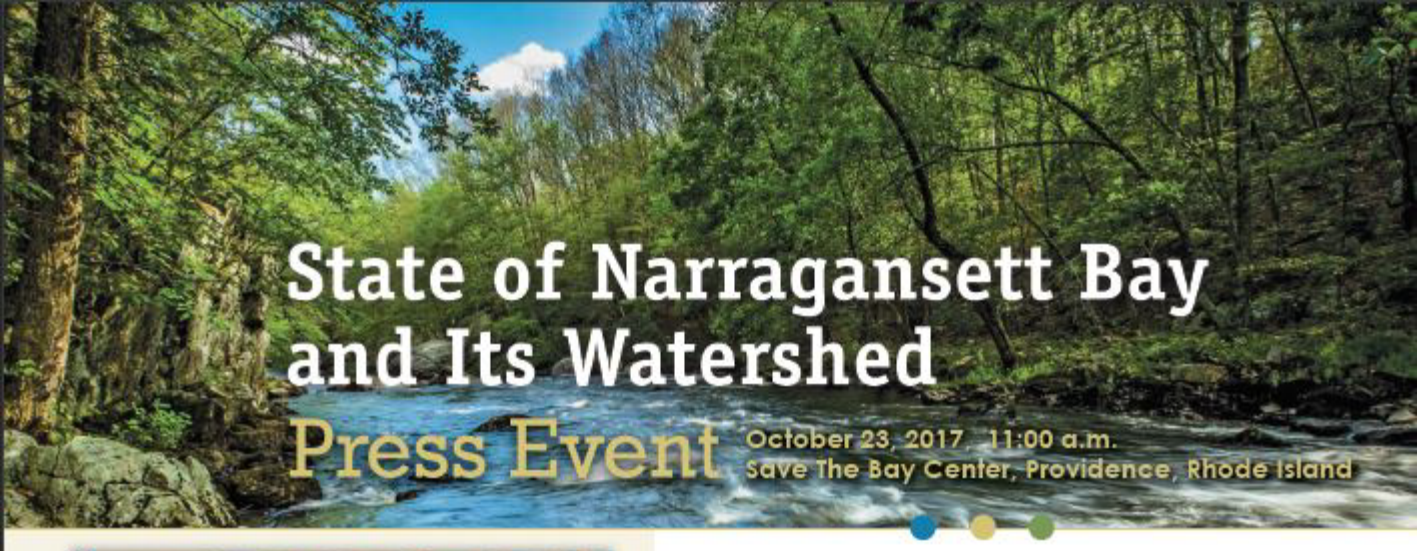
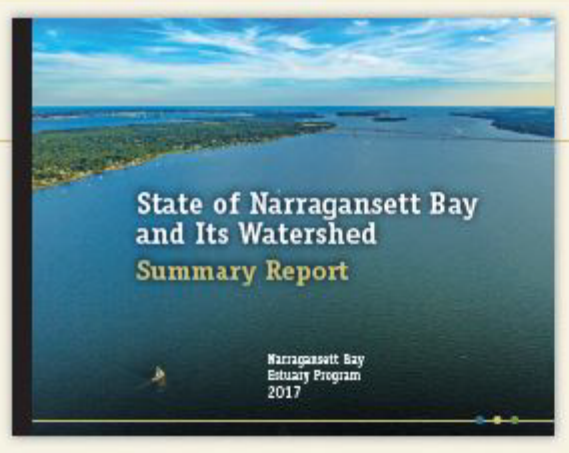


State of Narragansett Bay and Its Watershed

Press Event

October 23, 2017, 11:00 a.m.
Save The Bay Center, Providence, Rhode Island



The findings of the **2017 State of Narragansett Bay and Its Watershed** report offer a new and unprecedented understanding of the changing conditions in this important region. Agencies, organizations, and individuals can use this information in their decision-making to ensure that the benefits provided by the bay and watershed are sustained and enhanced for future generations.

Key findings drawn from the technical report highlight five themes:

- The water in the bay is getting cleaner.
- Scientists are tracking changes in the ecosystem after recent reductions in pollution from wastewater treatment facilities.
- Conditions vary greatly among places in the bay and watershed, generally improving with distance from urban areas—but urbanized areas are expanding.
- Climate change is affecting air and water temperatures, precipitation, sea level, and fish in the Narragansett Bay region.
- More research and monitoring are needed to understand the major changes occurring in the bay and watershed in order to enable well-informed adaptation and mitigation.

