# FROM PLANNING TO PASSAGE

## Aquatic Connectivity in the Narragansett Bay Region



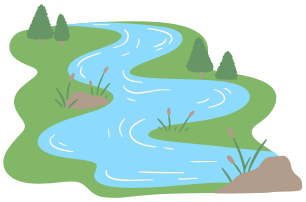
**MONDAY, OCTOBER 27, 2025**

Cumberland Public Library
Hayden Center
1464 Diamond Hill Rd.
Cumberland, RI 02864

NARRAGANSETT BAY ESTUARY PROGRAM


BOSTON
WORCESTER
Blackstone River
BROCKTON
MASSACHUSETTS
RHODE ISLAND
NARRAGANSETT BAY
WATERSHED
Taunton River
TAUNTON
PROVIDENCE
CONNECTICUT
Pawtuxet River
FALL RIVER
Wood River
LITTLE NARRAGANSETT
BAY WATERSHED
NEWPORT
Narragansett Bay
Pawcatuck River
COASTAL SALT PONDS
WATERSHED
WESTERLY
Salt Ponds
Little
Narragansett Bay
N
0 5 10 20
Miles
Kilometers
0 5 10 20
Map by Mariel Sorlien, NBEP 2024
Coordinate System: NAD83 UTM Zone 19N

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## *About the Event*

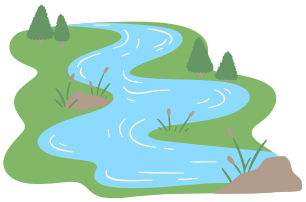
The Narragansett Bay region is **4,000 miles of rivers and streams** snaking through headwaters of central and southeastern Massachusetts down to Narragansett Bay and the Atlantic Ocean. Free-flowing waters connect forest and marshes to riparian zones, rivers, estuaries, and ultimately, the sea. Countless migratory fish, including River Herring (Alewife and Blueback Herring), American Shad, and American Eel, follow saltwater to freshwater and back through their life cycles.

Over the last 400 years, **man-made barriers, such as dams, tide gates, levees, and culverts were built to support agriculture, industry, infrastructure, and recreation**. These barriers provided the energy that powered the Industrial Revolution, facilitated development on coasts and floodplains, and allowed road building for accessible travel through the region. However, these barriers have had negative, long-lasting impacts to the watershed ecology. Dams and undersized culverts alter stream velocity, nutrient transport, sediment transport, organism passage, and more. Nearer to the coasts, tide gates or undersized culverts limit tidal access to salt marsh, which reduces sediment available for marsh surface accretion and ultimately contributes to salt marsh subsidence.

Approximately **1,000 dams** dot the region, and most of them no longer serve their original purposes. Additionally, **over 3,000 culverts** occur unseen under roadways and other stream crossings, and many were not designed in ways that support organism passage or provide resilience to large storm events. Overall, many of these barriers have outlived their usefulness, and fallen into disrepair, posing safety hazards to those who live around them. Removing such barriers can provide many benefits for flood risk reduction, water quality improvements, and ecosystem resiliency, to name a few.

While this is a large undertaking, the past few decades have seen a massive national movement toward dam removal and reconnecting waterways. **Collaborative work throughout the Narragansett Bay region** has focused on reconnecting systems by removing barriers and restoring in-stream and riparian habitats. Regional efforts to improve aquatic connectivity have included community outreach, assessment and prioritization of projects, barrier removals, and new convening opportunities, such as today's event. Today, we will discuss all of the steps between planning and passage, explore case studies linking these projects to other initiatives, and identify mechanisms to implement robust solutions for our most pressing challenges.

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*Schedule*

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**9:00 REGISTRATION AND BREAKFAST**

**9:30 INTRODUCTION AND NETWORKING**

Darcy Young, *Executive Director,* Narragansett Bay Estuary Program

**10:00 KEYNOTE**

Allison Roy, *Unit Leader*, US Geological Survey's Massachusetts Cooperative Fish and Wildlife Research Unit, University of Massachusetts
Restoring Aquatic Habitats Through Dam Removal

**10:30 CASE STUDIES**

David Gould, *Director of Energy & Environment*, Town of Plymouth, MA
Bundling Projects

