

Northeast Aquatic Biologists Conference



February 14-16, 2024 • Lake Morey Resort • Fairlee, Vermont

	Waterlot	Terrace Ballroom			
9:00 - 11:00	Pre-Conference Meeting: R Exchange *Registration Required* <i>As a continuation of an ongoing initiative, this meeting aims to provide a platform for R coding enthusiasts in our region to share innovative methods. Participants will discuss how they are leveraging various R programs to streamline unique processes and address specific problems.</i>	Pre-Conference Meeting: Streamgaging with USGS & the States *Registration Required* <i>This meeting enables state employees throughout the Northeast to connect with USGS contacts regarding our crucial network of streamgages. It also initiates a broader conversation about the need for funding endangered and priority streamgages.</i>		9:00 - 11:00	
12:00	Registration			Lake Morey Lobby	12:00
	Continuous Monitoring & Boatloads of Data Edgewater moderator: Dahlia Tympanick	Climate Change Impacts on Streams Theater moderator: Allison Roy	Cyanobacteria I Waterlot moderator: Corey Conville		
1:00	<u>Simple Point-in-Time Samples Predict Conservation-Relevant Summer Stream Temperature Metrics Better than Regional Models</u> <u>Keith Fritschie, VT DEC</u>	<u>Floods, Drought and In-Between: Examining the Effects of Recent Climate Patterns on Vermont's Macroinvertebrate Communities</u> <u>Aaron Moore, VT DEC</u>	<u>Autonomous UAV-Mounted LoRaWAN System for Real-Time Monitoring of Harmful Algal Blooms (HABs) and Water Quality</u> <u>Soheyl Faghir Hagh, University of Vermont</u>	1:00	
1:45	<u>Analysis of Continuous Stream Temperature Data from Long-Term, High Quality (Reference) Monitoring Sites in the Northeast</u> <u>Jen Stamp, Tetra Tech</u>	<u>Climate Change Effects on Stream Macroinvertebrates in Maine: An Analysis of Long-Term Data</u> <u>Adam Pepi, ME DEP</u>	<u>Sustainable Restoration of an Oligotrophic Water Body Impacted by Cyanobacteria and Tree Pollen</u> <u>Jonathan Higgins, Higgins Environmental Associates</u>	1:30	
		<u>Freshwater Invasive Species in the Face of Climate Change: Monitoring and Management in Massachusetts</u> <u>David Wong, MassDEP</u>	<u>Cyanobacterial Occurrence and Bloom Development in Oligotrophic Adirondack Lakes</u> <u>Sabina Gifford, USGS</u>	2:00	
2:30	Break			Terrace Ballroom	2:30

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WEDNESDAY, FEBRUARY 14

	Long-Term Monitoring Edgewater moderator: Alexa Hershberger	Stream Salinization & Conductivity Monitoring Theater moderator: Michelle Graziosi	Lake Monitoring Waterlot moderator: Benjamin Block
3:00	<u>Long-Term Monitoring Reveals Salinization Impacts for Lake Champlain and Its Tributaries</u> <u>Matt Vaughan, NEIWPC Lake Champlain Basin Program</u>	<u>Developing a Stream Conductivity Monitoring Program in Connecticut</u> <u>Ansel Aarrestad, CT DEEP</u> <u>Carriel Cataldi, CT DEEP</u>	<u>Monitoring Least Disturbed Lakes in Vermont as Part of the Regional Lake Monitoring Network</u> <u>Kellie Merrell, VT DEC</u>
3:30	<u>Twenty-Two Years on the Lower Kennebec River, Maine 2002-2023: Fish Assemblage Composition and Responses to Diadromous Fish Management</u> <u>Chris Yoder, Midwest Biodiversity Institute</u>	<u>Characterizing Salinization of Headwater Streams in the Lake Champlain Basin, VT</u> <u>Molly Costanza-Robinson, Middlebury College</u>	<u>Annual Variations in Lake Thermocline Depth Measured with Continuous Sensor Data</u> <u>Jeremy Deeds, ME DEP</u>
4:00	<u>Reshaping Rivers: 50 Years of Cleaner Currents in The Hudson and Mohawk</u> <u>Makenzie Garrett, NYS DEC / NEIWPC</u>	<u>Spatial and Temporal Variability in Stream Conductivity in the Boston Metropolitan Area</u> <u>Allison Roy, USGS, Massachusetts Cooperative Fish and Wildlife Research Unit, UMass Amherst</u>	<u>Enhancing Lake Bioassessment in Connecticut</u> <u>Mary Becker, CT DEEP</u> <u>Tracy Lizotte, CT DEEP</u>
4:30	<u>Unveiling the Flow of Change: A Weighted Regression on Time, Discharge, and Season Analysis of 50-Year Water Quality Trends in New York State (1972-2022).</u> <u>Charles Stoll, NYS DEC</u>	<u>Lessons and Strategies Learned from NHDES Chloride Monitoring Programs</u> <u>Ted Walsh, NH DES</u>	<u>Alum, Macroinvertebrates, and Water Quality: Implications for Sustainable Lake Management</u> <u>Matthew Kraft, NYS DEC</u>
5:00 - 8:00	Exhibitor & Poster Session <i>Terrace Ballroom</i>		
6:00 - 7:00	NEAEB Meeting <i>Garden View</i> <i>(Ground Floor Near Registration Desk)</i>		

