

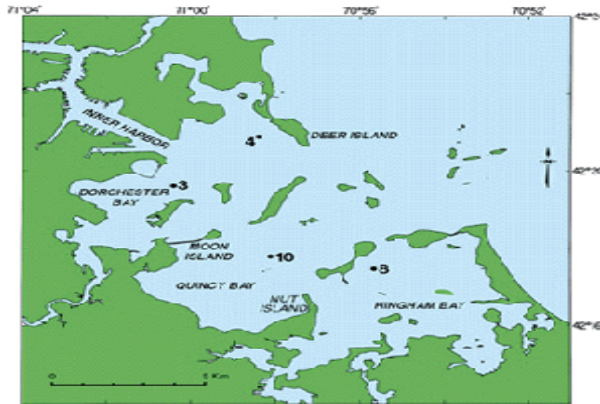
# BOSTON HARBOR EDUCATORS' CONFERENCE

**Renewal...Reconnection...Research**

**Saturday, October 4, 2003 (Workshops)**

**Sunday, October 5, 2003 (Field Trips)**

**South Boston High School**



Sponsored by

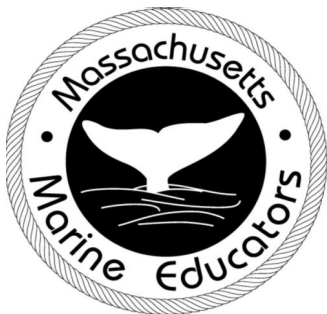
**Massachusetts Marine Educators**

**Harbor Islands National Park**

**Urban Harbors Institute**

**New England Aquarium**

**Massachusetts Water Resources Authority**



*A national park area*

## **Program Committee**

Joe Balsama  
Peg Collins  
Carl Johnson  
Joel Rubin

Gail Brookings  
Kelly Fellner  
Sukey Padawer  
Rick Schmidt  
David Weinstein

Bob Chen  
Marge Inness  
Bobby Robinson  
Meg Tobacsko

## Schedule

8:30 - 9:00 AM	<b>Registration and coffee</b>
9:00 - 9:10 AM	<b>Welcome and Opening Remarks</b>
9:10 - 9:30 AM	<b>Harbor Images by Ken Mallory</b>
9:30 -10:00 AM	<b>Keynote speaker, Gene Gallagher from UMass Boston</b>
10:00 - 10:15 AM	<b>Break</b>
10:20- 11:20 AM	<b>Workshop I</b>
11:25-12:25PM	<b>Workshop II</b>
12:30-1:15 PM	<b>Lunch</b>
1:20-2:20 PM	<b>Workshop III</b>
2:25-3:25 PM	<b>Workshop IV</b>
3:30-4:00 PM	<b>Show-Tell-Take</b>
4:00 PM	<b>Closing, Evaluations and PDP's</b>

### **Directions to South Boston High**

95 G Street  
South Boston, MA 02127

### **From the North**

I-93 to Broadway Bridge  
Follow Broadway to East Broadway  
Take 1st right onto G Street  
High School is at the top of G Street at Thomas Park

### **From the South**

I-93 to Morrissey Blvd.  
Follow Morrissey Blvd. to the end to Day Blvd., keeping the ocean on your right.  
Left on I St.  
Left 6th St. to the top of the hill.  
High School is directly ahead.

### **Public Transportation**

Red line to Andrew Station  
Walk E from ANDREW to DORCHESTER ST & DORCHESTER AVE  
Take the Route **10 CITY POINT VIA SO BAY CTR** to E BROADWAY & G ST

### **Registration**

Please use the form at the end. Make checks payable to Island Alliance. Mail checks and a separate form for each participant to:

Pauline Westhaver  
Urban Harbors Institute., University of Massachusetts Boston  
100 Morrissey Blvd.,  
Boston, MA 02125

**For more information:** contact Peg Collins at 617-782-9328 or email [Ccndpellns@aol.com](mailto:Ccndpellns@aol.com).

## Workshops

### **3 Session Workshop (10:15-12:25) and (1:20-2:20)**

#### **1. Using Remote Sensing to Study the Earth**

**Presenter:** John Pickle, Boston Museum of Science

This workshop will focus on using computers to explore the key concepts and skills used to study satellite imagery, and then use these with special visualization and analysis software to explore time-series of satellite images taken around the world. First we will start out with learning how color is the key for understanding satellite images, then we will apply color and scale to pictures of everyday objects, and finally, we will analyze satellite data over time. At the end of the activities, participants will take home a free CD of the software and images to continue studying how the Earth changes over time. To gain maximum knowledge, participants are expected to attend both sessions.