Wenley Ferguson, *Director of Restoration*, Save The Bay
David Borkman*, Shellfish Water Quality Program Supervisor,* RIDEM
Tracking Water Quality

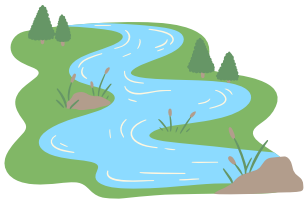
Kimberly Groff, *Network Liaison of Massachusetts*, SNEP Network
Connectivity in Resilience Planning

**12:00 WORKING LUNCH**

Ian Balcom, *Technical Services Branch Manager,*
Massachusetts Division of Ecological Restoration (MADER)
From Project Challenges to Enabling Conditions

This interactive 75-minute working lunch session, facilitated by Ian Balcom, engages participants in moving beyond project-by-project approaches toward systems-level solutions for aquatic connectivity.

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*Schedule*

### 1:30 PANEL: DIRT ON THE DIRT - SEDIMENT AND DAM REMOVAL

Mathias Collins, *Environmental Scientist*, NOAA
Alex Hackman, *Director of Ecological Restoration*, Mass Audubon
Chris Hirsch, *Dam Removal Program Manager*, MADER
Erin Peck, *Assistant Professor*, University of Rhode Island
Mason Sherman, *Marine Infrastructure & Dredging Coordinator*, RI CRMC
Expert Panel Discussion on Sediment Testing, Removal, Reuse, and Release during/after dam removal

### 2:30 RESOURCES AND TOOLS TO SUPPORT DAM REMOVAL

Scott Jackson, *Extension Professor*, University of Massachusetts
Exploring Ecological and Habitat Data Important to Dam Removal

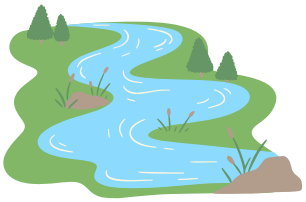
Emily Vogler, *Associate Professor*, Rhode Island School of Design
Narragansett Bay Dam Atlas: Tools for Proactive and Collaborative Decision-Making about Dams in the Watershed

### 3:30 FACILITATED DISCUSSION AND CLOSING

Ian Balcom, *Technical Services Branch Manager,* MADER
Emily Vogler, *Associate Professor*, Rhode Island School of Design
Courtney Schmidt, *Staff Scientist*, Narragansett Bay Estuary Program

The lunch results will be organized and presented by Ian Balcom. Emily Vogler will then revisit these themes and findings, exploring how to build the institutional foundations, community partnerships, and adaptive management systems that enable restoration to thrive as an ongoing process rather than isolated interventions. Courtney Schmidt will close the event with next steps.

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*Contact Information and Biographies*



### IAN BALCOM

*Massachusetts Division of Ecological Restoration/ ian.balcom@mass.gov*

Ian N. Balcom, Ph.D., is the Technical Services Branch Manager at the Massachusetts Division of Ecological Restoration, where he develops technical guidance and programs to advance watershed restoration and ecological connectivity across the state. He holds a Ph.D. in Environmental Toxicology from the University of California, Riverside, and serves as an Adjunct Professor at Johns Hopkins University teaching graduate courses in Bioremediation and Biofuels. His research focuses on plant-microbe interactions and ecological approaches to watershed-scale environmental remediation, with expertise in applying nature-based solutions such as phytoremediation and other sustainable soil and water treatment systems. Dr. Balcom brings over two decades of experience bridging scientific research with practical implementation, including previous roles as a professor at Vermont State University and as an environmental regulator managing contamination assessment and remediation projects in California and Oregon.

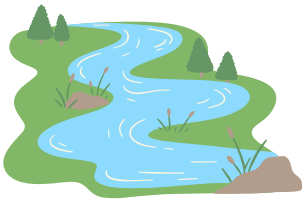


### DAVID BORKMAN

*RIDEM Water Resources - Shellfish Water Quality / david.borkman@dem.ri.gov*

David Borkman has worked on coastal phytoplankton and bacteria monitoring projects in New England waters since 1987. He completed a Ph.D. in biological oceanography at the URI Graduate School of Oceanography and has published on long-term phytoplankton community patterns and harmful phytoplankton blooms in local marine waters. He currently leads the shellfish growing area monitoring program at the Rhode Island Department of Environmental Management Office of Water Resources.