THURSDAY, FEBRUARY 15

7:00	Breakfast			<i>Terrace Ballroom</i>
8:45	Words of Welcome Maryann Dugan, NEIWPCC ; Richard Friesner, NEIWPCC Heather Pembroke, VT DEC ; Julie Moore, VT Agency of Natural Resources Morey Room			
9:15	Plenary Session Kathryn Cottingham, Dartmouth College Morey Room			
10:15	Break			<i>Terrace Ballroom</i>
	Stream Acidification <i>Edgewater</i> moderator: Kellie Merrell, VT DEC	Species Dynamics <i>Theater</i> moderator: Richard Friesner, NEIWPCC	Innovative Monitoring Technology <i>Waterlot</i> moderator: Matt Kraft, NYS DEC	
10:45	<u>Comparison of Indicators Used to Assess Stream Recovery from Mining Drainage: A Meta-Analysis</u> <u>Alexa Hershberger, UMass Amherst</u>	<u>Environmental Influences on Crayfish Behavior in Streams and Reservoirs and Implications for Invasives Management</u> <u>Melanie Giangreco, University of Florida</u>	<u>Internet of Things-Enabled Portable LoRaWAN Potentiostat for Real-Time Monitoring of Water and Soil Quality</u> <u>Parmida Amngostar, University of Vermont</u>	
11:15	<u>Impacts of Clam Shell Additions to an Episodically Acidic Stream in Eastern Maine</u> <u>Emily Zimmermann, ME DEP</u>	<u>Characterizing Habitat and Predicting Population Hotspots for Yellow Lampmussel in the Connecticut River</u> <u>Stefanie Farrington, UMass Amherst, US FWS</u>	<u>Persistent Monitoring of Large Environments with Robot Deployment Scheduling in between Remote Sensing Cycles</u> <u>Kizito Masaba, Dartmouth College</u> <u>Mingi Jeong, Dartmouth College</u>	
12:00	Lunch <i>Lakeside Dining Room</i>			

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THURSDAY, FEBRUARY 15

	Stream Assessment Edgewater moderator: Corey Conville, US EPA	Nutrient Assessment in Lakes Theater moderator: Jeremy Deeds, ME DEP	Water Quality Data & Management Session Room moderator: Melanie Giangreco, UFL
1:30	<u>Compassionate Biology: Piloting a Mortality Reduction Method for Macroinvertebrate Biomonitoring</u> <u>Michelle Graziosi, VT DEC</u>	<u>Why are Vermont's Low-Nutrient Lakes Increasing in Phosphorus?</u> <u>Leslie Matthews, VT DEC</u> <u>Kellie Merrell, VT DEC</u>	<u>Science Communication Technologies and Furthering "the Death of MS Word"</u> <u>Benjamin Block, Tetra Tech</u>
2:00	<u>Diatoms in Massachusetts Streams - What are They Telling Us?</u> <u>Ismar Biberovic, Tetra Tech</u> <u>James Meek, MassDEP</u>	<u>The Influence of Nitrogen to Phosphorus Ratios on the Growth of Phytoplankton in Cape Cod Ponds</u> <u>Kimberley Crocker-Pearson, Town of Brewster Natural Resource Committee</u>	<u>NEON in the Northeast: Aquatic Data and Resources to Understand Changing Ecosystems</u> <u>Annie Saball, NEON-Batelle</u>
2:30	<u>The Effects of Stormwater on Highly Urbanized Streams</u> <u>Rosemary Gatter-Evarts, CT DEEP</u> <u>Grace Hoeckele, CT DEEP</u> <u>Alaine Zhang, CT DEEP</u>	<u>Land Disturbance Influences on Lake Phosphorus Concentrations Across New York State - Opportunity to Define Thresholds for Watershed Protection</u> <u>Alene Onion, NYS DEC</u>	<u>Forging Ahead - Ecosystem-Based Assessment and Planning for Actionable Integration Water Resource Management of Biontegrity and Nutrients Along a Gradient</u> <u>Paul Stacey, Footprints in the Water</u>
3:00	<u>A Confluence of Data and Data Needs: Highlighting a Process for Connecting Non-Targeted Stream Monitoring and Permit Limit Development Using Estimated Ambient Values</u> <u>Keleigh Reynolds, NYS DEC</u>	<u>Reservoir Monitoring, the Importance and the Discoveries</u> <u>Stephanie Disla, MWRA</u>	<u>Monitoring for What is Required or Monitoring for What is Needed to Protect and Restore Our Waters: Some Findings from a State Program Review Process: 2002-2023</u> <u>Chris Yoder, Midwest Biodiversity Institute</u>
3:30	Social <i>Outdoors: Complimentary ice skate rentals, cross-country skiing, snowshoeing, sledding, and hiking trails</i> <i>Indoors: Boardgames in Lounge</i>		
6:00	Annual NAB Banquet & Awards <i>Terrace Ballroom</i> Guest Speaker: Ben Jessup, Tetra Tech		

