



1ST ANNUAL CAPE COASTAL CONFERENCE

STATE OF THE CAPE: CHANGING WATERS & SHORELINES

JUNE 13-14, 2013

DOUBLE TREE
BY HILTON

287 IYANNOUGH ROAD, HYANNIS, MA

Be a part of this important event!

REGISTER TODAY

www.waquoitbayreserve.org

Registration Deadline June 11

Continuing Education Credits:

Up to 9 CM credits requested from the American Planning Association, Massachusetts Chapter. Additional professional development credits available. Please inquire.

For additional information please contact:

Tonna-Marie Rogers at 508-457-0495 x110 or tonna-marie.surgeon-rogers@state.ma.us

Exhibitors please contact: Laurie Tompkins at x108 or laurie.tompkins@staet.ma.us

PLANNING PARTNERS & SPONSORS

WAQUOIT BAY RESERVE
ASSOCIATION TO PRESERVE CAPE COD
MASSACHUSETTS BAYS PROGRAM
WOODS HOLE SEA GRANT
MA OFFICE OF COASTAL ZONE MANAGEMENT
PROVINCETOWN CENTER FOR COASTAL STUDIES
CAPE COD COMMISSION
THREE BAYS PRESERVATION
AMERICAN PLANNING ASSOCIATION MA CHAPTER
MA DEPARTMENT OF CONSERVATION & RECREATION
MA DEPARTMENT OF ENVIRONMENTAL PROTECTION
WAQUOIT BAY RESERVE FOUNDATION

**Linking Science with Local
Solutions and Decision-Making**

Purpose

The goal of this conference is to provide an annual forum where regional and local decision-makers on Cape Cod can learn about pressing and emerging coastal management issues facing the region and receive relevant science-based information and tools that they can apply in addressing these issues.

Why Launch The Cape Coastal Conference?

The natural coastal resources of the Cape are inextricably linked to the identity, character and economy of the region. The health and sustainability of many of these resources are being threatened by multiple environmental stressors such as nutrient pollution, habitat degradation, inappropriate land use and climate change. To conserve and restore these vital resources it is critical that management and policy decisions draw on the best available science that illuminates how coastal ecosystems function, human impacts on them and consequences of management decisions and actions. In recognition of this need, the Cape Coastal Conference is being launched to provide a go-to forum where decision-makers, professionals, volunteers and scientists can exchange information and help to advance solutions to resource management challenges. The conference will highlight relevant science, local research, case studies and best management practices that can be instructive to towns in their coastal management efforts. It is also intended to be a venue that stimulates and facilitates dialogue between the science and management communities.

This conference was developed by the Waquoit Bay Reserve Coastal Training Program (CTP) in response to results of a 2012 needs assessment of local officials on Cape Cod. This inaugural launch of the conference was planned collaboratively by a diverse team of state, regional and local partners.

Who Should Attend?

Regional and local officials, municipal staff and board members, federal and state agency staff, planners, coastal managers, scientists, engineers, community groups and environmental organizations.

CAPE COASTAL CONFERENCE

AGENDA

THURSDAY, JUNE 13

Day One - Thursday, June 13

7:30 – 8:30 Sign-in & Refreshments
Regatta Room

8:30 – 8:45 Welcome and Opening Remarks, Alison Leschen,
Manager, Waquoit Bay National Estuarine Research Reserve

Plenary Session I: **State of the Cape's Waters and Wetlands**

Morning Keynote: State of the Cape's Bays and Estuaries: Threats and Impacts to Coastal Ecosystem Health
Dr. Chris Neill, Director, Ecosystems Center, Marine Biological Laboratory

State of the Cape's Ponds: What Have We Learned Through the Ponds and Lakes Stewardship (PALS) Program
Ed Eichner, Senior Water Scientist, School for Marine Science & Technology, UMASS-Dartmouth

Preserving and Restoring Our Wetlands: Benefits for Healthy Coastal Waters and a Resilient Coastline
MA Department of Ecological Restoration