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### MATHIAS COLLINS

*NOAA Restoration Center / mathias.collins@noaa.gov*

Matt is a hydrologist and geomorphologist for the NOAA Restoration Center's Northeast region. He manages a monitoring program that evaluates habitat restoration project outcomes. Matt also provides science support for restoration project planning and design across the Northeast United States and elsewhere, specializing in stream sediment dynamics and climatic influences on streamflows important for fisheries resources and project design.



### WENLEY FERGUSON

*Save The Bay / wferguson@savebay.org*

Wenley Ferguson is Save The Bay's Director of Restoration. Since 1990 she has worked on coastal and riverine habitat and water quality restoration projects throughout the Narragansett Bay and Rhode Island's coastal watersheds. Restoration projects have included salt marsh and coastal buffer restoration, river and tidal connectivity projects, coastal planting projects and stormwater retrofits. Wenley works with partners on project identification, funding, design, permitting, implementation and monitoring of habitat restoration and climate resilience projects.

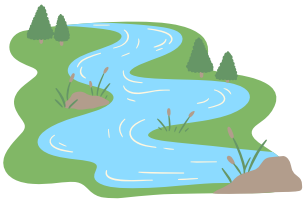


### DAVID GOULD

*Town of Plymouth, MA / dgould@plymouth-ma.gov*

David Gould is the Director of the Town of Plymouth Department of Energy and Environment. He has been with the Town of Plymouth for twenty-four years working on programs and projects focused on open space acquisition and natural resources management ranging from endangered shorebirds to diadromous fish Mr. Gould has been the manager on 12 dam removal projects as well as wetland restoration projects like the Eel River Headwaters and the Foothills Preserve Restoration Project. Mr. Gould is the recipient of the Coastal America Spirit Award, Coastal America Partnership Award, Coastal American Spirit Award and the NOAA Environmental Hero Award.

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### KIMBERLY GROFF

*SNEP Network / kimberlygroffma@gmail.com*

Kimberly has over 35 years of experience as a Water Resources Engineer. In her current private practice, she serves as the Massachusetts Liaison for the Southeastern New England Program (SNEP) Network. The Network's mission is to "empower communities to achieve healthy watersheds, sustainable financing and long-term climate resilience through management of stormwater and restoration projects." Kimberly works directly with communities and Tribes in southeastern Massachusetts and the islands to conduct community-scale and/or watershed-scale planning, building local capacity to achieve long-term climate resilience through enhanced stormwater management and ecological restoration efforts. In her spare time, she is an avid sailor and recently crossed the Pacific on a Farr 65 with 59 North Sailing.



### ALEX HACKMAN

*Mass Audubon / ahackman@massaudubon.org*

Alex Hackman is Mass Audubon's Director of Ecological Restoration. Over the past 20 years, he has managed projects and programs to restore rivers and wetlands, with a focus on dam removals, retired cranberry farmland, salt marshes, and urban wetlands. Alex lives in Medford, Massachusetts with his sweetheart Keri-Nicole, is passionate about Nature, and is an avid yet mediocre kayak angler.

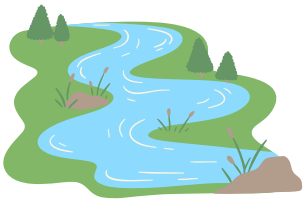


### CHRIS HIRSCH

*Massachusetts Division of Ecological Restoration / chris.hirsch@mass.gov*

Chris Hirsch is the dam removal program manager for the Massachusetts Division of Ecological Restoration. Chris earned a master's degree in restoration ecology from the University of Wisconsin where he studied wetland recovery post-restoration. In his current role, Chris manages dam removal projects throughout the Commonwealth, supports a team of dam removal project managers, and works to advance the practice of dam removal in Massachusetts.

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### SCOTT JACKSON

*University of Massachusetts - Amherst / sjackson@umext.umass.edu*

Scott Jackson is Extension Professor in the Department of Environmental Conservation at UMass Amherst, where he teaches courses and workshops on wildlife conservation and wetlands ecology, assessment, and conservation. Scott's research interests include aquatic connectivity, wetland assessment and monitoring, and the use of Unoccupied Aerial Systems (drones and sensors) to assess the vulnerability of salt marshes to sea level rise and other stressors. With colleagues in the UMass Landscape Ecology Lab, he developed landscape assessment tools and approaches including the Conservation Assessment and Prioritization System (CAPS), Designing Sustainable Landscapes (DSL) and Critical Linkages. Jackson also coordinates the North Atlantic Aquatic Connectivity Collaborative (NAACC), a network of practitioners in the 13-state North Atlantic region working to enhance river and stream connectivity.