### **Double Workshops – Morning (10:15-11:15)**

#### **2. Designing and Executing More Effective Experiments in the Classroom**

**Presenter:** Tom Eldredge, Marine Science Center, Northeastern University

Many of the inquiry-based curricula available to Massachusetts science teachers include experiments that lack appropriate scientific design. This can lead to experimental failure, unusable data and considerable frustration for teachers and students alike. This workshop is designed to provide G7-12 science teachers with ideas and information for designing and executing more effective experiments. The workshop will also offer marine based models of typical classroom and science fair experiments, with attention being paid to science learning standards (Mass. Frameworks & BPS Citywide).

#### **3. Water Quality Testing**

**Presenter:** Meg Tabacsko, MWRA School Program

Learn how to bring water quality testing activities to your classroom or field site near your school. Conduct up to 8 surface water tests including temperature, pH, dissolved O<sub>2</sub>, nitrates, biochemical oxygen demand and coliform.

### **Single Sessions – Morning**

#### **Session I (10:15-11:15)**

#### **4. Finding Stewardship in Boston's Front Yard: Boston Harbor Islands national park**

**Presenter:** Kelly Fellner, National Park Service

Imagine a place that encompasses 500 square miles of harbor waters, features the only glacial drumlin field in the United States that intersects a coast, and is home to diverse upland and marine habitats that attract a variety of marine birds, mammals, fishes, and invertebrates. This workshop will give an overview of the resources found within the Boston Harbor Islands national park area and how findings from recent science inventory projects can help connect students to active science.

#### **5. Dive and Discover**

**Presenters:** Stephanie Murphy, WHOI, and Carolyn Sheild, Clarke Middle School (Lexington, MA),

Learn about the Woods Hole Oceanographic Institution's online teaching tools at Dive and Discover ([www.divediscover.whoi.edu](http://www.divediscover.whoi.edu)). Dive & Discover is an interactive distance learning Web site designed to immerse you in the excitement of discovery and exploration of the deep seafloor. Daily updates, photos, videos, and e-mail correspondence with scientists aboard research vessels allow you to follow the progress of the scientific mission and find out about life on the floating laboratories at sea. This workshop will discuss ways to use this resource in the classroom.

## **6. Understanding and Using the Nautical Chart**

**Presenter:** Capt. David Weinstein, Harbor Connections

Understanding the Boston Harbor chart can greatly enhance your understanding of Boston Harbor. Participants will be given an overview of chart basics and then create and use their own chart in preparation for a harbor expedition. Basics will include such topics as reading buoys, orientation and measuring distances. This workshop should be followed by a harbor exploration on Sunday.

## **7. Vernal Pools**

**Presenter:** Valerie Bell, Massachusetts Marine Educators

This workshop will focus on using vernal pools as outdoor labs for teaching environmental science. Valerie will use my NASA lessons (developed at the Cape Cod National Seashore **Remote Sensing** program) as examples of what can be done. She will have a powerpoint presentation of her first visits with her students and some classroom activities. A basic background to Cape Cod Vernal pools will be given.

## **Session II (11:25-12:25)**

## **8. Turning the Massachusetts Frameworks into a Marine Science Curriculum**

**Presenters:** Joanne Shinnick, Marge Inness

This workshop will begin to relate Marine Science to the Massachusetts and National standards and thus allow teachers the ability to focus on lessons without re-inventing the wheel. Participants will receive framework handouts on a CD.

## **9. Secrets to Seaside Success: Tips for Leading Coastal Field Trips**

**Presenters:** Sukey Padawer, New England Aquarium and others

“Secrets for Seaside Success” shares the collective expertise of the New England Aquarium’s marine field education staff. We will use a slide show and a sampler of hands-on activities to highlight the “Ten Secrets to Seaside Success” that can help prepare you, your staff, your students, and your chaperones for a successful field trip to a coastal habitat in the Boston Harbor area. Topics include: pre-trip planning, types of coastal habitats to explore, enhancing students’ observation skills, pre- and post-trip activities, and recommended field guides and equipment. Please note: Most the curricula and resources highlighted are available for loan from the New England Aquarium’s Teacher Resource Center (TRC), and all workshop participants are encouraged to make a follow-up appointment with

the TRC for one-on-one consultation for planning their field trips (or any other Boston Harbor or Ocean/Aquatic unit you are planning).

### **10. Estuaries: Ecological Role and Value**

**Presenters:** Pat Harcourt and Shona Vitelli, Waquoit Bay Reserve

This presentation will include a brief introduction to the Waquoit Bay Reserve with a map to orient participants. It will include a definition of an estuary and locations in Massachusetts (including Boston Harbor). This workshop will discuss the ecological role and value of estuaries. Other estuary based activities will also be introduced and outlined such as the pressures on estuaries including population growth and development, loss of diversity, reduced water quality and sources of nitrogen and possible solutions that individuals can take to reduce nitrogen loading into our estuaries.