Restoring River Herring Using A New Ecosystem-Based Approach
Brad Chase, Senior Marine Fisheries Biologist, MA Division of Marine Fisheries

10:30 - 10:50 - *Break, View Exhibits*

Addressing Resource Management Challenges and Nutrient Pollution on the Cape: DEP's Response
Kenneth Kimmell, Commissioner, MassDEP

Plenary Session II: **Restoring Water Quality: Innovate, Integrate and Collaborate**

Using the Cape Cod Commission's MVP Tool to Make Decisions on Wastewater Management Solutions - A Community Demonstration
Tom Cambareri, Water Resources Program Manager, Cape Cod Commission

Using Innovative Demonstration Projects to Inform Decision-Making on Wastewater Solutions - Town of Falmouth Case Study

Tackling the Collaboration Challenge in Addressing Nitrogen Loading: Tools to Facilitate Cooperation between Towns in Shared Watersheds
Mike Domenica, Principal Engineer, Water Resource Associates, Inc. and Project Manager for the 208 Plan Update, Cape Cod Commission

12:30 – 1:30 - *Lunch (Provided for all attendees)*
Ivy Room

Plenary Session III: **The Dynamic Cape – Dealing With a Changing Climate, Sea Level Rise and Coastal Hazards**

Afternoon Keynote: Climate Change, Oceans and Us – Dr. Fiamma Straneo, Oceanographer, Woods Hole Oceanographic Institution

Rising Seas, Rising Challenges: Understanding the Global Threat of Sea Level Rise
Dr. Jerry Mitrovica, Harvard University

2:40 – 3:00 - *Break, View Exhibits*

Will the Cape Fall Into The Sea? Future Sea Level Rise and Coastal Change on Cape Cod – Rob Thieler, Coastal Geologist, USGS

Trends in Shoreline Change and Hazard Impacts: Hot Spots and Management Challenges – Greg Berman, Coastal Processes Specialist, Woods Hole Sea Grant

Preparing To Adapt: Modeling Storm Surge Risk and Coastal Engineering Adaptation Strategies – Kirk Bosma, Coastal Engineer, Woods Hole Group

Planning Smarter – Learning from Municipalities Engaged in Adaptation Planning for Coastal Change and Sea Level Rise

5:00 Day 1 Wrap-up

NETWORKING RECEPTION & POSTER SESSION

IVY LOUNGE

THURSDAY, JUNE 13
5:15PM - 6:45PM

CAPE COASTAL CONFERENCE

AGENDA

FRIDAY, JUNE 14

Day 2 - Friday, June 14

7:30 - 8:30 AM Sign-in and Refreshments

8:30 - 8:40 Welcome and Opening Comments
Regatta Room

8:40 - 10:40 Concurrent Sessions

Concurrent Session A: Exploring Shellfish Aquaculture as a Nitrogen Management Option

Nitrogen in Shellfish and Key Considerations for Aquaculture
Projects - What Are We Learning from Local Research?
Josh Reitsma, Marine Resource Specialist, Diane Murphy, Fisheries
and Aquaculture Specialist

Case Study - Town of Mashpee Shellfish Aquaculture Project
Rick York, Shellfish Constable

Case Study - Town of Falmouth Shellfish Aquaculture
Demonstration Project

Concurrent Session B: Restoring Water Quality Using Different Tools and Planning Approaches

Using an Integrated Approach for Water, Wastewater, Ponds and
Land Use Planning - Town of Brewster Case Study

Using Alum Treatment to Clean Up Cape Cod Ponds: Results and
Lessons
Ken Wagner, Water Resources Manager, Water Resource Services

Cleaning Up Santuit Pond Using Solar Bee Technology: Town of
Mashpee Case Study

Concurrent Session C: Adapting to Change: How Do We Do It?

