

NEERS SPRING 2009 MEETING PROGRAM

April 2-4, 2009 – Salem Waterfront Hotel, Salem, Massachusetts

Meeting Synopsis

Thursday, April 2: 9:00 AM – 7:00 PM

Meeting Registration, Ocean Management Symposium, Welcoming Social

Friday, April 3: 7:00 AM – 11:30 PM (or beyond)

Meeting Registration and Breakfast, Contributed Oral Presentations, Lunch, Poster Session, Business Meeting, Social, Student Awards Banquet, Entertainment and Dancing

Saturday, April 4: 7:00 AM – 12:15 PM plus optional Field Trips

Breakfast, Contributed Oral Presentations, Public Speaking Workshop, Concluding Remarks, Field Trips

Thursday, April 2, 2009

9:00 AM – 10:00 AM	Meeting Registration and Coffee (Grand Ballroom)
10:00 AM – 5:00 PM	Ocean Management Symposium (Grand Ballroom)
5:00 PM- 7:00 PM	Welcoming Social (Compass Room)
5:00 PM – 6:00 PM	Meeting Registration (Grand Ballroom)
7:00 PM	Dinner on your own in Salem

SPECIAL SYMPOSIUM

The Science Behind Ocean Management

Session Chair = Tay Evans, Massachusetts Division of Marine Fisheries

9:50 Welcome – Tay Evans, Massachusetts Division of Marine Fisheries

10:00 Wiggin, Jack

Director, Urban Harbors Institute, UMASS Boston, EEOS Department, Boston, MA
MARINE SPATIAL PLANNING: THEORIES AND APPLICATIONS

10:30 Weber, John

Massachusetts Office of Coastal Zone Management, 251 Causeway Street, Boston, MA
MASSACHUSETTS OCEAN MANAGEMENT PLAN: ITS RELEVANCE TO
COASTAL SCIENTISTS

11:00 McCann, Jennifer

Rhode Island Sea Grant, University of Rhode Island, Graduate School of Oceanography,
Narragansett, RI
THE RHODE ISLAND SAMP STORY: OCEAN MANAGEMENT IN THE OCEAN
STATE

11:30 Shumway, Carol

The Nature Conservancy, Providence, RI
OCEAN MANAGEMENT IN NEW ENGLAND

12:00 LUNCH on your own in Salem

1:20 Frankic, Anamarija

University of Massachusetts, Boston, EEOS Department, Boston, MA
ECOSYSTEM BASED MANAGEMENT AND EMBAYMENT LEVEL PLANNING

1:50 *TBD*

ECOSYSTEM BASED MANAGEMENT IN MAINE: THE TAUNTON BAY
MANAGEMENT EXPERIMENT

2:20 Barnhardt*, Walter¹ and D. Sampson²

¹U.S. Geological Survey, Woods Hole Science Center, Woods Hole, MA

²Massachusetts Office of Coastal Zone Management, 251 Causeway St., Boston, MA
GEOLOGIC MAPPING IN MASSACHUSETTS STATE WATERS: THE KEY TO
EFFECTIVE OCEAN MANAGEMENT

2:50 Chen, Changsheng

Department of Fisheries Oceanography, School of Marine Science & Technology,
University of Massachusetts-Dartmouth, New Bedford, MA
NORTHEAST COASTAL OCEAN FORECAST SYSTEM (NECOFS)

3:20 BREAK

3:40 Ford, Kathryn

MA Division of Marine Fisheries, 1213 Purchase St., New Bedford, MA
USING A VALUATION INDEX FOR IDENTIFYING AREAS OF HIGH
BIOLOGICAL VALUE FOR OCEAN MANAGEMENT

4:10 Dean, Micah

MA Division of Marine Fisheries, 30 Emerson Ave., Gloucester, MA
A GIS-BASED APPROACH TO REPRESENTING FISHERIES IN THE
MASSACHUSETTS OCEAN PLAN

4:30 Panel Discussion – How do we set priorities and what are the next steps to further ocean
management at multiple scales?