To download the 2017 State of Narragansett Bay and Its Watershed summary report, technical report, and related resources, go to: nbep.org/the-state-of-our-watershed

Speakers

Senator Jack Reed

Senator Sheldon Whitehouse

Congressman Jim Langevin

Congressman David Cicilline

Director Janet Coit, Rhode Island Department of Environmental Management

Secretary Matthew Beaton, Massachusetts Executive Office of Energy and Environmental Affairs

Professor Judith Swift, Chair of the Narragansett Bay Estuary Program's Steering Committee, Director of the Coastal Institute and Professor of Communication Studies and Theater, University of Rhode Island

Professor John King, Chair of the Narragansett Bay Estuary Program's Science Advisory Committee, Professor of Oceanography, Graduate School of Oceanography, University of Rhode Island

NARRAGANSETT BAY ESTUARY PROGRAM

235 Promenade Street, Suite 310 | Providence, RI 02908
401.633.0550 | info@nbep.org | www.nbep.org

State of Narragansett Bay and Its Watershed

Workshop

October 23, 2017, 12:30 p.m. to 2:30 p.m.
Save The Bay Center, Providence, Rhode Island

Welcome 12:30 to 12:35

Judith Swift, Chair of the Narragansett Bay Estuary Program's Steering Committee, Director of the Coastal Institute and Professor of Communication Studies and Theater, University of Rhode Island

Remarks 12:35 to 12:45

State of Narragansett Bay and Its Watershed

John King, Chair of the Narragansett Bay Estuary Program's Science Advisory Committee, Professor of Oceanography, Graduate School of Oceanography, University of Rhode Island

Keynote 12:45 to 1:00

Narragansett Bay as a Sentinel Estuary

Robinson "Wally" Fulweiler, Associate Professor in the Department of Earth and Environment and the Department of Biology at Boston University

Panel 1:00 to 2:20

Moderator: **Topher Hamblett**, Director of Advocacy and Policy, Save The Bay

Panel 1: Reduction of Nitrogen and Phosphorus Loadings and the Future Implications of Rising Temperatures and More Intense Precipitation

Robinson Fulweiler, Associate Professor, Department of Earth and Environment and Department of Biology, Boston University

Kimberly Groff, Director of the Watershed Planning Program, Division of Watershed Management, Massachusetts Department of Environmental Protection

Angelo Liberti, Chief, Surface Water Protection, Office of Water Resources, Rhode Island Department of Environmental Management

Warren Prell, Henry L. Doherty Professor of Oceanography Emeritus, Department of Earth, Environmental, and Planetary Sciences, Brown University

Panel 2: The Present and Future Biological Implications of Climate Change

Bethany Jenkins, Professor of Cell and Molecular Biology, College of the Environment and Life Science, Graduate School of Oceanography, University of Rhode Island

Tom Kutcher, Wetlands Biologist, Rhode Island Natural History Survey

M. Conor McManus, Marine Fisheries Biologist, Division of Marine Fisheries, Rhode Island Department of Environmental Management

Candace Oviatt, Professor of Oceanography, Director of the Marine Ecosystems Research Lab, Graduate School of Oceanography, University of Rhode Island

Closing 2:20 to 2:30

John King, Chair of the Narragansett Bay Estuary Program's Science Advisory Committee

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Speakers

Judith Swift serves as the director of the Coastal Institute and a Professor of Communication Studies and Professor of Theatre at the University of Rhode Island. Her research focus is the translation of science to the public. She often employs the arts as a means to translate science for the lay public, using emotional learning as a means to stimulate interest in and "stickiness" of information. She is Chair of both the Narragansett Bay Estuary Program's Steering Committee and Executive Committee.

John King is a Professor of Oceanography at the Graduate School of Oceanography at the University of Rhode Island. His current research interests include geomagnetism and paleomagnetism, environmental magnetism, sedimentology, paleoclimatic studies, sediment core logging, coastal and marine habitat and ecosystem studies, trace metal geochemistry, pollution studies, and how global climate change affects localities and communities. King was heavily involved in the Rhode Island Ocean Special Area Management Plan that was needed to help with the siting of the wind turbine farm off Block Island. He serves as Chair of the Narragansett Bay Estuary Program's Science Advisory Committee.