Using LIDAR and Climate Information to Better Plan for Coastal
Change - Municipal Case Studies

Collaborative Approaches for Addressing Climate Risk
Pat Fields, Managing Director, Consensus Building Institute

Tools to Advance Adaptation Planning

10:40 - 11:00 - Break, View Exhibits

Closing Plenary: Going Forward Stronger: Reflections on Using the Best Available Science to Build the Cape's Resiliency to Change

Building Public Support for Solutions: Effective Strategies for
Communicating Water and Coastal Change Issues

Bridging the Divide: Linking Science with Local Solutions and
Decision Making

Panel Discussion with representatives from local and county
government, the private sector and the scientific community.
Moderator - Heather Goldstone, Science Editor WCAI, the Cape
& Islands NPR Station

12:30 - Adjourn



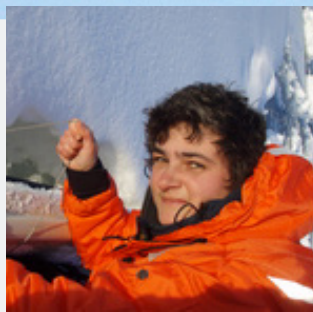
Christopher Neill is an ecologist, Senior Scientist and Director of the Ecosystems Center of the Marine Biological Laboratory in Woods Hole and Professor in the Department of Ecology and Evolutionary Biology

at Brown. Neill's research investigates the ecological consequences of deforestation in the Brazilian Amazon, including how clearing alters runoff and the hydrologic cycle, soil fertility, emissions of carbon dioxide and other greenhouse gases from soils to the atmosphere and the biodiversity and ecological health of streams. He also works on the ecology and restoration of terrestrial and aquatic ecosystems in coastal Massachusetts, including coastal ponds and sandplain grasslands and shrublands, where rapid increases in residential development threaten ecosystems that contain high and unique biological diversity. Neill is the Rosenthal Director of the Brown-MBL Partnership and the Brown-MBL Graduate Program in Biological and Environmental Sciences. He was a Fulbright Scholar at the University of São Paulo in 2007 and received a Harvard University Bullard Fellowship in Amazon ecology in 2010. In 2010, he was awarded an NSF Partnership in International Research and Education (PIRE) proposal that forges a collaboration among Brown, MBL and the Earth Institute at Columbia University to examine how the intensification of agriculture in East Africa influences human well-being, land use and the environment. Neill has authored more than 90 papers on the ecological consequences of land use change.

Neill has a long-standing interest in communicating ecological science to a general audience. He currently directs the Environmental section of MBL's Science Journalism Program, which immerses journalists in the science of Arctic environmental change within MBL's Long-Term Ecological Research Project at Toolik Field Station in northern Alaska. He has written a monthly column about environmental science and policy in the Falmouth Enterprise newspaper since 1994.

Fiamma Straneo

is a tenured Scientist in the Physical Oceanography Department of the Woods Hole Oceanographic Institution. Her research focuses on the polar oceans and their role in climate and climate variability. Motivated by the rapid and ongoing ice loss from the Greenland Ice Sheet, much of her most recent work is aimed at understanding the interaction between the ice sheets and the ocean. Measurements collected by Straneo and her colleagues indicated, for the first time, the widespread presence of warm waters of tropical origin at the margins of Greenland's glaciers.



Straneo has led over 15 field expeditions in the polar regions using a wide range of platforms that include research vessels, fishing boats, inflatables, helicopters and snowmobiles. She serves on many national and international scientific panels including the US CLIVAR (Climate Variability and Predictability) Working Group on Ice Sheet-Ocean Interactions in Greenland, the steering committee of the International Arctic-Subarctic Ocean Fluxes Group, the Atlantic Meridional Overturning Circulation Science Team and the Arctic Observing Change Panel. She was recently appointed a Fellow of the Leopold Leadership Program – which seeks to bridge the gap between environmental scientists, the public and decision makers. On top of the scientific publications, Straneo's research has been featured in the New York Times, NPR, the Weather Channel, and various international media outlets. This year, she was selected as one of about 50 climate scientists to visit Congress on 'Climate Day' – an event sponsored by numerous scientific organizations including AGU, AAAS and AMS.