FRIDAY, FEBRUARY 16

7:00	Breakfast <i>Terrace Ballroom</i>		
	Cyanobacteria II Edgewater moderator: Corey Conville, US EPA	Restoration Theater moderator: Anna Baynes, UMass Amherst	Macroinvertebrate Indices Waterlot moderator: Mary Becker, CT DEEP
9:00	<u>New Hampshire Department of Environmental Service's Cyanobacteria Harmful Algal Bloom Program Improvements</u> <u>Michele Condon, NH DES</u>	<u>Valley Brook Restoration Project</u> <u>Gabryel Gianoni, Memphremagog Watershed Association</u> <u>Peter Emerson, VT Fish & Wildlife</u>	<u>A Kansas Stream Macroinvertebrate MMI Calibrated to Predicted Natural Conditions per Site Instead of Discrete Site Classes</u> <u>Ben Jessup, Tetra Tech</u>
9:30	<u>Harmful Algae Bloom Monitoring and Lake Evaluation Methodology in New York using Sentinel-2 satellite data</u> <u>Lewis McCaffrey, NYS DEC</u>	<u>Beyond Run-of-the-River: Considerations for Removing a Dam with a Sizeable Impoundment and Lakeside Residents in Concord, MA</u> <u>Alex Patterson, EA Engineering, Science, and Technology, Inc., PBC</u> <u>Delia Kaye, Town of Concord, MA</u>	<u>Taxonomic Barriers for Usability of Volunteer Monitoring Benthic Macroinvertebrate Data for a Massachusetts Index of Biological Integrity</u> <u>Robert Smith, MassDEP</u>
10:00	<u>Phycoerythrin: The Other Cyanobacterial Accessory Pigment</u> <u>Nancy Leland, University of New Hampshire</u> <u>Kimberley Crocker-Pearson, Town of Brewster Natural Resource Committee</u>	<u>A Case Study of Restoration on The Muddy River, Boston, MA</u> <u>Lisa Kumpf, Charles River Watershed Association</u>	<u>A Stressor Specific Approach to Revising Vermont's Macroinvertebrate Biocriteria</u> <u>Aaron Moore, VT DEC</u>
10:30	Break <i>Terrace Ballroom</i>		
	Wetlands Edgewater moderator: Kellie Merrell, VT DEC	PFAS Theater moderator: Zachary Smith, NYS DEC	Environmental Justice Waterlot moderator: Alene Onion, NYS DEC
11:00	<u>Factors Affecting Phosphorus Retention in Restored, Riparian Wetlands on Formerly Farmed Land</u> <u>Tiffany Chin, University of Vermont</u>	<u>PFAS in Aquatic Environments</u> <u>Thomas Danielson, ME DEP</u>	<u>Review and Implementation: Developing Approaches for Surface Water Monitoring of Environmental Justice Areas and Disadvantaged Communities</u> <u>Alene Onion, NYS DEC</u> <u>Charles Stoll, NYS DEC</u>
11:30	<u>Vermont Bioassessment: A Look into the Past, Present, and Future of the Program</u> <u>Tina Heath, VT DEC</u> <u>Charlie Hohn, VT DEC</u>	<u>PFAS, Nutrients, and Other Contaminants along the New York Shores of Lake Ontario, April - October 2023</u> <u>Jessica Treviño, USGS</u>	<u>Harmful Cyanobacterial Blooms, Related Loss of Recreational Opportunities and Environmental Justice Areas in New York</u> <u>Sabina Gifford, USGS</u>