Moderator - Tay Evans, Massachusetts Division of Marine Fisheries, Gloucester, MA

5:00 Symposium Adjourns

5:00 – 7:00 NEERS Welcoming Social

Friday, April 3, 2009

- 7:00 AM – 8:00 AM Meeting Registration and Breakfast (Grand Ballroom)
 8:10 – 12:00 PM Oral Presentations (Grand Ballroom)
 12:00 PM – 1:00 PM Lunch (Grand Ballroom)
 1:15 – 2:35 PM Oral Presentations (Grand Ballroom)
 2:35– 3:55 PM Poster Presentations (Grand Ballroom)
 3:55 – 5:15 PM Oral Presentations (Grand Ballroom)
 5:15 – 6:00 PM NEERS Business Meeting (Grand Ballroom)
 6:30 – 7:30PM NEERS Social (Compass Room)
 7:30 – 9:00 PM Banquet and Awards Presentations (Grand Ballroom)
 9:00 PM – 11:30 PM Listening and Dancing to the NEERS Band (Grand Ballroom)

ORAL PRESENTATIONS

Session Chair = Pam Morgan, University of New England

* denotes presenter, **(K)** denotes Ketchum Prize candidate, **(R)** denotes Rankin Prize candidate

7:00 – 8:00 CONTINENTAL BREAKFAST

8:10 Welcome and Introductory Remarks – Pam Morgan, NEERS President

8:20 Taylor, David I.

Massachusetts Water Resources Authority, 100 First Ave, Boston, MA
 THE BOSTON HARBOR PROJECT, AND LARGE DECREASES IN
 EUTROPHICATION-RELATED MATERIALS TO BOSTON HARBOR

8:40 **(K)** Hayn*, Melanie K.¹, R.W. Howarth¹, R. Marino¹, A. Giblin², K. Foreman², P. Berg³,
 and K.J. McGlathery³

¹Cornell University, Ithaca, NY; ²The Ecosystem Center, Woods Hole, MA;

³University of Virginia, Charlottesville, VA

NUTRIENT INPUT-OUTPUT DYNAMICS IN A SHALLOW TIDAL ESTUARY ON
 CAPE COD

9:00 **(R)** Peng, Xuefeng¹ and A. Giblin²

¹Department of Biology, Connecticut College, New London, CT

²The Ecosystem Center, Marine Biological Laboratory, Woods Hole, MA

NITROGEN CYCLING IN SEDIMENTS IN TWO STRETCHES OF THE
 COONAMESSETT RIVER

9:20 Macfarlane, Sandy L.

Coastal Resource Specialists, Orleans, MA

AUTUMN'S GOLD NUGGETS: WASTEWATER MANAGEMENT AND THE
 SCALLOP CONNECTION

9:40 Hale, Stephen S.

Atlantic Ecology Division, U.S. Environmental Protection Agency, Narragansett, RI

A PORTUGUESE SPRING: MEASURING ESTUARINE HEALTH IN THE
 EUROPEAN UNION

10:00 BREAK

- 10:20 (K)** Wilson*, Kristin R.¹, J. T. Kelley², D. F. Belknap², and B. R. Tanner³
¹Program in Ecology and Environmental Sciences, University of Maine, Orono, ME
²Dept. of Earth Sciences, University of Maine, Orono, ME
³Dept. of Geosciences and Natural Resources, Western Carolina Univ., Cullowhee, NC
 NEW SALT POOL DESCRIPTION WARRANTS REINTERPRETATION OF THE STRATIGRAPHIC RECORD OF MAINE SALT MARSHES
- 10:40 (K)** Goggins, Justin* and C. Cuomo
 Univ. of New Haven, Dept. of Biology and Environmental Sciences, West Haven, CT
 SALT MARSH CHANGE AT THE CHARLES E. WHEELER WILDLIFE REFUGE AT MILFORD POINT, CT
- 11:00 (K)** Swanson*, Jeffrey L.¹, M.J. James-Pirri², C.T. Roman³, H. Ginsburg⁴, and J.F. Heltshe¹
¹Dept. of Computer Science and Statistics, University of Rhode Island, Kingston, RI
²Graduate School of Oceanography, University of Rhode Island, Narragansett, RI
³National Park Service, University of Rhode Island, Narragansett, RI 02882
⁴USGS Patuxent Wildlife Research Center, University of Rhode Island, Kingston, RI
 DEVELOPING THRESHOLDS FOR MANAGEMENT OF SALT MARSH ECOSYSTEMS USING NEKTON AND VEGETATION DATA
- 11:20 (K)** Corman*, Sarah S.¹ and C.T. Roman²
¹Graduate School of Oceanography, University of Rhode Island, Narragansett, RI
²National Park Service, University of Rhode Island, Narragansett, RI 02882
 SALT MARSH MOSQUITO DITCHES AS HABITAT FOR NEKTON AND IMPLICATIONS FOR RESTORATION
- 11:40 (R)** Charbonneau*, Diane J. and G.L. Chmura
 Department of Geography, McGill University, 805 Sherbrooke St W, Montreal, QC
 IMPORTANCE OF MANGROVES AND SALT MARSHES TO GLOBAL BIODIVERSITY
- 12:00 LUNCH**