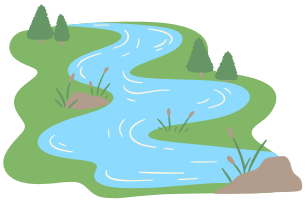


### ERIN PECK

*University of Rhode Island / erin.peck@uri.edu*

Erin is an Assistant Professor in Marine Geology & Geophysics at the University of Rhode Island Graduate School of Oceanography. Prior to joining URI, Erin worked at the Northeast Climate Adaptation Science Center and USGS Woods Hole Coastal and Marine Science Center studying anthropogenic impacts on Northeast salt marshes, and at the University of Delaware, where she studied how colonial-era milldams influenced sediment transport and biogeochemistry in mid-Atlantic streams. Erin earned her MS and PhD from Oregon State University, assessing the importance of fluvial sediment on salt marsh resilience to sea level rise.

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### ALLISON ROY

*University of Massachusetts - Amherst / aroy@eco.umass.edu*

Dr. Allison Roy is Unit Leader with the U.S. Geological Survey's Massachusetts Cooperative Fish and Wildlife Research Unit and Adjunct Research Professor in the Department of Environmental Conservation at the University of Massachusetts, Amherst. Dr. Roy works closely with state and federal agencies to co-produce research that characterizes anthropogenic impacts on aquatic ecosystems and assesses responses to conservation and restoration. Her field-based research typically employs large spatial gradients to identify stressor responses and species-habitat relationships within lakes and streams. Her graduate students and postdocs have worked on numerous projects in New England that have informed winter lake drawdown guidance, dam removal prioritization, water conservation, freshwater mussel restoration, and river herring management.

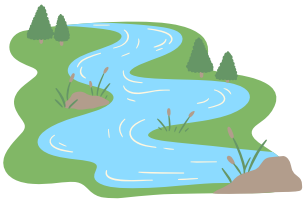


### MASON SHERMAN

*RI Coastal Resources Management Council / msherman@crmc.ri.gov*

Mason is the Marine Infrastructure and Dredging Coordinator for the Coastal Resources Management Council (CRMC). He grew up in Rhode Island and received his Bachelor’s Degree in Civil Engineering from the University of Rhode Island. Following graduation, Mason worked for a Dredging and Marine Construction contractor in the private sector for 10 years. During this time, he managed dredging projects across the country with a large focus on channel maintenance, beach renourishment, and marsh reclamation. In his role at CRMC Mason is responsible for permitting projects for marinas, ports, and anything dredging related as well as managing Rhode Island’s existing and future CAD Cells. He enjoys working with applicants on the front end of a project to help develop solid plans which meet regulatory requirements and result in a successful finished product.

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### EMILY VOGLER

*Rhode Island School of Design / evogler@risd.edu*

Emily Vogler is a landscape architect, environmental planner and artist whose research, design and teaching investigate social-ecological systems surrounding water, sense of place and climate uncertainty. She has ongoing research projects looking at the irrigation ditches in New Mexico, aging dam infrastructure in New England and coastal adaptation strategies in Narragansett Bay. Through her research and design practice, she investigates how the restoration and design of rivers and coastlines can help build climate resilience, improve habitat, expand public access, and strengthen community identity and stewardship. Emily is an associate professor at the Rhode Island School of Design where she teaches seminars and design studios on hydrological systems, urban ecology, landscape commons, community engagement strategies, and material and site-based strategies to restoration. She is also the founder and principle of Commonplace Landscape and Planning.  From 2017–2019, Vogler served as Department Head of Landscape Architecture at RISD. Before joining the faculty, she was a Senior Project Manager at Michael Van Valkenburgh Associates and was recognized as the 2010 National Olmsted Scholar.

*Event Partners*

RWU Roger Williams UNIVERSITY

EPA United States Environmental Protection Agency