POSTER PRESENTATIONS

<u>Ansel Aarestad, CT DEEP</u>	<u>Comparing Results for the PME Minidot and Onset U26 Dissolved Oxygen Data Loggers</u>
<u>Anna Baynes, UMass Amherst</u>	<u>Alteration of Flow and Fish Assemblages Downstream of Surface Water Reservoirs</u>
<u>Aidan Bowler, College of the Holy Cross</u>	<u>Road Salt Salinization of Freshwater Ecosystems: The Impact on Blackstone Invertebrates</u>
<u>Rachel Cray, University of Vermont</u>	<u>Calm Before (and After) the Storm: Phytoplankton Community Turnover After Severe 2023 VT Flooding Event</u>
<u>Melissa Czarnowski, CT DEEP</u>	<u>A Success Story: Trail Camera Images Provide Data to Support Streamflow Conditions in Permit</u>
<u>Elyse Duff, College of the Holy Cross</u>	<u>Wastewater Treatment Plants: Impacts of Effluent on Benthic Algae Communities in the Blackstone River Headwaters</u>
<u>Chloe Edwards, CT DEEP</u>	<u>25 Years of Successful Volunteer-Based Benthic Macroinvertebrate Sampling: Connecticut's Riffle Bioassessment by Volunteers (RBV) Program</u>
<u>Ben Fisher & Megan Essig, USGS</u>	<u>Lake Champlain Environmental Sensitivity Index Mapping</u>
<u>Maura Gould, US EPA</u>	<u>Using Real-Time Water Quality Monitoring Data to Predict Harmful Algal Blooms in Urban Rivers</u>
<u>Philip Hampson, University of Vermont</u>	<u>Long-term Analysis of Aquatic Macroinvertebrate Variability in Headwater Stream in Vermont</u>
<u>Xinchen He, UMass Amherst</u>	<u>Estimating 40-Year Daily Lake Ice Cover Under the Climate Change for Northern Temperate Lakes</u>
<u>Alexa Hershberger, UMass Amherst</u>	<u>Assessing Short-term Effects of a Phased Dam Removal on Freshwater Mussels and Habitat</u>
<u>Mingi Jeong & Kizito Masaba, Dartmouth College</u>	<u>Revolutionizing Water Quality Monitoring: Autonomous Surface Vehicles and Artificial Intelligence Integration</u>
<u>Marielena Lima, Charles River Watershed Association</u>	<u>Chloride Monitoring on Tributaries of the Charles River</u>
<u>Benni Marques, Neponset River Watershed Association</u>	<u>Surface Water Conductivity and Chloride Concentration in the Neponset River Watershed (Greater Boston, MA).</u>

WEDNESDAY, FEBRUARY 14

POSTER PRESENTATIONS

Aaron Moore, VT DEC

The Cotton Brook Landslide: Effects on Water Quality and Macroinvertebrate Community Health

Thomas Pacious, College of the Holy Cross

Assessing the Freshwater Fish Community Structure Across the Blackstone Headwater Streams

Joshua Rosen, USGS

The U.S. Geological Survey Soil and Low Ionic Strength Water Quality Laboratory: 41 Years of Service to Science

Jakob Stankoski, Oak Ridge Associated Universities

Comparing Fluorometric Methods (in-Vivo vs Extracted) for CyanoHAB Monitoring in Six Rhode Island Ponds

Leanna Thalmann, NYS DEC

Microtox® as an Indicator of Biological Integrity Across Stream Monitoring Sites in New York State

Maya Thomson & Pablo E. Gutiérrez-Fonseca, University of Vermont

Organic Matter Processing and Aquatic Macroinvertebrates in Urban and Forested Streams in Vermont

Walter Tokarz, CT DEEP

Evaluating Recreational Uses in a Highly Urbanized Connecticut Pond

Liza Toll, Middlebury College

Road Salt and Urbanization Effects on Burlington Stream Macroinvertebrate Communities

Clayton Williams, Saint Michael's College

Development and Evaluation of a Low-Cost, Customizable Water Quality Sensing System