ORAL PRESENTATIONS

Session Chair = Robert Buchsbaum, Massachusetts Audubon

- 1:15** Smith, Stephen M.
 National Park Service, Cape Cod Nat. Seashore, 99 Marconi Site Road, Wellfleet, MA
 THE IMPORTANCE OF TEMPERATURE REGIME IN TIDAL RESTORATION: A CASE STUDY OF PERIWINKLES (*LITTORINA LITTOREA*) AND MACROALGAE IN A PARTIALLY-RESTORED SALT MARSH LAGOON
- 1:35** Larsen*, Peter F.¹ and S. Barker²
¹Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, ME
²Maine Department of Marine Resources, West Boothbay Harbor, ME
 VIRGINIAN REFUGIA AND RELICT OYSTER POPULATIONS IN MID-COAST MAINE
- 1:55 (K)** Wood*, Melody and C. Cuomo
 Dept. of Environmental Science, Univ. of New Haven, West Haven, CT 06516
 THERMAL TOLERANCE OF THE INVASIVE TUNICATE, *STYELA CLAVA*

2:15 (K) Manfredi*, Vincent^{1,2} and K. Oliveira²

¹Massachusetts Div. of Mar. Fisheries, 1213 Purchase Street 3rd Floor, New Bedford, MA

²Univ. of Massachusetts-Dartmouth, Biology Department, North Dartmouth, MA

YOUNG OF THE YEAR WINTER FLOUNDER DISTRIBUTION AMONG
COASTAL AND ESTUARINE HABITATS

2:35 – 3:55 BREAK AND POSTER PRESENTATIONS

* denotes presenter, **(W)** denotes Warren Prize candidate, § - Elementary School student;

§§ - High School student

Bowen*, Rachel¹, R. J. Mooney², C. Windsor², and A. Lockwood²,

¹In-Situ Inc., 31 Bolivar Avenue, Troy, NY

²In-Situ Inc., 221 E. Lincoln Avenue, Fort Collins, CO

USING SPECIFIC CONDUCTANCE AS A SURROGATE FOR CHLORIDE IN
SALTWATER MARSHES

(W) Crescenzi*, Emily¹, J.B. Hubeny¹, J.K. Buttner², M. Fregeau², S. Weston², and T. Shields³

¹Department of Geological Sciences, Salem State College, Salem MA

²Northeastern Massachusetts Aquaculture Center and Department of Biology, Salem State College, Salem MA

³Massachusetts Division of Marine Fisheries, Gloucester MA

GRAIN SIZE CHARACTERIZATION AND SOFT SHELL (*MYA ARENARIA*) CLAM
SURVIVAL RATES IN SELECTED BOSTON HARBOR TIDAL FLATS

(W) Dailey, Abraham*, F. Pavri, V. Valentine, and G. Mueller

MONITORING THE SALT MARSHES OF WELLS MAINE USING NASA'S ASTER
IMAGERY

Dettmann, Edward H.

USEPA, ORD/NHEERL, Atlantic Ecology Division, Narragansett, RI

CHLOROPHYLL *A* AS A BIOCRITERION IN DEVELOPING NUTRIENT CRITERIA
FOR ESTUARIES

§§ Edmonds*, Meagan A., N. A. Apuzzo, E. J. Baumgaertner, J. A. Lembo, and Sr.
M. J. Paoletta.

