying urban versus natural contributions to stream chemistry in a Chesapeake Bay tributary using reactive transport modeling
10:30 AM	Break (10:30-10:45)			

	DAY 3 Continued			
	Session 18 (Panel): *Increasing the Effectiveness and Impact of Technical Assistance Delivery to Low-Capacity Communities* Elizabeth Van Dolah and Michele Romolini	***Session 23*** *Continued*	***Session 16:*** *Recent Modeling Advances in Compound Flooding, a 10-year Retrospective of Technological Innovations in Hydrodynamic Modeling and Monitoring Since 2016 Hurricane Matthew* J. Derek Loftis, Navid Tahvildari, Patrick Taylor	***Session 21*** *Continued*
10:45 AM	Panelists: **1. Elizabeth Van Dolah, Ayanna Healy, Joe Galarraga, et al.**: Applying the Sustainable Livelihoods Framework to Support Resilience Planning in Pocomoke City, Maryland **2. Conor Keitzer, Katie May Laumann, Sidney Anderson, et al.**: Assessing and communicating climate resilience at the community-level in Maryland **3. Jaline McPherson**: Cultivating Canopies: Artistic Approaches to Community-Based Forestry **4. Michele Romolini**: Network Brokers to Facilitate Knowledge Coproduction in Community Forestry: Implementing Maryland's 5 Million Tree Initiative in Baltimore **5. Emily Eisenhauer, Katie See**: Technical Assistance to Brownfields Communities	**Jenna Lee:** Drivers of temporal co-occurrence patterns and microeukaryote community dynamics in a multispecies diatom bloom	**Joseph Zhang:** A 25-year reanalysis of compound flooding hazard in US east and Gulf coast	**Harry Wang, Breanna Maldonado, Derek Loftis, et al.:** Three-dimensional, non-tidal three-layered circulation in Baltimore Harbor – Insights into harbor-bay exchange
11:00 AM		**Alex Flynn, Dr. Isabel Baker, Dr. William Schroer, et al.:** Characterizing Microbial Communities of Baltimore Harbor's Pistachio Tide	**HaoCheng Yu, Lars Nerger, Fei Ye, et al.:** Elevation skill enhancement from an efficient ensemble-based assimilation method in a large application STOFS-3D-Atlantic	**Rebecca Hale, Megan Stallard, Katrina Lohanet al.:** Combining incubations, sensors, and molecular approaches to understand E. coli sources across the Anacostia Watershed
11:15 AM		**William F. Schroer, Shaochen Fan, Sarah P. Preheim:** Quantitative sequencing coupled with dilution experiments reveals taxa specific growth and mortality rates in aquatic microbial communities	**Jon Derek Loftis:** Hydrodynamic Modeling of Compound Flooding During 2016 Hurricane Matthew: Then, Now, and Storms Like It In The Future	**Patrick Bitterman:** Leveraging CHANS Science for Chesapeake Bay Restoration: Findings from a 2026 State of the Science Workshop
11:30 AM		**Sairah Malkin, Emily Brownlee, Alex Burns, et al.:** Weekly eDNA Monitoring Captures Multi-Trophic Seasonal Dynamics and Emerging Interannual Variability: 125 Weeks from the PhytoChop Observatory	**Zanko Zandsalimi, Mehdi Taghizadeh, Majid Shafiee-Jood, et al.:** Explicit Interdomain Learning of Rainfall–Tide Coupling for Compound Flood Forecasting Using Graph Neural Networks	**Amalia Deloney:** The Amphibious Council: Experiential Futures and More-Than-Human Governance in the Baltimore Harbor
11:45 AM		**Katrina M Pagenkopp Lohan, Emma M. Palmer, Calli Wise, et al.:** Hidden Connections: Uncovering Complex Trophic Networks Through DNA Metabarcoding	**Hyungju Yoo, Y. Joseph Zhang, Zhengui Wang, et al.:** Enhancing Thermal Process Representation in Intertidal Areas through Soil-Air-Water Heat Exchange: A Case Study of Charleston Harbor	**Patrick Bitterman, Jason Yoo:** A Novel Integrated Framework for Simulating BMP Prioritization and Governance Dynamics in the Chesapeake Bay Watershed
12:00 PM			**Jon Derek Loftis, Yash Kishor Sanap, Sridhar Katragadda, et al.:** High-Precision River Stage Estimation via Passive Video Imagery Using Deep Learning and Image Segmentation	**Raj Cibin, Kalra Marali:** Impacts of a warming climate and increased land use changes on crop productivity and water quality: a case study in the Susquehanna River Basin
12:15 PM			**Jon Derek Loftis:** Spatial Evaluation of Flood Resilience Solutions Combining Real Time Water Level Sensors, Hydrodynamic Modeling, and High-Resolution Aerial Inundation Observations	**Farshad Hesamfar, Teresa Culver:** Assessing the social footprint of coastal groundwater variability under CMIP6 scenarios in Virginia's Eastern Shore
	Adjourn			