Robinson "Wally" Fulweiler is an Associate Professor in the Department of Earth and Environment and the Department of Biology at Boston University. She is an ecosystems ecologist and biogeochemist, whose research is focused on answering fundamental questions about energy flow and biogeochemical cycling of nutrients (nitrogen, phosphorus, and silica), carbon, and oxygen in a variety of environments. She is especially interested in how anthropogenic changes affect the ecology and elemental cycling of ecosystems on a variety of scales (i.e., local nutrient loading; regional/global climate change). Current research is centered on the transformations and the ultimate fate of nitrogen in the marine environment and the impact of climate change on benthic-pelagic coupling.

Panel Discussion Moderator

Christopher "Topher" Hamblett is Director of Advocacy for Save The Bay, whose mission is to "Protect and Improve Narragansett Bay." As a member of Save The Bay's Leadership Team, Topher provides strategic vision for Save The Bay's advocacy work, with a focus on water pollution issues, climate change adaptation, public access and legislative campaigns. Topher has more than 20 years of experience in environmental advocacy, including as a policy researcher, lobbyist, and spokesperson. Topher manages a staff of six advocates who work on policy, restoration, watchdogging and community mobilization for Narragansett Bay. Since 2005 he has been president of The Foundation for West Africa, which supports independent radio stations and networks in the West Africa region.

Panel 1 Discussion Participants

Kimberly Groff is the Director of the Watershed Planning Program at MassDEP. Kimberly has been with MassDEP for 8 years and has over 25 years of experience working to improve water quality through assessment, monitoring, permitting, analysis and water quality modeling. Kimberly is responsible for directing and managing a diverse staff of scientists, engineers and technicians engaged in the review and updating of MassDEP's Surface Water Quality Standards (314 CMR 4.00), ambient surface water monitoring, water quality analysis, 305(b)/303(d) reporting and planning that includes the development of total maximum daily loads (TMDLs). She holds a Ph.D. degree in Environmental Engineering from Georgia Institute of Technology, and a M.S. degree in Environmental Science from Drexel University.

Angelo Liberti has been the Chief of Surface Water Protection for the Rhode Island Department of Environmental Management's Office of Water Resources (OWR) for the past 18 years. He directs the OWR in the permitting program for discharges to surface waters (RIPDES), wastewater treatment facility planning and design reviews, water quality restoration studies, and shellfish growing area program. Prior to this he worked in the Office of Water Resources RIPDES program for 11 years. Angelo has a B.S. in Marine Biology and a Masters in Civil and Environmental Engineering.

Warren Prell is the Henry L. Doherty Professor of Oceanography Emeritus in the Department of Geological Sciences at Brown University. Much of his research career has been focused on using biotic and geochemical measurements in deep-sea sediments to reconstruct past environmental and climate conditions. In 2008, he was elected a Fellow of the American Geophysical Union "For pioneering contributions to the understanding of paleomonsoons and glacial-interglacial climates using observations and models." More recently, he has been using many of the same paleoclimate strategies and techniques to address questions of environmental and climate change in Narragansett Bay. Since 1999, he has participated in the Narragansett Bay Estuary Program surveys of dissolved oxygen (DO) in Narragansett Bay and has also collaborated with colleagues to measure and map the pre and post industrial changes of physical and chemical characteristics of the Bay's sediments and the benthic foraminifer populations as proxies for identifying the past spatial and temporal extent of hypoxia in Narragansett Bay.

NARRAGANSETT BAY ESTUARY PROGRAM

Formed in 1985, the Narragansett Bay Estuary Program's mission is to protect and restore Narragansett Bay and its watersheds—in both Massachusetts and Rhode Island—through collaborative action, sound science, and informed decision-making. The Narragansett Bay Estuary is one of the 28 estuaries in the country designated by the Environmental Protection Agency as an "estuary of national significance."