### **Afternoon Sessions**

**Double Sessions (1:20-3:25)**

#### **11. Nets, Disks, and Sounding Lines**

**Presenter:** Joe LaPointe, Gail Brookings, Massachusetts Marine Educators

Learn how to make your own oceanographic equipment for use with your students. Participants will leave with their own equipment already made.

#### **12. Integrating Field Site Visits with Classroom Curriculum**

**Presenters:** Dottie Merrill and Ewa Goodman (Children's Museum), Steve Barr, George H. Conley School, Jeni Day, Fuller Elementary School

Boston Waterfront Learning Project, a partnership of Boston Public School teachers and the Children's Museum with participation from many area harbor educators, has developed Trip Guides for teachers in grades 3-7 to South Boston, East Boston and Dorchester Beaches, Yirrell Beach., Belle Isle Marsh, Neponset and Charles Rivers and the HarborWalk. Teachers researched and developed the activities and tried the trips out with their classes. The BWLP team of teachers and staff present panel presentation of highlights of the project with sample activities for classroom and site visit.

#### **13. Big Programs for Little Children**

**Presenter:** Rebekah Stendahl, New England Aquarium

This session will provide tools that can be used to provide appropriate curriculum for an early childhood audience. During this session, educators will be given a brief overview into the best methods for early childhood education (generally considered to refer to children aged seven and under). With these practices in mind, tools will be shared that are effective in developing and evaluating curriculum for very young children. Activities will be shown to help spur ideas and conversation. A short brainstorming activity will ask participants to look at their own organization's content and messages.

**Session III (1:20-2:20)**

#### **14. Flush Back Time!**

**Presenter:** Meg Tabacsko, MWRA School Program

Participants will step back in time and learn what people did before the invention of the flush toilet which we use today. They will also learn about the history of waste disposal methods. They will see and discuss slides of garderobes used in medieval times to present day vacuum toilets.

### **15. Introduction to Modeling in the Geosciences, a Beginners Look at GIS**

**Presenter:** George Duane

A very basic look at how you might incorporate GIS into your classroom. The workshop will focus on using GIS software to plot earthquakes, identify plate boundaries, display local features and showcase the software's potential.

### **16. Finding Stewardship in Boston's Front Yard: Boston Harbor Islands national park**

**Presenter:** Kelly Fellner, National Park Service

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### **Session IV (2:25-3:25)**

### **17. Beach Profiling Using Emery Boards**

**Presenter:** Phil McLaren

This workshop will explain the significance and history of profiling as well as demonstrate Emery Boards that do not need a horizon for profiling. Participants will make their own Emery Boards for use in profiling local beaches with their students.

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### **19. Vernal Pools**

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**Sunday, October 5, 2003**

**Tentative Field Trips- Schedule to be Announced  
(Family and guests invited / additional fee.)**

1. Marine Biology Aboard the R/V Mysis - Ted Maney, Tom Eldridge, Northeastern University
2. Boston Light on Little Brewster Island - Sally Snowman, USCG, Kelly Fellner, NPS
3. Migrating Bird of Boston Harbor - Becky Harris, Northeastern Univ.
4. Deer Island Perimeter Walk - Meg Tabasco, MWRA
5. Navigational Chart Tour of Boston Harbor - David Weinstein
6. Renewal of Spectacle Island through Engineering and Sustainable Design - CAP, Dave Diltz, John Anderson
7. Peddocks Island Botanical Field Trip Ted Elliman, MA Div. of Fisheries & Wildlife
8. Save the Harbor Raptor and Gamefish Migration Tour - Bruce Berman, Save the Harbor/Save the Bay
9. Long Island Tour & Intertidal Zone - Joel Rubin, NEAq

**Tuesday, October 7, 2003**

The National Park Service and the Island Alliance are planning a Boston Harbor Island Science Symposium at the Museum of Science on October 7. This symposium is being organized in conjunction with the Mass. Marine Educators annual workshop, which is on October 4 at South Boston High School. In fact, the field trips for both events will be held jointly on Sunday, October 5.

We would like to invite all teachers to attend the science symposium on the 7th. The conference organizers are offering 1/2 price admission to teachers (\$25, \$20 if before September 15), which includes free parking, admission to the museum, participation in all symposium sessions, lunch and an evening reception featuring a keynote address by E.O. Wilson. Organizers would also offer to pay a stipend to teachers to cover the expense of recruiting a substitute teacher for the day. Students are also welcome and would receive the same discount.

More detailed information can be obtained on the conference website at [www.bostonislands.com/science](http://www.bostonislands.com/science). All registration can be done online as well. If you have questions, please feel free to contact Chantal at (617) 287.5570.

(Teachers may receive **PDP's** for all three days).