Dr. Straneo has a Laurea cum Laude in Physics from the University of Milan, Italy, and a Ph.D. in Physical Oceanography from the University of Washington. She joined WHOI as a post-doc in 1999. She lives in Falmouth, Massachusetts.

CAPE COASTAL CONFERENCE NOTABLE SPEAKERS

Kenneth L. Kimmell was appointed Commissioner of the MassDEP by Secretary of Energy and Environmental Affairs Richard K. Sullivan Jr. Mr. Kimmell joined the Patrick Administration in January 2007 as general counsel of the Executive Office of Energy and Environmental Affairs. On an interim basis, he also served as general counsel to the Massachusetts Clean Energy Center. He has focused on:



- legislation to merge energy and environmental agencies into one secretariat;
- major legislative initiatives such as the Green Communities Act, the Global Warming Solutions Act, and the Oceans Act;
- permit streamlining initiatives;
- wind energy siting reform;
- the Massachusetts Ocean Plan;
- state and federal permitting of the Cape Wind project, the nation's first off-shore wind project;
- development and early implementation of policy initiatives such as the MEPA Greenhouse Gas policy, a first-in-the-nation policy that requires developers of major projects to identify, avoid, and mitigate greenhouse gas emissions.

Prior to joining the Patrick-Murray Administration, Mr. Kimmell was in private practice where he focused on environmental and land use law and litigation, and argued numerous cases dealing with issues such as home rule powers of municipalities, zoning, and solid waste permitting.

Mr. Kimmell graduated from Wesleyan University and UCLA School of Law. He lives in Newton, where he has served on the Newton Community Preservation Act Committee. He is also a former Board Member of the Massachusetts Association of Conservation Commissions.



Jerry X. Mitrovica is a Professor of Geophysics at Harvard University and the Director of the Earth Systems Evolution Program of the Canadian Institute for Advanced Research. His research focuses on sea level changes over time scales ranging from the last decade to the age of the Earth. He is the recipient of the Rutherford Memorial Medal from the Royal Society of Canada, The Steacie Prize from the National Research Council and the Augustus Love Medal from the European Geosciences Union. He is a Fellow of the American Geophysical Union and, in 2007, was awarded a Guggenheim Fellowship. He is a former J. Tuzo Wilson Professor at the University of Toronto, and was a Visiting Miller Professor at the University of California, Berkeley.

EXHIBITOR REGISTRATION FORM

1ST ANNUAL CAPE COASTAL CONFERENCE STATE OF THE CAPE: CHANGING WATERS & SHORELINES

Linking Science with Local
Solutions and Decision-Making

JUNE 13-14, 2013

DOUBLETREE
BY HILTON
287 IYANNOUGH ROAD
HYANNIS, MA

**Please remit payment
of \$ 150.00 to:**

Waquoit Bay Reserve Foundation
(WBRF)
Attn: Coastal Conference
P.O. Box 3522
Waquoit, MA 02536

Name _____

Company/Org. _____

Address _____

Phone _____

Email _____

_____ Company Logo. Please send .jpg file to: laurie.tompkins@state.ma.us

_____ Electricity needed

Exhibitors will each have:

Six foot table for display

Exhibitor listing in the printed program

Set up time: Thursday, June 13
7:00AM - 8:00AM

Break-down time: Friday, June 14
10:45AM

PLANNING PARTNERS & SPONSORS

WAQUOIT BAY RESERVE

ASSOCIATION TO PRESERVE CAPE COD
MASSACHUSETTS BAYS PROGRAM

WOODS HOLE SEA GRANT

MA OFFICE OF COASTAL ZONE MANAGEMENT
PROVINCETOWN CENTER FOR COASTAL STUDIES

CAPE COD COMMISSION

THREE BAYS PRESERVATION

AMERICAN PLANNING ASSOCIATION MA CHAPTER

MA DEPARTMENT OF CONSERVATION & RECREATION

MA DEPARTMENT OF ENVIRONMENTAL PROTECTION

WAQUOIT BAY RESERVE FOUNDATION