This project was funded by agreements by the Environmental Protection Agency (EPA) to the New England Interstate Water Pollution Control Commission (NEIWPCC) in partnership with the Narragansett Bay Estuary Program. Although the information in this document has been funded wholly or in part by EPA under the agreements CE96172201, CE96184201, CE00A00004, and CE00A00127 to NEIWPCC, it has not undergone the Agency's publications review process and therefore, may not necessarily reflect the views of the Agency and no official endorsement should be inferred. The viewpoints expressed here do not necessarily represent those of the Narragansett Bay Estuary Program, NEIWPCC, or EPA nor does mention of trade names, commercial products, or causes constitute endorsement or recommendation for use.

Since 1947, NEIWPCC has been a leader in the work for clean water. As a not-for-profit interstate agency, NEIWPCC serves its member states -Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont - in many ways including by developing resources that foster progress on water issues, training environmental professionals, coordinating scientific research, educating the public, and providing overall leadership in water management and protection. NEIWPCC serves as the host entity for the Narragansett Bay Estuary Program.

NEIWPCC
New England Interstate Water Pollution Control Commission

Panel 2 Discussion Participants

Bethany Jenkins is Professor of Cell and Molecular Biology in the College of the Environment and Life Science and the Graduate School of Oceanography at the University of Rhode Island. She is interested in how the biochemical capabilities of microbial communities influences biogeochemical cycles and food webs in aquatic environments and how the biochemical potential of marine microbes relates to their ecological roles. Her research focuses on how the dynamics of nutrient cycling–in particular nitrogenous compounds–influences the structure of microbial populations. Another area of her research uses directed genomic and biochemical approaches to address how changes in the environment induce microbial responses that profoundly impact the marine ecosystem, such as the uptake of iron and the production of toxins by diatoms. Her research spans environments from the local Narragansett Bay ecosystem to Antarctica. She is a scientific thrust lead on the recently funded RI EPSCoR Consortium for Coastal Ecology Assessment, Innovation and Modeling (RI C-AIM).

Tom Kutcher is a coastal and wetland scientist who holds a Master's degree in Ecology and Ecosystem Sciences from University of Rhode Island. He has worked as a stewardship and natural resources specialist at the Narragansett Bay Estuarine Research Reserve, served as the Narragansett Baykeeper with Save The Bay and the Waterkeeper Alliance, and currently works with the Rhode Island Natural History Survey to develop monitoring, assessment, and restoration protocols for freshwater and coastal wetlands for our state environmental agencies. Tom led the development of a coastal habitat classification scheme for the National Estuarine Research Reserve and is a recent co-author of the Rhode Island Salt Marsh Monitoring Strategy (2016) and the Rhode Island Coastal Wetland Restoration Strategy (in review). Tom lives and recreates along the shores of Narragansett Bay with his marine-biologist wife and two salty kids.

M. Conor McManus is a Marine Fisheries Biologist for Rhode Island's Department of Environmental Management, Division of Marine Fisheries. Conor is involved in several of the Division's fisheries field surveys and research for various finfish, crustaceans, and shellfish. He also has experience in stock assessment science and fisheries management at both the state and Atlantic states level, and is involved in the Division's tasks pertaining to aquaculture and marine ecosystem science. He is currently pursuing his doctorate at URI-GSO in Fisheries Oceanography studying population dynamics and climate change impacts for Atlantic mackerel. His previous experience covers a wide range of research and education opportunities with several organizations, including the New England Aquarium, the Marine Biological Laboratory, and the National Oceanic and Atmospheric Administration.

Candace Oviatt is a Professor of Oceanography at the Graduate School of Oceanography at the University of Rhode Island. Her research has focused on whole systems and experimental marine ecosystems. For many years she directed the experiments conducted in mesocosms at the Marine Ecosystems Research Laboratory (MERL). She has examined nutrient cycling, primary production, respiration of coastal waters and the impact of climate trends on estuarine ecosystems. Since 2005 she had been the PI on the NOAA Coastal Hypoxia Research Program (CHRP) Grant to URI to study causes of summer low oxygen in Narragansett Bay, to develop simulation models of these events and to offer information and tools developed in the study to the RIDEM. She has taught the graduate core course in Biological Oceanography and currently teaches an Oceans and Climate Course and a Course on Narragansett Bay. She has advised 13 MS and 15 PhD candidates and served on 68 graduate committees since 1990.

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