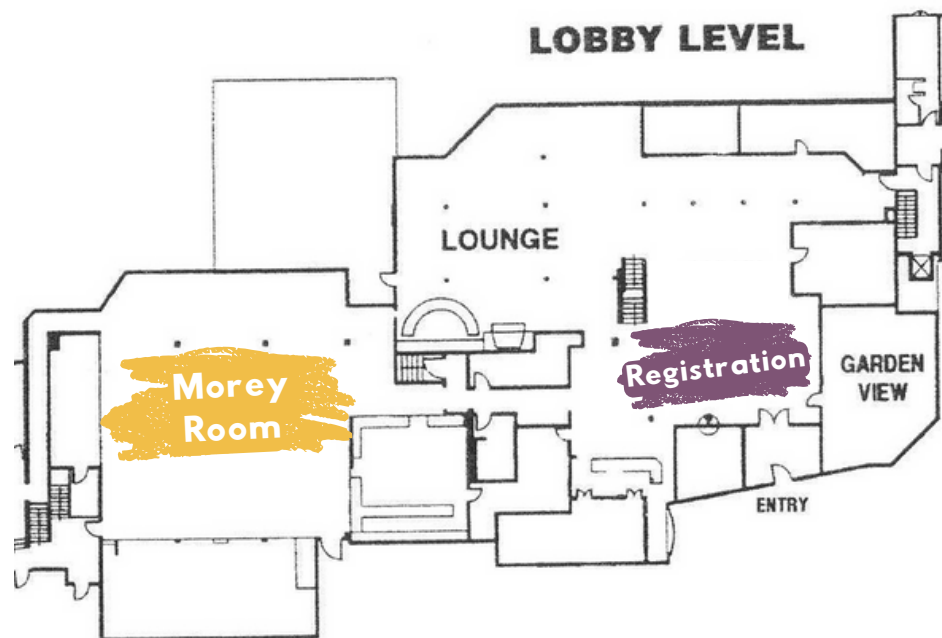
Francisco Zafón-Whalen, College of the Holy Cross

Road Salinization of Freshwater Ecosystems: Impact on Organic Matter in the Blackstone

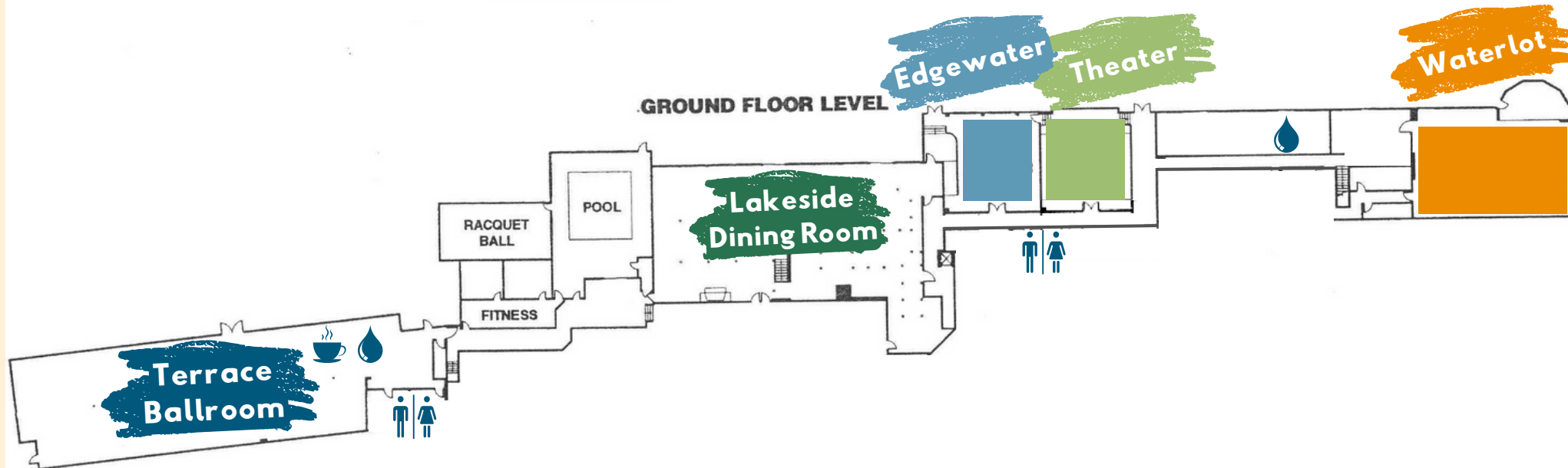
WEDNESDAY, FEBRUARY 14

LAKE MOREY RESORT

LOBBY LEVEL



GROUND FLOOR LEVEL



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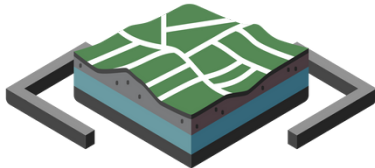
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Data Loggers



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