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

Program Committee
Joe Balsama  Gail Brookings  Bob Chen
Peg Collins  Kelly Fellner  Marge Inness
Carl Johnson  Sukey Padawer  Bobby Robinson
Joel Rubin  Rick Schmidt  Meg Tobacsko
David Weinstein  }
### Schedule

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<td>9:00 - 9:10 AM</td>
<td>Welcome and Opening Remarks</td>
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<td>9:10 - 9:30 AM</td>
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<td>9:30 - 10:00 AM</td>
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### 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 Ccndpclinns@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 O², 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). 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

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.

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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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. 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).
Boston Harbor Educators Conference
Registration Form

Early registration will guarantee choice of workshops. We will attempt to accommodate all registrants with their preferences; however, if selected workshops are filled, we will select a related workshop.

Name:________________________________________________
School:_______________________________________________
Address:______________________________________________
City:_________________________________State:____________ Zip_____________
Work phone:_________________________ Home phone:__________________________

Professional Development Point certificate requested:

_____ elementary school       _____ middle school
_____ high school                        _____ special education

Workshop Selections:

Remote Sensing 10:15-2:20 PM
Session I: 10:15-11:15 AM 1st choice______ 2nd choice________
Session II: 11:25-12:25 PM 1st choice______ 2nd choice________
Double Session: 10:15-12:25 AM 1st choice______ 2nd choice_______
Session III 1:20-2:20 PM 1st choice_______ 2nd choice _______
Session IV 2:25-3:25 PM 1st choice______ 2nd choice________
Double Session 1:20- 3:25PM 1st choice______ 2nd choice________

Field Trip Preferences:
1. ___________________________________________________
2. ___________________________________________________

Registration fees:

Early registration (received before 9/22) @$30.00/each _________
On-site registration (not assured of gift bag) @$40.00/each _________
MME membership @$20.00/year _________

Total Enclosed: $______________