Sacred Heart Academy, Hamden, CT

SEQUENCING THE *LIMULUS* MITOCHONDRIAL COX II GENE: COMPARISON
OF ECOLOGICAL VARIATIONS AND SNPS IMPLICATED IN BREAST CANCER

Ferry*, Kristen H.¹, J. J. Brown², J. F. McKeon³, K. Flanery, C. Ostaudelafont, M. West⁴, and T. Roettiger³

¹Massachusetts Division of Marine Fisheries, Gloucester, MA

²Fisheries and Wildlife Division, District Dept. of the Environment, Washington, DC

³U.S. Fish & Wildlife Service, Central New England Fishery Res. Off., Nashua, NH

⁴U.S. Fish & Wildlife Service, Nashua National Fish Hatchery, Nashua, NH

RESTORATION OF AMERICAN SHAD IN THE CHARLES AND MERRIMACK RIVERS, MASSACHUSETTS.

(W) Gifford*, Samantha J., and R. W. Fulweiler

Boston University, Boston, MA 02215

USING NITROGEN AND CARBON ISOTOPES TO COMPARE WILD AND CAPTIVE PENGUIN COLONIES

Hines*, Mark E.¹, C. Fonseca¹, G. W. Brace¹, J. Erwin¹, and R. N. Buchsbaum²

¹Department of Biological Sciences, University of Massachusetts Lowell, Lowell MA

²Massachusetts Audubon Society, Wenham, MA

NITROGEN FIXATION CONDUCTED BY SULFATE-REDUCING BACTERIA IN THE RHIZOSPHERE OF *SPARTINA PATENS*

Levine*, Edward R.¹, and L. Goodman²

¹Autonomous Systems Department, NUWC, Newport, RI

²Department of Estuarine and Ocean Sciences, SMAST, University of Massachusetts Dartmouth, New Bedford, MA, 027444.

TURBULENCE OBSERVATIONS IN NARRAGANSETT BAY

Nelson, K., N. Moin, and Anne Bernhard*

Connecticut College, New London, CT

ARCHAEOAL DIVERSITY AND THE PREVALENCE OF CRENARCHAEOTA IN A SALT MARSH

§ Pregnall, Hali J.

Arthur S. May Elementary School, Poughkeepsie, NY

MANATEES AND HUMANS: THE FUTURE OF THE MANATEE RELIES ON US

Turner*, Sara and T. Shields

Massachusetts Division of Marine Fisheries, Gloucester MA

BOSTON HARBOR SHELLFISH ENHANCEMENT PROJECT

Wigand*, Cathleen¹, E. Davey¹, R. Johnson¹, M. Stolt², M. Holt³, R. Tien¹, and L. Gamez¹

¹US EPA NHEERL, Atlantic Ecology Division, Narragansett, RI

²University of Rhode Island, Kingston, RI

³US Fish and Wildlife Service, Red Bluff Fish & Wildlife Office, Red Bluff, CA

SOIL RESPIRATION AND BELOWGROUND CARBON STORES AMONG SALT MARSHES ALONG A GRADIENT OF INCREASING WATERSHED NITROGEN LOADINGS IN SOUTHERN NEW ENGLAND

ORAL PRESENTATIONS – CONTINUED

Session Chair = Robert Buchsbaum, Massachusetts Audubon

- 3:55 (K)** Windecker, Laura A. and S. W. Nixon
Graduate School of Oceanography, University of Rhode Island, Narragansett, RI
THE PHYTOPLANKTON OF MID-NARRAGANSETT BAY, 1999-2008: QUALITY CONTROL AND DATA ANALYSIS
- 4:15** Cheney*, Donald¹, A. Meador¹, S. Greenwood², and K. Gardner²
¹Biology Dept. and Marine Science Center, Northeastern University, Boston, MA
²Environ. Res. Group, Dept. Civil Engineering, Univ. of New Hampshire, Durham, NH
COULD A PCB-CONCENTRATING SEAWEED BLOOM IN NEW BEDFORD HARBOR BE REDUCING PCB TRANSFER UP ITS FOOD CHAIN?
- 4:35** Moore*, Gregg E.¹, D. M. Burdick², C. R. Peter², and G.L. Chmura³
¹Dept. of Biol. Sci. and Jackson Estuarine Lab, Univ. of New Hampshire, Durham, NH
²Dept. of Nat. Res. and Jackson Estuarine Lab, Univ. of New Hampshire, Durham, NH
³Global Environmental and Climate Change Centre and McGill Univ., Montreal, QC
VALUATION OF ECOSYSTEM SERVICES IN RESTORED SALT MARSHES
- 4:55** Wilson*, Karen A.¹, L. Judd Jones², and A. O. Pearson²
¹Dept. of Environmental Science, University of Southern Maine, Gorham, ME
²Dept. of Biology, University of Southern Maine, Portland, ME
UNUSUAL PATTERNS OF NATURAL RECRUITMENT OF SALT MARSH PLANTS IN A SALT MARSH UNDERGOING HYDROLOGICAL RESTORATION
- 5:15 NEERS BUSINESS MEETING**
- 6:30 SOCIAL & POSTER VIEWING**
- 7:30 NEERS AWARDS BANQUET**
- 9:00 ENTERTAINMENT AND DANCING**

Saturday, April 4, 2009

- | | |
|---------------------|--|
| 7:00 – 8:00 AM | Breakfast |
| 8:15 – 10:00 AM | Oral Presentations |
| 10:20 AM – 12:00 PM | Workshop on Public Speaking and Scientific Presentations |
| 12:30 PM | Box Lunches available – please request when you pre-register |
| 12:30 PM – 1:30PM | Field trips |

ORAL PRESENTATIONS

Session Chair = Steve Hale, US Environmental Protection Agency

*denotes presenter

7:00 – 8:00 BREAKFAST

8:15 Gather for session

8:20 Grady*, Sara P.¹, and M. Kearns²

¹Mass. Bays Program, North and South Rivers Watershed Association, Norwell, MA

²Mass. Riverways Program, Division of Fish and Game, Boston, MA

BALANCING ECOLOGICAL AND MUNICIPAL WATER NEEDS IN FIRST HERRING BROOK, SCITUATE, MA

8:40 Armstrong*, Michael P.¹, G. Nelson¹, and M. Cieri²

¹Massachusetts Division of Marine Fisheries, 30 Emerson Ave, Gloucester, MA

²Maine Department of Marine Resources, PO Box 8 West Boothbay Harbor, ME

THE DECLINE OF RIVER HERRING: IS THERE A SMOKING GUN?

9:00 Franz, David R.

Biology Department, Brooklyn College, City University of New York, Brooklyn, NY

ASSIMINEA SUCCINEA (OR *MODESTA*?) – A HIGH MARSH AMPHIBIOUS

GASTROPOD FROM JAMAICA BAY, NY

9:20 Shields, Thomas

Massachusetts Division of Marine Fisheries, Gloucester, MA

RESTORATION AND ENHANCEMENT OF SOFTSHELL CLAM (*MYA ARENARIA*)

POPULATIONS IN BOSTON HARBOR, MASSACHUSETTS, USA

9:40 Metzler, Anita*, M. F. Tlusty, and D. Christie

New England Aquarium Edgerton Research Laboratory, Boston, MA

DIETARY INFLUENCE ON SHELL DISEASE IN JUVENILE LOBSTERS

(*HOMARUS AMERICANUS*)

10:00 BREAK

WORKSHOP:

How to Give a Good Talk: Public Speaking and Scientific Presentations

10:20 Welcome and Introduction – Tay Evans, Massachusetts Division of Marine Fisheries

10:30 Workshop – Bill Cunningham, Theater Department, Salem State College

12:05 Closing Remarks – Pam Morgan, NEERS President

12:15 Meeting Adjourns

12:30 Potential Field Trips (depending on interest – please sign up at the registration desk):

- 1) Searching for Nudibranchs in Beverly Harbor
- 2) Tour of Salem State College's Cat Cove Marine Lab for Aquaculture
- 3) Walking tour of Salem and visit to the Peabody Essex Museum
- 4) Visit to a salt marsh restoration project conducted by Salem Sound Coastwatch with Salem State students